June, 30th 2004

Tender to the European Spatial Planning Observation Network (ESPON)

Action Project 2.1.5:

Territorial Impacts of European Fisheries Policy

(2004 – 2006)

Lead partner:

Norwegian Institute for Urban and Regional Research (NIBR)

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Kommentarutgave 30.06.04

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1 Introduction

European Fisheries Policy have to deal with internal European matters like preservation of natural resources, access to production areas, social, economic and demographic consequences, and at the same time face the global competition in European markets. These changes and processes will affect European countries and regions with regard to the aims of cohesion, territorial balanced and sustainable development and polycentrism. The Norwegian Institute for Urban and Regional Research (NIBR) submit this Tender on behalf of the proposed Transnational Project Group for the ESPON project 2.1.5 "Territorial Impacts of European Fisheries Policy".

2 Summary presentation of the Tender and the transnational project group (TPG)

The transnational group (TPG) put together for the bid for Tender for ESPON action project 2.1.5 "Territorial Impacts of European Fisheries Policy" consists of one Lead partner six Partners and one subcontractor. The TPG comprise strong competence with regard to the fishery and aquaculture industries and the fisheries policy covering both the Atlantic and the Mediterranean area and the Baltic Sea, and with regard to territorial development, the ESDP-perspective and polycentrism. The Lead partner will, together with the Partners, contribute to the fulfilment of the six work packages.

2.1 Lead partner:

Norwegian Institute for Urban and Regional Research (NIBR)
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2.2 Transnational partners:

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2.3 Subcontractor

University of Akureyri Research Institute (UARI),
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2.4 Presentation of Lead partner

The Norwegian Institute for Urban and Regional Research (NIBR) is a leading national centre for applied local, regional and environmental research. The Institute conducts interdisciplinary applied social science research, assessment of development projects, evaluations and documentation for the Research Council of Norway and users representing a wide range of central and local government agencies, NGOs and private organisations. NIBR collaborates with a wide range of international institutions, and global activity has grown in recent years, especially in the area of regional/territorial development studies, environmental management development studies, and issues relating to sustainable development. The Institute is party to a number of joint projects and several specialist networks, among them the EU initiatives *European Co-operation in the Field of Scientific and Technical Research (COST)*, *European Urban Research Association (EURA)*, *OECD* and the *Joint Nordic Committee on Housing and Urban Research (NSBB)*. Researchers at NIBR are represented on the boards of a range of leading organisations, such as *Regional Science Association (RSA)*, *UNESCO's programme Management of Social Transformations (MOST)* and European Urban Research Association (*EURA)*.

Long-standing core activities in NIBRs research specifically relevant to spatial development in a cross border and European context have been the development of methodology and analysis of regional economic and regional demographic change; including regional economic modelling, and implementation of methods and tools for the study of territorial-demographic dynamics, perspectives and implications for the structure of settlement and different economic and policy sectors. Research activities during the later years comprise analysis of i) effects of regional policy measures, incentives and public actions, ii) regional effects of international integration, iii) comparative regional development in Europe, iv) evaluation of EU cross-border programmes, v) studies of regional-demographic dynamics, development and effects, vi) regional-demographic prospects and forecasts, vii) spatial and socio-demographic restructuring of urban areas, viii) spatial structures, functionality and construction of functional regions, ix) migration patterns and histories, x) internal and international migration; prospects and relations to the development of settlement patterns.

NIBR is ESPON Contact Point in Norway and partner to ESPON Activity 1.1.4 "The Spatial Effects of Demographic Trends and Migration" and ESPON Activity 1.1.1 "The Role, Specific Situation and Potentials of Urban Areas as Nodes in a Polycentric Development". In addition to deliver Tender to ESPON Activity 2.1.5 "Territorial Impacts of European Fisheries Policy" as lead partner, NIBR also takes part as partner in Tenders for ESPON Action 2.4.2 "Integrated analysis of trans-national and national territories based on ESPON results", and in ESPON Action 1.3.3 "The role and spatial effects of cultural heritage and identity".

NIBRs has been strongly involved in the evaluation of the 3 EU Interreg IIA programmes, participation in the ESF programme Regional and Urban Restructuring in Europe (RURE), and in programme management, thematic and area studies of the five year Norwegian Research Council programme "Regional development" (1999-2003), including studies of changes in settlement and industrial structures, regional-demographic dynamics and the labour market, and comparative regional policy in a Nordic perspective (Sweden, Norway). For more than ten years NIBR has been actively involved in the OECD projects on rural and territorial statistics and indicators (presently organised as Working Party on Territorial Statistics and Indicators). The aim of this activity has been to establish a theoretical frame of reference, operational concepts and indicators, and develop a Territorial Database enabling the comparative analysis of regional structures, trends and policy effects at the sub-national territorial level across the entire OECD-territory.

NIBR are also involved in research projects on fisheries policy and integrated coastal zone management (ICZM) in Norway and abroad. In Vitetnam, NIBR study the impacts of the rapid changes in the economic and administrative framework of the Vietnamese fisheries. In an EU-INCO funded project, the focus is on generating knowledge to identify and develop indicators for sound fisheries management. NIBR has a strong competence on ICZM, with projects in Indonesia, Sri Lanka and Norway. In Norway, NIBR has recently studied impacts of national conservation and municipal planning in the coastal zone for local communities. At the moment, the focus is on regional coastal zone planning and networking where the aim is a more integrated management. We will compare the Norwegian experiences with regional planning in other northern European countries (particular Netherland and Scotland).

2.5 Management of the TPG

The trans-national project group that will carry out the project is composed of a highly experienced team of experts on both European Fisheries Policy and on spatial development, ESDP and regional policy.

NIBR will act as lead partner for the ESPON project 2.1.5 "Territorial Impacts of European Fisheries Policy" submitted for tender on June 30th 2004. As Norwegian ECP NIBR has a permanent link of information to and from the CU and the MC. NIBR will coordinate the research, implement deadlines, facilitate transnational cooperation, edit all the reports and the interim reports and control the use of financial resources by other partners that may be granted to the project. The 2.1.5 project secretariat will submit progress reports of the activity of the team and the finances utilised to ESPON every six month.

The trans-national group include partners both from the EU countries (Denmark, Estonia, Italy, Portugal and Spain) and the EFTA countries (Norway and Iceland). These are all countries where fisheries and the aquaculture industry are important, and the partners also represent countries from the Atlantic and the Mediterranean area as well as the Baltic Sea. The composition of the team therefore secures an extended European perspective in the project.

