Development of functional synergies

Within the framework of some Community policies, spatial elements are taken into account to establish functional interdependencies and to emphasise synergies. Thus, research in the field of transport considers interactions between the use of the territory and transport demand or the requirements of sustainable mobility concerning the choice of transport mode. Regional policy attempts to promote regional innovation strategies in line with local needs; energy policy is dealing with the exploitation of solar energy in harmony with town planning objectives.

Integrated spatial development approaches

Beyond the simple acknowledgement of functional interactions and the development of the synergies which can result, a number of Community activities try to develop integrated and multisectoral approaches with a strong spatial dimension. This is true of the Community initiative on Transnational Co-Operation in the field of Spatial Development (INTERREG II C); of the policy for the integrated development of rural areas (LEADER); and the Demonstration Programme on Integrated Coastal Zone Management (ICZM). Yet these ambitious integrated development approaches are still relatively few.

Local communities and regions feel the benefits to varying degrees of regionally significant policy expenditure undertaken by the EU as well as by Member States in accordance with Community-wide binding regulations. The spatial effects of Community policies do not automatically complement each other, in line with a more balanced regional development. Nor do they automatically correspond to the development concepts of regions and cities. Without a reciprocal fine-tuning process, they can unintentionally aggravate disparities in regional development if they are exclusively geared towards specific sectoral objectives.

The Member States and the Commission consider the ESDP to be an instrument which can help to improve the co-ordination of Community policies. The earliest possible consideration of policy aims and options in the formulation and assessment of Community sectoral policies will have a positive effect on the development of local entities and regions. If local and regional authorities are on the other hand aware of the spatial effects of sectoral policy related decisions at EU-level, then they can react better to them.

Early consideration of the regionally different effects of EU sectoral policies is therefore necessary. Achieving the spatial development aims within the EU does not only depend on the available financial volume, but to an increasing degree on the early co-operation of spatially significant sectoral policies. In this respect, there is an urgent need to develop mechanisms for strengthening co-operation within the European Commission departments for ensuring the spatial coherence of interventions. Moreover, a systematic research and evaluation of the spatial effects of current EU policies by the Commission is necessary.

3 Policy Aims and Options for the Territory of the EU

3.1 Spatial Orientation of Policies

Because of development disparities and the way in which Community policies affect individual regions, local communities and regions of the EU are not automatically converging to a regionally balanced territory in the wake of EMU. It is, therefore, more important to take spatially differentiated measures and the opportunity presented by European integration to achieve sustainable and, thus, territorially balanced development of the EU.

For this purpose, the spatial development aims and policy options set out in the following chapters can be taken into consideration by all authorities and government agencies involved. Reflecting these aims and options in spatially significant sectoral policies at Community, national, regional and local levels can ensure that, besides the implementation of sectoral objectives, spatial development guidelines for the territory of the EU are also taken into consideration at an early stage in the policy process. These spatial development guidelines are as follows:

1. development of a polycentric and balanced urban system and strengthening of the partnership between urban and rural areas. This involves overcoming the outdated dualism between city and countryside.
global economy integration zones provides an important instrument for accelerating economic growth and job creation in the EU, particularly also in the regions currently regarded as structurally weak (Objective 1 and 6 Areas of the current regional funds).

At present, there is only one outstanding larger geographical zone of global economic integration: the core area of the EU, the pentagon defined by the metropolises of London, Paris, Milan, Munich and Hamburg. This zone offers strong global economic functions and services, which enable a high income level and a well-developed infrastructure. In addition, there are some isolated islands of significant growth (e.g. Barcelona, Region of the Øresund), where GDP is not yet high enough to change significantly the currently imbalanced spatial development in line with the underlying objectives of the ESDP. The economic-geographic situation of the EU differs from that of the USA, for instance, which has several outstanding economic integration zones on a global scale: West Coast (California), East Coast, Southwest (Texas), Mid-West.

The current spatial trends in the EU reveal a further concentration of activities, particularly high-quality and global functions in the core area of the EU and in a few metropolises. In view of the enlargement of the EU, a further concentration of spatial development in just one single globally outstanding, dynamic integration zone would not lead to a reduction of the disparities between the central part and an increasingly large periphery. A new strategy for spatial development is therefore necessary.

Previous policy measures affecting spatial development were primarily concerned with improving the links between the periphery and the core area through projects in the field of infrastructure. However, a policy is now required to offer a new perspective for the peripheral areas through a more polycentric arrangement of the EU territory. The creation of several dynamic zones of global economic integration, well distributed throughout the EU territory and comprising a network of internationally accessible metropolitan regions and their linked hinterland (towns, cities and rural areas of varying sizes), will play a key role in improving spatial balance in Europe. Global and high quality services have also to be taken more into consideration in metropolitan regions and cities outside the core area of the EU.

A spatial development perspective restricted to a polycentric development of individual metropolitan regions is not in line with the tradition of maintaining the urban and rural diversity of the EU. For this reason a polycentric set-
tlement structure across the whole territory of the EU with a graduated city-ranking must be the goal. This is an essential prerequisite for the balanced and sustainable development of local entities and regions and for developing the real locational advantage of the EU vis-à-vis other large economic regions in the world.

(72) Spatially effective policy decisions and investments, including the use of funding from the structural funds, particularly in the current Objective 1 areas, should therefore be oriented towards a polycentric development model. Suitable policy measures, in particular, to ensure a highly efficient infrastructure at transnational, national and regional level, should support and complement the development of the respective dynamic zones of integration.

(73) To strengthen a balanced settlement structure, ways and procedures must be found to enable cities and regions to complement each other and co-operate. The possibilities for this are varied and have to some extent been successful. As well as city networks at regional level, the need for complementing co-operation also applies to city networks at interregional, transnational or even EU level. Depending on the local, or regional, situation to begin with both objectives and solutions pursued vary.

(74) Promoting complementarity between cities and regions means simultaneously building on the advantages and overcoming the disadvantages of economic competition between them. However, complementarity should not be focused solely on economic competition but be expanded to all urban functions, such as culture, education and knowledge, and social infrastructure. The policy pursued must encourage effective co-operation between cities, built on common interests and the input of all participants. A prerequisite, therefore, is the voluntary nature of the co-operation and the equal rights of the partners.

