

THE SIGNIFICANCE OF LANDSCAPES

The concept of landscapes

The richness and diversity of rural landscapes in Europe is a distinctive feature of the continent. There is probably nowhere else where the signs of human interaction with nature in landscape are so varied, contrasting and localised. Despite the immense scale of socio-economic changes that have accompanied this century's wave of industrialisation and urbanisation in many parts of Europe, much of this diversity remains, giving distinctive character to countries, regions and local areas.

Landscapes can be divided into natural and cultural types. [Chapter 9](#) is dedicated to the former by presenting a view on Europe's relatively small but valuable percentage of natural and semi-natural ecosystems. However, there are practically no areas in Europe that can be considered 'natural' in the sense that there is no human influence whatsoever, and few where there is no human presence. Even the Nordic subalpine birchwoods, or the tundra and taiga of Russia, which are often thought of as 'untouched', have been subject to some human impact. Other areas, such as the openfields or bocage landscapes have sometimes replaced former forest landscapes and are not only influenced by but are in fact the very result of centuries-old human landuse. The term 'cultural landscapes' characterises this distinctive interrelationship between nature and people and encompasses a group of mostly rural landscapes. By prevailing over the remaining natural types of land-cover, cultural landscapes play a significant role for the state of Europe's environment. The interrelationship between nature and people varies from place to place, due to differences in physical conditions, such as topography, climate, geology, soils and biotic factors, and the type of human use or occupancy that can range from minimal to intensive. Landuse patterns have evolved around two significant factors: the type and accessibility of natural resources and the dynamics of demographic processes. Both factors are closely interlinked through a network of economic, ecological, social and cultural components. By acting as visual documents for the complex nature of these linkages, landscapes often represent aesthetic values in the perception of our environment.

The complexity of factors that contribute to the shaping of Europe's cultural landscapes is reflected in the diversity of values that are attached to them. Since these differences of perception set natural limits to any generalised approach of landscape evaluation, this chapter will only highlight some of the most obvious environmental aspects of cultural landscapes. Despite the many close links between this chapter and that on 'nature and wildlife' ([Chapter 9](#)), the values and problems of cultural landscapes are so much more based on economic and social aspects that they need to be set distinctively apart. However, conserving landscapes also helps protect the species and habitats within them and, taking action to protect species and habitats, contributes to safeguarding the richness and diversity of the landscape.

This chapter reviews the values which are attached to cultural landscapes, presents a typology of European landscapes, explains why landscapes are currently under stress, and describes landscape conservation measures underway at national and international levels. Given the existing discrepancy between the large variety of European landscapes and the lack of internationally harmonised approaches to describe and classify them, this chapter cannot be more than a first and incomplete attempt to tackle the subject. In particular, the large-scale map of European landscape types presented below must be considered as an indicative representation of the distribution of the main categories of landscape across Europe which has been developed for descriptive rather than analytical purposes. A prevailing theme throughout the chapter, however, is the importance of landscapes to the future of Europe's environment and their due place and importance in international efforts to safeguard the environment of this continent.

Values and functions of landscapes

Landscapes can be valued for a variety of reasons and they also provide a series of important functions. Five such values and functions are identified below: the role of landscapes in the sustainable use of natural resources, as wildlife habitats, providing economic benefits, scenery and open spaces, and possessing cultural heritage.

Sustainable use of natural resources

The character of many landscapes is often the cumulative result of human activities over many centuries. In parts of the Mediterranean region, for example, fire and overgrazing have led to the appearance of the *maquis*, now a very characteristic type of scrub and grassland ecosystem. However, one of the values which is to be found in some traditional landscapes is the presence of a sustainable pattern of landuse. The Iberian agro-silvo-pastoral landscapes of the montado and dehesa, the Scandinavian grazed deciduous woodlands, the puszta of Hungary and the sheep-grass downlands of Southern Britain are all examples of landuses which have also created

environments that are rich in wildlife and nature. The sustainable methods of land management that are reflected in these landscapes have survived for many hundreds of years and therefore may provide information as to how similar areas could be better managed in future.

Wildlife habitats

Agri- and silvicultural landscapes can form transition zones between the controlled human environment of cities and the wilderness areas of flora and fauna. As such, landscapes have important functions for both humans and wildlife since they provide not only resources for human consumption but also important habitats for many plants and animals. The need to preserve endangered species and natural habitats or biotopes, or more generally maintain biological diversity (see [Chapter 29](#)), is thus intimately linked to the existence of natural and diverse landscapes. Given the absence of true wilderness areas in many parts of Europe, extensively used agri- and silvicultural landscapes have increasingly become the only remaining refuge for wildlife. Proper landscape management is therefore essential to give nature a place of its own.