2.6 Technical organisation

There will be a responsible project leader for each work package and the work will be done on the premises of the respective partners. NIBR will as lead partner keep close contact with each partner by e-mail and telephone. Each work package will result in a regular work package report to be submitted to lead partner and the involved partners. These reports will serve as progress report to lead partner and will also form the basis of the interim reports to be submitted to the ESPON secretariat. Drafts of interim reports will be circulated to all partners in due time so as to secure that all aspects of the work packages will be considered.

Four meeting are planned in the projects in order to secure good and strong cooperation among the partners. The meetings will be organised as workshops in order to provide inputs from and exchange of information between all partners. The first meeting will be a kick-off meeting focusing on further clarification of indicators, data and work packages, and preparations for the first interim report. All meeting will be scheduled so as to fit in with the planned interim reports. We will also try to invite member of other ESPON projects and members from the CU to the meetings.

Scheduled meetings

Oktober 2004	Kick-off meeting Place: Oslo Subject: Clarification of indicators, data and work packages, preparations for the first interim report
January/February 2005	Meeting 2 Place: To be announced Subject: Draft and discussing the second interim report
Autumn 2005	Meeting 3 Place: To be announced Subject: Draft and discussing the third interim report
Spring 2006	Meeting Place: To be announced Subject: Draft and preparing the final report

Budget for the four meetings and others activities: EUR.40 000

Each partner will be allocated travelling funds for each meeting. Partners that host the meeting will also be allocated the equivalent travelling cost for covering expenses in connections with meeting coordination, lunches etc. Expenditures for meetings and travelling are based on the cheapest air tickets.

2.7 Project organisation

The table below gives a schematic presentation of the analytical project organisation of the work packages. It is important to note that the six work packages constitute an integrated analysis with flows of information and feed-back lopes between them.

WP0: Management and administration	WP Leader: NIBR	15 %
WP1: Data gathering, indicators and conceptualisation.	WP Leader: NIBR Inputs: All partners	15 %
WP 2 Fisheries and aquaculture industry – structural changes and policy regulations	WP Leader: IREPA Inputs: All partners	15 %
WP 3 Impacts on employment, cohesion and demography	WP Leader: NORUT Inputs: All partners	15 %
WP4 Impacts on regional economic strength	WP Leader: NIBR Inputs: All partners	15 %
WP5 Impacts on environment – integrated coastal zone management as a respons	WP Leader: IFM Inputs: All partners	10 %
WP6 Territorial impact analysis for European Fisheries Policy - conclusions and recommendations.	WP Leader: NIBR Inputs: All partners	15 %
		100%

3 Information regarding conditions of exclusion

Many of the partners in the ESPON 2.1.5 TPG are public bodies, such as Universities or public research institutes, and therefore attempt to be exempt from providing information regarding social security, taxes and statement to ensure they are not involved in proceedings related to bankruptcy, judicial settlement, liquidation, etc. Attached as appendix of the individual partners are some of the required certificates for NIBR.

F. Experience in projects elaborated in international consortia and networks	
5. Assurance of no conflict of interest	
A. A sworn declaration to be attached	Attached, appendix 8

5 Information regarding Award criteria

5.1 Knowledge of regional policy, the ESDP-perspective and European Fisheries Policy

1 & 2. The Transnational Project Group (TPG) encompasses a wide range of expertise and experience in the field regional policy, European spatial development policy and territorial trends in Europe, as well as in the field of European Fisheries Policy. The lead partner has taken care to construct a TPG that has both breadth and depth of both functional and spatial/regional knowledge and research experience. Appendix 1 gives more details of the extensive experience of partners. The lead partner, NIBR, has experts in the field of regional policy, the ESDP-perspective and territorial trends in Europe. The researchers who take part in the project have been, or are, all involved in research projects and programmes dealing with regional policy and spatial development. Our NCP at NIBR has for more than a decade been involved in the OECD project "Working Party on Territorial Statistics and Indicators".

All the project partners have extensive expertise and experience from large transnational projects in the fields of regional policy, spatial development and fisheries policy, and the project group encompasses internationally well-known institutes and researchers. In addition to the lead partner both the Norwegian partner the NORUT-Group, the Portuguese partner CEDRU and the Icelandic subcontractor UARI, have long research experience in the fields of regional policy, European spatial development policy and territorial trends. All these partners also have experience from research on fisheries policy but on this matter the TPG comprise several partners with special competence. The Danish partner, IFM, the Italian partner, IREPA, the Estonian partner, EMI, and the Spanish partner, IDEGA, have all extensive knowledge and research experience in the fields of fisheries and aquaculture policy, and socio-economic and territorial development related to these fields.

All partners are also familiar to work with indicators and databases and the TPG, with its institutes and researchers, therefore will have the necessary knowledge and capacity to

carry out territorial analysis, develop indicators and concept and provide relevant data to the ESPON database.

5.2 Technical quality

3) The project will include three major types of concepts and methodology and none of them are – according to our information – duplicate existing work. The overall research question is how the changes of CFP impacts on these variables: (i) the position of coastal regions in the territorial systems of higher level (EU, the actual countries); (ii) the position of the coastal regions in overall policies and particularly in structural policy; (iii) the restructuration processes inside the coastal regions. The challenge of all of the three issues is to be able to examine the relations between the implementation of fisheries policy changes and changes in the territorial systems and socio-economic structures. We plan to solve that problem by putting high effort on developing adequate concept of coastal regions that will include concrete studies of where the policies changes in the fisheries are implemented. According to (iii) there are several problems related to the levels on which socio-economic data is available – more concrete - if data on NUTS 4 or 5 is available where we want it to be. One of the challenges of the project is to examine the opportunities for doing territorial analyses inside NUTS 3 regions. Another problem can be the opportunity for including aquaculture in studies at this level. According to the 1998-study on fishery dependency for the Commision aquaculture data is only available on nuts 2.

4) Data will generally be submitted from Eurostat (Fish of the NewCronos data) and/or FAO. The project will also benefit from the data assessment and - organisation that was carried out on the study "Regional Socio-economic studies on employment levels of dependency of fishing" (www.megapesca.com/fishdep/eufishindex.htm). This study organised a list of data sources used for studying of fisheries dependent regions, and is discussing the level/scale problems. The quality of the fisheries statistics is co-ordinated by the Co-ordinating Working Party on Fishery statistics.

5) As mentioned in 3) a challenge is to develop indicators that cover relevant policy variables as well as structural variables. One possibility is to use changes of the amount of fish deliveries as the policy indicator. According to socio-economic indicators data on values and employment in harvesting, fish processing are available on NUTS 3 and in some occasions NUTS 4/5, and aquaculture on NUTS 2. And the more typical territorial indicators will be based data on population (number, density), economy (GDP, GDP per capita, EPO patents application), labour market (employment rate, unemployment rates), age structure, education level.

