

LANDSCAPES AND SUSTAINABILITY

Proceedings

of the European workshop on landscape assessment
as a policy tool *25th-26th March '99 Strasbourg, France*

Edited by: Dirk M. Wascher

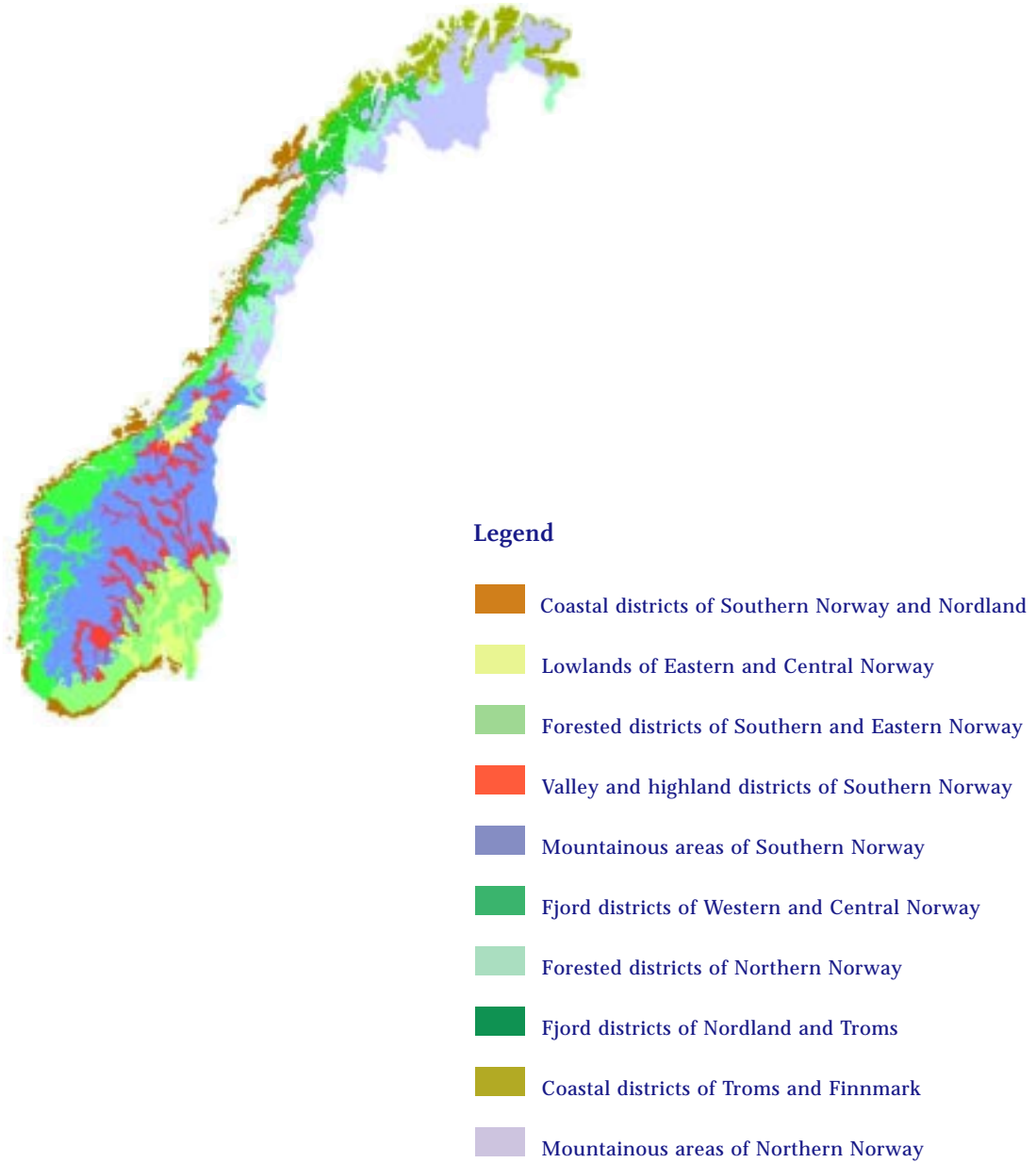


European Centre for Nature Conservation



The
Countryside
Agency

map 1: Norwegian agricultural landscape regions (see page 36)



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**of the European workshop on landscape assessment as
a policy tool *25th-26th March '99, Strasbourg, France.***

organised by European Centre for Nature Conservation
and the Countryside Agency

with support of

Department of the Environment, Transport and the Regions, United Kingdom

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Preface and acknowledgements

Since about five years time, the role of landscapes as a policy issue at the European level has been steadily increasing. Despite the absence of legally binding and targeted instruments, landscapes have captured the interest of both scientific as well as of governmental bodies. In the light of rather complex environmental themes such as biodiversity, indicators and driving forces, the question arises why this interest for the relatively undefined policy field of landscape? Among the many answers that could be given, one word is key to the understanding of this phenomenon: sustainability. Like hardly any other discipline, the landscape approach offers holistic assessment and planning tools to define and develop the interface between nature and culture. Hence, landscape, as the place of human interaction with nature appears to be at the heart of sustainability.

When starting to programme a European Workshop on landscapes in 1997 as part of the Action Plan implementation on 'European Landscapes' under the Pan-European Biological and Landscape Diversity Strategy, the organisers anticipated that the timing of the event would be adequate. And indeed, by the time of the actual workshop implementation, the Council of Europe had substantially advanced with the preparation of the draft European Landscape Convention, the European Commission had taken a lead on landscape indicators, and ECNC had started the implementation of the PEBLDS Action Plan for European Landscapes. This coincidence of initiatives and policy developments moved landscapes up on the European policy agenda. In this sense the Workshop was more than a routine exercise or a short-lived event, but the beginning of a new way of looking at the European challenges at the crossroads of nature and culture.

The European Centre for Nature Conservation (ECNC) and the Countryside Agency of England are hence very pleased that the contributions and discussions of the European Workshop on 'Landscapes and Sustainability' are becoming available in the form of these proceedings. While the workshop provided many of us with an enriching experience during the implementation, its effects went actually beyond the event itself by giving form to new ways of cooperation. As a result of the workshop, the Council of Europe and the European Centre for Nature Conservation have taken up the common lead on the implementation of Action Theme 4 under PEBLDS. In this collaboration, ECNC has been offered the role of the expert body to actively support the further preparation and implementation of the draft European Landscape Convention. Subsequently, a new Action Plan follow-up for the period 2001 – 2005 has been drafted. Also the European Commission has expressed their interest in further cooperation with the Council of Europe and ECNC to further the integration of landscape issues into the agricultural policy field.

We hence consider these proceedings as both a reference and guidance for future activities in developing landscape assessment procedures in support of sustainable objectives at the European level.

We herewith would like to thank the organisers Mrs Carol Somper of the Countryside Agency and Mr Dirk Wascher of the European Centre for Nature Conservation for their active role during the workshop preparation and implementation. We also wish to express our gratitude to the Council of Europe for providing the professional, institutional and social hospitality in Strasbourg that was very much appreciated by all participants. Special thanks go to the address of the funding organisations for the implementation of the Action Plan 4 under PEBLDS as there are the Department of the Environment, Transport and Regions (DETR, UK), the Swiss Agency of the Environment, Forests and Landscape (Switzerland), English Nature (UK), the Ministry of Housing, Spatial Planning and the Environment (The Netherlands), and the Ministry of Agriculture, Nature Management and Fisheries (The Netherlands).



Rob Wolters,
Executive Director,
European Centre for Nature Conservation



Jon Tomlinson,
Director,
Countryside Agency

Chapter I *OPENING OF THE WORKSHOP*

Welcome to Strasbourg

Dr Daniel Tarschys
Secretary General of the Council of Europe

It is a great pleasure for me to welcome you on behalf of the Council of Europe. The Workshop is organised by the Countryside Agency and the European Centre for Nature Conservation but with the co-operation of the Council of Europe, with whom they are in collaboration. We are very happy that you have been able to come here.

You are no doubt familiar with this house and its organisation, as the place where, until the end of the spring at least, the European Parliament also meets. Essentially, however, it is the location for the Council of Europe and a base for many different activities, of which a considerable number have direct or indirect relevance to the topic being discussed at this Workshop.

The Council of Europe is a somewhat complex structure, including intergovernmental bodies, expert groups, parliamentary bodies and people representing both local and regional government. At all of these levels, attention is given to environmental protection, spatial planning, landscape preservation, and sustainable development.

You may also be familiar with some of the conventions that have been adopted by Committee Ministers, such as the 1979 Berne Convention on European Wildlife and Natural Habitats, the 1985 Granada Convention for the Protection of European Architectural Heritage and the 1992 La Valletta Revised Convention for the Protection of Architectural Heritage. These deal with architecture and the cultural aspects of our heritage, but we are increasingly seeing a link between the cultural heritage and the natural heritage.

We are also involved in promoting national parks. In addition, we concern ourselves with trying to promote sustainable development in various different forms.

I should add that the Parliamentary Assembly has at least two committees that are relevant: the Committee on Agriculture and Rural Development, which deals with rural issues in the broad sense, and the Committee on the Environment, Regional Planning and Local Authorities, which takes great interest in the issue of environmental protection. At the Congress of Local and Regional Authorities of Europe people work on everyday matters at lower levels of government. They took the initiative of drafting a European Landscape Convention, which received the support of the Parliamentary Assembly and is now at the consultation stage at inter-governmental level. Within the Council of Europe, initiatives very often come from the parliamentary bodies, and action is then stimulated at intergovernmental level, as is the case in this instance.

I should also mention a decision taken by the last Summit of the Heads of State and Government. In the 50-year history of the Council of Europe, we have had only two summits – one in Vienna in 1993 and one in Strasbourg in 1997. At the last of these, a decision was taken to start a campaign entitled 'Europe - a Common Heritage'. It was decided that this should cover both cultural and natural aspects, and it is due to start later this year. It aims to create greater awareness of our common assets and common responsibilities as far as our heritage is concerned, as well as to increase our knowledge of shared features of our European heritage.

One last example of Council of Europe activities relating to the environment and our natural habitat is that of our cultural routes – an activity which has gone on for some time. Together with tourist authorities and planning authorities, we have developed a number of routes which have been carefully prepared and mapped out and are intended to stimulate greater knowledge and familiarity with our common heritage.

These are some illustrations of what the Council of Europe is doing in the field of landscape preservation and in the areas relating to this field in the wider sense. Naturally, we also liaise closely with non-governmental organisations active in this field. We are pleased to receive input - proposals or suggestions for action to be taken at the pan-European level - and are greatly looking forward to the results of this Workshop as further input to the activities of the Council of Europe.

I wish you all a highly successful meeting, and hope that the results it produces will prove fruitful not only in many different contexts but also for the Council of Europe.

Chapter 2 *SETTING THE SCENE*

Introduction to the Workshop

Dr Roger Clarke (Chair of First Day)
Director of Programmes, Countryside Agency, England, United Kingdom

We are grateful for the hospitality of the Council of Europe in welcoming us to Strasbourg.

This Workshop takes place at a time when there is increasing interest in landscape issues across the whole of Europe. This was evident, for example, at the highly successful Council of Europe Conference in Florence a year ago, where we discussed the proposed Landscape Convention. It was evident at that time that there was great interest shown by many countries in working at what one might call the 'landscape scale' and in seeing landscape as a tool for sustainable development. Initiatives such as the proposed Landscape Convention and the landscape theme of the Pan-European Biological and Landscape Diversity Strategy are expressions, at a European level, of that interest.

Rather than being at a political or strategic level, this Workshop is being conducted at a practical level, with two objectives. One is to share experience across Europe about techniques for understanding, analysing and describing landscape. The second objective is to consider the extent to which this analysis can be used as a tool for the development of policy in sectors such as spatial planning, biodiversity, agriculture or forestry. Many countries are grappling with the question of how we can move beyond having perhaps a limited number of protected areas or protected landscapes, to using landscape assessment as a tool for policy in creating the sustainable management of our territory.

Each of us will have our own definition of landscape, and the word has slightly different connotations in different languages.

Landscape is a very powerful but also rather elusive idea. It is about what we see but also about the processes that have created what we can see. Thus, it is about the beauty of Tuscany or the Odenwald or the Vosges - wherever it may be - but also about the processes of human settlement and agriculture and the natural forces that have created that beauty. Landscape is something that has great public appeal: people possibly find it hard to understand the more obscure aspects of resource protection or biodiversity but they feel very strongly about issues to do with landscape, both at the local level - where many local communities have an extremely strong sense of place - and at the national level - where landscape is often an important symbol of national identity. If I am not mistaken, Mount Triglav features as a symbol in the Slovenian national flag; it shows the importance of an aspect of landscape in the national identity of Slovenia. This same sense is present in many other European countries.

Landscape is about nature and culture. It is about natural features, about the farmed and wooded landscape or countryside, and about patterns of human settlement and the relationship between all of these things.

Landscape is everywhere - not just something that occurs in beautiful areas that are designated as parks of one kind or another. It is something that is present on the edge of this city, just as it is present in the Ballon des Vosges or the Schwarzwald or other areas that might be recognised as being of high quality. We need to assess the areas that may be less attractive, as well as those having a high degree of public appeal.

Landscape is about change. The work on assessing landscape does not imply that we think that, at a particular point in history, it was ideal or sustainable and should be retained, because landscape is dynamic and evolving. The question is how we can use techniques of landscape assessment to manage change in a way that will retain quality for the future.

Landscape is also about working above the level of scale of particular sites. We frequently talk about specific cultural monuments or nature sites. The landscape scale seems to us to be of vital importance at a broader level for planning and managing processes of sustainable development.

We want to use this Workshop to discover what common ground exists and whether there is action that needs to be taken on a European scale. When we refer to Europe, it is particularly difficult these days for those of us who are residents of the European Union, because sometimes when we say 'Europe' we mean the Union, and at others we mean a broader European home. This Workshop is for Europe in the broader sense: we are delighted to have at this meeting representatives both from countries within the European Union and from outside of it, so let us draw on the diversity of our experience.

The first day of the Workshop considers different techniques for assessing and analysing the landscapes of various parts of Europe, based both on national case studies and on the discussion of some common themes.

Day two is about how we apply those assessments or understandings in different policy sectors. We want to begin to acquire a sense of whether this is a valuable tool for policy development.

We have been assisted in the organisation of this Workshop by a number of institutions across Europe, who have contributed funds and expertise. In no specific order, I should like to thank: the Dutch Ministry of Agriculture, Nature Management and Fisheries; the Swiss Agency of Environment, Forests and Landscape; the Dutch Spatial Planning Agency; the Department of the Environment, Transport and the Regions from the United Kingdom; English Nature in the United Kingdom; and the Council of Europe, for providing premises for our meeting and access to interpretation facilities. The Countryside Agency, finally, is pleased to join with the European Centre for Nature Conservation in co-hosting this Workshop.

Rob Wolters

Executive Director, European Centre for Nature Conservation

It is a great pleasure for me to address you at this important event. ECNC is glad of having been able to organise this conference together with the Countryside Agency. I would like to thank the Council of Europe for hosting this meeting and the UK, Swiss, and Dutch Governments for providing financial support.

My hope for this Workshop is that it facilitates an open dialogue. A dialogue, which may result in finding common ground for actions in several areas, in particular:

- Raising the political and scientific profile of integrated national and European approaches to landscapes;
- Ensuring synergy between relevant European policy processes and initiatives;
- Promoting the role of landscape policies for sustainable development; and finally,
- Using landscape assessment and landscape indicators as tools for policy development.

I will address the following issues:

- What are European landscape policies, and why do we need them?
- Landscape policies as an emerging European policy issue;
- Recent European landscape initiatives;
- European landscapes and sustainability;
- ECNC's recommendation for strategic actions for European landscapes.

European landscape policies

But first some basic issues: **what** are European landscape policies and why do we need them.

I would like to define European landscape policies as '*policies that address spatial and qualitative aspects of economic, aesthetic, ecological and/or cultural land forming processes from a European perspective*'. This interpretation shows that this policy field is crosscutting and strongly related to physical planning and sectoral land use policies.

I see at least four reasons for the development of a European dimension to landscape policies:

1. Many landscapes are the result of natural and cultural processes that do not stop at national borders. A European approach may assist in maintaining the functional integrity of landscapes of European importance;
2. In recent decades, developments in land use and land ownership in Europe have disrupted various functions of European landscapes, including landscapes we consider to be of European importance. Since many of these developments are determined by international driving forces, European efforts are needed to re-establish the original functional integrity of these landscapes;
3. Given the particularly complexity of landscape policy, we could gain substantial knowledge from a European exchange of national and regional experience with landscapes research and landscape policies; and,
4. Landscapes policies have the potential to provide a significant contribution to the sustainable future of Europe's countryside, since they address in an integrated way the relationship between economic, ecological and social functions. This awareness has only recently gained ground, and it may be amongst the most persuasive reasons for developing European landscape policies.

However, before we look ahead, let us glance back to gain a better understanding of the European history of this policy.

Landscapes as an emerging European policy issue

The landscape concept has received ample attention in scientific research, not only in the 20th century, but also in the 19th century.