Economic benefits

Cultural landscapes are the expression of past and present economic activity. In particular, farming is often the architect of landscapes. The importance of landscapes for recreation and tourism is much influenced by the very result of this impact: intensive, mono-cultured, large-scale agro-industrial complexes are clearly less attractive to people than natural and diverse landscapes. Across Europe, countryside with a varied pattern of fields, farms and woods attracts many millions of visitors from nearby cities and further afield. A wide range of activities are carried out in such areas (eg, bicycling, hiking, swimming, nature-excursions and use of off-road vehicles). The construction of purpose-built large-scale sport or recreational facilities (eg, golf courses, ski-ramps, amusement and safari parks) often involves major physical changes. For rural communities these developments can be economically very important. However, they can often also be the cause of problems from both direct and indirect impacts not only affecting landscapes, but also through pollution, pressures they put on natural resources, urban development and congestion.

Open spaces and scenery

Landscapes and open spaces are often associated with harmony, stability and naturalness, and are generally viewed as pleasing contrasts to the quality of life in cities. 'Scenery' is a cultural/aesthetic expression of the land as it is seen and is primarily related to cultural landscapes. While human settlements represent a largely controlled environment, landscapes are appreciated for being the contrary: open, less controlled and seasonally changing. However, the role of human activities controlling, for example, the degree of openness or enclosure of a landscape, combined with the natural topography, is of primary importance in the creation of landscapes in Europe.

There is evidence that many people feel more comfortable in what they regard as the harmonious countryside of cultural landscapes rather than in the potentially threatening natural world of wilderness. Although difficult to quantify, the evidence indicates that people enjoy landscapes because they provide:

- scope for various forms of recreational and sporting activities;
- opportunities for inspiration and vision;
- a source of mental, physical and spiritual renewal; and
- a place of understanding and learning.

In this way, landscapes can provide many non-material benefits of life which all people seek. Sustainability is partly about people finding a new relationship with the natural world, and thus a greater valuation of the beauty and other intangible qualities of landscapes are relevant here.

Cultural heritage

European landscapes are important for the cultural elements that they contain; for example, ancient field systems of terraces, or vernacular architecture in farm buildings. This rich record of past landuse is to be found in many landscapes and has values which are comparable in many ways with the historic towns and cities of the continent (see also '[Cityscapes](#)' discussed in Chapter 10). Other values exist in the association between landscape and art in its many forms. The celebration of landscape has achieved international recognition: in great paintings (such as those of the Flemish School, French impressionists or German Romanticism), in the music of Sibelius and in the poetry of Wordsworth. Of further significance is the part landscapes play in national and local consciousness. Since the landscapes found in Europe today are so often the outward expression of people's link to the land, they are often imbued with rich cultural associations - an expression of people's own identity.

Landscape as a European concern

Whereas the international dimension of natural landscapes has been readily recognised for many years through nature conservation, cultural landscapes have tended to be thought of almost exclusively as a national concern. Certainly the protection of landscapes, and the management of change within them, is primarily a matter for

national and local action, but there is clearly a European scale of concern too. The particular richness and diversity of European landscapes, the visitors this attracts from within and outside Europe, combined with their many cultural associations, makes landscapes a matter of interest and concern to all. Ultimately the regional diversity and uniqueness of landscapes form collectively a common European heritage.

Since most landscapes are a by-product of human activities they are particularly exposed to change. This is an important characteristic of cultural landscapes which is not, *per se*, detrimental to the environment. Nevertheless, it is important to define an optimal potential where both the economic *and* ecological values of landscapes are balanced.

DESCRIPTION OF EUROPEAN LANDSCAPES

The approach

Identifying important landscape types of concern at European level needs to include numerous factors since, locally, landscapes possess many diverging connotations. This description focuses on the following factors: human activities, ecology, sustainability and scenery.

Landscapes of European concern need to represent:

- the main landforms that characterise the geological and climatic zones;
- areas where ecologically sound processes and sustainable use of natural resources are combined;
- areas which are extensively managed as semi-natural habitats for fauna and flora;
- regionally specific settlement patterns, ancient field systems, old trees, terraces and vernacular architecture; and
- examples of scenic quality and the visual characteristics of the continent.

