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TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

on the integrated management of coastal zones

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1. SUMMARY

This Communication considers some of the main features of the coastal zones, which are continuing to undergo environmental degradation in many parts of Europe. It explains why action at Union level is necessary in order to make faster progress towards sustainable development of the coastal zones. It reflects the determination to better integrate the various sectoral policies of the Union with each other and with the policies of the Member States.

A demonstration programme on the integrated management of coastal zones is planned, with the aim of showing how to apply in practice the principles of integration and subsidiarity in order to increase the effectiveness of existing instruments. One key factor is better coordination both between sectors of activity and the various levels of territorial authority.

The Communication will serve to obtain the views of the many parties with a stake in the future of the European coast and to prepare the launch of the demonstration programme.

The demonstration programme will be used to test cooperation instruments and mechanisms. The lessons learnt and the response will make it possible to identify possible complementary measures to be carried out at the European and other levels of decision-making.

2. BACKGROUND

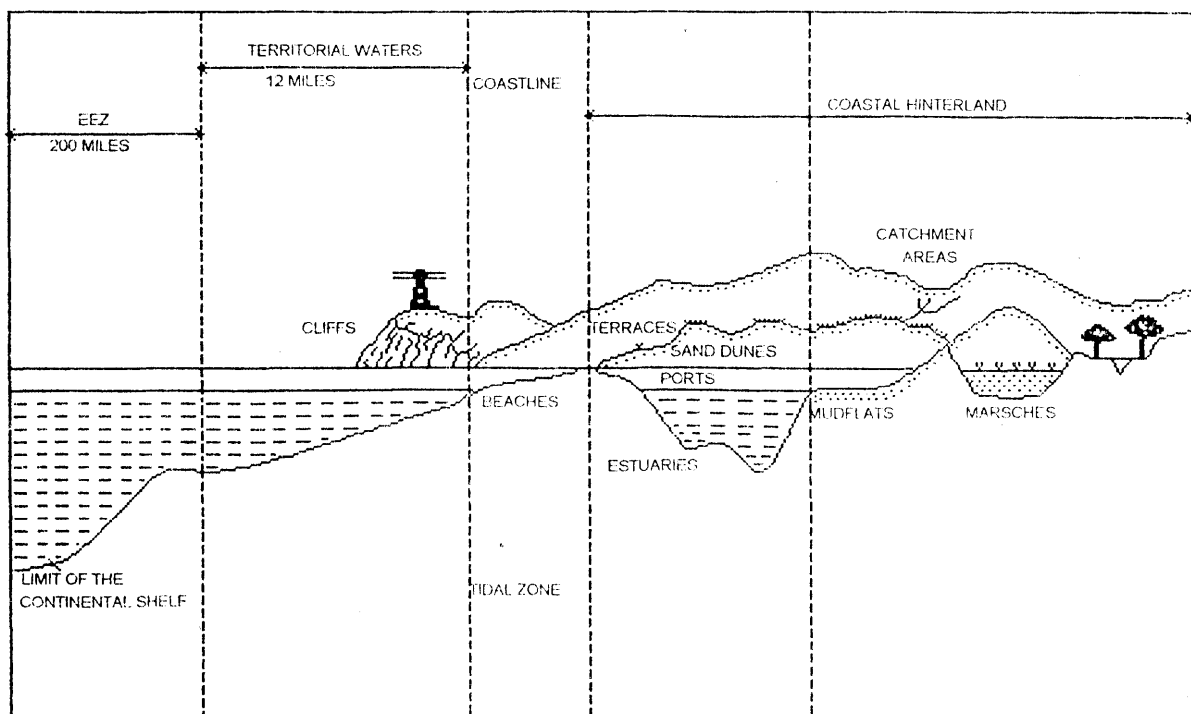
The quality of the environment and natural resources is continuing to deteriorate in many European coastal regions. However, the need to conserve the coastal zones as an element of the Community's natural and cultural heritage and as an essential basis for economic and social development has long been recognized¹²³⁴. Moreover, there are numerous legal, financial and planning instruments available which are directly or indirectly applicable to coastal zones. The current situation is largely due to the absence of mechanisms allowing the complex relationships between human activities and the environment to be taken into account in the decision-making processes.

2.1 REVIEW OF THE PROBLEMS

2.1.1 Definition of coastal zones

For the purposes of this document, the coastal zone is defined as a strip of land and sea territory of varying width depending on the nature of the environment and management needs. It seldom corresponds to existing administrative or planning units⁵. With regard to fisheries, it is common to limit the coastal zone to territorial waters as defined in the Convention on the Law of the Sea, although this limit does not correspond to any distinct biological or management unit. The natural coastal systems and the areas in which human activities involve the use of coastal resources may therefore extend well beyond the limit of territorial waters, and several kilometres inland (see figure 1).

Figure 1: Definition of the coastal zone for the purposes of integrated management.⁶



2.1.2 Relative importance of the coastal zones for the European Union

Compared with the other continents, Europe has a large continental shelf and a relatively long coastline in relation to its land area. There is a wide variety of types of coastal zone, with different natural conditions and patterns of human land use. Human impact is most visible in Europe, where the development of the environment has also been followed and studied longest. Its coastal waters receive the highest input of nutrients⁷.

Of course the 89 000 km of coastline of the European Union are not equally distributed between the 13 seaboard Member States. Figure 2 shows that about half of the level 3 territorial statistical units⁸ are on the coast. This is true of all the Danish counties, but only a quarter of the Spanish provinces or the French departments. The settlement pattern of the coast also varies considerably: while 19% of the population of the coastal states of the Union live in coastal municipalities, 41% of these 68 million coastal inhabitants are Italian or Spanish. The population in the coastal municipalities accounts for 70% of the national total in Denmark and 44% in Portugal, but only 3% in Belgium and 5% in Germany (see figure 3).

Figure 2: Coastal NUTS 3 units

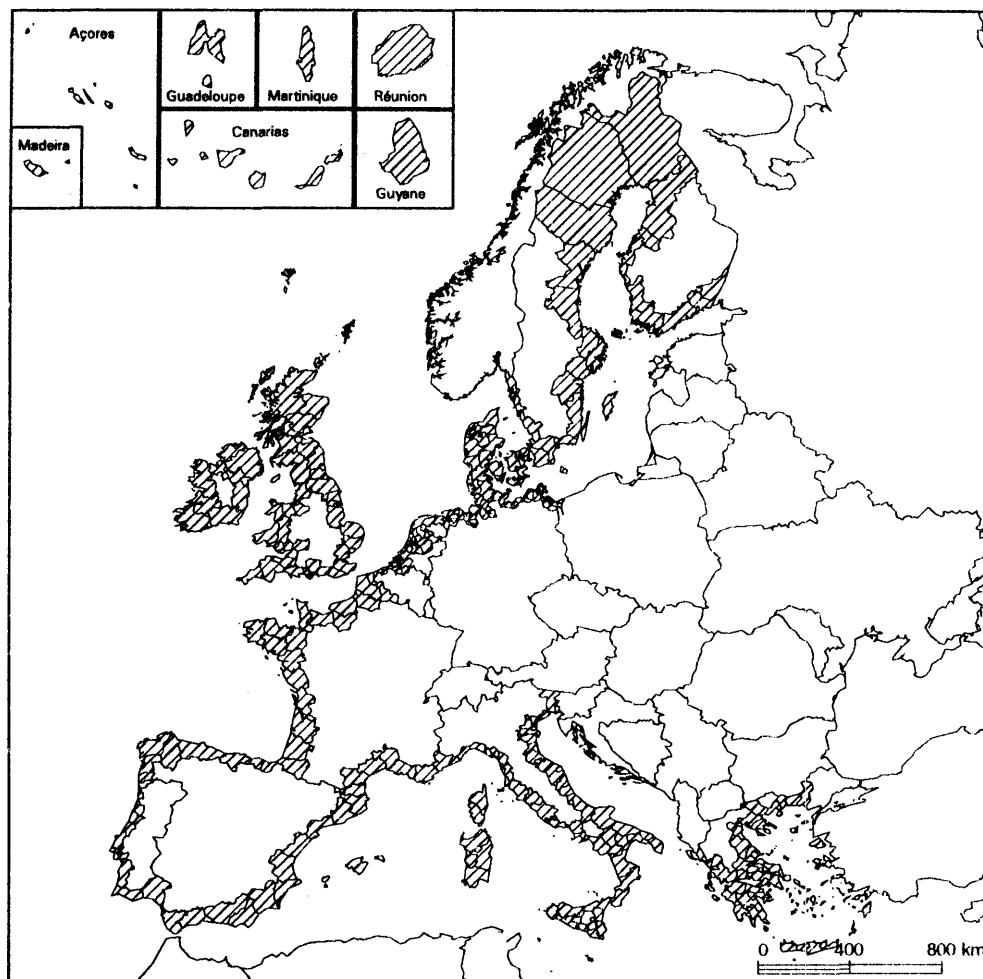
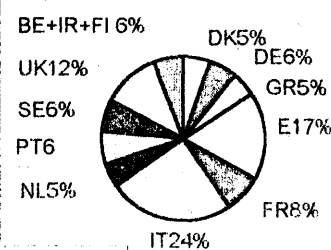