(75) Cities have increasingly diverse functional inter-dependencies with their surrounding countryside. These interdependencies require voluntary co-operation across administrative boundaries between local authorities, to strengthen the region as a whole in competitive terms. All participating partners profit from this. Possible fields of co-operation are local transport, waste management and the designation of shared residential or industrial areas. Co-operative cross-border city networks can provide a means of overcoming development disadvantages in border areas.

(76) The creation of networks of smaller towns in less densely settled and economically weaker regions is also important.

In these areas, co-operation between urban centres to develop functional complementarity may be the only possibility for achieving viable markets and maintaining economic institutions and services which could not be achieved by the towns on their own.

(77) Cities which are relatively far apart should co-operate in networks aimed at solving common problems. Beyond the exchange of experience, common objectives should also be pursued and joint projects implemented. Examples include local traffic management, city planning, co-operation between universities and research centres, the management of the cultural heritage and historic city centres, and the integration of new immigrants into urban society.

(78) Co-operation between cities and regions beyond the external borders of the EU provides an important opportunity to strengthen political and economic relations with neighbouring regions in Northern, Central and Eastern Europe and the Mediterranean. It also promotes co-operation on strategically important infrastructure and environmental projects.

(79) Policy Options

1. Strengthening of several larger zones of global economic integration in the EU, equipped with high-quality, global functions and services, including the peripheral areas, through transnational spatial development strategies.

2. Strengthening a polycentric and more balanced system of metropolitan regions, city clusters and city networks through closer co-operation between structural policy and the policy on the Trans-European Networks (TENs) and improvement of the links between international/national and regional/local transport networks.

3. Promoting integrated spatial development strategies for city clusters in individual Member States, within the framework of transnational and cross-border co-operation, including corresponding rural areas and their small cities and towns.

4. Strengthening co-operation on particular topics in the field of spatial development through cross-border and transnational networks.

5. Promoting co-operation at regional, cross-border and transnational level; with towns and cities in the countries of Northern, Central and Eastern Europe and the Mediterranean region; strengthening North-South links in Central and Eastern Europe and West-East links in Northern Europe.
3.2.2 Dynamic, Attractive and Competitive Cities and Urbanised Regions

(80) The regions of the EU can only be competitive and hence contribute to the reduction of unemployment if towns and cities, especially those outside the global integration zones and metropolitan regions, have enough economic potential. These include, in particular, the so-called “gateway cities”, which provide access to the territory of the EU (large sea ports, intercontinental airports, trade fair and exhibition cities, cultural centres); and smaller towns and cities which are active regional centres revitalising rural regions in decline. The “gateway cities” also include metropolitan regions located on the periphery, which can use specific advantages, such as low labour costs or special links with economic centres outside Europe or neighbouring non-Member States.

(81) Many of the less dynamic towns and cities of the EU have a relatively narrow economic basis dominated by a single economic sector, whose decline has a negative impact on the whole regional economy. The competitiveness of these towns and cities depends thus on a policy of diversifying their economic bases. The future prospects of the surrounding rural areas are also based on competitive towns and cities. Material and social welfare in cities is, therefore, an important factor for social, environmental and economic development. The development policies to achieve these objectives are very dependent on local conditions. The five following aspects are of particular importance to the sustainable development of towns and cities:

1. control of the physical expansion of towns and cities;
2. mixture of functions and social groups (which particularly applies to large cities in which increasingly large sections of the population are threatened by exclusion from urban society);
3. wise and resource-saving management of the urban ecosystem (particularly water, energy and waste);
4. better accessibility by different types of transport which are not only effective but also environmentally friendly; and
5. the conservation and development of the natural and cultural heritage.

(82) Sustainable urban development offers many opportunities for “thinking globally and acting locally”. The UN conferences in Rio and in Istanbul (Habitat II) have stimulated global measures which should be implemented at national and local levels. This issue must be taken into consideration by Community policies and by all Member States. The policy options cited in this section, which are related to the Agenda 21 and the Habitat Agenda, can be best implemented by a multi-sectoral, integrated urban development strategy.

(83) Strategies and instruments helping to achieve sustainable urban development strongly depend on local, regional and national starting conditions of the towns and cities of the Member States. The exchange of good practices in sustainable urban policy, which has been set up by Member States, offers an interesting approach for applying ESDP policy options. The European Commission has also presented, in its action framework, policy aims and proposed measures for urban areas which are consistent with policy aims for urban development in the ESDP.

(84) Member States and regional authorities should pursue the concept of the “compact city” (the city of short distances) in order to have better control over further expansion of the cities. This includes, for example, minimisation of expansion within the framework of a careful locational and settlement policy, as in the suburbs and in many coastal regions. It will only be possible to stem the expansion of towns and cities within a regional context. For this purpose co-operation between the city and the surrounding countryside must be intensified and new forms of reconciling interests on a partnership basis must be found.

(85) The future of the towns and cities in the EU depends on fighting growing poverty, social exclusion and stemming the loss of certain urban functions. Both the reconstruction of neglected areas and derelict industrial land and a balanced supply of inexpensive, high-quality housing in urban areas have to be promoted. Through integration of urban functions in the city, all citizens should have appropriate access to basic services and facilities, open spaces, general and professional education and health care. This includes the conservation and development of small planted areas in urban green spaces, which have both ecological and important social functions.

(86) The prudent management of the urban ecosystem is of great importance. An integrated approach with closed cycles of natural resources, energy and waste must be pursued in order to reduce burdens on the environment. Through this ap-
proach, both waste production and the consumption of natural resources could be limited (particularly in the case of resources which are not renewable or which regenerate slowly). Air, soil and water pollution could also be reduced. The expansion of natural areas in the cities, the conservation of biodiversity and common energy systems for households and industry are examples of measures which belong to a prudent environment policy.

(87) Accessibility of cities has an important influence on the quality of life, the environment and economic performance. Accessibility should be promoted by a spatial policy for location which is compatible with land use and transport planning. The aim here should be to reduce the expansion of the towns and cities and to adopt an integrated approach to transport planning. This would reduce dependency on the private car and promote other means of mobility (public transport, cycling).

(88) Policy Options

6. Expansion of the strategic role of metropolitan regions and “gateway cities”, giving particular attention to the development of peripheral regions of the EU.

7. Improvement of the economic basis, environment and service infrastructure of cities, particularly in economically less favoured regions, in order to increase their attractiveness for mobile investment.