Assessing such landscapes thus needs to take into account vegetational, geomorphological, agricultural, silvicultural and cultural influences.

A prime consideration for identifying cultural landscapes of European concern is the question of whether the ecological and anthropogenic elements of a landscape form a stable (or sustainable), functional and harmonious unit. To answer this question on an international level, and to set appropriate criteria to do so, needs a detailed study with a comprehensive and systematic approach. This was beyond the scope of the current assessment. The aim of this chapter is to provide a basis for an environmental appraisal of European landscapes from which future analyses of the priorities and concerns at European level can be developed. With the above considerations, an elementary typology of European landscapes was developed and applied across Europe at a scale of 1:6 000 000. The typology of Meeus et al (1990) is suitable here because it contains the appropriate elements and has been extended to incorporate additional landscape definitions to cover the whole of Europe. Attention is paid to the interaction of the following five factors.

Actual and potential vegetation

Noirfalise (1989) used soil and vegetation as the starting-point for making a distinction between different types of landscapes such as: bocage, openfields, agro-pastoral and agro-forestry landscapes, vineyards, Mediterranean landscapes and mountains. The map of the 'potential natural vegetation' of Europe ([Map 9.1](#)), the landscape map of the USSR ([Anon, 1988](#)) and the Atlas of the Environment from the former Czechoslovakia ([CSAV, 1992](#)) give an indication of potential natural vegetation based on interpretation of soil and climate. In the European part of the former USSR the following landscapes are distinguished: tundra; northern, middle and southern taiga; subtaiga; forest; mountain; steppe; and arid or desert landscapes.

Soil, landform and geomorphology

The soil map of the EC ([CEC, 1985](#)), the soil map of the world ([FAO, 1982](#)) and the descriptions of the major soils of the world ([Driessen and Dudal, 1991](#)) give an indication of the geography of soil types, and the formation and the use of land. The geomorphological map of the USSR ([Anon, 1989](#)) and the CORINE soil erosion maps of the southern part of Europe ([CEC, 1992a](#)) give information about the major processes of change in landscapes.

The agricultural use of the land

The landuse maps of Europe ([Csati et al, 1980](#)), CORINE land-cover ([CEC, 1992b](#)), the agricultural landuse map of the former USSR ([Anon, 1991](#)) and the agriculture types of Europe ([Kostrowicki et al, 1984](#)) give information concerning the distribution of crops, trees and forests grown in different regions of Europe.

Rural landscapes

Lebeau (1969) gives an extensive survey of the formation, morphology and geography of rural landscapes made and transformed by humans; Europe (excluding the former USSR) is divided into: bocage (hedgerows),

openfields (three types: western, eastern and Mediterranean), linear villages in polders or forests, huertas, coltura promiscua and montados.

Forest landscapes

Forest landscapes have a history and scenery of their own. Bernes (1993) gives an overall view of the landscapes of the Nordic countries (Denmark, Iceland, Norway, Sweden and Finland). Different forests, tundra, mountains and agricultural landscapes are distinguished. Pisarenko (1993) divides the Russian forests into climatic zones: tundra, pre-tundra forest, northern taiga, middle taiga, southern taiga and a zone of broadleaved forests.

Vegetation, one of the criteria mentioned above, can be illustrated with the help of the so called 'Holdridge' diagram. The field in the simplified Holdridge diagram ([Figure 8.1](#)) represents different conditions of water availability controlled by the rates and levels of evaporation and precipitation. From this, ten types of potential natural vegetation are located in a field with the five climatic zones of Europe. Natural growing conditions will follow these climatological and biogeographic zones, but not all the combinations implied by this diagram may be found as such 'in the field'.

Combining climate and vegetation with landscape scenery (the openness or degree of closure of the scenery) allows the distinguishing characteristics of different landscapes in Europe to be defined. On this basis, 30 landscape types of European interest can be identified. Their main characteristics are listed in [Table 8.1](#).

Comparison of 30 European landscapes

The geographical distribution of the 30 European landscapes identified in [Table 8.1](#) are illustrated in [Map 8.1](#). The landscapes vary from open (field) landscapes such as deserts, openfields and arctic tundra, to completely enclosed (forest) landscapes, such as bocage (hedgerows), forests, taiga and forest tundra. In total, eight broad categories are defined:

- tundras;
- taigas or forest landscapes;
- uplands;
- bocages or enclosed landscapes;
- openfields;
- steppes and arid landscapes;
- regional landscapes; and
- artificial landscapes.