Figure 3: Relative importance of the coastal population (Source: Eurostat)

- A : country
 B : total population ('000)
 C : population of the coastal municipalities ('000)
 D : population in a 50 km coastal band ('000)
 E : remainder of the territory ('000)

A	B	C	C/B %	D	D/B%	E	E/B%
Belgique-Belgie	10.041	295	3	3.190	32	6.851	68
Danmark	5.171	3.600	70	5.171	100	0	0
Deutschland	80.614	3.910	5	8.878	11	71.736	89
Ellada	10.323	3.445	33	8.817	85	1.506	15
España	39.085	11.703	30	21.201	54	17.884	46
France	57.372	5.245	9	13.981	24	43.391	76
Ireland	3.549	1.810	51	3.061	86	488	14
Italia	56.859	16.919	30	33.853	60	23.006	40
Nederland	15.182	3.231	21	11.412	75	3.770	25
Portugal	9.862	4.351	44	7.236	73	2.626	27
Suomi	5.042	1.826	36	2.994	59	2.048	41
Sverige	8.668	4.373	50	6.796	78	1.872	22
United Kingdom	57.998	7.961	14	42.592	73	15.406	27
Σ	359.766	68.669	19	169.182	47	190.584	53



C/ΣC

Σ

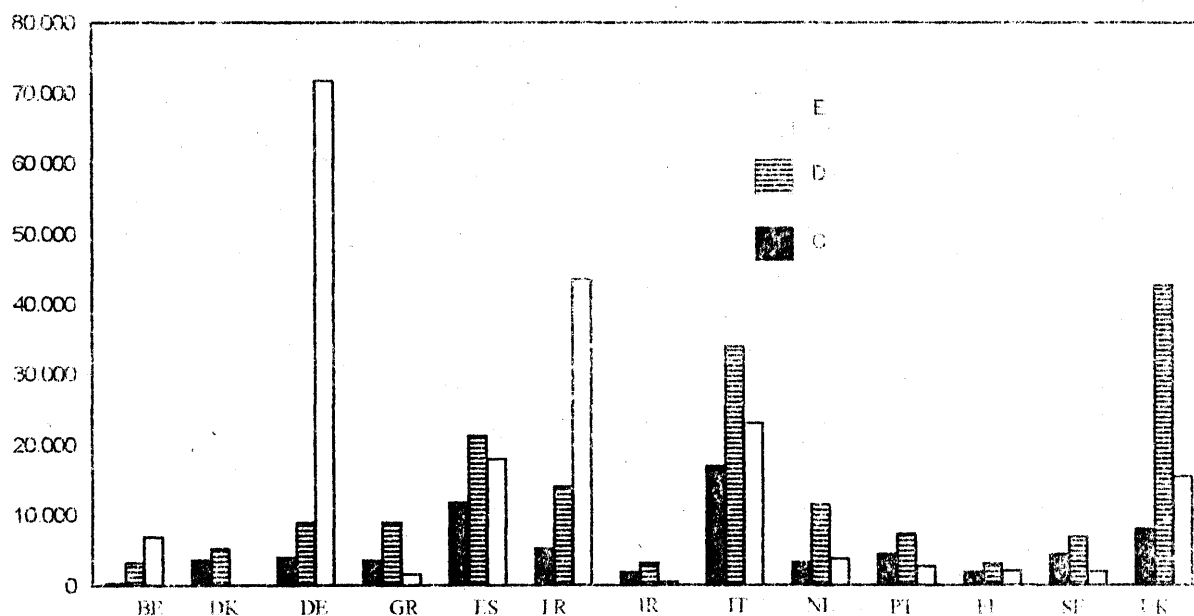
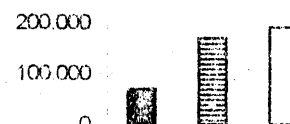
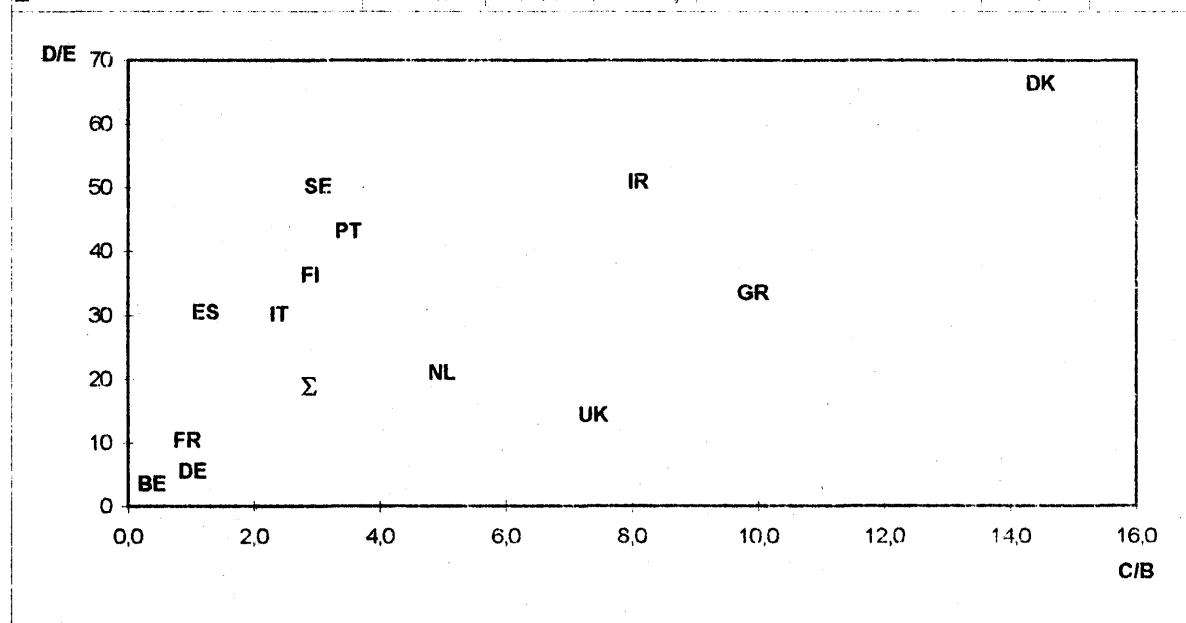


Figure 4 uses two indicators to illustrate the "coastal" and "land" character of the Member States: i) the ratio of length of coastline to land area; ii) the share of the national population living in the coastal municipalities. The coastal character is less apparent in some countries (BE, DE, FR) and very pronounced in others (DK), while in others it has more of a demographic (IT, ES, SE) or geographic (UK) component.

Figure 4: Coastal character of the countries of the Union: geography and population
(Source: Eurostat)

A : country
B : total national population
C : population of the coastal municipalities
D : length of the coastline (km)
E : land area (km²)

A	B	C	C/B*100	D	E	D/E*100
Belgique-Belgie	30.518	83	0.3	295	10.041	3
Danmark	43.080	6.227	14.5	3.600	5.171	70
Deutschland	356.958	3.378	0.9	3.910	80.614	5
Ellada	131.957	12.991	9.8	3.445	10.323	33
España	504.790	5.791	1.1	11.703	39.085	30
France	543.965	4.698	0.9	5.245	57.372	9
Ireland	68.895	5.629	8.2	1.810	3.549	51
Italia	301.303	6.808	2.3	16.919	56.859	30
Nederland	41.029	1.970	4.8	3.231	15.182	21
Portugal	83.859	2.797	3.3	4.351	9.862	44
Suomi	338.147	9.420	2.8	1.826	5.042	36
Sverige	410.934	11.930	2.9	4.373	8.668	50
United Kingdom	241.752	17.457	7.2	7.961	57.998	14
Σ	3.097.187	89.179	2.9	68.669	359.766	19



2.1.3 Reduction of biodiversity, water pollution, impoverishment of landscapes

At the interface between sea and land, life forms adapted to the special environmental conditions have evolved. The natural habitats of the shoreline are very varied but also very small in area, and have been in sharp decline for several decades (see box 1). Eight of the forty priority habitats listed in the Directive on the conservation of natural habitats and of wild fauna and flora⁹ are coastal. Approximately a third of the Union's wetlands are located on the coast¹⁰, as well as more than thirty per cent of the Special Protection Areas designated under the Directive on the conservation of wild birds¹¹. Coastal ecosystems tend to have very high biological productivity. The reproduction and nursery grounds of most fish and shellfish species of economic value are in the coastal strip, and a significant proportion of the catch of these species comes from this area, which accounts for almost half of the jobs in the fisheries sector¹².