8. Promotion of an economic diversification strategy in cities which are too dependent on a single branch of economic activity, and support for the economic development of towns and cities in less favoured regions.

9. Promotion of integrated urban development strategies sensitive to social and functional diversity. Particular attention should be given to fighting social exclusion and the recycling and/or restructuring of underused or derelict urban sites and areas.

10. Promotion of a wise management of the urban ecosystem.

11. Promotion of better accessibility in cities and metropolitan regions through an appropriate location policy and land use planning that will stimulate mixing of urban functions and the use of public transport.

12. Support for effective methods of reducing uncontrolled urban expansion; reduction of excessive settlement pressure, particularly in coastal regions.

3.2.3 Indigenous Development, Diverse and Productive Rural Areas

(89) Rural areas in the EU are characterised by diversity and indigenous development. They are complex economic, natural and cultural locations which cannot be characterised by one-dimensional criteria such as population density, agriculture or natural resources. Some rural areas have successfully assimilated structural change. This is attributable not only to locational factors, such as favourable sites or low wages, but also increasingly to factors such as the quality of the natural and cultural heritage: the existence of networks and partnerships; the democratic handling of decision-making; and not least, the initiative and commitment of regional and local politicians and other social players. The success of many rural regions in the EU demonstrate that countryside-based activity is not in itself a hindrance to dynamic economic development and employment growth. There are rural regions which have developed a relatively good competitive position in agriculture or tourism.

(90) However, a number of rural areas have not yet managed to achieve structural change and have considerable economic problems, often due to their peripheral location. Besides a high percentage of agricultural employment, the structural weaknesses of these areas can have other causes, such as an extremely low population density; inaccessibility; climatic disadvantages; poor infrastructure; lack of structural development; outdated industrial structures and outdated agricultural production conditions. Rural areas which are subject to new pressures, for example through economic growth and the expansion of neighbouring settlements of metropolises and larger cities and areas hit by the decline of agriculture, also have to face great challenges.

(91) In the past, rural regions were regarded by policy makers as homogeneous areas with the same obstacles and opportunities for development. This way of looking at things no longer fits the reality of the EU. Now the common characteristics of rural areas are a low population density and a high proportion of agricultural land use. However, with regard to the paths taken in development and prospects for
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development they differ greatly from each other. The diversity of rural development in the EU makes it clear that spatial development strategies must begin by taking into consideration local and regional conditions, characteristics and requirements.

(92) New impetus can be expected from a re-evaluation of the relationship between city and countryside. This should be based primarily on the ESDP’s integrated treatment of the city and countryside as a functional, spatial entity with diverse relationships and interdependencies. A sharp distinction between city and countryside within a region ignores in most cases the fact that only regions can form labour, information and communication markets. The region is, therefore, the appropriate level for action and implementation. For many matters relating to spatial development, it is also the appropriate level for analysis.

(93) In a polycentric urban system the small and medium-sized towns and their inter-dependencies form important hubs and links, especially for rural regions. In rural “problem” regions only these towns are capable of offering infrastructure and services for economic activities in the region and easing access to the bigger labour markets. The towns in the countryside, therefore, require particular attention in the preparation of integrated rural development strategies.

(94) As a result of economic growth, rural areas are, today, subject to a great number of negative environmental impacts. This includes strong pressure on the undeveloped areas near towns to meet the growth in demand for first and second homes; the negative effects of new leisure activities; and soil, air and water pollution through the processing and storage of waste. The appeal of areas with attractive landscapes such as mountains and coastal regions is endangered by mass tourism. Intensive agriculture can also lead to soil contamination and the destruction of cultural landscapes. These negative impacts can only be countered through suitable regional planning and corresponding environmental and agricultural policies for the re-establishment of biodiversity; reduction of soil contamination; and extension and diversification of agricultural use.

(95) Agriculture in areas with unfavourable production structures must also face up to the challenge of international competition. Potential solutions include the development of high-quality agricultural produce, through suitable strategies for marketing this produce and the re-discovery of the multi-functionality of agriculture, i.e. varied opportunities for earning a living in agricultural undertakings (e.g. farm holidays, wind generators). The social value of conserving the environmental, natural and cultural heritage is growing and offers a variety of employment opportunities for agriculture. Suitable provision of opportunities for education and further training can help in developing sources of income in addition or as an alternative to agriculture.

(96) The structurally weak areas in the EU, therefore, require particular attention. In these areas an effort must be made to diversify the rural economy in order to avoid dependence on single structures, and to create future-oriented employment opportunities. The small and medium sized towns in these regions offer hubs for the development of industry and service-related activities, research and technology, tourism and recreation. The process of the internal diversification of the rural economy leads to extra-regional links and networks; contacts with new markets and other companies, and access to information and knowledge.

(97) In the rural areas of the EU there is a considerable potential for renewable energy: solar energy; wind energy; hydro-electric power and tidal energy; energy from biomass; and even from urban waste near large towns and cities (methane production). This opens up interesting prospects for economic diversification and environmentally friendly generation of energy. This potential should be activated for the efficient use of resources. A further step would be the supply of excess energy to larger energy networks.

(98) The key to the sustainable development of rural regions lies in the development of an independent perspective and the discovery of indigenous potential and the exchange of experience with other regions, but not in the copying of development perspectives for other regions in the EU. Policy strategies must also take account of the diversity in development opportunities and threats. They have to provide the means for the rural areas to act. This will allow the regional and local players to respond to their problems with the greatest flexibility.

(99) Policy Options

13. Promotion of diversified development strategies, sensitive to the indigenous potentials in the rural areas and which help to achieve an indigenous development (including the promotion of multi-functionality in agriculture). Support of rural areas in education, training and in the creation of non-agricultural jobs.
14. Strengthening small and medium-sized towns in rural areas as focal points for regional development and promotion of their networking.
15. Securing sustainable agriculture, application of environmental measures and diversification of agrarian land utilisation.
16. Promotion and support of co-operation and information exchange between rural areas.
17. Use of the potential for renewable energy in urban and rural areas, taking into account local and regional conditions, in particular the cultural and natural heritage.

3.2.4 Urban-Rural Partnership

(100) Many local problems cannot be solved nowadays without an integrated way of looking at towns and countryside, since they tend to be regional problems. Practical partnership expresses itself through co-operation and co-ordination. However, in order for co-operation to grow into a long-term successful partnership, several preconditions have to be created:

1. the equality and independence of the partners;
2. voluntary participation in partnership;
3. consideration of different administrative conditions; and
4. common responsibility and common benefit.