Depending on the need, the application, the scale and the amount of detail, the 30 European landscape types identified could be divided into many subtypes - not attempted here. At this European level forests are only identified as landscape units in Eastern Europe. Indeed, some regional and artificial landscapes are too small or too unevenly distributed to be illustrated at the scale of the map; coastal and river linear landscapes are not included here either.

There is a remarkable difference between the landscape types of most parts of Western and Eastern Europe. Natural soil and climate conditions are more extreme in the East but overall are also more homogeneous than in the West. Population is less dense and the landscape types follow climate zones more closely. In the Nordic countries and Russia, forest landscapes, or taiga, dominate, and human influence appears less pronounced. By way of contrast, in Central Europe, the so called 'collective openfields' have been completely cleared of trees and shrubs for intensive cultivation while steep slopes and valleys have been reafforested. In western parts of Europe, under continental or Atlantic climatic influences, a greater population density and a more dispersed settlement pattern has resulted in a considerable area of the land being characterised by small-scale landscapes as well as large-scale openfields. Thus, in general, in the North and East of Europe, landscapes are generally more continuous and more closely resemble potential natural conditions, while to the West, landscapes are fragmented, change more often over shorter distances and reflect more strongly the impact of human activities. The distribution of landforms following ground relief is a major factor differentiating landscapes. Uplands, comprising mountain ranges and highlands, are characterised by their relief, active processes of weathering and erosion and the variability of climate conditioned by both elevation and geology. These form largely natural landscapes and are discussed further as mountain ecosystems in [Chapter 9](#).

In Southern Europe, under a Mediterranean climate, the landscapes reflect the ingenuity and past struggle of people over many centuries to earn a living from the land in poor natural growing conditions; terracing, irrigation and low-input agriculture have been the methods used, altering the landscape accordingly.

In southeastern Europe, low average rainfall (below 400 mm/year) and dry, warm continental climate favour treeless steppes, semi-deserts and sand deserts with 'sagebrush' vegetation and low landuse intensity.

In all parts of Europe, in addition to the main landscape types, specific regional landscapes have developed (or remained) such as the open forest landscapes on the Iberian Peninsula (the montados or dehesas), the coltura promiscua in Italy and Portugal, Poland's strip fields, and the polders along the North Sea coast. These and other typical regional landscapes have their counterparts in diverse and traditional terraced landscapes, which do not have a fixed place 'in the field' and thus cannot be located on a map of Europe.

Other than polders, some forms of deltas and the huerta, there are some types of 'artificial landscapes' which are also not represented on the map. By corresponding to intensive agro-industrial landscapes, including such features as modern topographic terracing (monocultures, eg, vineyards), extensive glasshouses and concentrated animal husbandry, these artificial landscapes are relatively common and widespread components of many landscape types. Although artificial landscapes may have become characteristic for the type and intensity of a region's productivity, they are often uniform, unspecific and disintegrated in environmental and aesthetic qualities. Consequently, these are not considered further.

Some further details and examples of local characteristics, development and trends relating to the identified European landscape types are described in [Boxes 8A](#) to [8E](#)

LANDSCAPES UNDER STRESS

The close interaction between people and nature is reflected in the way in which each European landscape has been shaped in some way by human activities. When the character of this interaction changes, the landscape is inevitably altered. Agriculture can be specially singled out as having a significant effect on landscapes, but there are a number of forces at work in Europe today which are disrupting the relationships of the past:

- agricultural intensification;
- agricultural abandonment;
- urban expansion;
- standardisation of building materials, designs, etc;
- infrastructure development, especially roads;
- tourism and recreation;
- mining/landfills; and
- loss of wildlife habitats.

Broader environmental problems, such as air pollution or the overexploitation of groundwater, may also have an impact on landscapes through, for example, the changes they bring about by damaging woods and trees (see, eg, [Box 34A](#)) or loss of wetlands.

An international European-wide 'landscape inventory' does not exist which could allow a systematic approach for assessing the dimension, rate and trends of landscape changes. In the absence of a comprehensive picture, the impact on landscapes in Europe from the forces mentioned above can only be briefly described and illustrated with the help of case studies. Most of the broader environmental problems associated with these changes are described in other chapters of this report.