A brief analyses of the existing body of research teaches us the following lessons:

- The definition of 'landscape' varies strongly and very much depends on the cultural background of the respective researchers and policy-makers;
- The landscape concept is strongly related to a holistic and multi-sectoral approach to countryside and rural issues;
- Some researchers refer to landscapes as the reflection of human life styles, while others breakdown the landscape concept in various separate qualities.

The first official European landscape policy actions were in the field of the preservation of cultural and natural heritage. The Council of Europe took the lead in this instance, with the Cultural Convention, the European Archaeological Convention and the European Architectural Convention. In the Council of Europe's main nature conservation instrument, the Bern Convention, the landscape concept has received some attention, but not a very prominent one.

In 1995, landscapes received European attention in the European Environment Agency's (EEA) Dobříš Assessment, that included a separate chapter on landscapes. Another important project was the Landscape Monograph, prepared for EEA by ECNC.

Also, IUCN developed in this period activities for European endangered landscapes.

Overall, however, I feel that, until recently, one could say that the concept of European landscape conservation was regarded by many policy-makers as being merely a subjective and rather non-political issue, of marginal relevance to the more immediate issues of sustainable development.

Your attendance at this workshop, ladies and gentlemen, provides sufficient proof that times are changing. The landscape concept is receiving increasing political and policy attention, at a European level as well as elsewhere.

Recent European landscape initiatives

This increase in profile can be demonstrated by various recent initiatives, of which the most important ones are:

- The development of the Action Plan for European Landscapes in the framework of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS);
- The development of a draft European Landscape Convention in the framework of the Council of Europe; and,
- The elaboration of the concept of landscape indicators within the framework of the European Union and the OECD.

I will briefly elaborate on these initiatives.

An important step towards a separate and political focus on landscapes was made during the negotiations of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS), which was adopted in 1995 at the 3rd Ministerial Environment for Europe Conference. Landscapes received separate mention both in the title and in the first Action Programme of this Strategy, which included an Action Theme on Landscapes (Action Theme 4). Action Theme 4 aims to:

- Compile a comprehensive reference guide on landscape diversity;
- Establish guidelines to address policies, programmes and legislation for landscape protection;
- Set up a code of practice to involve land owners;
- Investigate the relationship between traditional landscapes and regional economy; and,
- Establish an Action Plan, to set priorities and objectives.

The Action Plan for European Landscapes was developed in 1997 by ECNC and Alterra, in co-operation with the Dutch and Swiss governments. The Plan prioritises targeted and integrated European actions to further the conservation, management and monitoring of landscapes.

The Action Plan distinguishes four types of activities:

- Analytical activities, aiming at the review of existing qualities of European landscapes, landscape typologies, landscape assessment criteria, and landscape trends and opportunities;
- Priority setting activities, aiming at geographic and thematic issues of European importance;
- Public awareness and education actions; and
- Integration, conservation and management actions.

The Action Plan's implementation has begun with a project, developed by ECNC together with Alterra, Countryside Agency, English Nature and other partners.

The project has four components:

- European policy reference guide;
- This Workshop;
- A Comparative Study on Landscape Assessment; and
- A European Landscape Map.

The project is devised to link expertise from various international and national organisations and scientific institutions. ECNC hopes that the outcome of the over-all project will contribute to a clear and broadly supported European landscape framework.

Another Action Plan project, entitled '*New roles for Historic Estates and Cultural Landscapes*', is currently being developed by ECNC, Alterra and the European Union for Historical Houses and Estates, and in co-operation with IUCN.

A second major initiative is the European Landscape Convention, as developed by the Congress of Local and Regional Authorities of the Council of Europe. Mr Priore will address this issue, so I will not elaborate on its contents.

One may ask what are the differences and similarities of the Action Plan and the Convention.

In my opinion, the similarities are that both instruments are drafted on the basis of a genuine European concern about developments in European landscapes.

The differences lie with the formal framework. The Action Plan is based on PEBLDS, that has its anchoring in the Ministerial Environment for Europe process. The Action Plan is expected to be implemented via voluntary efforts from international, national and regional organisations.

The Plan has a strong focus on four categories of substantive activities.

The European Landscape Convention is proposed to enter a new legally binding European instrument, to which national governments, as Party to the Convention, legally commit themselves. Following instructions of the Executive Bureau of PEBLDS, ECNC and the Council of Europe have been looking for options to ensure more synergy between both instruments.

The options include:

- Parallel implementation, or
- The Action Plan becoming the Convention's implementation scheme.

I have informed the Council of Europe that ECNC is willing to facilitate full synergy, provided that the Council of PEBLDS agrees as well, and provided that the Action Plan implementation would not be delayed as a result of the linkage. I therefore hope that this Workshop will create the basis for even stronger co-operation between the Council of Europe and ECNC.

The third important initiative that I have mentioned is that of landscape indicators and landscape assessment, which is being discussed in the European Union and the OECD, as you will learn from Mr Berkowicz of the European Commission and Mr Legg from the OECD.

The term indicator refers to tools that measure developments in the economic, ecological and social functions of landscapes. Landscape indicators have received growing attention, especially in relationship to the concept of sustainable agriculture.

At the political level, the European Union's Agenda 2000 and the European Spatial Development Perspective clearly refer to the relationship between the multifunctional nature of Europe's agriculture and the landscape.

In 1998, ECNC, with various partner organisations, started a project, supported by the EU, called the '*Environmental Indicators for Sustainable Agriculture*', in short: ELISA. The project's aim was to define a set of operational environmental indicators that are able to assist the European Commission in the elaboration and review of its agricultural policy. The landscape concept has received growing attention in the implementation of this project. It is increasingly considered an *over-arching* concept that can provide suitable indicators for measuring trends in agricultural landscapes. At the York OECD Seminar on Agri-Environmental Indicators for Sustainable Agriculture in September 1998, Dirk Wascher, of ECNC, presented on behalf of DG Agriculture a paper entitled '*Environmental Indicators for Agricultural Landscapes*'. This paper was well received and resulted in the identification of a set of landscape indicators.

As you will have gathered, the EU and the OECD are playing substantial roles in developing the concept and in ensuring that the landscape issue is integrated into relevant policies and instruments.

This brings me to the next part of my address, which is the innovative contribution landscapes can make to sustainable development.

Landscapes and sustainability

The landscape concept, by definition, implies the integration of economic, environmental and social-cultural qualities in a physical setting. The changes in European landscapes are due to so called 'driving forces', which can be biophysical and socio-economic in nature. In one respect, landscape change is a very normal process, since it is just a physical reflection of changes in land use and history teaches that it is impossible and undesirable to freeze land use. From another perspective, it confronts us with a problem, since, in recent decades, the rapid land use changes that have taken place dramatically affected the qualities and internal coherence of many European landscapes.

This is reflected in the changing spatial patterns of landscapes. Broadly speaking:

- Landscapes with small spatial and historic patterns are changing into landscapes with larger spatial patterns, while losing the historic qualities;
- Landscapes with large spatial patterns are decreasing in scale.

The developments in agriculture are amongst the main socio-economic driving forces that have led to changes in European landscapes. At the moment, three major agro-driven spatial processes can be identified. These are:

- Intensification;
- Land abandonment;
- De-intensification.

This matrix of land use types provides the dynamic, which will influence future spatial trends. Land abandonment is occurring in large areas throughout the Mediterranean region. Intensification is expected to happen in EU accession countries, and de-intensification is already happening in various European regions, especially those that are subject to strong environmental policies or are experiencing a change from high-input agriculture towards low-input agriculture.

Other significant socio-economic driving forces include urbanisation, tourism, infrastructure, water management and forestry. Such driving forces both have effect and depend on European landscapes in various ways. One example is the strong dependence of outdoor tourism on unspoiled landscapes.

As I see it, the major challenge for each European landscape policy or instrument is to interact with the major driving forces.

Therefore, there should be a strong linkage between the implementation of the European Convention and the Action Plan for European Landscapes on the one hand, and the EU's Agenda 2000 and the European Spatial Development Perspective on the other. The work under the ELISA project on landscape assessment and landscape indicators may facilitate this interaction.

In order to enhance the effectiveness of the policy instruments at our disposal, I feel that European landscape policies and instruments should pro-actively identify three main types of European landscapes:

- Landscapes of European importance, where the landscapes qualities are relatively in balance;
- European landscape conflict zones, where the functions of landscapes are out of balance, or are expected to be so in the future;
- European landscapes, where the two zones overlap.

Based on this identification, European policy measures may be devised. One of the problems in formulating policies in this area is to determine thresholds of landscape viability. It is perhaps one of the salient features of viable landscapes, that they provide a stable framework for differing dynamics to interact.

Cases in point of landscapes for which clear European choices have to be made include the Dehesa landscapes in Spain, where uncontrolled land-abandonment has a negative effect on all qualities of landscapes. Likewise, the famous historic coherence of Tuscany's landscape is affected. Moreover, it is expected that the relatively stable landscapes in East and Central Europe will be strongly affected by the introduction of EU policies. Europe still has the choice to decide whether to safeguard the valuable landscapes in this region, or to re-do the same process as in Western Europe.

Mr Chairman, ladies and gentleman,

It is clear that the implications of relating landscapes to sustainability are enormous. It lifts landscape issues towards the heart of economic and social policy-developments.

If we are willing to accept and promote this approach, we can be confident that we can gain control of the process of landscape decline. By doing so, we can make a substantial contribution to Europe's sustainable development. And, not surprisingly, we may expect that the new European landscape initiatives, which I have highlighted, will have a substantial and political impact.

If we are not willing or able to meet these challenges, we will have to accept that all European landscape policies, both existing and new, will remain marginal to other policies, particularly agricultural ones. This, in the long run, would undermine Europe's efforts in the field of sustainable development.

Recommendations

In order to develop a coherent and effective European landscape policy, I would like to recommend the following:

- Ensure full and operational synergy between the draft European Landscape Convention, the Action Plan on European landscapes, and the OECD and EU-activities on landscapes;
- Highlight the positive role of landscapes and landscape policies in sustainable development;

- Ensure a clear interaction between the European landscape policies and the policies considered being the main driving forces affecting landscapes, positively and negatively. In realising this aim, the value of the landscape concept for regional development and regional identity should be highlighted;
- Prioritise the development of scenarios for future developments in European landscapes;
- Explore, to its full potential, the concept of landscape indicators for identifying, assessing and monitoring environmental trends in land uses;
- Prioritise the involvement of land users and land owner groups in Europe, as vital stakeholders for bridging landscape policies and rural policies;
- Allow for a reasonable level of flexibility for countries and regions in implementing European landscape policies.

I would like to assure you that ECNC is determined to continue contributing to integrate effective and practical European landscape policies and applied research.

I wish you a good seminar, and let us look beyond horizons!

I thank you for your attention.

The author thanks Dirk Wascher and Justin Mundy of ECNC for reviewing and contributing to this paper.

Riccardo Priore

Congress of Local and Regional Authorities of Europe (CLRAE),
Secretariat of the Council of Europe

I shall describe the draft European Landscape Convention, the procedure concerning its establishment and the state of progress of negotiations with a view to its final adoption.

Legal and political background

First, I will present to you the ideal legal and political reasons that led the Council of Europe to deal in an innovative and in-depth way with this subject.

Aware of its role, experience and closeness to citizens, the Council of Europe had been thinking about the identification of ideals contributing to the consolidation of the European cultural identity. It was after major political, social and economic transformations, which have characterised the history of our continent over the last ten years, that the idea emerged that we should look at the landscape.

Landscape was recognised as being one of the fundamental components of the identity of men and women in Europe. However, it was not that alone; the component bodies of the Council of Europe became aware of the fact that the landscape represents one of the essential factors in the living framework of people in Europe, and that its deterioration has a very negative influence on the quality of life of people every day.

The identification of the landscape as a fundamental component of local, regional, national and European identities and its recognition as an essential factor in the quality of everyday life, led the Council of Europe to endeavour to translate the ideal landscape into legal principles, which could be recognised by all European states within the framework of an international convention.

This ambition was encouraged by the European Environmental Agency (EEA) of the European Union following the first conference of the Ministers of Environment, who met in Dobříš in June 1991. The Dobříš report, *Europe's Environment* (EEA, 1995), expressed the wish that the Council of Europe could take the initiative of drawing up a European Convention on Landscapes. In the same year, IUCN published a document called *Parks for Life*. This contained action in favour of protected areas of Europe and the text recommended the implementation of an international convention on the protection of rural landscapes in Europe, in which the Council of Europe would participate.

It is important to take note of the concept of the ideal landscape which people wanted to protect and promote through the adoption of such a convention. In fact it is very different from the concept which has characterised most landscape protection activities in Europe up until now. The first state activity aimed at protecting landscapes was based on a more restrictive concept of the landscape. Public authorities in the majority of European countries were of the opinion that it was only those territories that had exceptional characteristics, from a historical, natural or more generally aesthetic point of view, that could be considered as landscapes - thereby deserving special legal protection.

On the other hand, territories that did not present any exceptional values from a natural, historical, aesthetic or other point of view were not protected legally in any way as far as their landscape dimensions were concerned. These territories were considered as being, so to speak, meaningless ('numb') landscape territories. This concept of the landscape - which could be considered to be elitist in nature - emerges in the legislative provisions concerning the definition of the landscape in a large number of European countries and some of these texts are largely in force today. They contain expressions such as 'of great aesthetic or natural value', 'of high quality from a visual or aesthetic point of view', or 'landscapes which are characteristic or are naturally curiosities'.

The essential element of the landscape, therefore - in other words, its variability and its capacity to evolve - was frequently not taken into consideration at international level. The legal protection of landscape was such that it suffered as a result of this elitist concept. It was very rare for the landscape to be the subject of special international legal regulations.

One single European treaty - although restricted to the three states of Belgium, The Netherlands and Luxembourg - is specifically devoted to the landscape. This is the Benelux Convention of 1992, which is called 'A Convention in Respect of the Conservation of Nature and Landscape Protection'. Nevertheless, it should be noted that this particularly concerned nature areas and trans-frontier landscapes and that is where the text provides the requirement of there being an exceptional characteristic of these landscapes.

The extension of UNEPS's list of World Heritage Sites to include landscapes at least meant that it comprised both cultural and natural aspects of landscape. These considerations of positive international law - with the exception of one-off initiatives in different countries - demonstrate that the possibility of fully protecting the landscape has not been taken up. This is probably because a doctrinal approach, which considers that the law always has to have an ethical foundation, has to proceed according to value judgements.

It is true that one of the duties of the law is to take decisions and to draw up statutes on the basis of a democratic process. This does not mean, however, that the law has to establish what is beautiful and what is not. As far as the landscape is concerned, this attitude may well have been the basis for the partial, incomplete and indirect legal approach which has meant that it has never been possible for the landscape to become a subject and an object of autonomous law.

The legal concept of the landscape discussed today within the Council of Europe is based upon the idea that the role of the law is not to recognise and protect a value or a given kind of beauty in the landscape. It has rather to recognise, and hence to protect, a value - full stop. In other words, it concerns the needs of citizens to participate in the determination of the formal characteristics of their territories. The landscape thus has to be something that is of interest and concern to law, independently of the value attributed to it. It is not acceptable that only part of a state's territories can be recognised as having landscape value and therefore to be protected.

The role of the Congress

Given the subjective nature of the value attributed to the landscape, what is worthy of protection for one person is not necessarily worthy of protection for another and vice versa. According to the Congress of Local and Regional Authorities in Europe (thereafter: 'the Congress'), no-one has the right to eliminate with the stroke of a pen the landscape dimension in a given territory, without having taken into consideration the interests of the local population concerned. On the other hand, the landscape, which should be recognised and protected by law, can have an objective value. The level of legal protection recognises this value and it has to be based upon a democratic decision, taking into account the aspirations of the people.

The Congress, representing local and regional authorities of the 40 member states of the organisation, took the initiative of drawing up a draft international convention on the landscape with a view to its adoption by the Committee of Ministers. Through this initiative, the Congress of Local and Regional Authorities assumed a responsibility and took up a challenge. The elected members of the Congress are responsible for the administration of towns and the territories around them. Through this, their political commitment aims to improve the quality of life of citizens in these towns and in these territories.

The Congress is convinced that, given the activities of public authorities in the landscape field, landscape should no longer remain a limited field of intervention within the exclusive remit of certain specialised scientific bodies. The landscape must become a political and social topic of general interest, because it contributes in a very important way to the well-being of citizens in Europe. It is the concern of all citizens. It is an opportunity for democracy and, in particular, for local and regional democracy. While referring to cultural and environmental preoccupations, the draft European Landscape Convention is based upon motives that are social in nature. It is perhaps thanks to motivations of this kind that it was possible to overcome the conceptual difficulties, linked on the one hand to the definition of the landscape to its multiple objectives, to multi-disciplinary principles, and on the other hand to the duality of its subjective and objective dimensions.

The draft Convention would like to offer an appropriate framework to make it possible to develop the legal approach and thereby to offer an international, legal guarantee for people in Europe through the appropriate protection of the landscapes as they so desire. The legal form that is proposed is justified by the fact that an international convention constitutes a living, legal instrument. It is essential that an international legal instrument, aiming to take into consideration the values and interests of the landscape can evolve with the variable characteristics of the landscape's values and interests.

An international instrument on landscape without a binding legal nature and an appropriate ad hoc follow up system would run the risk of remaining a dead letter: a sequence of recommendations which, with time, would no doubt lose contact with the problems that the text itself was trying to resolve.