(101) Partnerships between towns and the countryside have several spatial dimensions: a regional, supra-regional, inter-regional and transnational perspective. The regional perspective includes the partnership between towns and cities of every size and their surrounding countryside. Here in particular, towns and countryside must share an integrated approach, since they form a region and are mutually responsible for its further development. Towns in rural regions also have an important function as engines of growth for regional economic development. In sparsely settled rural areas only towns can offer certain standards in the supply of infrastructure and services and attract economic activities. In these areas towns are particularly important in the preservation of the settlement structure and the cultural landscape.

(102) The supra-regional perspective relates to an extensive division of functions between urban and metropolitan regions on the one hand and rural regions on the other. In principle an approach based on partnership also aims at achieving a balance between the various interests on a larger scale, in which both economic and environmental interests and social aspects are taken into account.

(103) In the case of the inter-regional and transnational dimensions, the exchange of experience and “learning from others” is predominant. Here the objective is not to find a balance between interests on the basis of partnership but, instead, to evaluate and pass on experiences gained in cooperation between towns and countryside on specific projects or initiatives.

(104) Partnership means sharing costs and benefits, for example, the provision of high-quality and expensive infrastructure facilities or the provision of areas for water supply to the urban population. New forms of partnership offer the opportunity of re-evaluating the exchange of services between towns and countryside for a sustainable spatial development perspective, aiming at the creation of a regional “service pool” for the exchange of local government services.

(105) In addition to the partnership between administrations, partnership-based networks between companies in towns and the countryside play a major role in the regional economy. Potential synergies can be exploited and learning processes established, to provide companies in spatial proximity with knowledge and information.

19. Maintenance of a basic supply of services and public transport in small and medium-sized towns in rural areas, particularly those in decline.
20. Promotion of co-operation between towns and countryside aiming at strengthening functional regions.
21. Integrating the countryside surrounding large cities in spatial development strategies for urban regions, aiming at more efficient land use planning, paying special attention to the quality of life in the urban surroundings.
22. Promotion and support of partnership-based co-operation between small and medium-sized towns at a national and transnational level through joint projects and the mutual exchange of experience.

23. Promotion of company networks between small and medium-sized enterprises in the towns and countryside.

3.3 Parity of Access to Infrastructure and Knowledge

3.3.1 An Integrated Approach for Improved Transport Links and Access to Knowledge

(107) Urban centres and metropolises need to be efficiently linked to one another, to their respective hinterland and to the world economy. Efficient transport and adequate access to telecommunications are a basic prerequisite for strengthening the competitive situation of peripheral and less favoured regions and hence for the social and economic cohesion of the EU. Transport and telecommunication opportunities are important factors in promoting polycentric development. Efficient transport and telecommunication systems and services have a key role in strengthening the economic attractiveness of the different metropolises and regional centres.

(108) The mobility of people, goods and information in the EU is characterised by concentration and polarisation tendencies. Increasing competition in the transport and telecommunication markets can intensify this development. Policy must ensure that all regions, even islands and peripheral regions, have adequate access to infrastructure, in order to promote social and economic and, therefore, spatial cohesion in the Community. It should also ensure that high-quality infrastructure, for instance high-speed/high-capacity rail lines and motorways, do not lead to the removal of resources from structurally weaker and peripheral regions (“pump effect”); or that these areas are not crossed without being connected (“tunnel effect”). Spatial development policy should work towards having high-quality transport infrastructure supplemented by secondary networks to bring about their positive effects in the regions.

(109) On the other hand, the concentration of transport services in the core area of the EU and their congested corridors reduce functional effectiveness and increase pressure on the environment in some areas. In order to reduce traffic burdens, integrated intermodal solutions which involve a shift to environmentally friendly transport systems and a more efficient use of existing infrastructures are very important. In the long term this requires improved fine-tuning between transport operators. Comprehensive integrated spatial development strategies must take this into account. In the future, territorial impact assessment should be the basic prerequisite for all large transport projects.

(110) These problems cannot be solved solely through building new infrastructure, however important it may be for all regions. Transport and telecommunication structures are not sufficient prerequisites on their own for regional development. Accompanying measures in other policy areas, such as regional structural policy or promotion of education and training, in order to improve the locational advantages of the regions are required. This applies especially to structurally weak regions.

3.3.2 Polycentric Development Model: A Basis for Better Accessibility

(111) The future extension of the Trans-European Networks (TENs) should be based on a polycentric development model. That means, in particular, ensuring the internal development of the globally important economic integration zones and facilitating their integration into the global economy. In addition, more attention should be paid to regions with geographical barriers to access, especially islands and remote areas. Spatial differences in the EU cannot be reduced without a fundamental improvement of transport infrastructure and services to and within the regions where lack of access to transport and communication infrastructure restricts economic development. A funda-
mental improvement of infrastructure and accessibility requires more than just providing the missing links in the TENs.

(112) Priorities, in complementing the network, for action should include supplementary measures for developing intra-regional linkages and development. The efficiency and density of these secondary networks will be vital for the integration of the regional and urban economies and their competitiveness. In particular, they serve to strengthen the smaller and medium-sized towns and their function in generating regional development overall.

(113) There is a risk that investments in secondary networks and their integration into the TENs cannot be carried out in time, or cannot be carried out at all, if the completion of higher ranking networks is given greater priority. To avoid a relative deterioration of service quality in those EU areas which are not directly integrated into the Trans-European Networks, the extension of secondary networks should not be treated as less important. This also includes the modernisation of regional transport services. In doing this, the utilised means of transport should be adapted to the specific local and regional circumstances (conventional rail network, buses, regional airports, etc.). Apart from this, the secondary networks can contribute to managing the traffic flows on the TENs and tapping the critical potential for large scale links. In this respect, the timetable for linking the secondary networks to the trans-European networks can be crucial for their development.