The quality of coastal waters is a major cause for concern. The two most spectacular phenomena in recent years, oil slicks and algal blooms, are illustration of the fact that coastal communities frequently suffer the consequences of events or developments beyond their control.

The settlement of the coastal zones and utilization of their natural resources since early times by man has created original forms of rural and urban landscapes, reflecting cultures centred on trade and largely oriented towards the outside. Urbanization and uniform agricultural and industrial developments have considerably reduced the biological diversity and cultural distinctness of the landscapes in most parts of Europe.

These problems are likely to be compounded in future as a result of the general trend in environmental and socio-economic conditions.

Recent research shows that climate change would involve a rise in sea level of several millimetres per year, and an increase in the frequency and intensity of coastal storms. The combined effects of these two phenomena could have serious repercussions depending on where they occurred, such as major floods¹³.

If appropriate action is not taken, the expected surge in tourism in the coastal zones¹⁴ in particular will increase the pressure on natural, rural and urban environments.

Box 1: Reduction of the diversity of natural environments and of landscapes

* Many British estuaries have lost between a quarter to half of their intertidal habitats over the last 150-200 years. In some cases the proportion is much higher. 90% of the estuarine habitats of the Tees has been lost in the last 100 years and 85% of the mudflats of Belfast Lough since the 16th century. In 1989 there were 123 cases of land claim affecting nearly 30% of Britain's estuaries (EUCC)¹⁵.

* 75% of the dune systems of southern Europe (from Gibraltar to Sicily) have disappeared since 1960 (EUCC).

* More than 32 000 ha of the German Wadden Sea has been reclaimed since 1963 and, as a result, the German North Sea coastline has been reduced from 1 200 km to 700 km during that time. Internationally important bays like the Nordstrander Bucht and the Meldorfer Bucht have been cut off from the sea in the last two decades (EUCC).

* The estuary common to the Odiel and the Tinto, near Huelva in south-west Spain, was considerably degraded in about thirty years by harbour activities and industrial developments. 80% of the 3 000 ha of intertidal flats of the right bank of the Tinto were covered with phosphogypsum deposits. More than 7 000 ha of the flood plain of the Odiel were seriously affected by salt works, hydrological modification, pollution by heavy metals and dangerous chemicals. Today the Odiel flats are protected owing to their importance (30% of the European nesting population of Spoonbill). An expensive rehabilitation plan for the estuary had to be implemented to control pollution.¹⁶

* The Loire estuary comprises very diverse natural environments including some of European interest. However, over the last few decades, the original heritage has been considerably impoverished. By 1978 the natural banks had shrunk to some 30 km compared with 300 at the beginning of the century. Of the reed beds which covered thousands of hectares on the river banks, only a few fragments remain, which serve as a refuge to rare species such as the White Stork or Black Kite.¹⁷

* Of 700 000 ha of coastal flats existing in Italy at the beginning of the century, there remained 192 000 ha in 1972 and less than 100 000 ha in 1994.¹⁸

c* In 1976 the mixed wood and pasture lands of Normandy covered 1 018 km² in a 5 km band from the coast. In 1980, only 892 km² remained.¹⁹

2.1.4 Competition for space and seasonal variations in pressure

A wide range of human activities take place in the coastal zones (see table 1), although not necessarily more than in other areas. Problems arise when these activities tend to develop together on the narrow coastal strip, creating conflicts between activities and with the goal of conservation of the natural ecosystems and landscapes. This concentration is reflected in population density, which in 11 out of 13 countries is higher in the coastal municipalities than in the remainder of the country (see figure 5). Moreover, the strong temporal variations in tourist activity and in the associated environmental pressures further complicate the management of the coastal zones.

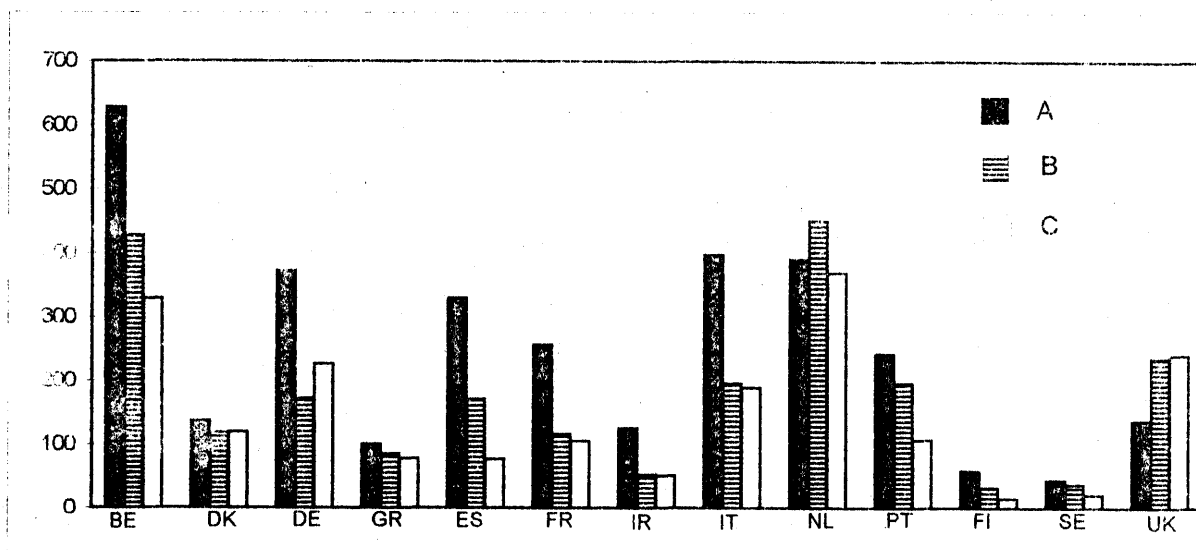
Table 1: Typical goods and services produced in the coastal zone.²⁰

Goods using mainly	renewable resources	non-renewable resources
	Fish Shellfish Kelp and other species of seaweed Fresh water (desalinated seawater) Energy from waves, tides and thermal or salinity gradients	Oil Gas Minerals Sand and gravel
Services consuming mainly	renewable resources	non-renewable resources
	Transport Defence Recreation: e.g. bathing, boating, fishing, skin-diving, observing wildlife Disposal of degradable wastes and other residues	Disposal of waste and other non-degradable residues Facility siting: onshore/offshore, fixed or mobile industrial operations, e.g. materials processing, marine terminals, ports, seabed pipelines and cables, power plants

Figure 5: Population density at municipal level (Source: Eurostat)