The Draft European Landscape Convention

The new concept at the basis of the draft Convention led to two particularly innovative consequences. First, the scope of the draft Convention covers not only remarkable landscapes but also ordinary landscapes. In this respect, what is suggested is that the future European Convention applies to the whole of the European territory, whether the areas concerned are rural, cultivated, natural, urban or peri-urban areas. This would not, therefore, be restricted to cultural, artificial components nor just to the natural components of the landscape. It would cover the whole of the landscape and the relationship between its different parts. This choice is due to the fact that all landscapes determine the quality of life for populations.

The second consequence is represented by the recognition of an active role for citizens in decisions concerning their landscapes. To offer to European citizens the opportunity to play an active role in the development of their landscapes constitutes in fact a project that is quite considerable in terms of its democratic repercussions, and one that can mobilise important human and financial resources. Given the multi-disciplinary principles of the landscape, as well as its wealth and diversity in Europe, this draft - or the implementation of the draft Convention - may give rise to the creation of a very large number of jobs in industrial and agricultural sectors as well as in the services sector.

In order to achieve these innovative principles in an appropriate way, the draft Convention provides for the fact that each signatory state would commit to guaranteeing the protection, management and development of these landscapes through the implementation of national measures and through the organisation of co-operation at European level. In this respect, within its domestic legislation, each state will be able to determine the best territorial level for the implementation of the Convention, according to the distribution of competence and in respect of the principle of subsidiarity.

National measures should aim at:

- The legal protection of the landscape as a fundamental component in the identity of populations and an essential factor in the quality of life of these populations;
- The drawing up and implementation of landscape policies aiming not just at the protection of landscapes but also at their management and their development;
- Taking landscape into consideration in a systematic way in other sectoral policies.

Landscape policies have to be expressed through special measures, which should comprise activities that involve the identification and evaluation of landscapes with a view to drawing up objectives concerning the quality of landscapes of territories outlined by those public bodies which are competent. These objectives will have to take into consideration the opinion expressed by the populations concerned. In order to do this, all of the special measures have to be based upon activities that make the population more aware of the values of the landscapes and the threats to which they are subjected. These educational activities will make it possible for people to understand the results of the identification

and evaluation activities of their own landscapes and hence to express themselves in an appropriate way when objectives of landscape quality are being drawn up. Taking into consideration the objectives of landscape quality, the competent public authorities will set up the means of intervention aimed at protecting, managing and/or developing the landscapes concerned. These means that they will need to be able to refer to landscapes with extremely varied characteristics and thus provide for intervention activities ranging from the strictest level of conservation through to true creation via protection, management and development.

In order to take into account the diversity of landscapes and the different national traditions, the draft Convention merely offers - within a non-binding appendix - a range of different solutions, which future parties to the Convention could use for inspiration according to their own specific needs. We are of the opinion that this solution represents a balanced choice, taking into account - as it does - traditions, methods and practices existing within each state.

Moreover, certain landscapes are of value to the whole of Europe. This value does not necessarily result from the exceptional characteristics of these landscapes but from the fact that they contribute in a particular way to the strengthening of the European identity. In order to conserve these landscapes, the draft Convention proposes to publish a list of landscapes of European interest. This solution, which has been supported by the Committee of World Heritage of UNESCO would complete, at European level, the world list that has been drawn up.

To emphasise yet again the fact that the scope of the draft Convention refers to the landscape as such, rather than the value attributed to it, the draft takes into account a recognition of efforts undertaken by local and regional authorities to look after so-called ordinary landscapes. In order to do this, it proposes attributing the European price of landscape to those local and regional authorities that have distinguished themselves through the activities aimed at improving the quality of their landscapes.

Conclusions

I would like to conclude by giving you some information about the ways in which the draft Convention has been drawn up and about the state of progress of negotiations concerning its adoption. Because of the scientific complexity of the subject and the diversity of national legal approaches, the Congress of Local and Regional Authorities drew up, as a preparatory document, a complete draft of the draft Convention in non-legal terms, as well as a comparative law study of the landscape in Europe.

Furthermore, during this work it constantly referred to the legal texts that already exist at international level, community level and national area level. In the context of its programme, in November 1995 the Congress organised a hearing in March 1997 and in June 1997 - during its fourth plenary session - the Congress adopted a preliminary draft European Landscape Convention. Before recommending that the Committee of Ministers adopt the Convention, the Congress consulted the representatives of the national ministries involved from the 40 member states of the Council of Europe, as well as the main international organisations concerned. This was done so that they could participate in a special conference held in Florence in April 1998.

On the basis of discussions at the Florence conference and the favourable opinion in respect of the preliminary draft Convention of the international institutions concerned - in other words, the Parliamentary Assembly of the Council of Europe, the Committee of Regions of the European Union, the World Heritage Committee of UNESCO, the Commission for Protected Areas and the Commission for the Law of the Environment of IUCN - during its fifth plenary session in May 1998 the Congress adopted the draft European Landscape Convention. This was with a view to its adoption by the Committee of Ministers of the Council of Europe. The draft Convention is part of the Recommendation 40 of the Congress.

In September 1998, in accordance with the wishes of the Congress, the Committee of Ministers of the Council of Europe entrusted to intergovernmental committees of the Council of Europe - that is the Cultural Heritage Committee and the Committee on Biological Diversity and Landscape Diversity - to examine the feasibility of the draft Convention prepared by the Congress, with a view to its possible adoption and opening to signature during the campaign of the Council of Europe. This is the campaign known as 'Europe - A Common Heritage', which is starting in October 1999 and will come to an end in October, 2000.

In November 1998, the Parliamentary Assembly of the Council of Europe adopted Recommendation 1393 which invites the Committee of Ministers to examine the draft Convention with a view to its adoption in the near future - if possible at the end of the campaign which I have just mentioned. The last stage of this long saga is a very favourable opinion on adopting the draft Convention expressed by the Committee for Cultural Heritage in February 1999. The last word before opening the Convention to signature would, of course, have to be expressed by the Committee of Ministers. This will take into consideration this opinion as well as that drawn up by the Committee on Biological and Landscape Diversity, which will be meeting next month in Geneva.

We are convinced that the discussions within this seminar will contribute to a great extent to those discussions that will take place at intergovernmental level, with a view to adopting the Convention.

Peter Berkowitz
European Commission - Agriculture Directorate-General

In the following I will present the view on DG Agriculture's Forward Studies Unit on the future European agricultural policy, especially on Agenda 2000 that will hopefully be agreed-upon today at the Berlin Council.

Landscape definitions

I shall start by giving a couple of definitions of landscape. I do not wish to open up a debate on the extent to which cultural definitions have been taken on board in definitions of landscape, but rather to illustrate a shift.

- 'Landscape is all the natural features such as fields, hills, forests and water, that distinguish one part of the earth's surface from another part' (Steiner, 1991);
- 'Landscapes are the concrete and characteristic products of the interaction between human societies and cultures with the natural environment' (Wascher, 1998).

The first view of landscape is very much focussed on its natural components. In this case we have an understanding of landscape that is quite easy to dis-aggregate. The second definition is very typical of those that we see now appearing in the literature. The new elements here are *interaction, complexity and context*. Certainly for us, this puts the development of policies that involve landscape, and also agriculture, in a totally different framework.

This shift towards the second definition is illustrated by looking at the area that specifically concerns us, namely the relationship between agriculture and environment. The first major manifestation of the shift is within the CAP. This is a move from what was basically a productivist model to what we refer to as a multifunctional model of agriculture, which places emphasis not only on the productive or economic functions of agriculture, but also on its social and environmental characteristics. With this comes a whole set of other relationships - a set of obligations and rights as regards other parts of society - and it makes the notion of agriculture far more complex.

Agriculture and environment

The second shift is one related to a view of environmental requirements as compliance - external to a policy - to building environmental objectives into policies in order to achieve something that is closer to sustainable development. With the discussion of sustainable development, of course, comes a broader set of objectives.

At a political level, there has been a very clear signal from the Council of Ministers that they wish to see improved integration of the environment into all community policies. This is a process that will reach its next airing at Helsinki, where a report will be presented on the state of integration. Following discussions that we have held with agencies, interest groups and national administrations in developing Agenda 2000, and from research work that we have undertaken at EU level, we have a far better understanding - I would not say that it is a complete understanding - of the complexity of the relationship between environmental media and agricultural production and of the fact that there are different relationships that are highly contextualised.

The last point is that there has been a broadening of the debate about the scope of environmental policy: how we fit biodiversity, natural habitats, and cultural habitats into a framework that has traditionally been very concerned with environmental media and the protection of natural resources in a more restricted sense.

Local agri-environmental systems

This can perhaps best be summarised in the idea of local agri-environmental systems. Rather than thinking of agriculture and environment at an EU level and then trying to bring them together, we have to start with a far more 'bottom-up' approach. Instead of trying to define that, I shall try to offer some ideas behind the concept of a local agri-environmental system.

The first is that the relationship between agriculture and environment is site specific. It is difficult to generalise and much easier to say something sensible about the relationship when discussing it at a regional or local level. The second point is that rather than talking about agricultural environment, we should be referring to agri-environment: that there is a complex relationship between agriculture and environment that produces both positive and negative environmental effects. The third point is that there is a systemic relationship between agriculture and environment that is not merely a matter of interrelationship or accident, but which is historical. Of the systems that have developed over time, some are more sustainable than others. This has been particularly true over the last few years with intensification, concentration, and the development of a whole new set of relationships between agriculture and the environment which are clearly unsustainable.

Given that we have this changing view of the relationship between agriculture and the environment, which I have tried to capture with this idea of local agri-environmental systems, the issue then is how to classify these, how to talk about them in an intelligible manner especially at a European, but also at a local, regional and national level. Our view is that landscape plays an absolutely key role here - the word '*over-arching*' was used earlier on.

First of all, landscape provides a spatial dimension to the patchwork that is land use, land cover and environmental features of areas. It allows us to talk in spatial terms as well as - at possibly a slightly more sophisticated level - allowing us to refer to what people call the 'mosaic' of landscapes that we encounter. These are especially important in terms of habitats. It gives us a whole range of tools to discuss agri-environmental features in a way that is spatial.

Secondly, it pushes us into talking about clusters of characteristics rather than just the characteristics themselves. Such clusters allow a higher level of generalisation in evaluating policies and their effects. Such evaluation could provide us with very important contextual information about relationships between basic environmental media and other characteristics, and about the effect of pressures. The simplest example in this particular context is that of the slope of land. (The question has just been raised of what we mean by 'environmental media'. For me, certainly, in the context of the Commission it means: air, soil, and water.)

Another important factor is that landscape - building up from land use, land cover, environment features, and a range of different things - can, in fact, provide a basic layer within a geographical information system (GIS) approach. Against this we can build up further information, possibly at a national, regional or local level.

Landscape classification

What, then, does landscape classification allow us to do? First, it allows us to structure information collection. There is a great deal of work going on on indicators and a lot happening on producing information, but we need to move to a new stage where we make it far more operational, more orientated towards policy thinking. Landscape classification can help us start thinking - and the Dobriř Assessment is the first step - about how we structure the information we are going to collect, to produce more and more operational outcomes.

In addition, landscape classification helps us to shift from simply environmental protection or damage reduction to a more sustainable, systemic view of what will produce in the long term the sort of outcomes that can be maintained. That is not to say 'maintained without public support' but it will produce systemic improvements in ecosystems and habitats for example. From our point of view, landscape classification is also very interesting in identifying trends at EU level. We probably saw quite a good example earlier on with the map of the way in which opportunities and threats can be conceptualised.

It is this last element that is of particular interest to us - to identify areas that are at risk and specific opportunities to enhance them. Public money is always limited, so it is especially helpful to understand where it can best be invested.

Agenda 2000 proposals

I want to mention now how our understanding of the uses of landscape fits into the Agenda 2000 proposals. The basic philosophy of Agenda 2000 is that farmers should observe minimum requirements as part of any support regime. There should be a basic set of requirements. Also, beyond what these basic requirements are - good agricultural practice, environmental services - can be paid for by society, particularly through agri-environmental programmes.

Landscape assessment appears to us to be vitally important in a number of ways, one of which is in helping us to define what good agricultural practice is. Quite clearly, beyond a very basic level that is definitely not high enough, it is difficult for Brussels to stipulate what a farmer should be doing in the uplands of the UK or in Tuscany. Local understanding and even local political processes, as opposed to merely technical ones, are clearly required in definitions of good agricultural practice.

The second is in the development of agri-environmental programmes that largely form the core of the EU's policy towards *greening* the CAP. They are a compulsory element and we want to see programmes that are tailored towards achieving real results at a local and regional level. Again, landscape assessment and contextual information can help us produce far better programmes.

Landscape assessment

What steps are needed, therefore, to make landscape assessment operational? The first is that we need to find ways of balancing and synthesising both natural and cultural elements. Rather than nature and agriculture being placed on different pedestals, we need to find ways to bring both of them together. We need to work further on developing classification of different types of local agri-environmental systems and to build upon the various works that has already been carried out on landscape types in natural terms, as well as on agricultural production systems. That information has to be brought together to give us a more coherent idea.

We need more work on the clustering of different features, to establish what sort of features fit together, what sort of features offer patterns that can be identified, and how these clusters of information can be better synthesised. Landscape is absolutely central to the further development of the framework of agri-environmental indicators. It is important, when talking about landscape, to remember that it is a different type of creature from other indicators. It provides a whole range of contextual information about systemic properties, as opposed to simply state. It is a far more dynamic concept. The focus on landscape indicators should be very over-arching.

Conclusions

In conclusion, I hope I have convinced you that in the Commission at least, we feel that landscape assessment offers considerable potential to help us to develop policy instruments both for agri-environmental as well as specific requirements that should be imposed upon farmers in different areas across the EU. It will help us to develop policies to protect areas high in cultural value. Landscape and landscape assessment has enormous potential as an analytical tool, to help develop better agri-environmental policies through classification. It also helps us to a better understanding in the range of ways that I have outlined.

In practical terms, there is a clear need to pull together different parts of the work. We are happy to see this joint Workshop take place, bringing together PEBLDS, the draft European Landscape Convention and other initiatives at the mainly national level. For it has perhaps more political, analytical dimensions.

We would like to see this particular context of the OECD work build up towards a coherent framework in the coming years. It is especially important for us in the context of the discussions that are going to be taking place in world trade, that we should be able to send a clear message about the sort of characteristics that are special to European agriculture and what we need to promote.

Discussion on Setting The Scene

Chair: Roger Clarke, Countryside Agency, UK

Arthur Spiegler (Ministry of Science, Vienna):

Can you give us a brief definition of what you understand to be landscapes of European significance? I know the landscapes of universal value, like UNESCO landscapes. I know our landscapes of national value and so on. I would also like to propose that this group could agree to use the landscape definition of the CLRAE - of the Landscape Convention.

It is the first time a definition of landscape has really been achieved in one sentence and this should be adhered to as far as possible.

Roger Clarke:

In relation to your second point, the definition of landscape provided by the Landscape Convention working party (Council of Europe, CG (4) 6 Part II, Strasbourg, 5 May 1997) is extremely helpful. A great deal of thought has been given to the whole matter. In relation to your first point about landscapes of European significance, perhaps Riccardo Priore would like to address that question?

Riccardo Priore:

Very briefly, during my statement I highlighted the fact that the landscapes of European interest are not those of outstanding character, from the natural, historical, aesthetic point of view. What we wish to stress in drawing up this list is the need to identify landscapes that have value in relation to the consolidation of a European identity.

This could probably best be explained by examples. Sites having European interest because of their aesthetic qualities could, of course, be included on the list but it is not merely those sites. There are sites which, even if not of outstanding or particular aesthetic value, nonetheless are of interest for the European identity. I will try to offer what may be a somewhat bold example of what might constitute this European identity. Taking the Chernobyl site in Ukraine, for instance or the concentration camp sites from the Second World War, such as Auschwitz. These are naturally sites that are hard to qualify as landscapes.

However, they are surely landscapes of extremely important value, bearing witness as they do and being in themselves acute tragic reminders of the European experience and therefore of the identity of our continent. I mention these two cases merely by way of example.

This is not a proposal to include them specifically in the list. However, they help illustrate the answer to your question, as it is hard to explain things in purely theoretical terms.

Roger Clarke:

One of the breakout sessions at least will explore that question in more detail.

Wilfrid Legg (OECD, Paris):

I have one matter for clarification by Rob Wolters. In one of his early slides, he referred to there being international driving forces that were 'disrupting the stability of landscape'. Could he explain what he had in mind there?

Rob Wolters:

Changes in land use in recent decades are in fact occurring quite rapidly, especially in agriculture but also in infrastructure, where water management has intensified in the last decade.

You now see more distributed processes, and I refer specifically to the major processes of extensification and land abandonment. These processes have consequences for all of the qualities of the landscapes. By this I mean that landscape qualities are economic qualities, strongly related to the regional and local economy, to cultural qualities and to ecological qualities. These qualities, which were for a long time relatively stable and in harmony, are being destabilised by these main driving forces. An example of this is the Dehesa landscapes of Spain, where not only existing natural or cultural values are being disrupted but also entire local communities losing the traditional bases.