(114) Apart from the EU-wide dimension, the intercontinental dimension of transport networks must also be taken into consideration. The current structures of the intercontinental accessibility of the EU are characterized, on the one hand, by regional differences in the standards of transport networks and nodal points (ports, airports), and, on the other, by the policy pursued by airlines and shipping companies, which tend to favour – usually for economic reasons - specific intercontinental nodal points in the core area of the EU. The integration of the regions into the intercontinental networks has therefore up to now not been balanced from a spatial point of view. However, this is not only due to the uneven distribution of the nodal points for intercontinental transport but also to the level of services at the various intersections. In the interests of achieving balanced development, it is therefore important to reduce the disparities not only in transport infrastructure but also in the level of services and the corresponding costs, because the private sector will play an increasingly important role for intercontinental transport in the process of developing nodal points and networks with different levels of services.

(115) Achieving balance in air transport and setting up a European network of large sea ports, including regional sub-systems of ports, would be in the interests of all regions. This would benefit both the nodal points in the core area of the EU, suffering in some cases from increasing strain, and also the peripheral areas which require further promotion of their economic potential. The basic promotion of the links between the intercontinental nodal points and their hinterland by means of rail and inland waterway transport is also very important if the goal of a sustainable transport system is to be achieved. In conjunction with a policy aimed at achieving an efficient integration of all regions in the EU, transnational spatial development perspectives can be a significant help in developing sea port and airport infrastructure.

(116) Telecommunication networks can play an important role in compensating for disadvantages caused by distance and low density in peripheral regions. The relatively small market volumes in regions with low population density and correspondingly high investment costs for telecommunication infrastructure can thus lead to lower technical standards and high tariffs, which bring competitive disadvantages. In many spheres (tele-working, distance education courses, tele-medicine, etc.) the provision of high-quality services at affordable prices is a key factor for regional development. Nevertheless, the application of modern technologies does not depend solely on the availability of advanced infrastructure, equipment or services and their affordability, but also on the development level of each region. Particular attention should, therefore, be focused on measures to stimulate demand, the development of application-related knowledge and the fostering of awareness of opportunities in order to stimulate investment.

A prerequisite for all infrastructure projects should be an early assessment of the anticipated spatial impacts and a fine-tuning of Community, national and regional or local measures.

(117) Policy Options

24. Strengthening secondary transport networks and their links with TENs, including development of efficient regional public transport systems.

25. Promotion of a spatially more balanced access to intercontinental transport of the EU by an adequate distribution of seaports and airports (global gateways), an increase of their service level and the improvement of links with their hinterland.
26. Improvement of transport links of peripheral and ultra-peripheral regions, both within the EU and with neighbouring third countries, taking into account air transport and the further development of corresponding infrastructure facilities.

27. Improvement of access to and use of telecommunications facilities and the design of tariffs in accordance with the provision of “universal services” in sparsely populated areas.

28. Improvement of co-operation between transport policies at EU, national and regional level.

29. Introduction of territorial impact assessment as an instrument for spatial assessment of large infrastructure projects (especially in the transport sector).

3.3.3 Efficient and Sustainable Use of the Infrastructure

(118) The current growth of passenger and goods transport (in particular in road and air transport) has an increasingly adverse impact on the environment and the efficiency of transport systems. Approaches for relieving these systems are possible through an appropriate spatial development policy, which influences the location of employment and population and therefore mobility requirements and choice of transport mode. More efficient use of existing infrastructure can be achieved by strengthening environmentally friendly transport systems and promoting intermodal transport chains. However, this objective must be achieved without negative effects on the competitiveness of both the EU as a whole and its regions. The integration of transport and detailed planning of land use can be particularly effective in the large urban regions, where the dependence of the population on the car could be greatly reduced. A policy which favours the use of public transport in cities and their hinterland and in densely populated regions is necessary.

(119) In the core area of the EU and in other densely populated areas along the large corridors and some coasts, traffic - in particular road traffic - has reached such a dimension that measures for a reduction of the related accessibility deficits and the environmental impacts urgently need to be introduced. Measures should, therefore, be increasingly taken for strengthening the more environmentally acceptable transport modes. This includes, for instance, the levying of road tolls or the internalisation of external costs of road traffic, combined with a corresponding location policy. The choice of measures should be in accordance with local conditions. Nevertheless, both road traffic for passengers and for freight will remain of great importance, especially for linking peripheral or sparsely populated regions.

(120) The strengthening of more environmentally friendly transport modes requires an intermodal approach and co-ordinated transport infrastructure management. Their more efficient and sustainable use requires an increased use of railways and, in goods transport, of waterways (maritime, coastal and inland waterway shipping). In addition to increasing the efficiency of these networks, this calls for the development of appropriate intermodal links - that is to say an area-wide range of transfer and transhipment points. The potential of rail transport can only be fully realised through substantial modernisation. This applies both to the creation of interoperability between the individual systems and the improvement of logistics. In the more densely populated European regions, high-speed rail transport up to a distance of 800 km can substitute for air transport. In sparsely populated peripheral regions, particularly in insular locations, regional air transport, including short-haul services, has to be given priority. In general, specific solutions must be sought for less favoured areas.

(121) The authorities responsible for ports, airports, rail transport and trunk roads and the operators of the different networks should co-ordinate their policies and activities through integrated intermodal strategies. Potential synergy between the transport systems must be explored. Solutions can also be found in the shared use of existing infrastructure in order to avoid over-capacity as much as possible. For instance two neighbouring ports can jointly use railways, or an airport can serve a hinterland across a border.

(122) Another important consideration is co-operation between national, regional and local transport policies. Efficient links between the networks at different levels is essential. Regional initiatives can help national institutions and network operators to an improved use of capacities as well as a better planning by taking local requirements into account.

(123) Telecommunications, information and communications technologies are important supplementary instru-
ments for regional integration. Thus, they cannot be seen as substitutes for transport development. A major focus should be on co-ordination between decision-makers for transport and for telecommunications. Regional planning and transport planning should also be more strongly integrated with each other.

(124) Policy Options

30. Better co-ordination of spatial development policy and land use planning with transport and telecommunications planning.
31. Improvement of public transport services and provision of a minimum level of service in small and medium-sized towns and cities.
32. Reduction of negative effects in areas subject to high traffic pressure by strengthening environmentally compatible means of transport, levying road tolls and internalising external costs.
33. Promoting the interconnection of inter-modal junctions for freight transport, in particular for transport on the European corridors, especially regarding shipping and inland navigation.
34. Co-ordinated and integrated infrastructure planning and management for avoiding inefficient investments (for example superfluous parallel development of transport infrastructure) and securing the most efficient use of existing transport infrastructure.