Population density

- A : coastal municipalities
- B : 50 km coastal strip
- C : national territory



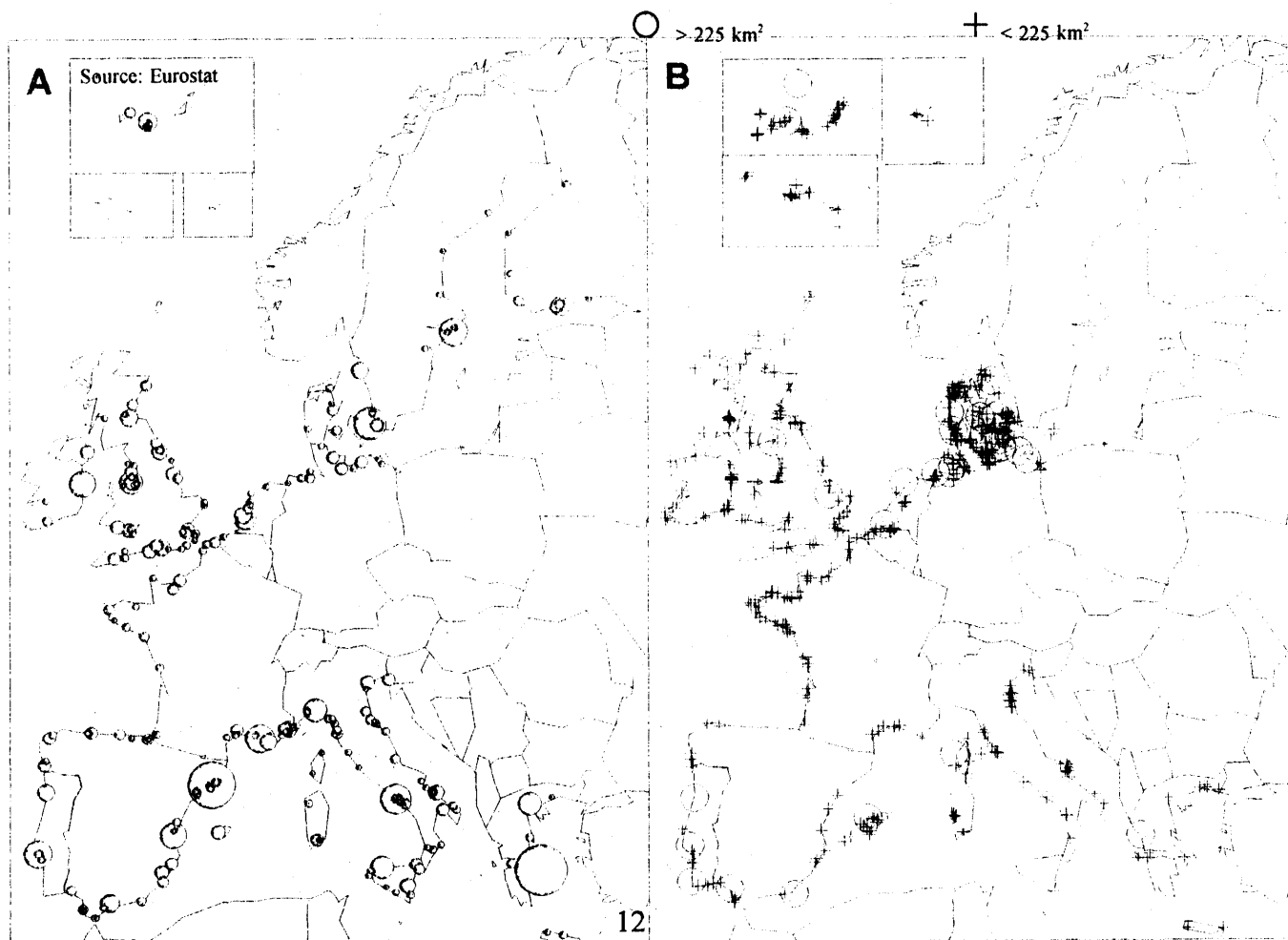
Three main types of coastal zone can be identified at European level: "urban/industrial", "intensive tourism", "nature/rural/fisheries", in which the predominant function represents very different management problems and different demographic and economic weights (see figure 6).

Figure 6: Main types of coastal zones

	A	B	C
Intensive tourism ("Top ten regions")	VAR 715.232	KOBENHAVN-ST. 558	PYRENEES-OR. 129
	ALICANTE 616.671	SAVONA 196	CORSE 127
	ALPES-MARIT. 583.663	VENEZIA 140	ALPES-HTE-PROV. 124
	BARCELONA 561.236	ALPES-MARIT. 136	SAVONA 103
	VALENCIA 517.735	GENOVA 131	VENDEE 102
	VENDEE 491.346	IMPERIA 127	VAR 101
	BALEARES 487.872	VAR 120	DODECANESOS 93
	HERAULT 484.029	FORLI 120	CYCLADES 90
	ROMA 454.202	LATINA 117	GERONA 87
	PYRENEES-OR. 430.240	LUCCA 116	AUDE 78
A : Number of tourists (1.8.1987)			
B : Number of tourists per km2			
C : Tourists/inhabitants			
Source: Vandermotten, ULB, Bruxelles			

A : Urban/industrial
Towns > 50.000 inhabitants

B : Nature
Special protection areas, (Directive 79/409/EEC)



2.1.5 Complexity of relationships between human activities and the coastal environment

The juxtaposition of activities in a limited space does not in itself explain the worrying development of the coastal environment.

Complex natural phenomena are at work and the consequences of human activity interacting with these phenomena are difficult to evaluate. Disturbance of the coastal environment can have a remote origin: a third of nitrogen input to the Baltic Sea comes from the atmosphere²¹. The nutrients drained by the river systems and flushed into the sea are a major cause of algal blooms. The observed effects are often difficult to relate to the causes, as they do not necessarily appear immediately (pollutants trapped in estuary muds and released later). Major damage (pollution or loss of biological diversity) frequently results from a combination of factors.

As a result of taking these interactions into account insufficiently or too late in the planning and decision-making processes, sectoral activities handicap each other and damage the environment (see box 2).

Box 2: Examples of the complexity of coastal processes and of the relations between human activities and the environment.

*** Coastal erosion**

At the beginning of the century a sea wall was built to protect the island of Sylt (D) against flooding during storms. However, the action of the waves reflected from the wall during rough weather led to increased coastal erosion. Expensive work had to be carried out on several occasions to check the problem created by an inappropriate technical solution: a vertical wall instead of a gentle slope. (Schierreck *et al.*)²².

*** Eutrophication**

In many European coastal areas, a considerable increase in the concentration of nutrients in coastal water has been recorded. The principal sources are agriculture and intensive livestock-farming, municipal waste water and, locally, intensive aquaculture. Nutrient enrichment of water stimulates the growth of phytoplankton, leading in certain circumstances to the phenomenon of algal blooms. Competition for the biotic elements, and in particular the oxygen consumed for plant growth and the decomposition of organic matter, is detrimental to wildlife and aquaculture. Moreover, the effects of these phenomena reduce the tourist attraction of affected sites.

*** Delayed effects**

Research work has shown that almost all suspended matter carried by rivers and discharged into the sea settles in the coastal zone along with associated pollutants (C.E.C.)²³. Pollutants thus accumulate in coastal sediments causing immediate or delayed effects. Under the Delta plan in the Netherlands, the closure around 1965 of the Harvingvliet, one of the arms of the Rhine, created a body of water subject to the usual phenomena of sedimentation. Owing to the heavy industrialization of the catchment area in the Netherlands and in Germany, sediments are highly contaminated and represent a danger to the ecosystem via the organisms which live on the bottom. Worms, eggs of insects and other species contain pollutants, that are also found higher up the trophic chains, in fish and birds. Discussions are under way for removal of the layers of contaminated sediments and their storage in isolated basins (Schierreck *et al.*)²⁴.

*** Atmospheric inputs**

A large part of pollutant inputs to the marine environment sometimes arrive airborne from distant sources. Research on the North-west Mediterranean (C.E.C.)²⁵ showed that if atmospheric deposits account for only 20% of total external contributions (river and airborne), this proportion amounts to more than 90% for cadmium and lead, elements which originate predominantly from human activities.

*** Drainage and consolidation of wetlands**

The Evros Delta in the east of Greece is a wetland of exceptional interest for nature conservation. In 1975 it was designated by the Greek authorities under the Ramsar Convention. This made it possible to slow down and then to stop drainage and agricultural improvement work initiated in the 1950s. This had proved not only to be incompatible with the conservation of the natural heritage, but was also economically unprofitable. Drained soils lost their fertility, pumping of the aquifer for the irrigation of the crops caused salt water intrusions, and drainage channels were not efficient. Remedial work, on a smaller scale but nevertheless detrimental to the environment, was undertaken in the 1980s, also without satisfactory results for agriculture. In 1987 the site was designated a Special Protection Area under the Directive on the conservation of wild birds and has since been managed for the conservation of this important element of Europe's ecological heritage²⁶.

2.2 DIAGNOSTIC ELEMENTS: INSUFFICIENT COORDINATION AND CONCERTATION

2.2.1 Existing measures

Awareness of the need to strengthen protection of the coast and political commitments to this end have led, since the beginning of the 1970s, to numerous measures resulting in some countries in specific legislation and national strategies, and, more generally, to regional management schemes, studies, inventories, and research (see annex 1).

At the Community level, few measures concern specifically the coastal environment, most being directed at the territory as a whole. The latter clearly have an important impact (direct or indirect) on the evolution of the coast, although the cause-effect relationships are far from easy to discern. Annex 2 shows that the protection of coastal zones is as dependent on the application of environmental policy as it is on integration of the environment into the sectoral policies. From a sustainable development perspective, such integration is designed on the one hand to reduce as far as possible any negative effects of the policies (consumption of natural space, pollution and nuisances) and on the other hand to increase their beneficial effects.