Agricultural intensification

The modernisation of agriculture brings about changes in the landscape. The larger-scale impacts of collectivisation are known to result in an opening up of the landscape. In bocage landscapes, larger machinery favours bigger fields, demanding the removal of hedgerows. Everywhere, modern machinery needs bigger roads and buildings from which to operate. When monoculture replaces mixed farming regimes, the landscape becomes more uniform and sterile. When land is drained for agriculture, or pockets of woodland are felled, the landscape is greatly changed ([Park, 1989](#)). On the other hand, irrigation can also have considerable impacts on a landscape's naturalness. In addition to these technology and production-related changes, there are also those resulting from changes in land ownership or management responsibility. Collectivisation in the East and land consolidation in many Western European countries, for example, have led to major changes in land use practices, leading in turn to different landscapes. The threats to the dehesa/montado of Portugal and Spain described in [Box 8F](#) illustrate how these pressures from agricultural intensification can affect a landscape (see also [Chapter 22](#)).

Agricultural abandonment

The opposite process has also been at work. Land that has been farmed for many years has been abandoned, or put to other uses, such as large-scale afforestation in several of the Atlantic seaboard countries. In some cases the effect on the landscape has been relatively slow and subtle, with the decline of farm holdings in marginal land and the encroachment of trees; many Alpine and other mountain areas have thus been affected, with the consequent disappearance of the former farmed landscape. But there are parts of Europe, and especially in poorer areas of the Mediterranean, where entire rural villages have been predominantly abandoned as the traditional farm economy has largely broken down ([WRR, 1992](#)).

Urban expansion and uncontrolled settlement

When towns expand, they incorporate the countryside and entirely destroy the landscape. The continually increasing transport network divides up the land (see [below](#)) and encourages further development. Beyond the physical expansion of towns, there is also the more subtle impact of an expanding urban presence felt within the countryside from increased mobility and, for example, the presence of second-home owners. Such developments can lead to rural communities having less influence in how the surrounding countryside is managed. The pressure from urban expansion is illustrated in [Box 8G](#) for the polder areas of The Netherlands.

Standardisation of building materials and design

The built features in the landscapes of Europe, such as farm buildings and walls, were traditionally constructed with materials such as local stone, timber and thatch. Styles of building evolved appropriately, and were immensely varied. Today, widely available modern standardised materials are displacing traditional ones (corrugated iron in place of tiles, or concrete breeze-blocks in place of local stone or brick, for example) due to cost-effectiveness or loss of traditional craft skills such as dry-stone walling or thatching. As a result, new buildings in different parts of Europe have increasingly come to resemble one another. The local vernacular is often lost along with local skills and sources of employment.

Infrastructure development and transport

In recent years the expansion and modernisation of national and even international infrastructure, such as roads, canals and power lines, have affected landscapes across Europe. Often this leads to ecological disruption and sometimes disrupts the local economy as well. Major roads, in particular, are alien elements in many landscapes; however, cumulatively, fewer improvements in the road network can also have a negative effect on the landscape. The way in which landscapes are becoming increasingly fragmented is illustrated with an example from Germany ([Box 8H](#)). See also [Chapter 21](#).

Tourism and recreation

Tourist and recreational qualities of landscapes directly result, in general, from their scenic attractiveness or distinctiveness. The resulting effects of increased income and employment in areas which have often few other resources can provide the means for the maintenance and enhancement of these very landscape values.

Unfortunately, the scale of some tourist developments, and the social and physical disruption associated with poorly planned tourism, is often completely alien to the landscape and wholly out of scale with the needs of the local economy. The problems of Alpine areas, which attract large and increasing numbers of tourists, and the effects on Alpine landscapes are discussed [Box 8I](#). See also [Chapter 25](#).

Mining, landfill and military areas

In many regions of Europe, mining, landfill and military activities have - sometimes dramatically - changed the topography and landuse patterns of landscapes. The shapes of mountains and lakes have been altered, river courses have been redirected, new visual perspectives have been formed by large and deep excavations, and very often the former vegetation has been replaced by a different subsequent landuse.

Some of the most obvious impacts result from large-scale coal and iron mining (see [Box 8J](#) and [Chapter 20](#)).

Examples can be found in Europe's industrial regions, such as the Donbass coalfields (Ukraine), the Black Triangle Region (Czech Republic, Germany, Poland) and the Ruhrgebiet (Germany) as well as the coal and steel region around Charleroi (Belgium). In many of these and other regions, large quantities of excavated materials form new landmarks, while deeply excavated mining areas often serve as landfills for waste or as artificial lakes. A multitude of relatively small gravel and sand pits have changed the character of landscapes by leaving on their surface a pattern of newly created open habitats (without vegetation) and waterbodies. When such features are created in areas where none have been before, they can sometimes form attractive points of recreation, or can be designed to function as second-hand biotopes.