3.3.4 Diffusion of Innovation and Knowledge

(125) Access to knowledge has the same importance for the competitive situation of the EU as access to infrastructure. Regionally interdependent labour markets and production and service locations require dynamic innovation systems; effective technology transfer; and institutions for training their workforces. Despite the progress of the past decade, which created the climate for new technologies and also provided improved training opportunities and specialist knowledge, access to knowledge and the capacity for innovation are still spatially unbalanced. The awareness of the population of the opportunities offered must also be strengthened. Governments (at all levels) must ensure that there are better links between education and research and the requirements of regional economic structures. They must also ensure that the general level of education is raised.

(126) Future economic development is likely to give prominence to the exchange of non-material services. Jobs are increasingly requiring more qualifications. The increase in productivity and employment growth depend increasingly on a further spread of new and better products and processes. Those companies which are able to combine innovation with new forms of organisation and more highly qualified workforce will be able to position themselves better on the market in the long term.

(127) In this respect, access to an adequate supply of high-quality training and to research centres is absolutely essential. In order to have a direct link between companies in less developed areas and research centres and training facilities it is essential that highly-qualified and well trained mediators are able to create such links. Technical service centres, where innovations can be presented and tested by local companies, would be helpful. In addition, communications between local companies on the one hand, and technology centres, universities, management consultants, etc., on the other hand, should be improved to develop complementary skills.

(128) The economic attractiveness of a region also depends on training standards and the professional skills of its labour force. In recent years, less developed areas have made significant progress in this, particularly in combating illiteracy. These efforts have to be continued. In addition, it must be ensured that local companies are also able to employ and pay the workforce according to their qualifications, thereby keeping them in the region.

(129) Information and communication technology can help to reduce deficits in the field of access to innovation and knowledge and, by this means, support the settlement of companies in rural regions. This creates investment incentives in regions which normally have lower relative location costs. A polycentric development of the territory of the EU can support this policy.

(130) The dissemination of the new information technologies in all regions involves the provision of a general basic service of equally high quality and the adoption of an ap-
appropriate policy of charges. As the northern countries demonstrate, low population density is not an insurmountable obstacle to the provision and widespread use of high-quality telecommunications services. In addition to regulative measures, strategies aimed at stimulating demand for knowledge promote the operation and use of information and communications technologies. This includes, for example, awareness-raising campaigns and better training opportunities.

(131) Policy Options

35. Wide-ranging integration of knowledge-relevant policies, such as the promotion of innovation, education, vocational training and further training, research and technology development, into spatial development policies, especially in remote or densely populated areas.
36. Securing Europe-wide access to knowledge-relevant infrastructure taking account of the socio-economic potential of modern SMEs as motors of sustainable economic development.
37. Fostering networking among companies and the rapid diffusion of innovations, particularly through regional institutions that can promote innovations.
38. Supporting the establishment of innovation centres as well as co-operation between higher education and applied R&D bodies and the private sector, particularly in economically weak areas.
39. Development of packages of measures which stimulate supply and demand for improving regional access and the use of information and communication technologies.

3.4 Wise Management of the Natural and Cultural Heritage

3.4.1 Natural and Cultural Heritage as a Development Asset

(132) The Communication from the Commission to the Council and the European Parliament on a European Community biodiversity strategy states that spatial development can play an important role in the conservation and sustainable use of biodiversity at local and regional level. The natural and cultural heritage of the EU is permanently threatened in a diverse number of ways. Even though strict protection measures are sometimes justified, it is often more sensible to integrate protection and management of the endangered areas into spatial development strategies for larger areas.

(133) The cultural heritage of Europe – from the cultural landscapes of rural areas to the historic town centres – is the expression of its identity and is of world-wide importance. It is also part of the everyday environment of numerous people and enriches their quality of life. Rigorous protection measures, such as those envisaged for architectural conservation for certain areas and monuments, can only cover a small part of this heritage. For the greater part, a creative approach is required, to reverse in a number of areas the predominant trend of neglect, damage and destruction and thus pass the cultural heritage, including current achievements, on to future generations. It is important to spread cultural life throughout the EU, in particular by supporting the development of cultural facilities, upgrading public spaces and reviving commemorative sites. In this respect cultural development can play a role of social and spatial balancing.

(134) The natural and cultural heritage are economic factors which are becoming increasingly important for regional development. The quality of life of towns and cities, their hinterland and rural areas plays an increasingly important role in the location decisions of new companies. Natural
and cultural places of interest are also an essential precondition for the development of tourism.

3.4.2 Preservation and Development of the Natural Heritage

(135) The development of natural resources takes place in the EU under the auspices of environmental management (air, water, soil) and targeted protection of certain areas (protected areas, environmentally sensitive areas).

(136) The extent of protected areas in the EU has grown in the past ten years although most areas remain protected “islands”. The objective of a Community-wide network of protected areas – “Natura 2000” – incorporated in the Habitat Directive and other environmental directives is a very promising approach, which has to be harmonised at an early stage with regional development policy. Concerted protection measures for areas which belong to the network must be drawn up and fine-tuned in line with spatial development perspectives. An ecological network and Natura 2000 can also secure and develop the protection of valuable biotopes. There is a role to be played by links and corridors between protected areas, such as hedges, which can assist migration and the genetic exchange of plants and wild animals. In addition, a broader land-use policy can provide the context within which protected areas can thrive without being isolated, including, if necessary, the identification of buffer zones.

(137) In addition to protected areas, different types of environmentally sensitive areas also display great biological diversity – for instance mountainous areas, wetlands, coastal regions and islands. Since such largely intact habitats are becoming increasingly rare, their ecologically valuable core areas must also be placed under protection. However, protection alone is not sufficient for conserving these areas. Their less sensitive parts should be the subject of economic uses in keeping with their ecological function. At the same time, this opens up new development opportunities for the regions, for instance in the field of environmentally friendly tourism.

(138) The conservation and development of natural resources calls for appropriate integrated development strategies and planning concepts as well as suitable forms of management. This ensures that nature conservation and the improvement of living conditions for people are taken into consideration equally. Spatial and environmental impact assessment can provide the necessary information basis for this. In the search for balanced solutions, the population affected should be intensively involved. The recommendations for spatial planning in the coastal regions of the Baltic Sea are very promising examples of international co-operation in this area.