To summarise, therefore, the driving forces affecting landscapes are closely related to the sectors to which I referred. The agricultural sector is among the most important of these, so one should focus particularly upon the relationship between landscapes and the agricultural sector.

Roger Clarke:

When you are Chairman tomorrow, Wilfrid, maybe when you introduce your session you might also give us a few minutes on the OECD work on landscape indicators in agriculture? That seems to be a very interesting piece of work, which has been referred to by various speakers.

Chapter 3 *NATIONAL LANDSCAPE ASSESSMENTS*

Norway: The National Landscape Character Programme

Professor Dr Gary Fry
Norwegian Institute for Nature Research (NINA)

(Chair: Dr Roger Clarke)

Note: Figures referred to in this text can be found in the report inside cover pages

I will start with the definition of landscape we use in Norway, which is very similar to the European one: *Landscape is a physical reflection of the interaction between European societies and cultures with their natural environment .*

This definition is slightly limiting for our work in Norway, because if we talk about just physical reflections, we do not really capture all of the interests of landscape that we have, particularly when landscape is important for either national or local identity and for many other aspects. In many ways, landscapes are perceptual units that we try to group together to form landscape regions that have some coherence.

With regards to landscape assessment, for us this is a systematic description of specific characteristics of landscape regions at different scale levels. In this presentation we will describe our approach. I shall cover the academic approach and my colleague Oskar Puschmann will show how we have tried to relate this to policy issues.

The work builds on the general landscape assessment approach. We are very concerned with *why* we are doing it, and hence maintain a dialogue with both local and national politicians. We are trying to identify landscape character. Within the landscape character zones, we are identifying what is important and why. The approach works on a hierarchy of scales, from national to local. It tries to include phenomenological approaches and cultural interests. It is designed to focus on the dynamic driving forces of landscape change because we see landscapes as very dynamic. In order to cope with change and with different weightings that have to be put on various aspects of landscape over time, our classification scheme also has to be dynamic.

We look at potential and threats within landscape regions and, with the enormous geographical variation that we have in Norway (Oslo is almost the same distance from northern Norway as it is from Rome) we really need some way of dividing the country into zones which can be used for developing management policies. We are working towards finding a transparent and valid method for developing policies.

The system in Norway is based upon landscape as a resource and planning unit and as a management and planning tool. As mentioned earlier, it is a hierarchical system. Starting with landscape regions at the top level, we divide the country further up into sub-regions that are useful for regional- and county-level policy. These are eventually again broken down to landscape areas at the municipality level and even, where needed, to individual landscape 'rooms'. The system is based on a systematic analysis of landscape components, about which Mr. Puschmann will talk when I have finished. We have combined this with detailed landscape maps.

The result is a map of Norway divided into landscape regions. Our decision to make it hierarchical was based on certain strengths of such an approach. Most of the rest of my talk is about the methodological approach. A hierarchical approach utilises the best national and local data that is available. The objective is to go down to fine detail. Where this is not possible, other ways of getting the information are explored. The approach copes with the steep geographical gradients that can be identified. It has a clear focus on user needs at different scale levels - different administrative levels. It is innovative in many ways, in that it is trying to combine both qualitative and quantitative approaches. Quality and quantity allow for ease of communication and their availability has validated our approach.

As far as possible, we endeavour to make the steps transparent and flexible. We have the advantage that the regions are not entirely dependent upon administrative boundaries. Whether we are looking, say, for search areas for biodiversity strategies, or important cultural landscapes, and these are not confined to administrative boundaries, we can focus on the holistic assessment of landscapes, and we can include new interests as these become more politically important.

At present, current priorities are the integration of the following landscape values: biodiversity; cultural heritage and identity; landscape experience and access; sustainable land use and production. That is our actual political framework.

Of course, all systems have limitations and if we look at the Norwegian system there are some jobs that remain to be done. Data quality and availability varies across the country, limiting the themes that can be incorporated at all scale levels. In some areas, therefore, we do very well, whereas in others we are still out there, collecting the data. There is a demand for higher level resolution, so that it can be used particularly in Agenda 21 work and for other local issues. However, this is expensive, and at the moment we do not have the financial resources to work at such a refined level. Current assessment needs also require greater input from the cultural/historic dimension. At the moment we do not have good information nationally, although in the areas where we do have it, it works very well.

In whatever circumstances they are being used, most underlying assessment models require greater theoretical development. According to our observations, there are challenges for landscape assessment at virtually all levels. If it is seen as irrelevant to user needs, it will have no chance. If it stagnates and fails to develop further, it may have been misguided. It may be left on the shelf, something that has happened many times. I have looked at all of the schemes I could find from the whole of Europe. Very many blossom and are then abandoned. Why is this? Are they constantly being replaced by new approaches - we keep reinventing the wheel? Or is it because they become fixed lines on maps, whereas landscapes are in fact changing? We have to bear these things in mind.

There are also some scientific challenges. We are under quite serious pressure to try to quantify landscape character but there are problems with this, even if it can be done at all. We have to try to cope with local uniqueness and national perspectives simultaneously. Landscape character assessment probably does this very well. We also have to continue to integrate a wide range of interests and those interests will continue to increase in scope. Then there are the different political priorities. The weighting of our work is obviously dependent upon what politicians are interested in today. We sometimes need to tell them what they might be interested in tomorrow!

In a democratic society we must provide a transparent framework for decision making. People need to understand how it works at both local and policy levels.

To return to some of the methodological problems and our desire to make things more quantitative, I will offer this concept. Why do we need landscape indices? We need them because management wants them as an indicator of some environmental quality or value. For research, we often need them to quantify landscape structure or some other aspect of landscape. We usually also need them because we cannot really afford to go out into every landscape and measure everything.

First I want to give you a note of warning. More objective methods may be just an illusion. Landscape character mapping is at least honest about what it is doing, whereas some of the more seemingly objective methods are not. We often start off with an environmental value that we wish to study in a real landscape. Frequently, we do not go there but we take an image of that landscape, usually with some remote sensing source. We reduce that remote sensing source to a map image and from that mapped image we calculate an index. At each step along that line, we make subjective decisions.

Landscapes are also not easy to map, because we decide the mapping units, we decide the scale, we fix the boundaries and we weight the data by these decisions. They then affect what we deliver to policy.

What are the opportunities and challenges for our particular work? We need to incorporate new sources of data like the newly available topographic data - at very fine resolutions that can give us far more information about landscape form. We need continually to adopt new and improved methods as they come along. We need to get more high-resolution trials - the landscape character of particular places. We need to make links with other ongoing projects, both within Norway and within Europe. We need better integration of a whole package of environmental interests and character mapping, or at least to show that character assessment has a link with other interests, and this is the part that we feel is working best at the moment. We also need to link it to other policy sectors, including agriculture, forestry, transport and so on, in order to give us the possibility for scenario modelling.

Dr Oskar Puschmann Norwegian Institute for Land Inventory (NIJOS)

The map on landscape regions to which Professor Fry had referred to is based on a project that the Nordic Minister of Council developed in 1987, so we have been doing this for 12 years and have developed it further.

We have divided the whole country into 45 landscape regions, which we have done together with all of the agriculture and nature conservation departments and cultural heritage departments. We discussed where borders should go; these borders are not connected to county boundaries.

We have a hierarchical structure, starting on a national level, with the 45 landscape regions, which are then divided into 444 subregions. These are then divided into landscape areas. It is important to note that we talk about a national level, a regional level and a local level - we focus continually on what level we are referring to when we discuss landscape because the scale is of high relevance.

In describing a landscape, we focus on six major landscape components. These are major landforms, geological composition, waterways, vegetation patterns, agricultural areas, buildings and technical installations. Together these form what we call the landscape character. These components are put together in different ways in all of the regions.

We then use different types of maps and data to analyse them. I will give you some examples of how we use this with agricultural areas and how we come up with data to do that.

For another map project we are using data from the application to the agricultural support register, to which every farmer in Norway applies twice a year. Since every farmer in Norway also has co-ordinate, we can find out the location of the different kinds of data and its agricultural production.

It is not only of interest to specify how much agricultural land there is. It is also interesting to know what kind of production is taking place. The yellow area on the map shows cereal production, the green is grass production, and the orange shows potato and so on. We do not use this only to see what is being produced in the various subregions. We also want to discover exactly where they produce it and, as every farmer has a co-ordinate, we can then show it on a map. One map indicates every farm producing cereal, with figures showing how many hectares of cereal production there are.

This is done with all of the different crops because each has a different impact upon the landscape, which is important. We look for data that offers some detail about the landscape. Another map shows grass production in the mountain valleys, the upper valley and highland settlements, we have grass production, which has a different sort of impact on the landscape. We can also do this for various types of animal.

Cattle and sheep have different kinds of impacts on the landscape because of their grazing characteristics. We focus only on those animals that have an impact on the landscape, not animals like chickens and pigs, which have none.

We can produce the same illustrations for buildings, showing what kind of buildings there are and how they are spread over a landscape. Farm buildings, for instance, have different impacts on different landscapes. If the landscape is flat, there is a scenic view and you can see the farm buildings. If they are in a forest area, however, their impact is clearly different.

We use maps to describe the different kind of impact that agriculture exerts on different kinds of sub-region. We do that for all of the subregions and can then also tell the difference between landscapes in the same landscape regions, as well as the difference between landscape regions and what their impact is upon agriculture.

We repeat this on various levels. Another closely related approach has been the mapping of ten different kinds of agricultural landscape regions as they are being used (*reference: see Map 1 inside cover*). This is more useful on a national level. It is the top of a hierarchical system and shows ten different kinds of region built up by way of the 45 regions, so it has the same boundaries. We can then take those 45 landscape regions and view them as small kingdoms, focusing on what the environmental problems are within each region. We forget the county border boundaries. Landscape regions do not follow county borders!

One example of the landscape regions is the clay soil districts of east Norway. We focus on these and try to solve them. If we take, for instance, agricultural land subject to pressure from urban development: 70 per cent of all of the people in Norway who move do so to this region, and there is tremendous pressure on agricultural land for urban development. We therefore focus in this region on what is happening with agricultural land and what is happening with the urban landscape.

However, one must also consider where all of these people are moving from. When people move out from other landscape regions this also has an impact, so we then look at the changes that are taking place in regions that are being abandoned by people moving away from them.

We treat this as a reference system, building it up in such a way that we can use it for various purposes. I have discussed cultural landscape, conservation and management. We also use the data in a thematic or agri-environmental context.

Our data is much used in connection with impact assessment: if the government is going to build a new road, what sort of landscape will it be going through? Should it be considered from a regional or a national perspective?

We have also used it in relation to tourism planning. That is in fact the one thing that has made this whole programme continuous since 1987, because the tourism departments wanted to have some sort of classification, showing how the different kinds of landscape in Norway could be used as resources for tourism.

Another example are the Lofoten and Vesterålen - one of the 45 regions - and it is very much used in tourism because of its landscape. If you look at the views on postcards from that area, there is the mid-night sun on every one of them. That is a regional characteristic for this area of Norway, as well as for the subregions. If you go to the landscape area levels and the local levels, you will see that only four of the landscape areas offer the possibility of seeing the midnight sun. Then, of course, if you try to put into a regional and national level how important these four areas are, you discover from local feedback that these are important from the regional and the national point of view as well.

A English translation of a report describing this process, particularly linking it to agricultural policy, is available.

Enrico Bürgi

Swiss Agency for the Environment, Forests and Landscape (BUWAL), Switzerland

It is with great pleasure that I present the Swiss Landscape Concept to you, which the Swiss Federal Council - our government - has decided to implement.

Maybe you think - in terms of the European Union - Switzerland is somewhat 'set apart'. However, Switzerland's nature is not. We do want to work with all partners on national and international levels to increase the quality of landscapes and the integration of economies in these matters. This is the main discussion we have taken up and now try to apply ourselves.

The 'Swiss Landscape Concept'

Using the report *Swiss Landscape Concept I* will stick to a general level while pointing out some specific aspects of our approach.

Switzerland is governed as a Confederation of 26 states, Cantons. The Federal System depends on a close cooperation between the Federal government and the Cantons. For so-called Federal tasks, the Federal government exercises legislative authority after consultation with the Cantons. For the implementation, however, the Cantons have the authority to issue implementing regulations on their own. That is the case for instance in the protection of nature and landscape.

Through the implementation of the Landscape Concept, Switzerland is in a position to respond to Action Theme 2 of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS). This enables us to integrate all aspects with an impact on nature and landscapes into all our sectorial policies. A series of measures is focused on nature and landscape activities. Our definition of landscape includes the total surface area, within or outside of built-up areas. This shows the result of the integration of all natural factors, such as subsoil, soil, water, air, fauna and flora, etc., in constant evolution and the interaction with cultural, social and economic factors. As there are many ways to define this, we were looking for a definition which the government could apply and which also is according to the aims of the draft European Landscape Convention, as well as Action Theme 4 of the Pan-European Strategy.

The Swiss Landscape Concept is structured in general aims, sectorial aims and measures for all sectors. We have to make a reporting to the Federal Council every four years. Accordingly, the Concept could be adapted. We also aim at involving and motivating those people who identify with cultural landscapes, or who have an understanding for biotope issues or the need to set up ecological networks.



Photo 1



Photo 2



Photo 3



Photo 4

The four general aims are:

- Natural values, the key word is natural landscape, its evolution and dynamism; (Photo 1)
- Cultural values; (Photo 2)
- Sustainable development, concentrating on regionally specific tasks; and (Photo 3)
- Environmentally friendly management, diversification, ecological development, etc. (Photo 4)

No question that people must have the possibility to live in harmony with the goals of nature and landscape protection in diversified landscapes. We consider this issue to be increasingly relevant in Europe. Farms have decreased in numbers, being replaced by other forms of land use.

Furthermore, there are sectoral aims and measures. We have worked them out in close cooperation with our partners in the other federal offices who in their duties take decisions with an influence or impact upon landscape. Today, together with our partners, we implement the aims and measures in all sectoral policies.

Examples

One of the most important measures in the sectoral policy 'agriculture' is focusing on ecological compensation. The goal is to have 10 per cent of the agricultural surface area in lowlands dedicated to the promotion of ecological diversity, ecological links and measures of demographic development.

The level of direct payments and in particular the compensation payments for ecological efforts as mentioned in the Landscape Concept reaches from a minimum amount to really large contributions. The amount of direct payments is increasing.

A specific aspect: we have protected areas but not enough corridors or linkages between them. Looking at Action Theme 1 of the Pan-European Strategy, it is extremely important at national and international levels to enforce these links, in order to minimise and reverse the fragmentation of landscape by roads and other objects. This work will take years. It might work at national levels. International goals can only be met if many countries start the same policy by setting up these types of measures,

Another example is to be found in the sector of forest economy and policy: in Switzerland a wide net of forest roads exists. Those roads are based on historical trails or paths. They are 2.50 meters wide. Such landscape elements are adapted to the topography and frequent witness of historic development. In order to manage the forest concerned the trail had to be enlarged from 2.50 m up to 3.00 m or even more to adapt it for the needs and dimensions of modern trucks used for forest management. Easy to imagine, what this would mean in a hilly and mountainous landscape as Switzerland! The costs for such a project are between 3 to 5 million Swiss francs.



Photo 5

The alternative solution, with costs of less than a tenth of the before mentioned amount, was to construct a special narrow tractor (*Photo 5*). The local authorities were asked to accept that during the next 20 or 30 years the roads would not be enlarged. Under the condition of a financial contribution the local authorities and the forest engineers agreed with that solution.

Pan-European Biological and Landscape Diversity Strategy

Now we come to the synergy with the Pan-European Biological and Landscape Diversity Strategy. A very important goal for us is to work for synergy in Action Theme 1 (Ecological Networks), Action Theme 2 (integration into key sectors and sectoral policies of nature and landscapes); Action Theme 4 (landscape conservation) and Action Theme 10 (mountain ecosystems), also a part of the Draft European Landscape Convention.

The examples earlier mentioned have shown how people can live and feel good in a non-classified landscape. The landscapes should be kept and managed accordingly. Citizens also should be able to earn their living in these landscapes. The identity of the landscapes must be considered as a whole, not only some of their sectoral aspects or even worse, particular interests.

Looking at landscapes as a whole - it is an issue for the future. Accordingly, one can say that the Swiss Landscape Concept contributes to the European Landscape Convention and is, at the same time, an instrument to carry out in practical terms. This stimulates the dialogue between partners who really have an impact upon landscapes. Nature, culture and exploitation must be linked together towards a sustainable development landscape concept.

The Swiss Landscape Concept fits neatly into the international policy on nature and landscape sectors. It also sustains the ideas about balanced economy and ecology, and goes perfectly together with Action Theme 4 regarding the type of instruments and scientific work. This basis is absolutely necessary to obtain a coherent nature and landscape policy in the future.

Another instrument to be mentioned, in the best sense of the term, is the draft European Landscape Convention that precisely covers sectors that can be integrated into legislative and commercial terms and provides communities with instruments that can be used effectively.

The French approach to landscape

Jean-François Séguin

Ministry of Land Management and the Environment, France

Before presenting you the French Environment Ministry's approach on the typology of landscape, I would like to tell you something about the way that France has adopted legislation concerning landscape in the past.