National and international military exercise fields are relatively widespread throughout Europe. An example of concentrated military and mining activities at the border between Germany and Poland is illustrated in [Map 8.4](#). The often extensive areas are located predominantly in regions where sandy soils permit large-scale machinery operations and which are far from human settlements. The presence of woodland provides natural shelter against outside observations as well as barriers to noise. In Central and Northern Europe, natural pine forests and heathlands often qualify for this function and, due to their relatively low economic productivity, their poor sandy soils are in little competition with other landuse interests. The destruction of vegetation and soil, the detonation of explosives and the release and storage of pollutants such as gas, oil, chemicals or radioactivity may pose serious environmental threats to the overall quality of the areas and their groundwater. However, in contrast to mining and landfill activities, military operations are often carried out in a fraction of the area designated and are inaccessible to the public as well as generally exempt from any other landuse activities. Furthermore, military exercises usually take place over relatively short periods of time and sometimes with many years interruption. Such areas, being extremely well sheltered against outside disturbances and in many ways less affected by human landuse than many other 'open' landscapes, can contain significant natural habitats and rare or endangered wildlife. Especially, abandoned military territories thus constitute an important source of natural landscapes to be managed and restored in an environmentally sound way.

Loss of wildlife habitats

Since it is characteristic for landscapes to change over time and be the result of human rather than of nature's influence, their function as habitats for fauna and flora might appear relatively unspecific and arbitrary. Thus, for example, the disappearance of certain landscape types does not automatically equal a loss in species numbers. There are however, some, general trends which are seriously affecting the role of landscapes as wildlife habitats. These can be summarised as follows:

- small, diverse structures are decreasing;
- linear and point elements are disappearing;
- wetlands and waterbodies are decreasing as groundwater tables are lowered;
- substitute landscapes are often more uniform in physical and biological character;
- remaining habitats are often smaller, more fragmented and
- the number of landscape components with evidence of pollution (eg, forest damage or eutrophication) are increasing.

*White stork
(Ciconia ciconia) in
extensively used landscape*
Source: D Wascher

All these types of change can have important effects on habitat qualities and the species compositions within them. In general, the diversity and the number of species in a given area decrease, or, where this is not the case, less specialised species replace highly specialised ones. Such changes affect not only nature and wildlife, but also the quality of agricultural landscapes themselves and their products. The disappearance of many natural, 'biologically active' organisms and the increase of inappropriate landuse activities (eg, crop farming on poor soils) has led to an overutilisation of fertilisers and pesticides, often with negative effects on soil, species and food-products. (See also [Chapters 9, 22 and 29.](#)) An example of the influence of landscape changes on the ecological value of an area is given in [Box 8K](#) for Sweden.

LANDSCAPE CONSERVATION AND STRATEGIES

Many of the pressures described above are inducing changes, both subtle and obvious, sometimes occurring with great speed. The combined effect of these changes often results in:

- the degradation of distinctive landscape features ;
- the diminishing of natural and cultural values; and,
- the weakening, and even breaking, of the links between people and the land.

The overall result is that the diversity, distinctiveness, and value of many landscapes in Europe are declining rapidly.

Landscape conservation faces the dilemma that, if applied in the sense of preservation, it will attempt to maintain a status quo of a scenery which is often the result of a specific type of landuse activity reflecting a certain historically or economically limited time-phase of a region. Preserving landscapes can therefore involve the unrealistic and unacceptable aim of preserving past economic patterns. Although there may be a limited role for 'museum landscapes' (that is, small areas of landscapes which are preserved in their entirety primarily for educational purposes), for the most part landscape conservation needs to focus on landscape management. An approach of this type would be designed instead to manage the process of change; this would aim to reduce the damaging effects on the landscape, and the natural and cultural values which it contains, of activities which would eventually modify the landscape, and encourage the creation of new landscape values. Several national and international instruments exist or are under preparation which can assist in such landscape conservation and management.