(139) Apart from this, new approaches should be taken to harmonise nature protection and spatial development. In the preservation of natural heritage protected areas and other ecologically valuable areas, an important service for the whole of society is provided. Protection regulations and development restrictions should not be allowed to have a negative impact on the living conditions of the population. Instead, ecological resources should be costed in economic terms – for instance through adapted fiscal solutions. Through earnings produced in this way, each region could open up appropriate new development opportunities, at the same time preserving the natural heritage.

(140) The so-called “greenhouse effect”, that is the concentration of gases contributing to the global warming of the earth’s atmosphere, represents a major challenge for environmental protection. Responsibility for climate change lies in particular with the combustion of large amounts of fossil fuels in the energy and transport sector; the destruction of forests; the intensification of agriculture; and the production of CFCs and halons. As a counterweight, the obligations entered into by the EU in Kyoto to reduce CO₂ have to be strictly implemented. Spatial development policy can make an important contribution to climate protection through energy-saving from traffic-reducing settlement structures and locations, as well as making contributions through the increased use of CO₂-neutral, renewable energy sources. In their function as “green lungs”, European forests are extremely important for sustainable development. This also involves the optimum use of forest resources in Europe. In this context, sustainable forest management should have top priority.

(141) The destruction of soils is another serious environmental problem in the EU. Through the type, extent and intensity of human use, a large amount of soil is threatened with irreparable loss of structure and function as the elementary basis for life. Significant risk factors are soil...
erosion caused by land use; floods; forest damage; ground water contamination; concentration of pollutants; and also the intensity of agricultural use and the allocation of open space for settlement purposes. Efficient land protection, to preserve natural resources and soil functions is therefore necessary. Soil protection must also ensure that compaction resulting from use, erosion and soil destruction is reduced, just as much as combating potential pollutants or excessive use of open space for settlement purposes.

(142) Protected and endangered areas have to be recognised as components of urban and rural regions. Spatial planning at suitable government and administrative levels can play a decisive role here, as well as in the protection of humans and resources against natural disasters. In decisions concerning territorial development, potential risks - such as floods; fires; earthquakes; landslides; erosion; mudflows; and avalanches and the expansion of arid zones should be considered. In dealing with risks, it is important, in particular, to take the regional and transnational dimensions into account.

(143) Policy Options

40. Continued development of European ecological networks, as proposed by Natura 2000, including the necessary links between nature sites and protected areas of regional, national, transnational and EU-wide importance.
41. Integration of biodiversity considerations into sectoral policies (agriculture, regional policies, transport, fisheries, etc) as included in the Community Biodiversity Strategy.
42. Preparation of integrated spatial development strategies for protected areas, environmentally sensitive areas and areas of high biodiversity such as coastal areas, mountain areas and wetlands balancing protection and development on the basis of territorial and environmental impact assessments and involving the partners concerned.
43. Greater use of economic instruments to recognise the ecological significance of protected and environmentally sensitive areas.
44. Promotion of energy-saving and traffic-reducing settlement structures, integrated resource planning and increased use of renewable energies in order to reduce CO₂ emissions.
45. Protection of the soil as the basis of life for human beings, fauna and flora, through the reduction of erosion, soil destruction and overuse of open spaces.

46. Development of strategies at regional and transnational levels for risk management in disaster-prone areas.

3.4.3 Water Resource Management – a Special Challenge for Spatial Development

(144) Water is an important resource for nature, agriculture, households, industry, recreation, energy production and transport. In the EU, the availability of water is often taken for granted. The difficulties with regard to guaranteeing water supply will, however, in future probably increase not only in quantitative terms, but also from a qualitative point of view. Through continuing pollution, over-utilisation and bad management, the quality of water resources has deteriorated, although the extent of this problem within the EU varies from region to region. Since water does not recognise any boundaries, the problems are often of a transnational nature. It is, therefore, necessary to co-operate across administrative boundaries in the field of water resource management, for example in large river valleys, of flood protection, of drought prevention and of ground water and wetland protection.

(145) Water protection policy and water resource management have become a necessity. Policies for surface water and ground water must be linked with spatial development policy. Preventive measures for the reduction of waste water, over-utilisation and pollution of water resource should have preference over “end-of-pipe” technologies. Corresponding spatial and land use planning can make a decisive contribution towards the improvement of water quality. That is the reason why the impact of large water exploitation related projects should be examined through territorial and environmental impact assessments. Moreover, cross-border and transnational development strategies are a basis for a better water resource management.
Water can also represent a threat. Spatial planning, above all at transnational level, can make an important contribution to the protection of people and the reduction of the risk of flood. Flood prevention measures can be combined with nature development or restoration measures. The INTERREG II C programme for the prevention of flooding has identified some potential approaches.

The demand for water is continuing to increase, particularly as a result of the growing consumption by households, agriculture and tourism. In the Mediterranean areas, the problem is particularly acute. Programmes for combating drought, such as the special programmes within the framework of INTERREG II C, must be aimed in a more focused way at limiting the demand for water and at increasing the efficiency of the water supply systems. Concerning activities with a high demand for water, spatial planning can already make an important contribution by identifying uses that require less water within the planning process. These problems require a broadly-based public debate, since only a broad awareness of the issue among the population can ensure the sustainable use of water resources.

Drainage projects and the overuse of ground water also have negative impacts on environmentally sensitive areas. Large areas of moist biotopes have been destroyed and some wetlands have disappeared completely. In terms of their biological value and their natural cleaning and regulating functions, wetlands are a valuable resource. Their preservation and restoration have top priority.

Chemical and organic compounds in the seas and their overuse threaten maritime ecosystems and lead to an overall degradation of the environment.

Policy Options

47. Improvement of the balance between water supply and demand, particularly in areas which are prone to drought. Development and application of economic water management instruments, including promotion of water-saving agricultural methods and irrigation technology in areas of water shortage.

48. Promotion of transnational and interregional cooperation for the application of integrated strategies for the management of water resources, including larger ground water reserves in areas prone to drought and flooding, particularly in coastal regions.