2.2.2 Insufficient coordination

A considerable body of legislation and instruments are available which, if applied, should contribute to protection of the coastal environment. However, this has not halted the deterioration of the environment, which continues apace in many areas. Recent studies on this question tend towards the same conclusions: existing legislation and instruments are relatively complete, but are not as effective as they could be due to the lack of coordination between the numerous actors influencing the development of the coast.

This not only concerns the horizontal relations between sectors of activity (see table 2), but also the intermeshing of the policies and actions carried out at various levels of territorial authority. Over-zealous application of the subsidiarity principle too often leads to a parcelling out of responsibilities, which are simply distributed between the levels of competence, with no scope for taking account of the numerous interactions between them. Owing to this lack of coordination, the complex relations between human activities and the coastal environment described are neglected and the isolated measures fail to achieve their goal or may even be mutually contradictory (see box 3).

Box 3: Some references to the coordination and concertation deficit

* Like many coastal zones, the north Brittany coast (Côte de Granit Rose) underwent intensive urbanization between 1960 and 1990. Figure 7 shows that the reserves of authorized building land are likely to add to this phenomenon. The local town planning documents drawn up during this period therefore appear to be in contradiction with the national directives and the regional plan²⁷, which advocate in-depth development towards the interior of the country rather than along the coast. A slowing down of this trend is, however, becoming apparent with the revision of the town planning documents in the framework of the National Coastal Law, owing in particular to the intervention of nature conservation associations.

* "Coastal states that are in the process of defining and implementing a national programme for integrated coastal zone management have encountered obstacles e. g.:

- fragmented institutional arrangements
- single-sector oriented bureaucracies
- competing interests and lack of priorities "

Despite the recognition of their overwhelming importance, institutional arrangements and intersectoral and intergovernmental linkages are too often poorly articulated, ineffective and inefficient (World Coast Conference)²⁸.

* "From the evidence presented to us, we firmly believe that coastal protection, planning and management in the United Kingdom suffer from centuries of uncoordinated decisions and actions at both the national and local levels. We found that there are inadequacies in legislation, anomalies in the planning system, a lack of central guidance, and overlapping and conflicting policies and responsibilities (and in some cases a lack of action) among a host of bodies, with poor coordination between them. Much of this has arisen partly because of the pattern of ownership of the coastal zone and partly because the boundaries separating the administrative authorities are not drawn with regard to the presence of natural coastal processes and the possible consequences on one part of the coastline of interference in another. Administrative responsibilities should match the coastal dynamics as the reverse will never happen. We conclude that ignoring this as a principle historically has led to the present general failure to plan or protect this nation's coastal resources in any integrated or coordinated manner. (House of Commons)²⁹.

* "Studies have revealed a picture of immense diversity but little overall direction or coherence, a situation not too dissimilar from that in EU as a whole. [the Coastal Zone] extent transcends operational boundaries, its resource base does not exist, the range of economic and environment actors is wide, and they are often temporary, and always diverse in their competence. Moreover, Transport or Water, for example have Institutions and Companies to which EU Programmes can relate, but the coast does not. It is in effect institutionally under-developed. "(G. Steeley)³⁰

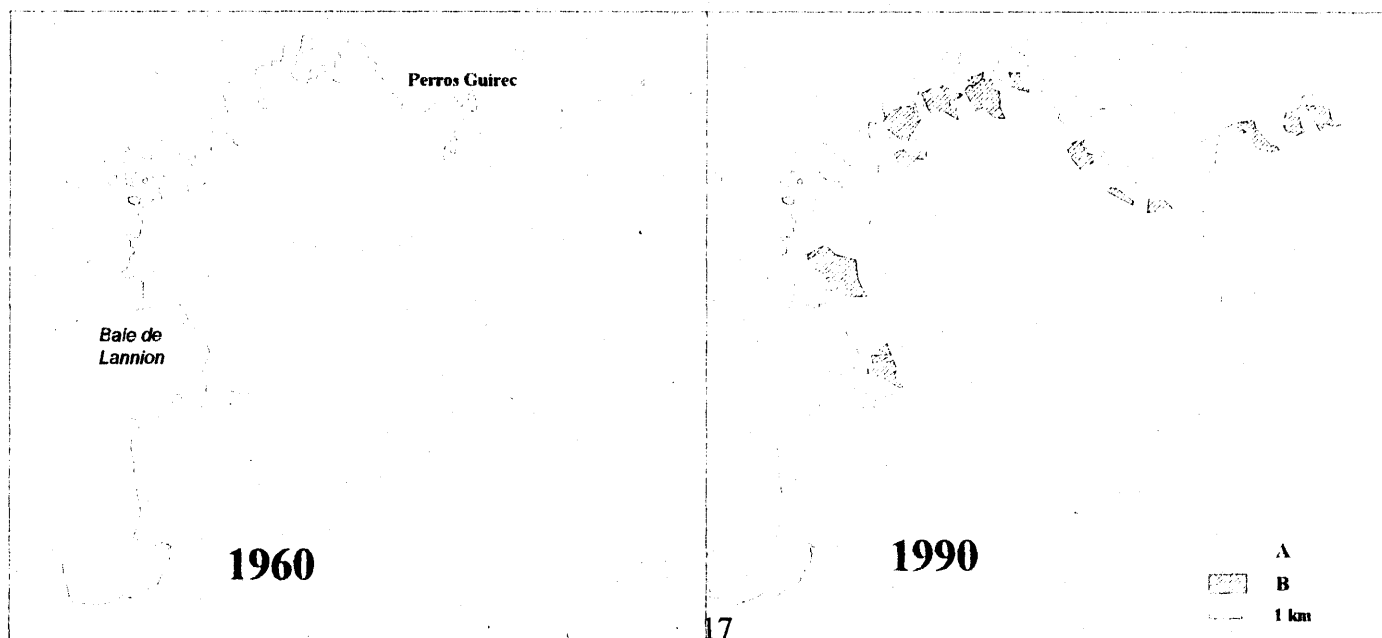
* "Considering a situation where specific and dispersed interventions still dominate - and the state does not escape this reproach -, the time has come for concerted management ... around a strategy based on balanced development compatible with the environment. To obtain it, the consistency of the instruments and of the necessary means must be organized, the convergence of the public policies and of the local initiatives be ensured The coast is confronted with a scale problem: it is managed, on various levels, by a very high number of actors intervening on very different scales. The impression is that of a lack of coherence of the actions in areas which more than any other require it. Consequently, the coast appears like one of the places where contradictions in the management of the national territory are revealed in the most acute fashion. (DATAR)³¹

Table 2 : Sectoral planning in the coastal zones

Sectors that often have a specific coastal dimension	Sectors not specific to the coastal zone, but which may have a significant impact
Defence Port and harbour developments Shipping and navigation Tourism and recreation Fisheries Aquaculture	Agriculture Forestry Nature management Parks and recreation Education Public health Housing Water supply Control of water pollution Transport Control of natural risks Development of mining resources Industrial development Energy generation Research

Figure 7: Urban development of the north Brittany coast (Côte de Granit Rose) 1960-1990 and reserves of building land ³².

- A : Urbanized sectors
 B : Sectors not currently urbanized, but open to urban development under the regulations



3. DEMONSTRATION PROGRAMME ON INTEGRATED MANAGEMENT OF THE COASTAL ZONES FOR SUSTAINABLE DEVELOPMENT

3.1 JUSTIFICATION FOR COMMUNITY ACTION

3.1.1 General

The **fifth Community programme of policy and action in relation to the environment and sustainable development**³³ provides for an initiative in response to the Council's request for an overall Community strategy for the integrated management of coastal zones³⁴.

Work on the European aspects of spatial planning, in particular the **Commission Communication "Europe 2000+"**³⁵ and the preparation of a **European Spatial Development Perspective**³⁶, confirmed the need to devote particular attention to the fragile environment of coastal zones, which require an integrated approach.

There are three reasons for the Union's interest in the fate of the coastal zones:

- the existence of problems of a European dimension which cannot be solved by the countries separately (common natural and cultural heritage, transfers of pollutants and sediments, tourist flows, maritime safety);
- the influence of the policies and action of the Union on the development of the coastal zones (regional, transport, fisheries, environment, agriculture, energy and industrial policy);
- the need for an exchange of experience and know-how in a field where successes are still rare and where there is substantial public and political demand for the conservation of the coastal zones and their sustainable development.