French legislation on landscape emerged in 1906, through the Act on the Protection of Natural Monuments, which in fact was a law modelled after the protection of historic monuments. Thus, the natural monuments were initially geological configurations - such as rocks, waterfalls or trees. In other words, the first approach to protect the landscape was focusing on natural elements that were small in size.

French legislation on landscapes

In 1930, this law was changed into the Act on the Protection of Sites and here the perception of remarkable landscapes was expanded to include much larger landscapes on the one hand and, on the other, landscapes that were constructed to a greater extent through human intervention.

Then more recently, since 1985, we have looked at large, remarkable landscapes with a special concern for what we call the need to intervene - to manage the site - in order to allow them to be visited while supporting their sustainability against immense tourist pressure.

The most recent project on Mont St. Michel involved the expenses of more than FF 500 million. The Landscape Act of 1993 had been implemented by our administration in a way that went clearly beyond the protection of sites. This Act stipulates that landscapes comprise the whole territory, whether they are remarkable landscapes that have been constructed by professionals or whether they are far more day-to-day landscapes constructed by the inhabitants themselves - such as allotments in the Parisian suburbs.

An added impetus to action may also be the sympathy that all French people have for rural landscapes of the nineteenth century. Or trying to understand how modern agricultural practices can also create landscapes that are as interesting as hedgerow landscapes, and how these urban landscapes - such as alongside the Seine, which is on the World Heritage List - can be just as important to French people as the urban constructions we have seen.

There is also the issue of how landscape aspects influence regional planning and regional development, e.g. through infrastructure. There was such an impact from the eighteenth century and the same occurs today with the motorway system.

Landscape assessment project

The Landscape Act of 1993 led the French Ministry to ask Mr Lejanboule, who is also speaking at this Workshop, to work out a method that allows the assessment of landscapes in order to identify adequate policies. This is in fact the main topic of my presentation. However, instead of really creating an 'atlas', the goal was to first identify the landscapes and then to qualify them. The project, therefore, is not so much to assess the landscapes - to slot them into categories and to allocate different values to them - but to try to define for all landscapes what their different identities and characteristics are.

The method is based (1) on taking note of the current situation and (2) on assessing what we call the dynamics - the ways in which landscapes are going to evolve - so that it is possible to anticipate this development and to define public policy.

One of the key characteristics of this method is that it considers, as far as landscape is concerned, virtually everybody as an expert. A division between so-called ordinary people who know nothing, and so-called experts who know everything is not applicable for landscapes. The French approach is guided by the definition that the French people give to the landscape - and here I quote from a relatively traditional dictionary - which describes it as being *'the extent of countryside that can be seen in one sweep of the eye'*. It is, therefore, something that is territorial and it is expanding. It is also, however, the look that we direct towards it. Unlike the nightingale, the landscape does not sing when nobody is listening to it! Since we feel that humans need to project their view on the landscape we made this the basis of our approach.

The landscape is not diffuse across the territory but is made up of what we have called different units. The first step of the concept focuses on natural aspects, which in turn leads to identifying these landscape units can be recognised. In the Vosges Mountains, for example, different units that should be taken into consideration. To do this, you have to carry out a specific geographical analysis. There have to be on-the-spot analyses, case studies and analysis of aerial photographs to identify these major geographical units. They are linked with the relief, with the hydrographic system, with the vegetation. It is also linked, of course, to the paths, roads, waterways and the built environment - whether you are dealing with the agricultural or urban built environments.

Once this identification of the landscape units has been carried out, it is important to measure what value has been attributed to those landscapes by society in the past, through the level of protection given to the different forms. This work has already been carried out. It identifies all those territories that are given protection, and means not to necessarily judge - not produce a value judgement - but rather to be able to see what values have already been attributed in the past. The third approach, looking at the situation, is drawing up a list of all of the pictorial, aesthetic representations of this landscape and, by deciphering them, deciding what those values that have been assigned to them by different artists and during different eras.

Finally, a very important piece of work involves identifying which are the landscapes that are of interest to the local population and for which it is necessary to carry out an enquiry mostly at local authority level - at the level of the municipality. In the *Finistère* we have something like 280 persons to whom we have to talk, which involves a great deal of work. You have to be in a dialogue with the inhabitants, find out what they know and then discover which landscapes have importance for them.

These four methods of analysing the landscapes enable us to produce a photograph of the landscape at the point in time that the study is being produced. If one wishes to use this photograph as a basis for a policy, one needs to be able to work out the likely development trends, and which points will be a priority. One of the best means of doing this is to understand past developments in order to be able to project developments into the future.

The first way of working is to identify any visible signs of landscape development. We have various ways of doing this: map analysis published at different time intervals; aerial photography; and also the photographic observatory of landscapes - that is different photographs taken at regular intervals - which make it possible to assess how landscapes have evolved, in addition to the purely cartographic or statistical data.

The next step is to update development trends. This involves working on existing statistics whether they are agricultural, population or building statistics. In other words, you can measure the pressures on the territory or what the decrease in pressure might be. If you see that in a given region no more building permits are being granted, one can possibly conclude that as far as the built environment is concerned, the situation may remain stable.

Trying to project into the future, we contacted people in charge of planning responsibilities to see what plans they had in mind, but which had not yet taken shape in the form of an official request for authorisation. We therefore carried out inquiries among local main economic authorities in a given region as well as at the national level, in order to find out about new constructions and land distribution. This allowed us to produce maps showing potential land use change over the next five to ten years.

When all plans of the companies and local and regional authorities have been compiled, the main development trends become evident, namely on the basis of the three components referred to earlier. You would then have to validate this, of course, with the people who have been interviewed, with the local and regional authorities, to establish that they agree that that is where the landscape is going to change.

We constantly consider how indicators can be useful, because we think that there are not just indicators in terms of nature, but also indicators in terms of political trends as well as evaluation of how things may evolve.

For the assessment of Angers, for instance, a master plan for regional development was used for two things: first, to draw up a reference document that has been put together by scientists, decision-makers at public level and part of the population. The document has been produced in a concerted way and thus becomes more solid - and is better accepted - because everybody knows what is being referred to from then on when talking about landscape. The second use is to indicate increases and decreases in pressure areas. You will therefore be aware of where things are likely to change - because agriculture will be changed there, things may be built, a road may run through - as well as where pressure might decrease, for example where agriculture is regressing, land is being left fallow, where a population is going down. This makes it possible for politicians to work out priorities. That is, you can see which parts of the territory are likely to be affected by either an increase or a decrease in pressure.

These documents show that one is perhaps able to better master those forms of landscape that are considered as day-to-day landscapes, but also to protect those which have been designated as being of interest for the population or indeed for the nation as a whole. During the realisation of certain plans we have been able to find landscapes that are important at a greater level than the local one. This enables better dialogue to take place between local, regional and national levels. The 1993 Act has assigned the responsibility for regional planning to regional and local levels. The atlas is useful for France at all levels. It is used as a basis for policies that form part of contracts between the national government and the regions and between the regions and lower territorial units.

The landscape atlases produced in France are applied to quite wide-reaching areas, including both regions and départements. This work can also be carried out on far more limited areas, such as the one in *Anger*. Take, for instance, the results that can be found in a land use plan. This was the original land use plan for this area, which has been changed after the atlas was drawn up for the local municipality.

Zones marked in red show business areas, and it can be seen that all of the other activities were really concentrated on the periphery of the road. Analysing the typology of the landscape meant that it was possible to make a different proposal, linked to the displacement of the original road that was going to be built there. You can, therefore, see that the question of landscape is not just one that refers back to the protection of the cultural heritage in the strictest sense of the term, but also that it makes it possible to have a more coherent approach regarding the territory, the overall area and all of the different sectoral policies. These generally show no consideration at all among each other.

The method for producing the atlases can perhaps be considered original in the sense that it considers each citizen to be an expert. After all, a landscape has a social component as well as a scientific one. Obviously we are only just embarking upon this. We have not yet covered even half the territory of France with this method of study. We have some difficulty in going from one scale to another. The atlas works are being drawn up region by region or département by département and on regional specific characteristics.

A French President once said that the French were ungovernable and every Frenchman had a different opinion. Clearly, the difficulty is to come up with a cheese that is going to satisfy everybody. There are many variations from one area to another, and it will require a great deal of effort to come up with a nationally based atlas. It is sometimes difficult to move from a regional scale atlas and translate it into the land use plan, because just in the Finistere you have 258 municipalities, but there are not 258 kinds of landscape in that area.

Countryside character and natural areas - combining landscape and biodiversity

Carol Somper
Countryside Agency, England, United Kingdom

Note: Figures referred to in this text can be found in the report inside cover pages

I would like to explain that, despite being a single speaker, this is very much a joint presentation. My colleague, Keith Porter from English Nature, will join me in answering your questions at the end of this session.

To begin with, the Countryside Agency is the English government agency responsible for promoting the natural beauty of the English countryside and enabling people to enjoy it. We designate and advise on the management of England's finest landscapes, the eight English National Parks and 37 areas of outstanding natural beauty. We advise government on all countryside matters, including the development of policies for planning, land use and land management. We research and innovate new ways more effectively to integrate and implement these policies from national to local level. We have considerable experimental powers and work with a very broad range of organisations.

We work alongside two sister agencies, whose individual remits complement our own. The first is English Heritage, who are responsible for England's historic fabric, its scheduled ancient monuments, sights and buildings. The second is English Nature, who have responsibility for wildlife and natural features. They advise government on all matters relating to wildlife, geological conservation and biodiversity. English Nature is responsible for designating and advising on the management of over 4,000 Sites of Special Scientific Interest (SSSIs) across England.

In order to do all of this work effectively, each agency needs to understand precisely what ‘countryside’ or ‘landscape’ means. In common with much of the rest of Europe, England has a cultural landscape. It is diverse both in semi-natural habitats and historic interest. It has many cultural associations, having been shaped by natural forces and human activity over the millennia. More importantly, it is a living, constantly evolving resource that requires careful and skilful management.

The three agencies agree that the key to sustainable development is a better understanding of landscape and use of what we call a ‘character approach’. Character is our shared expression of the way the natural and cultural elements of landscape combine to make areas different from each other: not better, or worse, but simply different, giving each area a unique sense of place.

I should like to explain now how this approach came into being. About 23 per cent of the English landscape is designated for its very high quality and enjoys special protection. The Countryside Agency urgently needed a comprehensive assessment of the entire English landscape to guide its policy development. English Nature, having traditionally focused on designated sites and on action plans for individual species, realised that these alone would not deliver sustainable biodiversity.

Landscape Character Areas

Our common aim was to find an approach that went beyond designation of the very best to encompass commonplace and everyday landscapes. In 1993, we realised that we were developing complementary approaches that could be integrated into a single, joint, mapping exercise. English Heritage joined our inter-agency team to advise on the historic aspects of the developing methodology. Our joint aim was to develop a national framework of geographical areas that described what the landscape was, how it had evolved and how to use this knowledge better to guide and inform its protection, conservation, enhancement and restoration.

The methodology began with a systematic analysis of the landscape. A pilot exercise had shown that 12 aspects – related to physiographic, ecological and cultural categories – determine the English countryside as people recognise it. A national dataset for each of these 12 aspects was prepared for our inter-agency project. I would like to offer a few examples of these.

One example is solid and drift geology and is something that had never been done before. It gives you the bones of the landscape. We developed an ecological dataset, showing patterns derived from soil census information. This is field density and size: the dark green areas indicate very ancient farming patterns with small fields, and the orange to dark red indicate very modern and much larger field patterns.

The datasets relating to the 12 aspects individually give summary information for every kilometre square in England. They were analysed using TWINSpan – a system of multivariate cluster analysis – and a geographic information system. This computerised process indicated areas with distinct combinations of characteristics. Because landscape is partly subjective, both the Agency and English Nature had also begun a parallel process of consultation, starting with our own staff and selected planning authorities.

As the results of the computer analysis began to emerge, we broadened this perceptual exercise into a joint national consultation with a much wider range of partners. These included local authorities, regional government, nature conservation and landscape organisations, landowners and farming organisations within each of our eight regions.

From this exercise, lasting almost a year, we produced this map: 'The Character of England, its Wildlife, Landscape and Natural Features'. While the three agencies have developed a single, joint map, we use it in different ways. The Countryside Agency and English Heritage use the 159 landscape character areas as their national strategic framework. English Nature combines many of these, using common boundaries – and the boundaries are zones of transition rather than hard lines – to form their 97 larger, terrestrial natural areas, which underpin their work on biodiversity.

Some natural areas are single character areas. Other encompass up to seven landscape areas, providing a more appropriate scale for ecological analysis. This is because in some parts of England, an understanding of ecological coherence requires a larger scale than that needed for understanding the cultural character of the landscape, which becomes more important at a more local level. This relationship is fully illustrated in the large poster outside and we have made this big enough for it to be impossible to overlook!

Following this national consultation, the Countryside Agency, with assistance from English Heritage, drew up detailed, analytical landscape descriptions for the character of each of the 159 landscape areas (*reference: see Map 2 inside cover*). An example volume of these is also outside for you to take away.

In parallel, English Nature produced biodiversity profiles for each of their natural areas. Each profile describes biodiversity and geological features for each area, from which a vision is set out for achieving a more viable future. Examples of these profiles and complete sets are on CD-ROM with related information – again available for you to take away.

The Countryside Agency's landscape information does not contain a prescription for a better quality countryside. In England, we consider landscape assessment to be a largely neutral and descriptive process. We evaluate the results of landscape assessment. We are developing robust techniques for evaluation, such as environmental capital. This is to agree locally with all stakeholders – residents, local businesses, interest groups, local authorities – what landscape features matter (and this example shows woodland), what function they serve and how important they are at local, regional and national level.

The English government agencies are collaborating on 15 pilot applications of environmental capital, which range from regional strategic planning to small-scale local community projects, focused on an inclusive process of participation in local decision making. It is re-democratising the democratic process. These landscape descriptions and biodiversity give meaning to our joint map and this national picture is helping each agency to foster a wide understanding about how the landscape and its wildlife have evolved. Crucially, it is gradually being used to help inform all individuals, businesses and governments that are shaping the countryside of the future.

A practical example

Next, I would like to illustrate how our character approach can be applied to a specific area. My colleague, Keith Porter, and I have deliberately chosen a less traditional and less attractive landscape to illustrate the strength of our approaches. This is the urban Mersey natural area in Northwest England and is made up of seven landscape character areas. Each of these share the common characteristics of an industrial heritage, urbanisation and fragmented and depleted natural features. This natural area is one of the most densely populated in Europe. It contains two of the largest conurbations in England. The most natural habitats in this natural area are woodland – in steep-sided, narrow valleys, the peaklands – locally called mosslands, and the saltmarsh, intertidal habitats, sanddune and dune heath of the coastal edge. Dune heath is listed as being of European significance.

Especially characteristic of this natural area, however, are the manmade habitats, resulting from past industrial activity – the reservoirs, canals – and the new habitats, developed on areas of natural waste. This industrial legacy has resulted in predictable impacts upon local wildlife across the entire natural area. These are the degradation of habitat quality, fragmentation of biotopes, impacts resulting from industrial and agricultural pollution and the heavy demands of outdoor recreation. All of these impacts are set to increase due to economic priorities and the recreational needs of people from the adjacent conurbations.

English Nature's primary interest in this Workshop is to learn more about the processes driving landscape change and evolution. These will, ultimately, determine whether or not we achieve sustainability for wildlife. This shows habitat isolation and what we would like to achieve, more connected landscapes. The pattern and dynamics of biotopes within a landscape will determine whether a species can react to environmental changes and disperse or run to extinction.

Changing scale now, I should like to turn your attention to one of the landscape character areas within this natural area. This is the Mersey valley. It is characterised by manmade waterways and tributaries. It is a broad, linear river valley with wide, open views across the flat landscape of saltmarsh. It has mudflats, mosslands, peakland, mixed farmland and industrial development. Trees and woodland are scarce; field patterns are large and regular. Industrial development is massive and highly visible against the skyline, serviced by networks of road, rail, canals and powerlines. It is a distinctive, cultural landscape.

The settlements of Runcorn, Warrington and Widnes have an industrial history as well as sharing today's development pressures, which are intense. Continuing peat extraction and poorly executed land reclamation are dramatically changing the character of the mossland habitats. There is great pressure for new housing and unsympathetic landfill developments are also prominent in the open landscape. Pressure for industrial expansion around Runcorn is associated with the degradation of adjacent farmland.

There are clear and urgent opportunities for landscape enhancement here that local stakeholders need to articulate, promote and act upon. There is tremendous scope for the better use of brownfield sites and vacant land within the industrial areas. More imaginative and sensitively designed reclamation schemes are needed, both for existing and new landfill sites. There is considerable scope for hedgerow and woodland creation to increase the diversity of the local landscape. There is a need for more concerted and co-ordinated efforts to manage better the biodiversity of the mosslands.

Applications throughout the country

Now I would like to focus upon particular applications of countryside character and natural areas throughout the country. Through English Nature's understanding of England's biodiversity and the Agency's landscape approach, we are each in a better position to advise on the balance to be struck if we are to retain valued elements within the landscape and to achieve a more diverse and sustainable landscape in the future.