6) As discussed above the basic of the project will be our ability to build adequate concepts of coastal regions, including aspects as different types of fishery dependents, targeting position in the fisheries as well as the structural policies and geographic localisation (central-peripheral localisation), distances to urban settlements. The database will be organised in order to cover this objective, and more specific it will be built up according to the description in 5). As specified in the schedule about selection criteria the consortium is well equipped according to carry out statistical analyses of the material. The maps will cover the EU area, the specific countries and some selected costal regions will be presented. NIBR has acquired and use the map tools that are common for the all ESPON projects. Probably analyses of the position of coastal regions can be done by specifying the coastal regions on maps building on data from the ESPON data base as

these are being used in e.g. the third report on Economic and Social Cohesion from January 2004.

7) The findings will be of importance according to the in and out phasing of regions in the structural policies, as well as contributing to the developing of special interventions into fisheries district-/regions inside and outside the target regions of the structural funds. Moreover it will contribute to a better understanding of the establishing and implementation of capacity reduction policy in the fisheries and the need for co-ordination of sector policies (as the fisheries) and more territorial focused policy.

8) Interaction for thematic coordination and networking with other ESPON-projects will be ensured by the fact that NIBR is partner in several ESPON projects: ESPON Activity 1.1.4 "The Spatial Effects of Demographic Trends and Migration" and ESPON Activity 1.1.1 "The Role, Specific Situation and Potentials of Urban Areas as Nodes in a Polycentric Development". NIBR works very close with Nordregio which is partner in this project, and which also is partner in the cross-sections projects 3.1 "Integrated tools for European Spatial Development" and 3.2 Spatial scenarios and orientations in relation to the ESDP an EU chohesion policy". NIBR also takes part as partner in Tenders for ESPON Action 2.4.2 "Integrated analysis of trans-national and national territories based on ESPON results", and in ESPON Action 1.3.3 "The role and spatial effects of cultural heritage and identity". NIBR will also have close contact with the ESPON Coordination Unit for updating on status and development of the cross-section projects, and will provide the Coordination Unit with progress reports and management details.

6 Project structure and research design

6.1 Introduction

Fisheries and aquaculture plays a varying role in the economy of the different European countries and regions. The regional importance is strengthening by the fact that the seafood industries in many cases are located outside commuting distance to a larger city, and with few alternative sources for income. The tendency over the years has been toward a more concentration of fishing 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. But still, 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 (Symes 2000)[1]. The importance of the sector becomes clearer when analysed at lower regional level or at the local level. With other words: Dependency rates are higher at greater level of regional disaggregation.[2]

Changes in the CFP (European Fisheries Policy) where adopted in late 2002 and a number of measures will be implemented in near future. The main aim is to strengthen the competitiveness of the sector. It has following elements: 1) Conservation of fish stocks, 2) Restructuring of fishing and fish farming, 3) Organisation of the market for fish and associated products and agreements on fishing with third countries (European Commission 2004).[3] These changes are likely to affect the fishing industry, particularly employment in a number of ways:

- Multi-annual management plans for all stocks
- Reduction in quotas
- Reduction in the fishing fleet
- Limitation on how, when and where fishing can take place
- Limitation on financial support for modernizing and building of new vessels

Activities linked to fishing will also be affected to varying degrees in different parts of the EU. On the other hand, the employment in the aquaculture sector has increased over the last years and this is expected to continue. In this context, aquaculture represents an important factor of the reinforcement of socio-economic cohesion. Aquaculture also plays an increasing role in the supply of seafood, and the challenges are different compared to the fishing industry. The aquaculture is more regionally concentrated, it is located in the

[1] Fisheries dependent Regions.
[2] Regional Socio-economic Studies on Employment and the level of Dependency on Fishing.
[3] A new partnership for cohesion. Third report on economic and social cohesion.

coastal zone and competes with or has impacts on other activities in the coastal zone. Availability of good sites for production is one of the major challenges for further development. Aquaculture competes with or has impacts on other activities in the coastal zone (e.g. tourism, recreation and protection of habitats and wild species). Balancing the different interests in the coastal zone and prepare for further development of aquaculture has to be solved through the concept of integrated coastal zone management (ICZM) and planning.

Processes on restructuring, reduction, expansion and development are therefore occurring side by side and in various combinations. The effects of this will vary between regions and the territorial impacts on short and long term will be different. The way changes in the CFP affect different types of coastal areas constitutes the thematic frame for this project.

6.2 General objectives and research questions

Some of the key questions for the project to investigate are:

- How will these changes and ongoing processes affect European countries and their regions? What are the territorial impacts on these changes in view of the aim of cohesion, territorial balanced and sustainable development and polycentrism?
- What are the potentials and the preconditions for innovations in the marine sector? How would new economic dynamics influence the diversity of types of coastal regions?
- How will effects of fisheries policies influence spatial development in coastal regions and a polycentric development? What role does accessibility play for developing new activities in the fishing industry in different regions?
- How has the fishery dependent areas been restructured in recent years and how successful has the restructuration been?
- What are the impacts of fisheries policies to be taken into account in different types of coastal regions in relation to the concept of ICZM?

The analysis of spatial effects of fisheries policy on an European level implies considering both the CFP of the EU and the policies of the EFTA countries. However, major challenges and development trends show many similarities all over Europe.

The general objectives for the ESPON project 2.1.5 “Territorial Impacts of European Fisheries Policy” are:

- Development of methods for the territorial impact assessment of sectoral policies (in this case European Fisheries Policy)
- Development of territorial indicators, typologies and concepts and providing an input to the ESPON database and map collection and to sustain the project by empirical, statistical and/or data analysis
- Analysis of territorial trends, potentials and problems deriving from the policy at different geographical scales, and in different parts of an enlarged European territory
- Analysis the demographic, social and environmental impacts of CFP
- To show the influence of CFP on spatial development at relevant scales (as well evaluating the effects in relation to an integrated management of the coastal zone)
- To show the interplay between EU/EFTA sub-EU/EFTA spatial policies and best examples for implementation
- Deduction of policy recommendation promoting territorial cohesion and a polycentric and better balanced EU territory, including potentials for cooperation and networking

- Propose appropriate instruments to improve a coordination of European sector policies and the ESDP

6.3 Research design

The study will be developed as described in the following:

1) Categorising of costal regions and hypothesis on territorial impacts. The classification will be based on data about:

- Geographical variables as location, area and distance characteristics
- Type of structural dependency (cf. EU-commission report 1999[4]) – we plan to separate between coastal regions dependent on small scale marine harvesting, off shore based fisheries catching, fish processing and marine aquaculture
- Position in the EU and national policy system (classification according to the structural policies in EU, targeting position in the national policies)
- Relation with the implementation of the new European Fisheries Policies

2) Developing of indicators covering the degree of influencing of the new tools of European Fisheries policy, for instance by examining the changes of amount of deliveries and/or the level of capacity reduction.