3.1.2 The 1986 Commission Communication and progress made

While it is clear that the Union has a role to play, the question arises as to the advisability of a particular course of action, complementing the existing generic or specific measures (see annex 2). The Commission considered this question in the context of its Communication COM (86) 571³⁷, prepared following the adoption of the European Coastal Charter³⁸ and in response to the request of the European Parliament³⁹ and the Council⁴⁰. The Commission stated that it would continue to apply existing or planned measures rigorously, taking particular account of the coastal aspects. Measures specific to coastal zones were therefore not envisaged.

However, the analysis in the previous section shows that since the 1986 Communication, progress on the protection and integrated management of the coast has been inadequate. This is due to two factors: firstly, a new approach takes time to implement and, secondly, conditions were less ripe then politically and in terms of the available instruments than is the case today. The Commission already noted in 1986 that the key to the success of an integrated approach was preventive measures, concerning in particular:

- i) an internal Commission procedure to take account of the environment dimension in the operation of the Structural Funds;
- ii) the obligation to carry out environmental impact assessment of plans and programmes;
- iii) a reference framework to take account of the spatial consequences of Community policies;
- iv) economic instruments that integrate environmental and natural resources aspects.

Substantial progress has been made since then on these four points:

- i) an internal procedure for integrating the environment in European policies has been adopted and applied⁴¹. The Regulation on the Structural Funds contains environmental compatibility clauses⁴²;
- ii) a draft Directive on the strategic environmental assessment of plans and programmes should be submitted to the Council and Parliament in 1995;
- iii) work on European spatial planning is progressing⁴³,
- iv) research on environmental economics is proceeding according to plan⁴⁴.

3.1.3 Accelerating the implementation of sustainable development

In recent years, two major policy lines have assumed concrete form:

- i) the systematic integration of environmental objectives into economic development through the participation of all the actors;
- ii) the taking into account at European level of territorial and spatial planning aspects, in a spirit of subsidiarity and cooperation.

The necessary conditions are therefore in place, both as regards the fundamental approach and the instruments, for the implementation of sustainable development in the coastal zones. However, experience with the application of the fifth environment action programme and spatial planning, both at European level and in the Member States, has clearly shown that actual progress in this area is too slow in light of the gravity and complexity of the problems of the coastal zones.

Joint action by the Union and the Member States is therefore required in order to accelerate implementation at all levels by improving the effectiveness of legislation and of the existing financial and planning tools.

Given that:

(i) there is not a tried and tested model available to achieve this objective easily, and (ii) the natural and socio-economic conditions within the Union vary considerably,

the Commission proposes that a **demonstration programme** should be carried out in order to make best use of the available experience in a broad, joint learning process. Such a collaborative, pragmatic approach is also a necessary preliminary to any decision on possible subsequent action, making appropriate use of the various instruments available.

3.2 DEMONSTRATION PROGRAMME

3.2.1 Objective

The practice of sustainable development requires the full and systematic application of the principles of integration and subsidiarity. This can be achieved only with the active participation of all the players (political authorities, administrations, economic actors, scientists, the general public). Moreover, changes of approach are often necessary. Sectoral attitudes have to give way to cooperation. Appropriate instruments, in particular information and coordination machinery, have to be refined.

The objective of the demonstration programme will therefore be to show the practical conditions that must be met if sustainable development is to be achieved in the European coastal zones in all their diversity. It will have a dual function.

i) to test cooperation models for the integrated management of the coastal zones;
ii) as it progresses, to provide the technical results necessary to foster dialogue between the European institutions and all the players with a stake in the development of the coastal zones.

The lessons to be drawn from the programme and the accompanying debate will serve as a basis for elaborating possible additional measures to be carried out in concert at the European and other levels. They should also provide input for various Community initiatives on the environment and spatial planning, in particular:

- the development of detailed criteria and mechanisms for the integration of the environment in the operation of the Structural Funds,
- the launch of the draft directive on strategic environmental impact assessment,
- initiatives pertaining to other types of area posing similar problems, such as urban or mountain areas.

Finally they will also constitute a response to the commitments entered into by the European Union in respect of Agenda 21 of the United Nations Conference on the Environment and Development⁴⁵.

3.2.2 Partners

The partners in the programme should be representative of the levels involved in the management of the coastal zones (see table 3). Moreover, the cases chosen to participate in the demonstration programme should cover the full range of possible European coastal scenarios (urban/industrial; intensive tourism; nature/rural/fisheries). A limited number of cases involving a high level of knowledge and experience would be preferable to a large number of cases of moderate interest. To succeed, the programme will have to rely as far as possible on existing information and concertation mechanisms. The preferred partners will be those who have already carried out many of the tasks listed in table 4 and who have the will to share and compare their experience in the interests of sustainable development.

The Commission will have to ensure that the partners have access to all the information available at European level on the coastal environment and activities (European Environment Agency, Eurostat, RTD programme), and on the relevant Community policies and measures. It will structure and organize the analysis and evaluation of the results as the programme progresses, with a view to drawing conclusions for follow-up action at the Community and other levels, paying particular attention to the evaluation procedure.

Table 3: Levels and products of concertation

Level	Product
European / transnational	Vision / Perspective
National	Strategy
Interregional	Perspective / Strategy
Regional / Local	Programme / Scheme / Plan

3.2.3 Content

The hypotheses underlying the demonstration programme are as follows:

- i) improved concertation between the actors is the basis for sustainable development. It helps identify synergies or contradictions between actions resulting from the various policies and facilitates the acceptance of arbitration. In short, it develops the actors' awareness;
- ii) such concertation can develop only from full, comprehensible information on the state of the environment, the origin of the changes affecting it, the implications of the policies and measures at the various levels and the options;
- iii) concertation has to be organized and maintained. There is a need for mechanisms and working methods to ensure dialogue between the actors in the various sectors of activity and at the various levels of territorial authority, and an ongoing exchange of information, from the local level towards the Community level and *vice versa*.

Each partner in the programme should therefore carry out the same work for the territory concerning it, as shown schematically in figure 8. Starting from an inventory of the situation (description of the environment and of the socio-economic measures envisaged), the causes of the current problems should be analysed and the consequences of the prospective developments assessed. These data should be processed in order to provide the players with comprehensible information enabling them to assess the situation and confer on the management options.

The adoption and monitoring of the demonstration programme and the analysis, dissemination and discussion of the results will constitute an essential part of work.