First, endorsed by our government, our national framework of areas is being adopted by increasing numbers of local authorities as a better way of understanding the relationship between the natural and cultural aspects of the landscape that give each area its unique character. Using our framework, they are beginning to subdivide and develop landscape classification – a hierarchy of assessments – that will provide more detailed information to develop better strategies for managing in the future.

Both the Agency and English Nature are forging effective partnerships with the new Regional Development Agencies. These are charged with drawing up strategies for regeneration and economic development in each of the eight regions of England. These strategies must, according to government guidance, take account of countryside conservation priorities. They must protect the environment and integrate social, economic and environmental objectives in contributing to sustainable development. We hope that countryside character and natural area information will guide their strategic planning for new development and infrastructure.

English Nature are developing their objectives and combined targets for each natural area, to help them to understand the key factors and economic sectors with whom they need to engage in order to achieve a more sustainable position for biodiversity. This enables them to recognise potential conflict and to strike a sensible balance. Without such a framework, they would not have made such rapid progress, mobilising resources to deliver local action against these national targets. This is a national target for Stone Curlew. Characterising the landscape has helped English Nature to prioritise local delivery of national targets, avoiding the dilution of effort and resources. When money is scarce, therefore, targeting in this way is far more effective.

At a time when the Common Agricultural Policy is about to enjoy further reform, our complementary approaches can be a more significant input to the more coherent guidance that is needed to tailor agri-environmental schemes to local needs. This reflects precisely what Peter Berkowitz said earlier this morning: helping to make life a little easier for farmers prepared to manage the land in ways that meet environmental objectives. We are working with our government's Ministry of Agriculture to develop a more sophisticated targeting strategy, using a character-based approach to identify which landscape elements need attention. Thus, it is identifying need rather than reacting to demand. We are looking at existing and planned agri-environment measures in this respect.

Our joint map, landscape descriptions and profiles have been the basis for developing a new national forestry strategy for England, guiding what kind of woodland should go where and why. Landscape character descriptions and natural area information have been used very effectively in partnership with the concept of environmental capital to develop a new way of undertaking environmental impact assessments for new road schemes.

Again, we are beginning to work with our government to refine and develop this approach for transport infrastructure at a strategic level. This will relate directly to the work being carried out by DG Transport in the European Commission.

The English tourism industry is starting to look at ways of using landscape character information to gain a better understanding of the asset they are exploiting, which can only be good for the countryside economy. Our landscape and wildlife are assets to be exploited sustainably for tourism, creating an economic imperative to sustain and enhance them for the future.

The Countryside Agency has used the character approach to guide the development of an initiative encouraging rural communities to produce their own village design statements, for guiding and shaping new development so that it enhances the character of their village and the surrounding countryside. I have left some examples of these statements for you to take away. We are about to undertake a national consultation on new, draft guide for landscape character assessment. This work is being carried out in partnership with Scottish Natural Heritage because of the very strong parallels between England's approach and that of Scotland. The new guidance will explain and illustrate how to apply character approach to landscape. We hope that it will be instrumental in developing a consistent approach to landscape assessment in England and Scotland.

The way forward

This new guidance will help us to work with other agencies, government departments and, we hope, European colleagues to help develop ways to evaluate landscape more effectively. Our involvement at this Workshop demonstrates our commitment to helping to shape a new dialogue for landscape at the European level. We have set up a countryside character user network, to help all those who wish to apply this approach to their planning and land management activities. This network is being developed to help articulate the process of regional and local decision making in pursuit of sustainable development. We are trying to support the practitioners who want to make a difference.

We are about to begin new research into ways of monitoring landscape change, looking at the environmental data we have for landscape, identifying trends and trying to model future change to give us a better focus for developing strategies today. On 1 April 1999, the Countryside Agency merges with the Rural Development Commission – the government agency in England working to develop rural areas so that they enjoy socio-economic well being. The result will be a brand new government agency providing a very exciting opportunity to work for people and places in rural England.

Our current remit, therefore, to protect and enhance the countryside, will broaden to include promoting social equity and economic opportunity for the people who live there. Sustainable development must be our watchword.

Both this new agency and English Nature will continue to develop the character approach and work with English Heritage and others to integrate further cultural and biodiversity aspects, the scientific and the aesthetic, so that future generations can enjoy what is best about the English landscape: not just the very best of our national heritage and its wildlife but also the commonplace and local landscapes that give much of England its rich and diverse character.

Dr Ödön Rádai,
Ministry for the Environment & Regional Policy, Hungary

The Past

The territory of Hungary and the Carpathian Basin was inhabited by prehistoric men since at least 350 000 years. That means: landscapes of the country are formed and transformed by human activity since ages. No doubt: with growing population and with the development of tools, techniques and practices – the footprints and traces of humans covered larger and larger areas. Interference between humans and nature has first left only temporary traces; nature was able to 'heal' the wounds. In other words: man behaved in a symbiotic way and not - as frequently being accused of - as a parasite.

When the ancestors of Hungarians conquered the country 100 000 years ago, vast landscape areas had already been transformed by Celts, Romans, Huns, and others.

But the changes in terms of landscape were still not 'dramatic' or irreversible. The most striking features were the changes in vegetation cover. In other words: the abiotic part of nature and landscape was still mainly the same (hydrography, geomorphology, geology, hydrogeology). Stone quarries and gravel pits were only sparse and small. Infrastructure (roads, bridges, canals, aqueducts, villas, fortifications, and settlements) and cultivated land were not exclusively dominant.

After the Huns hundreds of years have past without the presence of a dense population. Thus nature had a chance, at least partly, to recover. The 'conquista' of the Country by the Hungarians (896 AD) was not a shocking event for landscapes. The population was in the order of magnitude of hundreds of thousands; the number of domesticated animals was several times more. Dramatic changes were caused by the invasion of 'Tatars' i.e. Mongols. Large proportions of the country were devastated and part of the population killed (1241 AD). But it was only a short period and the country recovered soon.

The most significant elements of the Hungarian landscape are still the castles, built mainly on top of hills and mountains for better defence. The next tremendous impact on Hungary and its landscape was the occupation of a large proportion of the country, by the Turks (1526 AD, battle of Mohács). It lasted for 150 years and about one third of the population of Hungary was killed or 'exported' as slaves. Hundreds of villages were destroyed and never resettled again. In some places the ruins of the church do exist until now. For a long period cattle driven on foot (to the western part of Europe) was the only way for meat exportation. In general it can be stated that until the advent of large-scale water management activities and river regulation works: sustainability was 'maintained' by *nature* itself.

Tremendous changes came with the advent of mass-transportation of the 19th century (railways, steam-boats). It became possible for the first time to export food (grains, etc.) in huge quantities. So the demand for arable land increased. Large areas covered by water perennially and temporarily became subject of river/water regulation and amelioration. Rivers were forced into straight canals and confined between dikes, thus separated from the former meanders, floodplains, side arms, oxbow lakes. Wetlands, marshes, swamps, and bogs were drained. All these activities transformed for the first time Hungarian landscapes, in terms of hydrography. Vast areas were depleted of regular inundation.

Thus not only hydrography, but climate original plant cover, habitats of wild (and domesticated) animals were destroyed, completely altered. Soon the once more-or-less regularly inundated areas were used for new settlements. In the mean time the vegetation of the mountains, where the rivers had their headwaters was destroyed too: forests were cut. This had a tragic consequence: floods became more frequent, peaks of floods higher and shorter, impact on protecting structures (dikes, sluices) and in general on infrastructures (roads, railways, bridges, and buildings) harder. The '98 autumn and '99 spring floods along rivers and inundations by excess water became dangerous. The central and local governments have to spend huge amounts of money for flood protection and excess water removal, not to speak about the damage in buildings, constructions and losses in agriculture. All these events and other reasons - like EU approximation; agriculture - stress the necessity of rethinking the 'fate' of Hungarian landscapes (as an integral part of regional policy).

The Presence

Landscape

Defined in the *Act No. LIII. of 1996 on Nature Conservation in Hungary (Part Two, Art. 6, (1))*: 'Landscape means a confined part of the Earth's surface with a particular structure and characteristics, specific natural values and natural systems combined with characteristic features of human culture, where forces of nature and the artificial (man-made) environmental elements coexist and interact.'

The definition is further stating (2): 'The natural or near-natural state of landscapes shall be preserved while utilising landscapes and natural values; moreover, provision shall be made for the maintenance of natural values, natural systems and unique landscape features which determine the character and aesthetic endowments of landscapes.'

Clearly, the key expressions are as follows: '... *natural or near-natural state...* shall be *preserved...*'; '...*utilising landscapes and natural values...*'; '... *maintenance of ... natural systems and unique landscape features...*'; '...*character and endowments of landscapes...*'. Special attention has to be paid to the following part (3): 'Unique landscape feature' means a natural value or *natural formation* characteristic to a particular landscape or *man-made yet inherent element* of the landscape which has natural, historical, cultural, scientific or aesthetic significance for society. '

Para. (4) must be considered as extremely important. It says: 'The *determination and registration ...* shall be the task of the ... bodies of nature conservation. (Park Directorates...). 'According to *Para (5)*' The regional plan shall contain an *inventory* of the unique landscape features. But then: what is an inventory and which are the *unique features*?

Let us move to *Part Three, Article 23, Para (2)* - and see the complexity of the above sentences! It reads: 'By virtue of this law *all springs, bogs, caves, sink-holes ... salt lakes, tumuli and earthen fortifications* are protected.'

An inventory of springs is practically completed, containing all information about topography, geology, hydrology and chemo-physical data:

- Caves, sinkholes (swallow-holes): inventory is ready and up-to-date.
- Salt lakes; the situation might change fast; the constant ones are inventoried.
- Tumuli (burial mounds): inventory has been completed.
- Earthen fortifications: inventory of prehistoric ones is ready. Medieval age and later period will soon follow.

The importance of all these features is in their very peculiar appearance in the landscape and their very large numbers (tumuli: thousands, fortifications: hundreds).

Sustainability

Sustainability is clearly defined by the Act: Part one, Art. (4) I: 'Sustainable use' means the use of nature's elements in a manner and at a rate that does not exhaust their regenerative abilities or lead to a decrease in natural resources and biological diversity, thereby maintaining their inherent potential for satisfying the demands and needs of present and future generations. ' In Hungary, landscape that are close to nature can still be found. Landscapes, which were influenced by human activities are quite widespread - but in most cases human impact was not irreversible. Wetlands and forests can be restored, parts of river courses revitalised. Traditional cultural landscapes are typical and restorable if necessary. These parts of the country remained, because of lack of too modern infrastructure and less developed countryside. Still the former, large state farms and co-operatives have transformed at least the plots; but again it is already partly restored by privatisation. A problem is that traditional knowledge, ancient practices (in agriculture, forestry, water management, water mills and windmills), quarrying etc. are or will soon get lost. Old people were the sources of this knowledge, but the number is decreasing fast.

Landscape assessment

Landscape assessment is not simply a descriptive process in Hungary; it includes also landscape evaluation. It has to meet the requirements of the Act of Nature Conservation, but most of the work is still to be done. The relevant special literature of other countries is – or will be soon – evaluated and all elements that are of relevance: will be either incorporated or adopted.

Landscape evaluation techniques

'Elements of landscape' are (as mentioned above) already well known on the basis of inventories. This fits of course for architectural monuments, landscape forming settlements and infrastructure of special value too. The inventory of the most important and most valuable geological, hydro-geological, geo-morphological features (objects that are often of landscape forming relevance) are already well known and under the protecting umbrella of the Act as well. These are of three main types: mega, meso and micro elements of the landscape.

- In the category of mega landscape elements: volcanoes, groups of volcanoes, karstic plateaus, mountain ranges, lakes, swamps can be mentioned;
- Meso elements are: rock cliffs, rock towers, sand dunes, landslides, etc;
- Micro elements are: springs, cave entrances, tumuli, small earthen fortifications. Tumuli and fortifications are a very special category; almost without exception were these constructed in full accordance with geology/geo-morphology.

There were always two aspects considered: the site had to be free of floods/inundation and well defensible. The last might mean: steep hillside and/protection by water. Protection by water is equal to being surrounded either by natural water-bodies (swamp, bog, meander of a rivercourse) or artificial (trench dug around it and being inundated – at least temporarily; by water fed e.g. by precipitation).

The surveying of these partly artificial objects will help in reconstructing former floodplains, areas being temporarily inundated; because for sure these sites used to be safe against surface water. Springs are again of great importance as landscape elements. In the Trans Danubian karstic area (because of draining of mines and over exploitation of wells) large and often warm karstic springs became dry. Thus not only important wetlands became dry, but the creeks fed by the springs as well. The situation became so serious that some mines (bauxite) had to be abandoned in order to save famous spas (*Hévíz, Buda, etc.*). After the closing of coal and manganese mines (and the co-ordination of the production of waterworks) the original hydrography of the area is slowly recovering. In other areas (*e.g. Bükk Mts.*) some of the brooks or creeks fed in former times by karstic springs: will never have their original discharges, if not being dry for long periods.

Sectoral policies

Today's sectoral policies have to be still better coordinated in terms of landscape protection. All the available data (and there is a lot!) have to be compiled, systematised, evaluated and arranged into a coherent web in order to be able to save the existing values, to restore the elements not yet irreversibly destroyed. The development of a national (regional) *strategy* is a necessity. The first steps toward these aims are done.

Public participation

This is a concern, because still new civil organisations are necessary. Very well acting NGOs have already experiences in generating sustainability, but the (fast changing) stakeholders have to be involved and convinced.

The Future

The future of Hungarian landscapes is a big question mark and an exciting challenge at the same time. Which are the most important aspects to be taken into account when it comes to planning, or partly predicting only?

- Global climate changes (if any), meso-climatic changes (local human impact);
- Changes of the number of inhabitants of the country (continent, globe) and the impact there of in terms of socio-economic affairs; and
- Political-geographical changes because of regionalisation, globalisation.

Short-, medium- and long-range actions have to be planned, fulfilled in order to save the still existing values of landscapes, to restore as much as necessary or possible and maintain sustainable use of resources. Short term activities are needed for inventories, surveys ; all this is in the order of magnitude of some years. Medium term means in this context: data evaluation, processing and screening; time necessary is measured in one or more decades. Long term actions are (or will be) preparation of strategies and continuous adaptation to the changing – yet unpredictable – world.

In Hungary

- Global climate changes are not yet for sure detected. Extremities can be experienced, but proofs for trends are not available;
Meso-climatic changes are observed (in most cases as the result of 'anthropogenic' impact; deforestation, amelioration, river/water regulation, over-production of groundwater resources).
- Number of inhabitants of Hungary: was stagnant for some decades (>10 M) and is decreasing in the last decade by about 50 thousand/year. According to certain predictions in 2050 it might sink to 6 - 7 M.
Political, socio-economic changes are still expected and thus here again: prediction of trends and possible impacts have to be inserted into the web of other factors;
- Political-geographical as well as socio-economical processes should be predicted - but this is not an easy issue.
Most important factors are: approximation or membership to international/supra-national unions, organisations.

The abandonment of arable land, partly due to market-related, partly due to environmental impacts (inland water inundation) will bring about tremendous changes for both the landscape and the population. This is the big challenge Hungary is facing and the great opportunity to save, restore and sustain valuable landscapes.

Discussion on National Landscape Assessment

Chair: Roger Clarke, Countryside Agency, UK

Rob Owen (Countryside Council for Wales):

I would like to address Gary Fry. You mentioned in your talk that you had a line that was to do with what was important where and why – that is, the evaluation part. I am not sure how you did that, from the talk?

Gary Fry (NINA, Norway):

That is another project! However, we are currently conducting a large project in Norway, which looks specifically at the importance of the landscape experience, biodiversity and cultural heritage – how to measure them and how to integrate them. Then we look back at the regions, to see where we find patterns of those combinations that also, of course, happen to define the character of an area.

Dirk Wascher (ECNC, The Netherlands):

I have a question for Mr Ségan and also for the Norwegian delegates. In your work at the national level, you no doubt encountered the problem of identifying important areas or landscape elements from the national point of view, and maybe noticed the conflict between local uniqueness and national priority setting. Drawing upon this experience, or at least from the questions that arose from it, could you imagine how European priority setting would involve or affect your considerations or procedures in a similar way? Could you share with us your views about what this might mean for Europe?

Gary Fry:

The answer to the first part of the question is that we are also trying to see the regional classifications that we have in the light of projects that are being undertaken by your own institute, so that we can decide whether sites that we regard as having national importance have some significance in a wider context. The problem occurs more at the very local level. It is very difficult – and probably always will be – to compare a small valley in Norway with one in Switzerland or one in Hungary. At the moment this is partly because of different methodologies in use and partly because the cultures themselves have shaped a certain characterisation, which will always be unique. That is a considerable problem when raised to an international level.

Jean-François Ségan

(Ministry of the Environment, France):

The problem concerning landscape also applies to a question that was asked regarding the protection of species and fauna, where some zones – however important they are at internatio-

nal or national level – may have a different level of importance at regional level. In my presentation, I referred to history and civilisation that are part and parcel of the landscape. It can happen, for instance, in certain regions that are close to the frontiers – because as you know, the European frontiers have not always been where they are today – that it would be absolutely natural for particular landscapes of local interest to represent, at European level, something that is extremely important. Therefore, that might be important not only in national terms but also in international, or European terms. To give an example: one of our major concerns is not to base European identity on the more unpleasant aspects of our history. I would mention the Battle of Pouvine, which was never the subject of protection at national level because it celebrates an event that is, in fact, part of French culture. I am sure, however, that at European level it might well acquire another dimension.