3) Developing indicators about socio-economic changes that also can be used in analyses that include all regions in EU/EFTA and/or the European nations (as GDP, unemployment, employment rates, gender employment etc.).

6.4 Model of analysis

The analysis should consider territorial impacts of changes in European Fisheries Policy. Our overall model of analysis is:

Independent variable: Changes in European Fisheries Policy ⇨ *Dependent variable:* Territorial impacts

The *independent variable*, changes in European Fisheries Policy (CFP), involves the fishing industry (fishing and processing) and the aquaculture industry. These industries have different dynamics, different technologies, different use of territory, etc. However, both are elements in what may be called European Seafood Industry, they are often located to the same regions and they are parts of the same sector policy. A further description of status and changes in fishing and aquaculture industry in EU and EFTA will be given under Work package (WP) 2.

The *dependent variable*, territorial impacts of changes in CFP, will be concentrated on the following:

- Impacts on employment, social cohesion and demography (WP 3)
- Impacts on regional economic strength (WP 4)
- Impacts on environment and coastal zone management (WP 6)

[4] Regional Socio-economic Studies on Employment and the Level of Dependency on Fishing. Lot No. 23: Coordination and Consolidation Study.

Our understanding is that the major impact of changes in CFP is that the amount of fish resources brought to land will decrease, and the project should study these impacts on the territorial balance and cohesion on different geographical levels. Changes in CFP will not affect all regions in the same way and to the same extent. However, a large majority of fisheries dependent regions are in objective 1 or objective 2 areas (or similar outside EU). According to this, a starting point for our study will be to identify and categorising the diversity of coastal regions in Europe in terms of fishing dependency on different levels. We plan to separate between coastal regions dependent on small scale marine harvesting, of shore based fishing catching, fish processing and marine aquaculture. The study of territorial/ spatial impacts will be done with references to the aims of cohesion, territorial balanced and sustainable development and ESDP-perspectives as polycentric development. More specific the project will study:

- The position of coastal regions in developing of the territorial system of EU and the specific countries. Of specific importance is if the CFP impacts on the disparities between regions in EU and inside the nations.
- The position of the coastal regions in the overall Community policies (as the ESDP) and the structural policies (as the Cohesion fund, ERDF, ESF). Of specific importance is questions related with the coastal regions in-/outphasing in different types of regional policy measures (those mentioned above and the need for specific policies interventions in fisheries regions as "restructuring of the fisheries sector outside the objective 1)
- The territorial development inside coastal regions. The project will examine the ability for doing intra regional/area analyses on different levels. For instance by using data on Nuts 4 or 5 for spatial analyses on Nuts 3 level, and data on nuts 3 level for analysing spatial changes on nuts 2/1 level. The analyses will be related to ESPD perspectives as polycentric development and a balance rural-urban development.
- Demographic-, social- and economic changes inside the coastal regions and if possible inside different types of coastal regions in order to detect regions most negatively and positively affected by the new European fisheries policy.

NIBR will as lead partner initiate and then in cooperation with our partners lead and fulfil the following issues within action 2.1.5 "Territorial Impacts on European Fisheries Policy" that are in line with the "call for tender" and the "terms of reference".

6.5 The work packages

The analysis is divided into six work packages in accordance with the research design and research questions outlined in Term of Reference and the interims report and the final report. WP0 comprise project management and administration. WP1 develops indicators, typologies, concepts and design for gathering of data of territorial impacts. WP2 provides a description of structural changes in the fisheries and aquaculture industry and in the fisheries policy. WP1 and WP2 can be seen as prerequisite for the other WPs and inputs from these two packages are necessary for the different territorial impacts analysis in WP3-5 and for the final synthesis of territorial impacts in WP6.

6.5.1 WP1 Data gathering, indicators and conceptualisation

Common indicators and data on territorial impacts - fisheries and aquaculture employment, demography, regional economic strength, territorial cohesion and a polycentric and balanced development - on different spatial/geographical level are preconditions for the other work packages in the project. Inputs from WP1, therefore, will be necessary for the accomplishment of the project.

The focus in WP1 will be on the following tasks:

- Agreement on territorial indicators, typologies and concepts of territorial impacts
- Development of typologies for coastal regions and fishery dependent regions
- Development of methods for the territorial impact assessment of European Fisheries Policy
- Gathering of existing indicators, proposals of new one in order to reveal the state and developmental trends of territorial impacts due to structural changes in fisheries and aquaculture industries and to changes in the European Fisheries Policy (CFP)
- Gathering of data in both EU-countries and EFTA-countries
- Using and developing map-making methods to measure and illustrate state, trends and impacts of the CFP at different geographical scales, and in different parts of an enlarged European territory
- providing an input to the ESPON database and map collection and to sustain the project by empirical, statistical and/or data analysis;

Data on territorial impacts

The data for the project will partly be information from the Eurostat data bases, made available by ESPON, and partly data collected from national bureaus of statistics and at R&D-institutions as universities and research institutes in the selected counties.

There has already been collected and harmonised much useful statistics by other projects within ESPON that can be used by the project, not least the thematic projects on spatial effects of demographic trends and migration (1.1.4) for both demography and regional typologies and 1.1.1 for regional typologies based on urban areas and polycentrism.

Among policy impact projects project 2.2.1 on the territorial effects of structural funds is especially relevant, not least for the analyses of impacts of former objective 5a (1994-1999) – to speed up the adjustment of agriculture and fisheries structures, since 2000 part of the wider objective 2. For comparison project 2.1.3 on territorial impacts of CAP and rural development policy can be of some relevance. Cooperation with the coordinating project on integrated tools for European spatial development (3.1) is evident. We already possess the common GIS tools required for this cooperation.

Data sources on fisheries and aquaculture

The international cooperation on fishery statistics is coordinated through the Co-ordinating Working Party on Fishery Statistics (CWP), which has been very important for securing high quality international statistics (complete data sets, comparable statistics and harmonised data) and contributing to the quantity of international statistics in this field.

Data are generally submitted either directly to Eurostat and/or to FAO – Food and Agriculture Organisation of the United Nations. The questionnaires use the same concepts and definitions as the EU legislation. Data from the two sources are comparable.

Within Eurostat the domain FISH of the NewCronos data base covers catches, landings, aquaculture production, the fishing fleets, foreign trade in fishery products, employment and supply balance sheets for fishery products. The data base include EEA member countries and major fishing nations outside this territory. The contents of the data base have been maximised in terms of the length of the time series and the country coverage. Eurostat's Fishery statistics CD-ROM is a copy of the NewCronos software and data on fishery statistics.