Figure 8: Schematic content of the demonstration programme

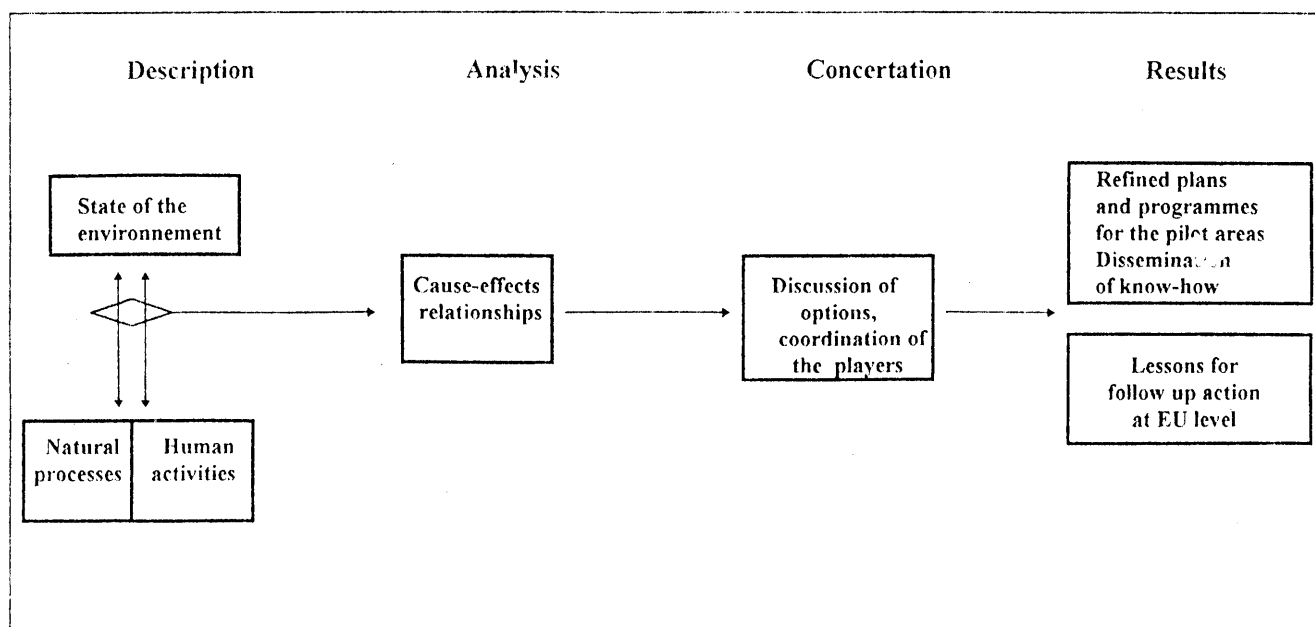


Table 4: Principal tasks of the programme

Description	State of the environment and of the environmental management infrastructures - Fauna, flora, habitats - Landscapes - Land use - Water quality - Air quality - Pollutant emissions and waste production - Coastal dynamics - Environmental management infrastructures * Inventories of the measures: - for environmental protection (quantified and located) - for development (plans, programmes, sectoral development measures: transport, industry, fishing, energy, etc.) - for planning (infrastructures, equipment)
Analysis	- Origin of the current environmental problems - Effect of the environment measures in force and planned - Strategic evaluation of the development measures decided or planned - Effects of socio-economic development and of the natural environment (major trends) - Analysis of consistency between the measures taken or under consideration in the various sectors and at the various levels - Evaluation of management options, including economic evaluations - Syntheses of information produced, to permit concertation
Concertation	- Adjustment where necessary of the concertation structures to involve all relevant actors - Evaluation of information and of the options - Formulation or adaptation of plans / programmes / strategies / visions
Lessons	* Dissemination of know-how: - on plans/programmes/strategies/visions of sustainable development of the coast in the territories of the partners in the demonstration programme - on the conditions of sustainable development according to the levels or to the types of areas - on the operation of horizontal and vertical coordination * Identification of additional measures to be carried out in cooperation at European , national, regional, local levels.

Table 5: Illustration (non-exhaustive) of the tasks of the programme partners at the various levels.

	Local / regional<<---	<<---- National----->>	----- European >> Transnational / interregional
Description	- Detailed state of the environment - Indicators - Environmental measures - Development measures	- Synthetic environment indicators - National plans	- Definition of synthetic indicators (European Environment Agency, Eurostat) - Databases on the state of the European coast (EEA, Eurostat) - Inventory of the Community policies and programmes relevant to the coast
Analysis	- Impact of the local and other measures on the coast - Impact of the general, natural and socio-economic trends - Mutual consistency of the sectoral measures and with policies at other levels - Evaluation of management options	- Strategic environmental assessment of the national plans and sectoral programmes from the point of view of their impact on the coast	- Strategic environmental assessment of the impact of Community policies on the coast - Evaluation of consistency of policies
Concertation	- Use of existing mechanisms and procedures, supplemented and adjusted as required, for intersectoral concertation, between territorial units	- Interdepartmental coordination existing or to be adjusted	- Inter-DG group - Coordination with international organizations - Concertation with the countries and regions
Results	- Plan/concerted schemes for integrated management of the coast, consistent with the other levels	- State of the coastal environment - Coastal strategies	- Information on the state of the European coast - Information on the environmental and spatial effects of the Community policies - criteria and methods for the implementation of sustainable development in the Structural Funds - Means of improving cooperation for sustainable development

3.2.4 Means and timetable

Means

Implementation of the programme will involve tasks and therefore costs for each partner. However, these should not necessarily result in additional expenditure in the Community budget. There are various instruments and programmes available or in preparation, the general objectives and criteria of which are directly relevant to coastal zones. Without any changes in the rules governing these instruments, partners could submit proposals for parts of the demonstration programme, in particular:

- the new Community initiative for transnational cooperation on regional planning in Europe (INTERREG IIC, in preparation);
- the second action programme under Article 10 of the ERDF Regulation, in particular action in the field of spatial planning.
- LIFE, for which the new draft Regulation⁴⁶ specifically mentions the coastal environment;
- financial instrument for fisheries policy, PESCA programme;
- Article 8 of Regulation (EEC) No 4256/88 and the Community LEADER II initiative, which will serve to identify and facilitate the transfer of positive experience in integrated management of rural coastal zones through the European Observatory for Rural Innovation and Development;
- European Environment Agency (European Thematic Centre on Coastal Zones);
- PHARE, multi-country programme, according to the interest of the countries;
- environment research programme, e.g. for the organization of evaluation seminars;
- operational means for the conduct of the programme and the analysis of the results (studies, meetings, etc.).

The concerted use of various financing sources to support an objective common to several Community policies is also in conformity with the Commission's desire to ensure optimum consistency of the financial instruments. It would also demonstrate that, in the short term, progress towards sustainable development depends to a large extent on the better use of existing means at all levels.



Timetable

The following phases are planned over a total of about 3 years following adoption of the Communication:

- Launch of the programme:

Dissemination of the Communication to the actors who influence coastal development (European institutions, countries, associations of regions and local authorities, NGOs). Gathering of reactions (Council Resolution, Parliament opinion). Discussions, identification of potential partners, project selection, development of work specifications 6 months

- Implementation of the programme 2 years

- Analysis of the lessons learnt and identification of follow-up actions 6 months

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Annex 1: Examples of measures specifically targeting the coastal zones

Joint Declaration on the Protection of the Wadden Sea, signed in 1982 by the Netherlands, Germany and Denmark.

Vision and strategies for the Baltic Sea 2010. Towards a framework for spatial development in the Baltic Sea Region. The Baltic Institute, ISBN 91-630-3091-8.

Ministerial Conferences on the Protection of the North Sea, from 1984: Bremen Conference.

Blue plan for the Mediterranean launched in 1976 in the framework of the Barcelona Convention.

National directive on protection and management of the coast (79-08-25). Coastal law (France) 1986.

Coastal law (Spain). Law No 22/1988, 28 July 1988.

Law on integrated management of the coast (Portugal). Decree-Law N° 309/93.

Creation of the "Conservatoire de l'Espace Littoral et des Rivages Lacustres" (France 1975).

Creation of Enterprise Neptune under the auspices of the National Trust (United Kingdom, 1965).

National coastal study: A national strategy for development and conservation (Ireland). Bord Failte Eirann et Foras Forbartha, Dublin 1972.

Planning policy guidance notes on coastal planning for the Secretaries of State for England and Wales and their inspectors. HMSO 1992.

Management strategy for the lower Normandy coast (France). DATAR, 1979.

Annex 2: Typical examples of Community measures relevant to the protection and management of coastal zones

*** Environment policy**

The majority of the measures apply without discrimination to all the territory of the Union, while a few of them mention the coast specifically.

- Pursuant to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and Council Directive 79/409/EEC on the conservation of wild birds, Member States are obliged to protect and manage a sufficient number and area of sites to ensure the survival of species of fauna and flora and the conservation of the habitats specified in the directives. A significant number of the Special Protection Areas for the protection of the birds are in coastal zones, which will also be the case for the Natura 2000 network as a whole.
- Pursuant to Directive 76/160/EEC on the quality of bathing water and Directive 79/923/EEC on shellfish water, Member States have undertaken to ensure the quality standards defined in the directives in the sites they designate. By adopting the proposal for a Directive on the ecological quality of water (COM (93) 680 final), they will commit themselves to submitting programmes designed to achieve certain quality standards, including for coastal waters.
- Directive 91/271/EEC on urban waste water concerns emissions to watercourses and coastal waters.
- Directive 91/676/EEC aims to reduce nitrate inputs in water from agricultural sources and thus also contributes to preventing the eutrophication of coastal waters, which are potentially sensitive areas.
- Air pollutants not only have an adverse effect on air quality, but as a result of deposition are a significant source of eutrophication and coastal and marine water pollution. A number of directives concern the control and reduction of emissions to the air from various activities: industrial plant (84/360/EEC, amended 91/692/EEC), the incineration of dangerous waste (94/67/CE) and municipal waste (89/369/EEC), large combustion plants (94/66/CE, amending 88/609).
- The Directive on the assessment of the effects of certain public and private projects on the environment (85/337/EEC) covers a number of activities including some specific to the coast. The directive in preparation on strategic environmental assessment of plans and programmes will play a very important role in the integrated management of the coast.
- Restrictions on the marketing and use of certain pollutant products reduce their presence in the environment, including in coastal zones. This applies for example to paints containing organostannic compounds (Directive 76/769/EEC), certain plant protection products (Directive 79/117/EEC) and detergents (Directive 73/404/EEC, amended by 82/242 and 86/9).
- Since 1986 almost a hundred projects in the field of protection and management of coastal zones have been granted financial support under the LIFE instrument (Regulation (EEC) 1973/92) and the ACNAT and MEDSPA budget headings. The new proposal for a regulation (COM (95) 135 final) specifically mentions the wise use of coastal zones.
- Part of the financial support to awareness-raising and training concerns coastal zones.