Hans-Peter Jeschke (Austria):

I would like to come back to an earlier question – extremely important from the national standpoint, especially when we talk about European strategies that have to be developed and when we discuss assessments of landscapes that might have a European dimension. The only method that should in fact be employed would be to use similar typologies. I stress the word ‘similar’ because these have to be developed and this can only be done in the form of clusters. On the basis of this method it should be possible to determine unique landscapes that will have been influenced by the various European cultures. Such representation will take into consideration various geographical and historical features and we have to combine all of these elements. In this kind of general strategy, therefore, we will be able to determine the diversity of the European landscapes.

Marija Zupancic-Vicar (IUCN, Slovenia):

Incidentally, I also work with IUCN, World Commission on Protected Areas. I would just like to offer some information about this point. Some work has already been carried out around this and we have in fact prepared a report now on trans-boundary co-operation and trans-boundary protected areas. Many of these span two, three and even four countries which are together in one co-operation, which means that there are important landscapes – protected areas – but also open areas, where identification has been carried out on some characteristics if not on all of them – biodiversity, river basins, some eco systems and so on. The other work that has also been carried out under the Parks for Life scheme is the identification of potential World Heritage Sites in Europe. These

already amount to some 80 sites but are mostly not just natural sites. They are mixed, cultural landscapes and natural areas. Therefore, some work has already taken place on this subject.

Oskar Puschmann (NIJOS, Norway):

The main purpose of the landscape reference system that we are building up in Norway is not to focus on anything specific other than the landscape. We are looking at it in a 'box', if you like, into which you can place different topics. To give an example, we have all heard the slogan that we must 'think globally, but act locally'. When the government comes up with slogans that urge us to take care of qualified wilderness, our response is to ask where that is and how we can make good use of it. Then we can go out and establish which landscape regions in Norway have qualified wilderness. Then we can report it to other countries. You, in Denmark, have most of the qualified wilderness. Then we move down to the local authorities and advise them that they are the municipality that has most of it. That is one of our aims, to be able to put different topics into it and then establish which are the kinds of landscapes that are influenced by, as I said, wilderness.

Roger Clarke (Countryside Agency, England):

I would like to make a couple of points that have occurred to me as a result of listening to the presentations this morning.

- There seems to be a high degree of agreement about the significance of landscape as an over-arching concept in helping us plan for the future – something that brings together nature and culture, something that is relevant in all areas, not only some special areas. There has not been a great deal of disagreement – rather, in fact, a high level of agreement – about the basic principles and concepts.
- The point has been well-made, perhaps particularly so by Jean-François Ségan when he said, that 'we are all experts'. The Council of Europe has reminded us of the importance of the popular dimension of landscape. We need the expert analysis of different factors that make up landscape. We need the indicators but we also need the popular appeal. Therefore the scientific systems for generating data and producing maps, need to go alongside the popular input from government institutions right down to local citizens.
- If landscape assessment is to have impact, it needs to be at the heart of government, a point that was well illustrated by Dr Rádai's final comment, when he said that these ideas are central to the future of large parts of Hungary. The work is not going to succeed if it is being carried out just by scientific institutions or agencies on one side. It has to be at the heart of government and we may need new legal instruments that help to express that concept or, as Enrico Büergi illustrated from Switzerland, some form of agreement between, say, environment ministries and other ministries of government about what they are going to do if this thing is to have any impact.
- There is a very important issue about scale: how can we scale up and scale down? That matter was not resolved. We had a certain amount of debate about the European and the national levels, which is quite difficult because at one level each village is unique, while at another we have to plan for Europe as a whole. How do we move between these scales in a way that is not too artificial? We do need action at the village level. We need action at the regional level. We need action at the national level, as well as at the European level. How we can establish a relationship between these different scales is an important and unresolved question.
- We have had illustrations about a wide variety of applications of the concept and much of the remainder of this workshop is about applications. The contribution from the European Commission was particularly helpful in saying that, in the agriculture sector, as agriculture moves to a more multi-functional approach, landscape techniques would be especially valuable. Alternatively, to take a different example, Mr Ségan illustrated how landscape assessment can relate to spatial planning at the municipal level.
- The final slide from Norway, which said that there are various sectors in which landscape assessment can be applied – for example, tourism – was very helpful. I saw that as a broad concept, which indeed was picked up by the flower that Enrico Büergi drew of how different parts of the Swiss Federal Government might take this idea forward.
- A final point was that the landscape assessment approach often focuses on particular issues or problems. Several speakers have referred, for example, to the countryside next to major cities – often marked by industrialisation – where things are perhaps changing rapidly. Another example was Mr Büergi's illustration of these paths – forest paths or roads – and how they could accommodate wider vehicles, where you do not move the path, you move the vehicle and make that smaller. Illustrating the technique needs to address not just general concepts but particular issues that arise either at the local community scale – as in the case of the Swiss example – or if we are planning for urbanisation and expansion of cities, or for the future of Hungary and which areas might be flooded in the future.

Chapter 4 *WORKING TOWARDS A CONSENSUS*

Developments in European Landscape Assessment

Dr Jan Klijn

Alterra – Green World Research, The Netherlands

Note: Figures referred to in this text can be found in the report inside cover pages

The need for an international approach

The urgent need for an international approach on landscape concepts and policies is continuously increasing. Land use changes are affecting European landscapes in various ways. Though often associated with negative effects, some of these changes can create new opportunities for landscape restoration and transformation. Land use changes, either market- or directly policy-driven, are essentially supra-national (i.e. trans-boundary) in nature. Many changes at the national level are so similar in character that the international importance of landscapes is becoming more and more evident. When addressing this development, both scientists and policy makers face the need for well-organised, reliable and consistent data on landscapes. Another need is to agree on a common methodology for how to operate with this data, how to assess trends that affect landscapes, how to deal with threats or opportunities and how to develop policies that are effective. Environmental reports such as the Dobříš Assessment (1995) and European policy papers such as the PEBLDS (1995) provide the rationale for a solid and targeted approach on landscapes as a policy issue. Key requirements that are frequently quoted in these documents is the need for internationally agreed-upon typologies, assessment methodologies and landscape-specific data.

Moreover it has been recognised that the scale of landscapes (geographical units with a certain size between 100 and 1 million square kilometre) is very suitable for policy and decision making at the national and international level.

Users and user requirements

Before investing large resources in developing methodologies, databases and other products, the users and the user requirements should be clearly defined. In general, it can be stated that users are (1) European institutions (European Commission, Council of Europe, European Environment Agency) (2) national authorities or stakeholders, and (3) NGOs dealing with landscape conservation, land use planning, and other aspects related to the land.

User requirements can be stated in terms of :

- I. **Policy orientation:** stated in terms that fit policy options and phrased in terms that are understandable for non-scientists;
- II. **Appropriate scale fitting the international scale of applications:** as an indication could serve a scale of app. 1: 2.5 - 10 Million; smallest mapping unit of e.g. 25 square kilometres (5 x 5 km);

- III. **Consistency** of classifications, legends, assessment methods etc.;
- IV. **Data and methodology should enable:**
 - Cause – effect assessments; effects of certain measures.
 - Possibilities to use data for monitoring: registration of change;
 - Possibilities to link data to other data (CORINE; hard- & software specifications);
 - User friendly systems (easily approachable, manageable for modal user);
- V. **Data storage should support multiple use** (selections and combinations of data layers);
- VI. **Data architecture open to adjustment and extensions;**
- VII. **Free access** (e.g. legally, no charge) to all international and national bodies.

Top-down versus bottom-up approach

The ambition is to develop a standardised data and assessment system for European landscapes that is directly related to land use changes. Though the interest for this had been expressed relatively often and attempts have been launched more than once, the problem could not yet be solved.

Given the expertise and data availability at the European and national level, an internationally shared classification, evaluation and impact assessment methodology is feasible and in favour of all users, including national institutes and administrations. However, this would only be accurate to a certain level of detail. In addition and required for further elaboration, national or even sub-national approaches have their own value and legitimacy. It is important to define when and where different approaches should be selected and how both approaches could be translated into each other. What therefore is necessary is to establish:

- International classifications and assessment methodologies as top-down approaches (example: EU Commission's Corine classifications);
- National or regional classifications and assessments to be considered as supplementary;
- Essential data sets to be supplied from national inventories (e.g. historical data, data on archaeology);
- Linkage between both systems in order to be useful for both goals to be able to translate and transport data and insights in both directions for mutual benefits "parties";
- National and regional responsibilities for landscape policy for implementing international policy and criteria.

In this context I want to stress that techniques of data storage, selection and choice of criteria supported by IT techniques are powerful tools that can support different approaches. As long as objective data are gathered and stored there remains a large freedom to interpret and evaluate them from different viewpoints and for various applications, in this case from an international or national level.

BOX: Lessons from soil and land cover mapping

To underline the above I briefly want to touch upon experiences in a strongly related field: soil mapping and land evaluation based upon soil data as accomplished many years ago without digital databases, GIS techniques and other computer facilities. Soil scientists had another problem: many nations already had their own concepts, terminology, classifications, mapping scale, existing maps and tight mapping schemes and schedules as well as land evaluation systems. Nevertheless, they managed to identify the basic soil characteristics, designed an overall classification with legend and were able to produce a full cover map of Europe (1: 2,5 million) that later was improved into a map scale 1:1 million (1978) and digitised (1986). A tremendous task that has not been without failures or biases, but that is serving its goals well until today. Comparable success stories can be told about the CORINE land cover data as supplied from satellite images: as coverage increases it is a wonderful tool for landscape analysis (distribution, confrontation with land use; monitoring of land use changes).

Some characteristics for a general methodology.

When being asked to define a user-oriented methodology, the following steps appear as useful:

- I. Classification and mapping (in objective terms): resulting in map legends, maps or GIS (layers).
- II. Description of characteristics / properties (including specific vulnerabilities/ suitabilities).
- III. Evaluation based upon national or international criteria (preferably indication of current status of e.g. legislation, protection etc.).
- IV. Insight in current or foreseen trends in land use or plans to change destination or management (possibly in several alternatives using scenario techniques).
- V. Confrontation between expected changes and landscape values: what are trends, what are opportunities?
- VI. Formulating policy options: what to do, using what kind of measures?

In the beginning, I talked about motives for using an international approach with regard to landscapes. As part of the implementation of Action Theme 4 under PEBLDS, ECNC has coordinated a project on landscape assessment according to the SWOT approach (Strength, Weakness, Opportunity & Threat). At my institute, Alterra, we have a project under way for physical planning in the Netherlands and we are trying to get more information about Dutch landscapes in an international context. We used a very basic example of man-made polder areas. Since it was possible to compile European data on polders, we are able to show that the Netherlands hold an important proportion of polder landscapes in the international comparison (**reference: see Map 3, inside cover**). We are now gathering extra information about the quality of these polder areas. Polder areas are affected by all kinds of changing land use. The maps helped us to measure the percentage of built-up area in several polder areas in the northwest part of Europe. So this is an example in giving some valuation to national landscapes, in this case Dutch polder landscapes.

The example of a polder landscape analysis at the European level is meant to illustrate the opportunities as well as the benefits of such assessments for sustainability at the landscape level.

How to proceed?

As it became clear there are good reasons for developing internationally oriented landscape inventories and assessment methodologies. Lessons should be learned from comparable exercises such as the European Soil map and subsequent activities that help to use soil data for all kinds of applications. In addition, however one has to realise that the design and construction of a toolbox that includes large databases and a general methodology consumes many years before it is operational. This is not an excuse to abstain from this work, still it can be necessary to develop a more quick and practical approach to support policy making in the coming years. For there cannot be any mistake about what is going on in European landscapes. Changes in land use are fast and the rate of degradation of cultural landscapes with major losses of ecological, historic and scenic values is sometimes astonishing. Hence, rapid inventories of high value landscapes and an overview on most important landscape threats (red lists) could be crucial to support short term policy making.

How should local decision-making and a bottom-up approach integrate with national and regional policies for landscape?

Chair: Dr Hans-Peter Piorr, Centre for Agricultural Landscape and Land Use Research (ZALF), Germany

Rapporteur: Dr Rob Owen, Countryside Council for Wales, United Kingdom

Rapporteurs' summary

We considered four broad questions:

1. Who should be included in the decision making process? (top-down/bottom-up).
2. Which spatial levels are appropriate for landscapes? (scale).
3. What is the role of landscape dynamics? (change).
4. Which are the more general aspects?

We shall not keep the discussion to those individual questions, as comments made cut across them as the discussion evolves.

First, the question of who is the decision-maker. Clearly, the European Union, governments, and the regional level are extremely important. But we also wanted to give considerable importance to the role of individual landowners and members of the public who have changed the landscape over thousands of years and will obviously continue to do so. A question arose about whether all of the public is involved. People tend to live in normal landscapes and visit special ones, so we all have a connection with landscape.

We then considered how decisions can cascade down and up at the same time. Some examples were given from the UK: finding room for additional housing demand, or setting a target for increased amounts of forestry. In many respects these are national targets which need to filter down to the scale at which they are to be implemented. A problem then arises when the local population resists some of the decisions that have been taken at the top. The issue then is who shouts the loudest. We have a phrase in the UK, 'NIMBY' - I do not know whether it is used in the rest of Europe - that stands for Not In My Back Yard. That is quite relevant here.

'I do not believe that we should underestimate the ability of communities and individuals to engage in debates on landscapes.'

On the question of scale, a sectoral approach to looking at agriculture, forestry, planning change and so on can help to determine the scale at which decisions cascade down. Landscape should clearly be part and parcel of the decision-making process at each stage, and the way in which a landscape assessment, therefore, can provide the right framework for sensible local decisions was highlighted.

We touched on how a consistent approach can be achieved at a European level while allowing the flexibility to permit regions to operate within their own systems. This is a huge question, and one that will have to be discussed at future workshops.

Looking at the bottom-up approach, how can local communities engage therefore with landscape assessment? How do we tap into public perception? There is a range of techniques that are evolving in this area and certainly more work and more sharing of experience is needed.

'It is very obvious that in the field of landscape we cannot afford to only use a top-down approach.'

We considered the monetary issues involved with local landscapes, putting a value on them. Some special landscapes have a value that is perceived in housing prices, for instance. Again, more work is needed here because more information about the economic value of landscape will help to shift some of the political debate.

In terms of engaging local populations with information from experts, we felt that this is a way forward. Experts are really providing information and not making the decisions on behalf of the community. In this way the top-down and the bottom-up approaches begin to interact.

We briefly touched on how far down one should go. Do you go down to the level of communities? The question was posed: do they relate to some of the landscape areas? There are difficulties here and public opinion is a fickle thing that can change almost overnight, and we need to be engaged in this process on a long-term, experimental basis.

'The challenge is to insert landscapes into ongoing decision-making processes and that should take landscapes into account.'

Two distinctive points came out towards the end of our discussion. On one hand, there is the issue of impact assessment: when a large issue comes up public opinion can be galvanised. However, what we are really talking about today is a far wider interpretation of landscape: it is landscape assessment for all decision-making, not just large-scale impacts that are happening in a short space of time. There are difficulties here because most people think in short spaces of time, and cannot really contemplate landscape change over a longer period.

'We are doing a lot of environmental integrated assessment or sectoral integrated assessment at a scale that is compatible with what we call landscapes.'

To close, landscape is clearly coming to the forefront as a decision-making framework. However, it is not a framework for issues, it is not a framework for everything. It does have a great deal of potential and the top-down and bottom-up approach is something that will need to be considered. More research is needed to achieve the right degree of consistency so that you can build from the bottom-up approach and then get them to click together with the top-down activities.

How should we integrate the cultural and natural aspects of landscapes?

Chair: Dr Teresa Pinto Correia, University of Evora, Portugal

Rapporteur: Dr Yves Luginbhul, Centre for Scientific Research, France

Rapporteurs' summary

This session had three main questions to address:

1. Are all European landscapes of cultural interest?
2. How to consider natural component when assessing landscapes within a cultural framework?
3. How to manage the future development of landscapes, considering that all landscapes represent a historical record? (preservation versus change).

There was general agreement that one cannot separate nature and culture. Sometimes it does not even make sense to consider separating the natural and the cultural landscape. All landscapes are both natural and cultural.

'In order to be heard, landscape issues must be communicated in a common language - a European landscape classification is a first step.'

There was also agreement that in different aspects, both in classifying and understanding landscapes and in trying to manage them and make proposals for their management, we have to consider different levels. We have to consider the local, regional, national levels and the European level when it is relevant. Different levels have different methodologies and are relevant in different ways so we need to take account of that.

There was also consensus on the need to continue our efforts on classification. In relation to the question of whether we would describe a landscape as natural or cultural, simply describing it is not enough. We need to continue creating an inventory or classification of landscapes.

'The development of indicators for assessing the state of landscapes represents a new professional and political challenge.'

Then we have the question of the evaluation of landscapes. Evaluation is much more difficult than classification because there are different cultures of nature, there are different perceptions of nature and different objectives when considering landscapes. This means that we need to consider the perceptions of different groups and evaluation should take account of these differing perceptions. This means that for evaluating and monitoring landscapes, we must have indicators on landscape condition that are perhaps more dependent upon natural sciences and then we will have the contribution of social science, which will be the understanding of attitudes and perceptions by different groups.