Concerning catch data, information for recreational fisheries is incomplete. Data further exclude quantities caught but not landed. Data on foreign trade balance are regarded as under estimates. Data will also as far as possible be collected from the fishing industry itself.

6.5.2 WP2 Fisheries and aquaculture industry – structural changes and policy regulations

A description and analysis of status and changes in fisheries and aquaculture industries and European fisheries policy based on common data also constitutes a prerequisite for the analysis of the territorial impact analysis in the other work packages. This will be done in WP2.

Structural changes in fisheries and aquaculture industries

The European Union (EU) is one of the major world fisheries powers. Also EFTA countries, like Norway and Iceland, have large fleets and a noticeable production. In 2001, the EU (still at 15 members) fishery and aquaculture sector realised a volume of production of approximately 7.400 thousands tons, equal to the 5% of the world fishery production. Norway and Iceland realised a volume of production of approximately 5.000 thousand tons. Fisheries and aquaculture plays a varying role in the economy of the different European countries, both old and new ones. Fishery Industry is present in all member states.

The European fishery sector is changing rapidly. Processes on restructuring, reduction, expansion and development are occurring on various sides. The effects of these changes vary, clearly, among countries. Conservation of fish stocks is probably the largest challenge to European Fishery Policy due to heavily exploitation of a number of commercial species, of which some stocks are outside safe biological limits. In fact, in the last decades the over-capacity of the EU fleet has put considerable pressure on fish stocks. Hence the major challenge of the European fishery policy has been and still is to improve the balance between harvesting capacities and available resources.

A number of measures have been implemented and others are foreseen to achieve a sustainable level of the fishery sector, both in EU and EFTA countries. Among them, quotas, fleet reduction, size and mesh limitations are the most important. The reduction of the fleet is perhaps, the main CFP measure aimed to achieve a better balance between the fishing pressure and the natural resources. An analysis of the fleet reduction cannot leave out of consideration the main instrument created to finance the EU fishery policies: the

Financial Instrument for the Fisheries Guidance (FIFG). The FIFG interventions concern all the aspects and the problems of the EU fishery and aquaculture sector.

Through a series of Multi Annual Guidance Programmes (MAGPs), the EU fleet underwent a noticeable reduction. In terms of fishing power, the EU fleet registered a decrease of 899.112 kW in the period 1994-2000. As far as the last changes, it can be said that in 2002, the total number of vessels stood at about 90.000, respect a number of 100.000 in 1998.

Spain, United Kingdom and Greece have been the EU countries that contributed most to this reduction. The FIFG played a crucial role in achieving this objective if we consider that about 53% of the fleet reduction can be attributed to projects financed by the FIFG programme within the period 1994-99. Anyway, it must be outlined that, in some case, the FIFG had opposite results than those expected. For instance, in some countries, like Belgium, Ireland, Portugal, Finland and Sweden, structural funds devoted to the new constructions and to fleet adjustments resulted in a restraint to the reduction of national fleets.

As far as the fishing pressure, if we take into account the volume of the catches in the same period, a decrease is occurring. The volume of the fishing catches decreased of 762.356 tons. In this case, too, the FIFG gave a great contribution (51%) to the reduction. In the other hand, as for fleet reduction in some countries this financial instrument failed in achieving its objectives at national level. For instance, in some countries, as the FIFG financed more new constructions than demolitions, the fishing pressure registered an increase.

In most recent years landings in EU ports continue to decrease mainly due to the overexploitation of some major European fish stocks. The volume of European landings has decreased by about 3% since 2000, their value has increased by over 9% and consequently the average price of fisheries products in the EU has increased from € 1.2/kg to € 1.39/kg over the same period.

The reduction of the fleet capacity and a more limited access to fishing areas, resulting from the large number of measures aimed to the reduction of the fishing effort, contributed greatly to a decrease of the self-supply level of the EU fishery sector. To this we must add that the EU imports more fisheries products than it produces. Fisheries products play, in fact, an important role in the European diet as a valuable source of protein and as a healthy food. The average EU consumption stands at 24.5 kg/head/year, considerably higher than the world average of 16 kg/head/year. Given that European fishery production is largely limited by quotas and restrictions and taking into account the consumption levels, it is expected that Europe will become more dependent on imports.

Anyway, the financing (through the FIFG again) of projects aimed to the creation of (a) joint ventures between EU and Third countries fishery enterprises and (b) new fish farming activities contributed to rise the EU internal supply level.

The aquaculture production, which represents 33% of the total value of EU fishery production and 17% of its volume, was estimated to be approximately 917.000 tons in 1993 while, in 2000 it reached 1.319.000 tons, registering an increase of about 44%. Aquaculture continues to play an important role in alleviating the pressure on fishery resources. Anyway, the importance of aquaculture varies in the EU: in some Member States the value of farmed fisheries products is greater than that of landed products while

in others aquaculture represents an important part of their total production. It is also important to notice the difficulties that the European producers, particular in the aquaculture sector, are facing if considering the high competition from producers in Asia and South-America where wages are relatively low.

Evaluations on the impacts of the most recent EU fishery policies are still in progress. Changes in the CFP were adopted in late 2002, and a number of measures will be implemented in near future, which is likely to affect the fishing industry and particularly the sectors' employment. New measures as like multi-annual management plans for all stocks, reduction in quotas, fleet reduction, limitations on way, time and areas for fishing will take place, followed by financial limitations for supporting modernisation and building of new vessels. Estimates made by the European Commission indicates that the reduction of the fishing fleet will lead to a total loss of 28 000 jobs in the sector over a four year period. On the other hand, aquaculture holds a potential for expansion if efforts are made for that.

The fishery policy framework

The main components of the European Fisheries Policy relate to resources, markets and structure.

The resource policy

By the adoption of the Common Fisheries Policy in 2002 the basis for the development and management in the fisheries was changed significantly. Among the major changes is the adoption of overall fishing fleet capacity ceilings and discontinuation of the capacity reduction programmes which had been in place in the past combined with the abandoning of support to fleet modernisation that will enable an increase in fishing effort. The relative stability is still a cornerstone in the fisheries policy and, as a consequence, TACs will continue to be the main instrument for the resource policy. However, the CFP includes other instruments such as technical measures and effort control and it was indicated from the outset that effort control and to some extent closed areas would be used as important supplementary instruments. Since the introduction of the CFP, TACs have been supplemented with effort control in several fisheries.