National protection of landscapes

The IUCN World Conservation Union has developed a system of categories of protected areas (see [Table 9.14](#)). Several of these are relevant to the conservation of landscapes, but Category V (protected landscapes and seascapes) is particularly so. Protected landscapes include areas in which people live and work, and in which there are farms, working forests and small settlements, as well as natural landscapes. The key criterion for their establishment is that they should be areas of distinctive landscapes in 'aesthetic, cultural and/or ecological' terms. The IUCN definition of Category V Areas is as follows:

Areas of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, cultural and/or ecological value. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

(IUCN, 1990)

Despite the relatively small number of protected landscape sites compared with national parks (264 sites) and nature reserves (more than 40 000), the area of land granted landscape protection status in Europe is greater than both of these put together. This is confirmed by an analysis of 25 countries, presented in [Figure 8.2](#). There is, however, a wide variation between individual countries and some clearly make less use of this protection category.

For sites which satisfy the IUCN Category V definition for protected landscapes and seascapes, the management objectives listed in [Box 8L](#) have been proposed.

Properly used, protected landscapes can be effective instruments of landscape conservation. In some countries, protected landscapes provide powers and resources to:

- control undesirable forms of development;
- support traditional landuse practices;
- support nature conservation and the protection of the built heritage;
- encourage craft industries, sustainable tourism;
- manage visitors so that they do not damage the environment;
- develop sustainable landuse models, eg, for biosphere reserves; and
- support programmes of public education and community involvement, to increase awareness and support for landscape protection among residents and visitors.

There has, however, been a tendency in some countries to designate protected landscapes without providing the powers and resources to ensure the effective conservation of such areas.

World Heritage Convention

The purpose of this convention is discussed in [Chapter 9](#), since it is an important instrument for international cooperation for the conservation of natural sites of great international importance. However, the criteria for the convention have recently been altered and it is now possible for cultural landscapes of outstanding universal significance to be inscribed on the World Heritage List. Since the guidance to be based on these criteria is still being formulated, it is not yet possible to know the full relevance of this development to the protection of Europe's landscapes. However, it is already clear that certain outstanding landscapes would merit inclusion on the list. Though this would be of limited benefit geographically, it would help to establish more clearly the international importance of certain landscapes in Europe. Moreover, within such areas, a major national effort will be required to protect the existing quality of the landscape.

A possible convention for the protection of Europe's rural landscapes

Discussions have taken place in regional meetings of the World Conservation Union (IUCN), the Federation of Nature and National Parks of Europe and elsewhere concerning the development of a European convention to address some of the problems of landscape protection covered in this chapter. The broad aim of such a convention (which might eventually be developed under the auspices of the Council of Europe) would be to strengthen the conservation of the rural landscapes of Europe, and its objectives might include the following: to encourage states to record their landscapes and to put in place measures to protect or enhance them; to develop a network of landscapes of European significance; and to support this with training, information exchange and perhaps a centre of European landscapes expertise.

Environmentally sensitive areas (ESAs) and related measures

Under EC Regulation 92/2078/EEC, governments may define certain areas as being important for conservation of biodiversity, landscapes or cultural features, where those qualities depend upon the survival of traditional forms of farming. Such areas are then eligible for grants, to which the EU makes a contribution to ensure that such traditional farming is maintained, with appropriate safeguards for environmental protection. In effect, a contract is made with the farmer to protect the landscape and other environmental qualities on the land in return for financial support for the farming system which sustains those qualities.

Article 19 of this Regulation has been widely used in several EU member states - within France, for example, nearly 170 000 ha have been so designated within the French system of regional nature parks which have been recognised as protected landscapes and seascapes. Similar schemes exist in some non-EU countries, such as in Sweden and Switzerland. Also, complementary schemes have been developed at national level in EU countries, including the UK, Germany and The Netherlands, some of which involve local authorities in the administration of the funds, or which provide in areas not given ESA status ([Jongman, 1993](#)).

Since Europe as a whole faces the likelihood of spare agricultural capacity for many years, this means of bringing new sources of income to farmers to maintain the landscape could have potentially wider applications.