49. Preservation and restoration of large wetlands which are endangered by excessive water extraction or by the diversion of inlets

50. Concerted management of the seas, in particular preservation and restoration of threatened maritime ecosystems.

51. Strengthening of regional responsibility in water resource management.

52. Application of environmental and territorial impact assessments for all large-scale water management projects.

Creative Management of Cultural Landscapes

Cultural landscapes contribute through their originality to local and regional identity and reflect the history and interaction of mankind and nature. They are of considerable value, for instance as tourist attractions. The preservation of these landscapes is of great importance, but must not make economic use impossible or hinder it excessively. In some cases, the targeted protection of places of particular interest is necessary. In other cases, entire landscapes should be preserved and/or restored. The way in which agriculture is practised is frequently the most important aspect in countering the destruction of cultural landscapes.

A common feature of many European landscapes is their constant further development. However, this tends to lead to more uniformity in landscapes and the loss of biodiversity. A small number of places should be placed under protection as unique examples of historical cultural landscapes: for instance the “Bocage” arable landscapes along the Atlantic coast. Protection measures are also required for elements which are particularly typical of older landscapes, for instance the old systems of open fields through which places of historical interest evolved. In a similar way histor-
ic paths which lead through different countries, such as the pilgrims’ path to Santiago de Compostella or the Italian “Via Francigena”, are of such great value that they should be placed under protection.

(153) In a great number of cases the creative further development or the restoration of landscapes is more important than preservation of the current situation. Today, measures affecting landscapes are frequently uncoordinated. Their results tend to be random and often just reflect various interests of each participant. New commercial and housing developments are often built without aesthetic or environmental considerations. In some cases, extraction of raw materials destroys entire landscapes. Therefore, for many areas in Europe an individually adapted and creative landscape policy must be drawn up. Policy should be based on an integrated approach to new developments and contribute to the creation or restoration of attractive landscapes.

(154) In some cases, the countryside can deteriorate through a lack of human intervention. This happens, in particular, where traditional agricultural land use methods are given up. Neglecting land management in endangered areas, such as mountainous or coastal areas, can have particularly serious consequences, for example when it reinforces soil erosion. In areas where human activities are not yet very pronounced, reducing human intervention can also allow nature to recover. The promotion of traditional land use methods, the development of tourism and reforestation can, for example, be alternatives to completely fallow land.

(155) Policy Options

53. Preservation and creative development of cultural landscapes with special historical, aesthetical and ecological importance.
54. Enhancement of the value of cultural landscapes within the framework of integrated spatial development strategies.
55. Improved co-ordination of development measures which have an impact on landscapes.
56. Creative restoration of landscapes which have suffered through human intervention, including recultivation measures.

(156) Many European towns and cities have a large number of extremely valuable cultural areas which are often suffering slow but constant deterioration. Despite considerable investment in maintenance and restoration of these areas, it has not been possible to halt this trend. Protection programmes must be initiated to avoid irreparable damage. The signatory states of the Grenada Convention of 1985 have committed themselves to an approach that ensures the protection and maintenance of the architectural heritage, but which at the same time must take into consideration the requirements of a modern society.

(157) Cultural heritage is particularly sensitive to environmental pollution and to risk factors generated by both natural and human factors. Knowledge about different risk factors is still insufficient and requires the development of sophisticated methodologies based on a comprehensive concept of risk evaluation.

(158) Europe’s cultural heritage not only consists of individual historic buildings and archaeology sites. The different lifestyles of inhabitants of European towns and cities have to be viewed in their entirety, as a part of the cultural heritage. Many European cities are subject to the dangers of commercialisation and cultural uniformity, which destroys their own individuality and identity. This includes, for example, real estate speculation, infrastructure projects which are out of scale with their environment or ill-considered adaptations to mass tourism. These factors frequently combine to cause serious damage to the structure and the social life of towns and cities and to reduce their potential as attractive locations for mobile investments. Spatial development strategies can help to counter these dangers.

(159) Modern innovative buildings should not be regarded as disruptive influences but, instead, as potentially enriching the cultural heritage. In many cases, however,
the best architectural works are individual successes, frequently accompanied by unattractive development, which impairs the quality of the urban environment. Buildings or groups of buildings are seldom arranged on the basis of a contemporary vision of urban planning and integrated in a harmonious way into urban ensembles. As in rural areas, the townscape is often the result of random development. Strategies for the creative design of townscape are only gradually being developed. They are, however, urgently required, in particular in towns and cities where the deterioration in the quality of the buildings has reached a state which prevents people from living or investing there.

4 The Application of the ESDP

4.1 Towards an Integrated Spatial Development

(161) In applying the policy options, Member State government and administrative agencies as well as EU services should consider, at an early stage, sectoral and spatial conflicts and timing difficulties and set the right priorities. This requires new ways of co-operation, which according to the ESDP’s principles should be on a voluntary basis. The application of the policy options is based on the principle of subsidiarity. There is thus a need for close co-operation amongst the authorities responsible for sectoral policies; and with those responsible for spatial development at each respective level (horizontal co-operation); and between actors at the Community level and the transnational, regional and local levels (vertical co-operation – see Fig. 7). Co-operation is the key to an integrated spatial development policy and represents added value over sectoral policies acting in isolation.

(162) Integrated spatial development policy at EU scale must, therefore, combine the policy options for development of certain areas in such a way that national borders and other administrative hurdles no longer represent barriers to development. The ESDP provides the framework for integrated application of the policy options. Its application is not the responsibility of one authority but of a wide range of spatial development (land use, regional planning, urban planning) and sectoral planning authorities.

(163) The policy options differ from each other with regard to the geographical area to which they apply. The ESDP recommends three levels for spatial co-operation:

1. the Community level,
2. the transnational/national level,
3. the regional/local level.

From the EU point of view co-operation at transnational level is of central importance. Transnational strategies and programmes help applying sectoral Community policies to the different regions of the EU. They can also support the co-ordination of Community policies with respective national, regional and local policies.

(164) Of the possible groupings of ESDP policy options, there are a number which are key to achieving a balanced and sustainable spatial development policy. These have to be determined locally according to the prevailing situation. Examples of this are as follows:

1. Promotion of the networking of urban regions: All cities and regions must be capable of contributing to reducing unemployment, to economic growth and to social harmony in the EU. For this purpose, strategic partnerships and co-operation between the urban regions should be more strongly encouraged. This requires a regional, cross-border and transnational approach to urban networking.
2. Better accessibility as a pre-condition for polycentric development: Even if it is not possible to achieve the same degree of accessibility between all regions of the