The starting point for the CFP was a situation where there was still overcapacity of fleets relative to the catch opportunities available and where several stocks were in a depleted state. The fishery management strategy that the EU Commission has adopted will mainly aim at limiting the fishing effort through application of the day-at-sea instrument and closed areas. This strategy will be implemented within a multi-annual catch/landing quota-system, through which quotas are translated into days-at-sea. The reduction in capacity adjustment instruments combined with the days-at-sea instrument implies that the number of days-at-sea that are available for fishing vessel in those fleet segments that are fishing on the stocks that are under recovery will be diminishing. This will expose the economic consequences of the excess capacity as is already seen in those fleets which depend on stocks for which low quotas have been set. The fact that the targets (to be) set for the recovery of the fish stocks will be related to outputs further implies that the points of reference that will be used for the setting of quotas and fishing effort allowed will be lower than the risk minimising points of reference that have been used up till now. In the long run this will lead to higher and more stable fish stocks. However, in a more pessimistic but highly likely scenario the fishing effort will not be sufficiently reduced because of over capacity. This will imply the continuation of the crisis management of fish stocks in many years to come.

The reduction of catch/landing quotas that will most certainly be implemented in the short and medium term implies that for economic reasons it will be necessary to reduce the capacity of important segments within the fishing fleet until the depleted fish stocks have recovered. The segments which are under most pressure are those exploiting depleted stocks such as most cod stocks, some sole stocks, some Nephrops stocks and hake.

Also in the EFTA region (Norway and Iceland) the past years have been a time of radical change in the fishing sector. After years of overexploitation of the fishing stocks quota systems have been introduced. However, the CFP is not a part of the EEA agreement. This means that the agreement does not include a common resource management regime and it does not allow for free market access either, though it provide for lover customs duties and better market access for a number of fish products.

In the medium and longer term other policies as reflected in the Water Framework Directive and the Marine Strategy (under development) are expected to have important consequences for the fisheries sector.

The fish market policy

The common market policy has since 1970 included instruments for common trade standards and norms, price intervention, producer organizations and trade with third parties. The revised (2001) EU fish market policy includes important revisions which aim at establishing a better balance between fish demand and supply, to improve the competitive capacity of producers and to improve consumers access to information on the market. The instruments include requirements for producers organizations to develop programmes to balance demand and supply, support to the establishment of industry organizations, an update of the intervention programmes and requirements for better consumer information. In relation to food security the EU Regulation (178/2002) on food security will from 2005 require tractability of food products. This may have important consequences for fisheries products in the medium term.

The structural policy

The structural policy for the fisheries sector relates to the Community policy for economic and social coherence and for strengthening the development. The main EU structural funds targeting the fisheries sector are the FIFG (1994-1999 and 2000-2006) which provides support to development of the capture, processing, aquaculture subsectors, for protected areas and for harbour development and PESCA which has assisted fisheries dependent communities in getting access to other structural funds.

Governance and regionalization

The CFP includes an important opening for increased stakeholder participation and for regionalization of the implementation of policies. The main instrument is the development of Regional Advisory Councils which will include representatives of industry and other stakeholder groups and which will advise the Commission on the implementation of instruments. The RACs are a part of the policy for conservation and sustainable exploitation of resources. Similar mechanisms for regionalization have not been stipulated for other policy areas.

6.5.3 WP3 Impacts on employment, cohesion and demography

Socio-economic impacts of fisheries policy on coastal and fishery dependent regions vary between regions. In countries like Norway, the Faeroes, Iceland and Greenland, here have been a universal tendency among smaller, remote fishing communities for depopulation and ageing population structure. In north-east Scotland many coastal villages seem to have lost their identities as fishing communities. In more industrialised, urban regions with fishing industry, employment in the fishery sector may be reduced but the overall regional socio-economic effects may be less devastating than in the periphery. It is, therefore, important to note that divergent economic, social and demographic trends may characterise the development and the territorial impacts in urban and remote regions.

Social cohesion in terms of reduced income disparities and unemployment and a more balanced spread of economic activity in Europe, will not only improve personal and social well-being but also increase income and living standards and strengthen regional competitiveness and economic growth. WP3 will focus on impacts on fishery and aquaculture employment, social cohesion measured by income distribution and jobless households and on demography. The analysis takes the variables in Terms of reference as its point of departure and uses data from the data sources listed in WP1, i.e. Eurostat, NewCronos etc.

Impacts on employment in fisheries and aquaculture industries

As far as the employment level, first it must be said that the number of people employed in the fishery sector is not limited to the number of fishermen at sea. The aquaculture and processing sectors, as well as ancillary industries such as marketing, distribution and shipbuilding are also important sources of employment. These activities play a significant role in regions where alternatives are scarce. The participation of women in the fishery sector is most important in the processing sector where in some regions women make up more than 50% of the work force.

As far as the changes on the employment rates and, in particular, the effect on the number of jobs of the EU fishery policies, the FIFG 1994-99 had a global negative impact on employment. The result for the period 1994-99 was a decrease of approximately 900 jobs. In particular, the impact has been very different among the sectors of the fishery chain. If we take into account the fish catching sector, the number of jobs created by new constructions and joint ventures were not balanced by the employment decrease caused by fleet reduction. The overall result was a decrease of more than 10.000 jobs. Completely opposite results are registered in the other sectors. Projects financed in the aquaculture sector created approximately 3.600 jobs, while the processing sector registered an increase of more than 5.600 jobs. It is estimated that also in the marketing channel new jobs were created as an effect of the FIFG financed projects.

The employment analysis in WP3 will look closer into employment impacts of the European fisheries policy and how this policy may affects employment in different regions and how employment vary by gender and age. The analysis takes the variables in Terms of reference as its point of departure and examines the following variables in Fisheries and Aquaculture employment:

- Absolute employment and share of fisheries employment
- Evolution of the share of fisheries employment
- Age structure

- Absolute employment and share of aquaculture employment
- Evolution of the share employment of aquaculture
- Age structure

Impacts on social and territorial cohesion

A central aim of EU is to diminish disparities in income and employment, and achieve a balanced and sustainable development in all regions, and to improve integration and cooperation between regions. One way of doing this is to make sector policies which have spatial impacts and regional policy more coherent. ESPON action 2.1.5 will analyse the European Fisheries Policy in light of this cohesion perspective. The analysis takes the variables in Terms of reference as its point of departure and examines the following Social cohesion indicators:

- Distribution of incomes: ratio income received by the highest earning 20% and the lowest 20%

The data sources for the distribution of incomes can be several, with different populations. For instance; income derived from tax statistics use a different population than income derived from employment statistics. In order to make comparisons it is of vital importance that the data sources apply the same definitions. To the extent that the Regional Accounts for households are available for most countries, the comparability will be ensured, and we will be able to make comparisons at a regional level (NUTS 2 or 3).

- Jobless households: share of households in which no member is employed

The best data source for describing jobless household is to use The European Union labour Force survey. This is an enquiry directed towards households, designed to obtain information on the labour market and related issues. Since 1995 the survey has covered fifteen Member States. Norway and Iceland have also supplied data since 1995. The national statistical institutes are responsible for selecting the sample, preparing the questionnaires, conducting the direct interviews among households, and forwarding the results to Eurostat.