Ecological networks and the landscapes

Within Europe, national and international ecological networks are considered to be of future importance for landscape conservation. They are of three kinds:

1. Networks of important sites - protected area systems (see [Chapter 9](#)), some of which are linked together to form European networks (such as the Council of Europe's network of biogenetic reserves or the evolving Natura 2000 network).
2. Ecological networks as part of nature conservation - a coherent framework for nature conservation, involving core areas, buffer zones, corridors and rehabilitation areas. Article 10 of the EU Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna suggests the establishment of corridors as natural linkages between habitats. The Dutch ecological network (EECONET) and 'ecological bricks' proposal for the establishment of protected areas along the line of the former Iron Curtain are other examples. (These are discussed further in [Chapter 9](#).)
3. Ecological networks as part of integrated planning - networks which form part of a nation's physical planning. There are countries, particularly in Central and Eastern Europe (eg, Estonia, the Czech

Republic, Lithuania, Poland and the Slovak Republic), but also in Denmark and to a lesser extent elsewhere in Western Europe, where green corridors, 'belts' and 'lungs' are used as frameworks for physical planning. In the case of the 'Green Lungs' project (see [Box 9NN](#)), Poland is discussing with its neighbours how such frameworks can be extended across national boundaries.

All three approaches, but especially the last two, offer the potential for landscape conservation and management on a large scale. However, this potential cannot be realised solely by keeping urban development away from such green zones. Protective policies need complementing by others which address the factors of landscape change described in this chapter. This covers policies and instruments, such as ESAs, which offer the opportunity to restore damaged landscapes, and others (eg, support for sustainable forms of tourism) which generate income in the rural areas concerned.

In landscape terms, therefore, the ecological network approach is important because:

- it is a powerful tool for guiding landscape conservation and management;
- it links landscape conservation and management to the conservation of biodiversity; and
- it provides a framework for integrating landscape and nature conservation objectives into national planning for sustainable development.

Landscape issues cannot, however, be addressed solely through the network approach. Many landscapes will not be within the green corridors, lungs or belts. Therefore, networks need to be complemented by nationwide policies for landscape planning and management.

Planning and management

In order to avoid irreversible processes of decay, temporary collapse or radical deformation, integral landscape planning can help guide human landuse activities and provide compensation where necessary. To achieve this goal, landscape ecology needs to operate as a cross-sectional discipline by addressing cultural, economic and ecological issues in a scientifically and conceptually creative manner. As a special heritage of the community living within them, each landscape also requires national responsibility.

Numerous countries and local administrations with planning responsibilities have adopted aspects of landscape planning and management in their policy and management. The principles that seem to be most effective include:

- professional landscape planning and management addressing the processes of change rather than the changes themselves (environmentally sensitive areas are a good example);
- working with local people to produce better results; and
- an acceptance that landscapes *will* change, because they are a function of human landuse depending on social-economic and cultural factors (world markets, advances in technology, changes in society, etc).

CONCLUSIONS

Europe's landscapes are immensely diverse and rich in natural and cultural values. A series of factors are bringing pressures to bear on these landscapes causing changes that are both subtle and dramatic, and many of which are occurring at great speed. Often the changes being invoked are unintentional consequences of other activities where the roles and values of landscapes are not taken fully into consideration. This is resulting in a general replacement of natural and regional diversity by artificial diversity or homogeneity, and in some cases is accompanied by more specific environmental degradation. In the past, the approach to conservation has been species- or site-specific. Now, however, the fragility of whole landscapes is an issue. Approaches to halt the loss of biodiversity and cultural identity in Europe's landscapes can be successful only if they encompass the economic viability of rural communities. An understanding of the important links that exist between cultural landscapes and the people who live within them is essential for promoting both environmentally sensitive changes and social-economic integration. This in turn requires a framework of national and international support which recognises that there is a European interest in the future of Europe's landscapes and rural communities. To ensure the success of landscape planning and management, the following approaches are considered important:

- to study, record and monitor European landscapes for their ecological, social, cultural and economic values;
- to understand the processes of change, their causes and consequences;
- to take action to protect outstanding landscapes, using such recognised tools as designated landscapes and seascapes;
- to put in place effective landuse planning mechanisms for use in all areas (for making plans and for regulating what happens on the land);
- to make landscape considerations an important factor in shaping national and regional strategies for sustainable development - that is, treat landscape as an environmental resource in the planning process;
- to recognise the landscape scale as one that is important for strategies addressing the conservation of biodiversity, complementing species- and site-specific approaches;

- to develop support systems for rural communities, and farmers especially, to acquire greater prosperity without the need to destroy landscapes;
- to introduce measures to encourage farmers not only to protect existing landscape features, but also to create new elements in the landscapes; and
- to encourage greater public awareness of the value of landscapes, locally, nationally and internationally.

Landscape planning, management and protection are facing the challenge to embrace changes while at the same time understanding their implications and ensuring that they do not violate basic environmental and cultural values. All actions proposed should take into account the special dynamic aspects of landscape evolution over time.