[REDACTED]

- A number of databases on the state of the European environment and land cover were created under the CORINE programme⁴⁷. These will be updated and extended by the European Environment Agency⁴⁸, whose aim is to provide the information necessary for European environmental policy and whose work programme includes coastal zones.

* Economic and social cohesion

Significant progress in integrating the environment in development processes was made with the adoption of Regulation (EEC) n°2081/93, which stipulates that the plans and programmes submitted by Member States under Objectives 1, 2 and 5 of the Structural Funds have to comprise:

- an appraisal of the environmental situation of the region concerned;
- an evaluation of the environmental impact of the strategy and operations defined in the plan in terms of sustainable development in agreement with the provisions of Community law in force;
- the arrangements made to associate the competent environmental authorities in the preparation and implementation of the operations envisaged in the plan and to ensure compliance with Community environment rules.

These provisions should make it possible, for example in the eligible coastal regions, to integrate environmental concerns into port, tourist or transport developments and to encourage the financing of environmental infrastructures such as water or waste treatment plants.

Under the ENVIREG Programme⁴⁹, which applies to the Objective 1, 2 and 5b regions of the Structural Funds, three quarters of the budget has been devoted to the reduction of pollution in the coastal zones and to the promotion of integrated management for the protection of the natural environment and landscapes.

Finally, work on the European aspects of regional planning places special emphasis on coastal zones.

* Fisheries policy

The common fisheries policy includes conservation measures designed to protect fishery resources and structural measures to reach a balance between fishery efforts and available resources, in the interests of protecting marine ecosystems.

Thus the structural measures comprise provisions to limit the environmental impact of intensive aquaculture and encourage extensive aquaculture, and investments to improve hygiene and human and animal health aspects.

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The conservation measures (basic regulation, TAC and quotas, technical measures, inspection, limitation of fishing capacities) contribute to protecting fishery resources and therefore also the environment, in particular:

- Regulation (3760/92) which provides the basis for the conservation of fishery resources in a context of protection of marine ecosystems;
- the annual Regulations fixing the total allowable catch (TAC) of the principal marketable species in the Community waters of the north-east Atlantic and distributing the quotas between Member States;
- various Regulations designed to achieve a balance between fishery capacities and available resources (4028/86, 3690/93, 1627/94), or place restrictions on the technical characteristics of the fishing gear (3094/86: the Atlantic and the North Sea, 1866/86: the Baltic, 1626/94: the Mediterranean).

* Agricultural policy:

The reform of the CAP and the accompanying measures aim among other things to extensify production and reduce pollution. Regulation 2843/94, amending Regulations 2328/91 and 866/90, comprises provisions for aid to investment in environmental protection. Support for conservation of the semi-natural environment (e.g. salt meadows, dyke grasslands) is possible under agri-environmental measures (2078/92). In addition, Article 11(a) of Regulation (EEC) No 2052/88 includes in the eligibility criteria for Objective 5b the existence of "pressures exerted on the environment and the countryside". Some rural coastal zones home to fragile ecosystems have therefore been designated eligible (e.g. the Breton marshes and the Poitou-Charente marshes).

* Transport policy

Maritime safety policy contributes to reducing the risks of marine and coastal pollution, in particular through measures relating to navigation, training of crews, the characteristics of the ships and port reception facilities for the treatment of residues.

* Energy policy

The environmental impact of coastal infrastructures must be minimized in general. This concern is taken into account above all in regional energy programming.⁵⁰ In addition, a number of sparsely populated regions remote from the energy distribution networks are highly suited for the implementation of techniques and practices for the environment-friendly use of local, renewable energy sources.

* Industrial policy

It contributes to facilitating the balanced development of industrial activities in the coastal zones (heavy industries, construction, etc.).

* Research policy

The fourth framework programme of research and technological development (1994-98) comprises a number of specific programmes in support of the above policies which are

specifically relevant to the coastal zones. One of the themes of the environment programme, the human dimensions of environmental change, dedicates particular attention to the integrated management of the coastal zones.

* Tourism and the environment

The Green Paper on the role of the Union in the field of tourism⁵¹, adopted by the Commission on 4 April 1995, cites the sustainable development of tourism among its main concerns.

Various projects in the coastal zones have been supported in the framework of *Community action plans to assist tourism*, which provide that the measures taken must be "conducive to preserving and protecting the quality of the natural environment"⁵².

More specifically, the Community action plan is implemented by the following measures:

- support to initiatives aimed at informing and increasing the awareness of tourists and suppliers of services about the interaction between tourism and the environment, in particular through the creation of a European environmental prize;
- support for innovative pilot projects to reconcile tourism and nature protection at local or regional level, in particular coastal or mountain areas, nature parks and reserves, e.g. by measures for the guidance of visitors;
- support for the development of networks involving transnational exchanges of experience of environmental problems and their possible solution through visitor management at sites;
- support for initiatives encouraging "soft" forms of tourism.

Annex 3: Contacts with organisations involved in the integrated management of the European coast

For the purposes of preparing this Communication, information and views were exchanged in 1995 with the following organizations:

- European Union for Coastal Conservation
- Conference of the Maritime Peripheral Regions of the European Community (Commissions of the Islands, of the North Sea, Atlantic arc, the Mediterranean, the Eurisles Network)
- European Environment Agency and contractors : Laboratório Nacional de Engenharia Civil (Lisboa), Centro de Estudios y Experimentación de Obras Públicas (Madrid), National Institute for Coastal and Marine Management (Den Haag)
- Délégation à l'Aménagement du Territoire et Mission Interministérielle de la Mer (Paris)
- Coordinated Action for Seaside Towns (Coast Network)
- The National Trust (UK)
- Coastwatch Europe
- Birdlife International
- Council of European Municipalities
- Blue Plan (Action Plan for the Mediterranean).

- [REDACTED]
1. Resolution (73)29 of the Committee of Ministers of the Council of Europe on the protection of the coast.
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 3. European Community environment programme (1973-77), OJ C 112, 1973.
 4. Integrated coastal management in the European Community, 1978, EUR 6105.
 5. European Environment Agency. Scoping study on integrated environmental assessment of coastal zones. Draft, May 1995.
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 7. Integrated Geosphere Biosphere Programme. Land Ocean Interactions in the Coastal Zone. Meeting report on implementation plan. Quezon City, Philippines, 23-27 April 1995.
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19. Gachelin, Ch. Pour un Plan Stratégique Intégré du Littoral Français, DATAR 1992.
20. World Coast Conference: see note 6.
21. Helcom, 1994.
22. G.J. Schiereck & J. Van der Weide, Coastal Zone Management: A round game, paper presented to the Coastal Zone Management Workshop, Malaysia, March 1995.
23. CEC. Community RTD programme in the field of the environment. European River Ocean System Project (EROS).
24. See note 22.
25. See note 23.
26. Greek Ornithological Society. Information note, 1995.
27. Management plan for the Breton coast and the islands approved by the departmental and regional assemblies of Brittany (January 1977) and by the Interministerial Council for regional planning (November 1977).
28. See note 6.
29. House of Commons Environment Committee, 1992. Second Report. Coastal zone protection and planning. HMSO.
30. Steeley, G. Draft resolution for the Council of European Municipalities, 1994.
31. See note 19.
32. Conservatoire de l'Espace Littoral et des Rivages Lacustres, Paris.
33. OJ C 138, 17.5.1993.
34. Resolution of 25.02.92, OJ C 59, 6.3.1992.
35. Commission Communication "Europe 2000"+. Cooperation for European territorial development. COM/94/354. ISBN 92-826-9100-4.

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36. Conclusions of the German Presidency following the informal Council meeting of the Ministers responsible for regional planning at Leipzig on 21/22.9.1994, in Regional Planning, Federal Ministry for Regional Planning, Building and Urban Development.
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39. Resolution of 18.6.1982, EP 73424.
40. See note 37.
41. Commission of the European communities. Internal measures designed to promote the objective of integration, adopted on 2 June 1993.
42. Regulation (EEC) No 2081/93; Articles 8,9,11a.
43. See note 36.
44. RTD programmes in the field of the environment (1990-94): OJ L 192, 16.7.1991 and (1994-98): OJ L 361, 31.12.1994 - Human dimensions of environmental change.
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