This kind of labour market information gives one the opportunity to obtain information on relevant labour market aspects across all sectors of the economy in a consistent manner. It also facilitates the interpretation of the information in a wider population setting, since the information collected need not necessarily be confined to persons in the labour force (employed/unemployed) but can involve all other persons in the households covered. This is an important additional dimension as analysis is increasingly concerned with those on the periphery of the labour market.

In recent decades the borderline between the labour force and what is termed the "economically inactive" population has become increasingly blurred, due to the increasing incidence of part-time and temporary work and the ease with which large numbers of persons (particularly women and young persons in the final stages of their education) repeatedly enter or leave the labour force. These aspects are highly relevant for employment/unemployment in the fishery sector.
The wider coverage associated with labour force survey also allows the possibility of assessing labour market effects in a household or family context. Another advantage of a labour force survey is that it affords the opportunity to define certain labour market characteristics not normally available from other statistical sources. Since the definitions used to measure these entities are the same for each country, comparability between the involved States is guaranteed for certain estimates.

Impacts on demography

Demography will be included in WP3 as history has most often proved demography to be part of the *outcome* of societal processes and not the cause of them. The demography of the fisheries should in other words primarily be analysed as part of the outcome of fishery and aquaculture employment, the demographic processes being identified by the structural changes and the employment situation rather than the opposite. The jobs related aspect means we will be best served by a division of the fishery population into life stages as the age aspect is important for both the industry and the wider demographic realities such as migration and the resulting sex and age biases.

The fishery population should be compared to that of the population of the territories at large to see if there can be identified special age structures, sex composition and/or nationality/migration issues. This is due to the possibilities of some jobs being considered less attractive by the local population and therefore accepted only by certain groups, like immigrants recently arrived in a country.

Demography is central to ESPON project 1.1.4, the spatial effects of demographic trends and migration. Within this project there have been made, and will be made additional typologies concerning demographic territorial development within the ESPON territory, also linking them to the territorial impacts of other processes. These territorial typologies will be used in the project to define fisheries in a wider territorial context in a situation where the technological and industrial developments of recent decades have often made fisheries less visible in employment at the regional levels.

The analysis takes the variables in Terms of reference as its point of departure and examines the following Demographic indicators:

- Population density
- Share of population younger than 20 years
- Share of population older than 60 years
- Evolution of the population (average annual change over previous x (5 to 10) years

6.5.4 WP4 Impacts on regional economic strength[5]

The Third report on economic and social cohesion states that the economic growth in the EU has slowed appreciably the last three years. This has resulted in a rise in unemployment, with entailing social implications. The low growth of productivity also reflects more fundamental problems in the EU.

[5] European Commission: *A new partnership for cohesion*. Third report on economic and social cohesion, Luxembourg 2004
Eurostat (1995): *Regional accounts methods – Gross value added and gross fixed capital formation by activity*. Statistical document theme 1 (General statistics) Series E: Methods. Office for official Publications of the European Communities, Luxembourg 1995
Eurostat (1996a): *European System of Accounts ESA 1995*. Luxembourg 1996
Eurostat (1996b): *Regional accounts methods –Household accounts*. Statistical document theme 1 (General statistics) Series E: Methods. Office for official Publications of the European Communities, Luxembourg 1996

There are, however, wide disparities in output, productivity and employment between countries and between regions. A main trend is found to be the narrowing of disparities in income and employment. In spite of this, large differences remain. GDP per head in Greece and Portugal are still only around 70 per cent of the EU average. In Greece and Spain some 6-8 per cent fewer people of working age are employed than the average.

According to Daniel Tarschy (2003)[6], some disparities between the member states and their regions seem to shrink whereas others are more resistant to change. There are clear signs of convergence when it comes to production. For unemployment, however, the gaps are growing, linked to the recent deceleration in economic activity. Tarschy expresses it this way: Productivity has increased in poor areas without generating new jobs. Production in the Objective 1 regions has been modernised but has not been able to absorb more manpower.

In the third report on economic and social cohesion, the commission finds that GDP per head in Objective 1 regions has converged towards the EU average, thus understating the GDP as a measure of production, not necessarily comparable with social welfare.

Also the long-term evolution of GDP reveals that the disparities between countries have declined over time whereas disparities among regions have proven to be more stubborn. This may have to do with differences in regional strength and the regions' ability to change and to adapt new technology, industries and infrastructure. Regional vulnerability, measured as the regions' dependence of a few, major industries, (here fishering and aquaculture), is another aspect. The analysis will examine the following indicators to measure regional economic strength:

1. Gross Domestic Product (GDP) per inhabitant in PPP
2. Evolution of GDP per inhabitant
3. Unemployment rate
4. Evolution of unemployment rate
5. GDP/occupied person
6. Fisheries share of regional/national GDP
7. Aquaculture share of regional/national GDP

The first question occurs for the variables 1. – 5. The regional level is not specified here. Does this imply that purely the national figures are required? The figures on the national level are available in several data bases. However, regional figures will provide a deeper insight of the regional strength and weaknesses. We will therefore, as far as they are available, analyze figures from the Regional Accounts. Although there may be a methodical problem concerning regional Purchasing Power Parities. When regional PPP are not available, we will use the national PPP, thus assuming no regional price differences within the countries.

The regionalisation of the figures will vary between the countries: Some countries have long time series with an advanced specification for several industries and regional levels, meanwhile other countries only have figures on the national level, or not lower than NUTS 2. The first step will be to collect and categorize the data available in a matrix.

[6] Tarschy, Daniel (2003) Reinventing Cohesion, the future of European Structural Policy Swedish Institute for European Policy Studies, Report No. 17, Stockholm 2003

For the productivity indicator (5.) we find it most accurate to study the Gross Value Added per occupied person, if the GVA figures are available[7]. The same applies for the indicators 6. and 7. : Fisheries and Aquaculture share of regional/national GVA.

An interesting aspect of the regional productivity can be revealed by analysing the regional GVA per occupied person, by industry. In this way regional comparative advantages can be studied. For instance; In Norway the GVA per employee in the northernmost county are far below the national average. The GVA per employee within the primary industries, however, are far above the national average, indicating a high productivity within these industries in this specific county. If possible we will also attend to analyze the GVA per occupied person at industry level.

There will be a methodical problem though, if different methods for regionalisation of the GDP/GVA are applied in different countries.

Following the EEA treaty, the member states shall compose the National Accounts in accordance with the basic methodology as given in the European System of Accounts (ESA). From 1996 the ESA included a chapter on Regional Accounts (Eurostat 1996a). There are also implemented statistical documents, containing the detailed documentation for the practical use of the basic rules stated in the ESA. (Eurostat 1996b and Eurostat 1995).

When followed, the recommendations above ensure comparability of the methods used and the resulting figures for the different European countries.

6.5.5 WP5 Impacts on environment – integrated coastal zone management as a response

An important step in the European policies has been to become aware of the need to take into consideration the importance of the coastal zones. Coastal zone have a great importance for European citizens: besides the fact to host a large number of peoples, they represent important supply source for foods and raw materials, are fundamental for some sectors like transport, tourism and host some of the most interesting natural habitats and a unique biodiversity in terms of flora and fauna. Coastal ecosystems also tend to have very high biological productivity. Coastal zones are subject to great environmental problems like habitat destruction, water pollution, and coastal erosion and resources exploitation. The excessive exploitation of the yet limited resources of the coastal zones gives rise to more and more frequent conflicts among the various sectors using these resources. For instance, the aquaculture industry, which is more regionally concentrated and is located in the coastal zone, frequently competes with or has impacts on other activities in the coastal zone, such as tourism, recreation and protection of habitats and wild species.

Since 1996, the European Commission has been working to identify and promote measures to remedy these problems and to improve the overall situation in the European coastal zones. In particular, in the period 1996-1999, the Commission operated a Demonstration Programme on Integrated Coastal Zone Management (ICZM) aimed to

[7] We consider the non-produced transactions of FISIM (financial intermediate services indirectly measured) and the net taxes that together make the difference as not so relevant to the regional productivity. At least as long as the net taxes may be allocated according with the total GVA, and not to the various industries.

provide technical information about sustainable coastal zone management, and to stimulate a broad debate among the various actors involved in the planning, management or use of European coastal zones. The concept of ICZM emphasises the importance of the coastal zone of Europe as a whole and delivers methods for clarifying and managing the diversity of conflicting interests and number of challenges in the coastal zone. Being an integrated approach, the ICZM offers a broader perspective to aquaculture and most of the fishery-related activities. The decline of fishing activity and vulnerable fisheries dependent areas should be addressed through ICZM.[8]

Coastal zone planning is an important tool for ICZM and sustainable decision making, and in balancing conservation and user interests. ICZM is defined by the EU as a dynamic, multi-disciplinary and interactive process designed to promote sustainable management of coastal areas. The concept is based on a) A broad "holistic" perspective (thematic and geographic), B) A long term perspective, C) Adaptive management (responding to new information and conditions) during a gradual process, D) Local specificity, E) Working with natural processes, F) Participatory planning, G) Support and involvement of all relevant administrative bodies, H) Use of a combination of instruments. Norway has also developed an efficient system for ICZM, promoting a holistic, collaborative and bottom-up approach and involving relevant stakeholders in the planning processes.

Availability for good sites for aquaculture is one major challenge, and a further expansion has to be addressed through using ICZM. This is needed for a proper integration of aquaculture with the other activities carried out on the coast and protection of the coastal environment. Being an integrated approach, the ICZM offers a broader perspective to aquaculture, most of the fishery related activities and environmental issues as biodiversity, and the main focus is the use of coastal territories. Existence and content of coastal zone plans according to the ICZM principles will therefore be studied. Of particular interest is how the plans are facing the challenges related to changes in CFP in fishing dependent areas. Another aspect is how the plans are facing environmental issues as water quality, biodiversity, etc. A relevant question is to what extent environmental objectives are integrated in the plans. To ensure relationship between fisheries policy and environmental policy, the project will take note of the Interreg III B North Sea project; "Save the North Sea", and similar Interreg projects. EUs Water Framework Directive will have major influence on the coastal zone management, and call for attention. The purpose of this Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. The basis for the directive is an ecosystem approach across administrative and geographical borders.

Several indicators of a sustainable coast can be considered. In a report to the EU ICZM Expert Group a set of indicators are recommended – one measuring progress in sustainable development and one measuring progress on implementing ICZM.[9] Some examples of indicators seem to be relevant for our project, as: change to significant coastal and marine habitats and species, concentration of nutrient in coastal waters, number, volume of marine oil spills and volume and value of fish landings.

[8] Official Journal of the European Communities. Recommendation of the European Parliament and of the Council of 30 May 2002, concerning the implementation of ICZM in Europe.
[9] European Topic Center on Terrestrial Environment (2003): Measuring Sustainable Development on the Coast. Report by the Working Group on Indicators and Data under the lead of ETC-TE.

6.5.6 WP6 Final report, conclusions and recommendations.

The purpose with WP6 is to create a synthesis and draw together in an integrated analysis all the information and results from the others work packages, WP1-WP5. WP6 will not only summarise all results but also present the final remarks about territorial impacts of European fishery policy and presents policy recommendations. WP6 will also seek to integrate results from other relevant ESPON actions.

The policy recommendations with regard to sector policies and territorial impacts which will be outlined in WP6 and presented in the final report, take the policy orientation in ESDP, territorial cohesion, balance and polycentrism, as their point of departure. At this tender stage of the work it is neither possible nor reasonable to present any recommendations.

7 Time schedule

ESPON Action 2.1.5 starts in autumn 2004 and ends in May 2006. The project will be divided in four stages in accordance with the deliveries of the three interim reports and the final report. The first five work packages will be carried out in all four stages whereas the last work package, the final report, will be dealt with in the three last stages, cf. the meeting agenda and the project structure. The tasks in the time schedule are related to the recommendations set out in Terms of reference point iii General objectives and iv Primary research questions.

Stage 1 focuses on reaching a consensus on indicators and how to obtain the data necessary for carrying out the territorial impact analysis. This implies establishing common definitions, clarifying concepts, outlining relevant methodology, examining availability of data and reviewing earlier and ongoing studies. Results of ESPON projects in course, particularly under priority 2 and 3, and relevant Interreg III B projects, will be taken into account in this work. At stage 1 a first detailed and comprehensive list of statistical and geographical data from international and national sources also will be worked out. Preliminary hypothesis and a first outline of a diagnosis of the European fishery sector and main territorial impacts will also be part of this stage. Stage 1 terminates in December 2004 when the first interim report is delivered.

Stage 2 will focus on definitions, typologies, diagnosis and data input (indicators and maps) to the ESPON database on the basis of work done at stage 1. Appropriate indicators and instruments will be worked out in order to detect costal regions and territories within the ESPON space (EU27+2) that are most positively and negatively affected by trends and impacts related to European Fisheries Policy. For this purpose a typology of coastal regions will be presented together with a diagnosis of changes in the fishery sector and the assumed main territorial impacts. Special focus will be placed on demographic structures and trends, polycentrism, regional economic structure and potentials, environmental elements and networking between coastal regions. A method