The question of evaluation is one that needs a great deal of further research on understanding the methodology. There was no consensus about how we should make evaluations and in which forms. There was a consensus that the focus should be on managing landscapes for the people who live on them. Nature itself and management of natural resources is important but it is also important to listen to the people living on the landscape.

'We cannot ask local people about their perceptions of abandoned landscapes, because there are no local people left any more.'

Then there is another question for which we have no answer: how do we manage the cultural landscapes, found in southern Europe and in some mountain areas, where there are no longer any people? In the regions that are abandoned or where the density of populations is low, the management of landscapes becomes increasingly difficult – sometimes impossible. Perhaps it would be at regional, national or even European level that decisions should be made as to whether these landscapes are worth preserving or not. If they are worth preserving, there should be an effort from this European or national scale to do so.

Is designating special areas of landscape still relevant at local, regional, national and international levels?

Chair: Marija Zupancic-Vicar, World Conservation Union, Slovenia

Rapporteur: Rebecca Hughes, Scottish Natural Heritage

Rapporteurs' summary

We started off the debate by exploring IUCN's role and the international direction of the protection of landscape and its relationship with other bio-diversity protection at that level. I then gave a brief introduction on a national approach. During the course of the discussion we came up with one or two proverbs.

'Do not throw the baby (landscape) out with the bath water (designation).'

In other words, do not throw away what we already have because what we have already is still worthy of its place. It is a question of readjusting, perhaps reorienting and re-prioritising. We should think again about how we look after these places, rather than asking whether they really have a role any more, as we believe that they do.

We reached various conclusions about the way in which thinking has changed over the past decade or two in terms of landscape, and also about the shift in terms of landscape protection thinking that has taken place. We felt that the protection systems that are in place at the moment, certainly in the UK, have perhaps curled at the edges and need looking at again. In Scotland we have been looking very thoroughly at our national designation system, where it is going, and where it will need to go in order to take changes in thinking on board.

'Landscape is for everybody, it should involve everybody.'

It is not about protection but about involvement. The stakeholder interest issue came up repeatedly throughout the discussion, and the need to involve local communities on the ground was considered paramount. We all know about Local Agenda 21 and the implications that will have on community planning, land use planning generally and the involvement of local people. It is a very important aspect to take on board in a debate about designations.

We also need to think about linking protected areas to other areas outside. The issue is not just about those gems, it is about the wider countryside setting, the wider landscape, the totality of the landscape. The comprehensive landscape approach is what we are looking for now. We might well be thinking about a network of landscape systems, possibly along the lines of the European Ecological Network (EECONET) – the idea being to make sure that they are all in a healthy state but with some parts having more recognition and protection than others for whatever reason.

Behind all of that, however, is a much more rounded approach to management and the approach of environmental policy generally in terms of how that is to be achieved.

‘Designation in itself is not a panacea.’

There are different ways to achieve the end of having protected areas. It is part of something much greater, something much wider - and is about the way we approach our environmental management practice. That led us to our last conclusion, which is really about the greater integration of policy from wherever we are sitting, whether it be agriculture, bio-diversity, landscape, tourism or whatever interest we have. There needs to be greater integration of policies in all sectors. Landscape and bio-diversity should be integrated into those sectoral policies of things like forestry and tourism. We thought here that there should be a drip-feed approach to landscape in policy, rather than it being considered in a sectoral sense.

To summarise our conclusions then, do not throw the baby out with the bath water, do not focus simply on the diamonds any more, and finally, the drip-feed approach is possibly the direction in which we should be looking.

Discussion on Working Towards Consensus

Chair: Eladio Fernandez-Galiano, Council of Europe

New landscapes

Michael Dower

(Cheltenham & Gloucester, England): It seems to me that there is a question that we have not really raised up to now, which is the possibility of inventing new landscapes. After all, people are able to invent and to create. Indeed, the idea features in the draft European Landscape Convention of projections or visions that politicians might have of creating or inventing new landscapes and new settings where European citizens can live. Society is changing and there are huge upheavals underway in European societies. Values are changing, our view of nature is changing and perhaps the time has come to invent new landscapes.

Chair: That is really provocative.

Speaker: I just want to give a brief answer to, or put a new gloss on, the question of the invention of new landscapes. I do not believe that we in Europe, or indeed worldwide, can develop sufficient economic power as experts to enable us to invent landscapes. The conditions of the WTO will be the prime conditions for automatic development of new cultural landscapes, dominated by agriculture.

Although special sectors are or should be relevant to landscapes, and although certain technical areas have their own particular methods, these have to be related one to another without necessarily having to break it down into nature or culture and other areas that cannot be assigned to specific hard scientific categories.

Hans-Peter Piorr (ZALF, Germany): I also believe that the landscape concept has two perspectives: the backward-looking conservationist attitude and the forward-looking attitude. To take up the argument of the previous speaker, the issue of planning artificial landscapes, what I believe the speaker meant is that we need to give intensive thought to how we wish to develop our landscapes in the future. I would point out that the concept of landscape, or *Landschaft* in German, puts two words together: 'land' and 'schaffen' - to create or shape. Landscapes are things that have always been created by mankind and this will continue to develop in the future. There are landscapes that will be abandoned and we have to think about what we want to have done with these landscapes in the future.

This is important also in connection with the global perspective. There has been much talk here of Europe but there is also a global, a worldwide perspective. If we take the guidelines of the Rio Summit, I wonder what contribution Europe can make in this context. We do not have a huge expanse of natural landscapes, we have no tropical rain forests, and we do not have any gigantic boreal or northern forests. What we can contribute to a world strategy for the protection of nature and sustainable development is what we call 'cultural landscapes', but not with a conservationist/projectionist attitude. It is precisely within the meaning of sustainable development and further enhancement. We have a lot of experience of interaction with nature. We have seen how cultural landscapes grow up over hundreds of thousands of years and have some of the most experience of the world in this. Not all cultural landscapes have been sustainably developed. The contribution of Europe to a world strategy within the meaning of the Rio Summit could be something like this and I believe, therefore, that a forward-looking strategy is very important. The local public should not be constantly told what they should not do; we should also say what they can do in order to enhance landscapes more than has been done in the past.

Speaker: My point is about the creation of landscapes. As a corollary, we should also add the rehabilitation of damaged landscapes. We have many damaged landscapes all over Europe.

European Heritage Campaign

Speaker: Of all of the important issues that we have discussed, we are getting to the point where the goals and issues of the European Heritage Campaign might have a high profile. I hope that this is the case.

Chair: I am responsible for that campaign, together with Mr José Maria Ballastere, who is the Head of the Heritage Convention. Indeed, we want the landscape issue to become one of the main issues of the campaign. We should like to finish the campaign with the signature of the European Landscape Convention, and we do hope that governments want the same thing.

Michael Dower: I was pleased with Yves Luginbhul's remark and, since he and I were co-authors of the first non-legal version of the European Landscape Convention, I want to express my pleasure at the way this conversation has been going.

Breakout session review

Michael Dower: There seems to be acceptance that we are talking about all of the landscapes of Europe and, if that is the case and is part of the consensus here, I hope it will be recorded as such because it is a major breakthrough. Some countries have already taken that on board and that came through, for example, from both Norway and England this morning. It is a crucial point. I was very pleased that Carol Somper deliberately chose as her example an urban and peri-urban example, rather than a rural one, because it helps to make the point that all landscapes matter - from the centre of our cities out to our wilderness.

I would like to build on what Yves Luginbhul said, and emphasise the five verbs that are crucial to the European Landscape Convention. The idea is that the Convention should encourage, in those states which sign up to it, the governments and the people to identify, evaluate, protect, manage and plan or enhance the landscapes in their area. I dwell on the verbs in order to make two further points.

Identification, classification, description are different stages and different thoughts from evaluation. That has begun to come through from the descriptions that some nations have given. We need to describe the character of our landscapes before we put values on them. We need to understand our landscapes - all of our landscapes - before we can sensibly make policies for them. That is a different stage and a different point from putting values on them. Valuation is needed, but as a second and complementary step.

As for the other three - protection, management and planning or developing - we have until now been focusing very largely on the landscapes that we want to protect. We have tended to be very protective about them, and to concentrate on stopping things happening in them. We are now recognising that all our landscapes, even the most remote and 'natural', are also cultural and were heavily influenced by

and often made by people. However, the only way to maintain those landscapes is to maintain the life upon them.

Many of our most precious landscapes were made by ways of life that may be threatened, and the only way to protect those landscapes is to protect and sustain those ways of life in modern, viable ways. So even those landscapes where the main effort is on protection need managing and they may have areas within them that need improving.

Right at the other end are landscapes where the main emphasis is upon enhancing, developing, planning if you like. This is true, for example, of the 12 community forests in England, or the national forest, or the Scottish central forest woodland, and areas in other parts of Europe where that is emphatically needed, such as the terrible brown coal areas of Central Europe, the lignite mining areas. Those, too, will need management when they have been improved and they may have elements within them that need protection.

So what I plead is that we look at all landscapes, that we distinguish between identifying and evaluating, that we recognise that all landscapes are cultural and natural and that all landscapes will need their own mixture of protection, management and enhancement.

Rebecca Hughes (Scottish Natural Heritage):

Michael mentioned six verbs and I would like to introduce two more: educate and involve. You can have a local population that does not appreciate what you are doing in order to protect the landscape and most of the efforts would prove to be futile because you are acting against the wishes of the people, of the local community. So you need to educate and then involve them so that they will have ownership of whatever future plans are being formulated for the particular area.

'Culture' versus 'Nature'

Speaker: I was delighted by what Rebecca said before, that all landscapes are cultural, all landscapes are natural. Every landscape, from the centre of the city right out to the wilderness, has nature in it – like that lovely flowering tree in the courtyard of this building. All landscapes, alas, are affected by man, if only by aerial pollution in Europe. And all landscapes are cultural, because they do not exist unless a man or a woman or a child is looking at them; they are existentialist in that sense.

Chair: I think that Europe's landscapes are as cultural as African landscapes or even American landscapes. We also have a lot of biodiversity in Europe and many forests, especially in Russia.

Oskar Puschmann (NIJOS, Norway): We are also having the debate in Norway about nature and culture. When we work with landscape, I often find myself using a lot of energy establishing what we actually mean by the use of the words. When we use the term 'cultural landscape' in Norway, we put some kind of value into it and people see it with very different eyes. An archaeologist will see the historical landscape and a botanist will see it as a botanical landscape and focus on the plants. If you use a term like "cultural landscape" and we do not agree with what we put in it, it is like using a word like 'vehicle'. If Gary thinks of a vehicle as an aeroplane and I think of it as a car, the gentleman here thinks of it as a sailing boat, a bicycle or whatever, we cannot agree on what we are talking about. So when we talk about cultural landscape, we mean every landscape because there is landscape all over Norway and all over Europe.

Also there is the distinction to be made between what is a cultural landscape and what is a natural landscape. For example, if we have a national park with wilderness and there is no human impact on it, then I would also describe that as a kind of cultural landscape because we have used millions and millions of Norwegian krone to get to that statement that we should call it a national park and that we should not allow any human impact in that area. Therefore, you can also say it is a cultural landscape because we have decided that it should be a natural landscape without human impact. So, again, it is an issue of how you use the terms.

In Norway, we are having a discussion about whether, when it comes to agriculture, we should call it 'multi-functional agriculture'. That has been discussed in Europe too. We say, OK, we support agriculture with subsidies because it produces food and it produces environmental goods or collective goods like the people in the cities are also using when they are in the rural countryside. The question is, are we actually doing that, are we producing environmental goods and how can we affect that? In 1970 we decided in Norway that a farmer should earn as much as an industry worker, but since 1970 have we asked the question about what he is going to produce?

As a further example, if I am paid in 1970 for making red shoes and I am still producing red shoes but no-one wants to buy them, they want green shoes or brown shoes, are the people then asking me to produce different kinds of shoes other than red ones? That is the kind of question that you can also ask farmers. Is the landscape he is producing today what the public really wants, and who will decide in the coming years what kind of landscape we want to have? That is a discussion that is coming up.

Conclusions of the Chair: It is very appropriate that we are holding this meeting in the Council of Europe because our main business here in this house is democracy and human rights, peace and dialogue, and these are the main values for which the Council of Europe exists. We do other things like environment and landscape protection but our main business is really human rights.

When we talk about landscapes, these are the words that I have noted. We are talking about diversity, the need to maintain diversity in Europe. Diversity is contrary to fascism. Diversity is democracy. Diversity means that the different approaches to landscape preservation have to be maintained and seen as branches of a common tree. As Riccardo Priore and Monsieur Ségan said this morning about the draft European Landscape Convention and its very democratic content, giving people a say in the physical and emotional environment of landscapes, this is a rule of democracy.

We are all landscape experts so this is an important value. What do we say when we talk about landscapes? We talk about democracy, we talk about tolerance and then we talk about knowledge, assessment and monitoring. What has come out as a very important element of today's discussions is that we need to know our landscapes better and we need to solve some of the methodological problems that other people working with species have solved. There were people working with species who solved them 200 years ago. The people working with landscapes will solve them in the next few years.

Then we are also talking about culture and nature. There is general agreement that there is no longer the need to use the term 'cultural landscapes', at least not in Europe. Landscapes are cultural and they are natural. They are natural because they have been born, nature comprises things that have been born, and they are also cultural because we have cultivated them.

It is also important to take both concepts of natural and cultural into talking also about the value of landscapes. Landscapes are a resource, landscapes are our heritage. We should be open to new landscapes and we will certainly create new ones.

I do not know whether this will be on purpose. However, we have never created landscapes on purpose, we have found landscapes being created. The immense field we have with natural landscapes is because we have evolved in them. Our brain has been built in natural landscapes and it is only in the last few seconds of our evolutionary time that we are living outside them. That is why we come back to them in search of a Paradise Lost that we had when we were more creatures of nature than we are now.

So the heritage value of landscapes brings me to another subject on the future. Talking about heritage is talking about something of your values and you need to carry them to the future to other generations. If landscapes are considered to be a very important resource for the future of Europe, the main industry of Europe is tourism and it is based on two things: our cultural heritage and on landscape and natural values.

Other words I have noted are flexibility, adaptability and in Brussels what we call 'subsidiarity', we have to find the appropriate level for decisions. However, in any event, it will be by respect of this tolerance, democracy, knowledge and value that we are going to make landscapes one of our main jobs over the coming years.

Breakout Session 5.1

Using landscape assessment to inform agri-environment strategies

Chair: Valery Morard, European Commission - DG Agriculture

Rapporteur: Dr Rob Owen, Countryside Council for Wales, United Kingdom

Rapporteurs' summary

The following section is an excerpt from the Interim Report of the Concerted Action Project 'Environmental Indicators for Sustainable Development' (Wascher, 1998) of the European Commission (DG Agriculture).

Landscape as a horizontal concept

When building a conceptual framework for a complex relation between agriculture and the environment, one does so by defining numerous components, linkages and functional relations. Frameworks such as DSR (Driving Forces-State-Response) or DPSIR (Driving Forces-State-Impact-Response) are schematic and policy-oriented, treating the different environmental themes and social issues as independent and value-free concepts. However, even with only basic knowledge of ecological and socio-economic issues related to agriculture, the causal links that exist between, e.g. soil types, land use, habitat quality, biodiversity value and social appreciation, become evident. When considering each aspect in isolation or only as abstract numerical information, the overall context is far from being resolved. One might argue that it is absolutely sufficient to examine the individual components in order to understand the agro-environmental complex. The underlying assumption for such an (vertical) approach is that meeting certain environmental targets (benchmarks) of each individual component, results automatically in a positive state of the environment as a whole. Given the definitions and objectives laid down in recent EU policy documents such as Agenda 2000, European Spatial Development Perspective and the Pan-European Biological and Landscape Diversity Strategy, the adequateness of an exclusively vertical approach must be doubted. Issues such as rural development, cultural landscapes, or regional identity form a set of policy-relevant values that give new definition to the concept of sustainability. All of these issues have in common that socio-economic considerations are playing a vital role when defining environmental objectives. Since such an approach is intrinsically linked to the spatial dimension, the landscapes can offer both the territorial and the horizontal means for building a valid conceptual framework for agri-environmental indicators.

For decades, landscape ecological disciplines have provided the methodological and conceptual framework for a wide arena of environmental research and planning. Hardly any urban or rural development plan, road construction, river course adjustment or other large-scale physical planning task is being executed without input from the discipline of landscape ecology. Following the introduction of 'environmental impact assessment' in the early 1980s, the profession's technical instruments and concepts have become increasingly refined in order to provide decision-makers and the public with objective and reliable tools. While landscape ecology has become a technically advanced and widely

applied component of land planning and object (impact)-orientated decision-making processes, the discipline is limited to being a rather 'reactive' tool at the regional and local level. At the supra-regional and national levels, planning schemes continue to be rooted in regional planning as the mitigating instrument to balance different societal interests, such as agriculture, industry, urban development and *nature and landscape conservation*. One of the few exceptions is the role of 'the ecological main structure' as it has been laid down in the Nature Policy Plan of The Netherlands (The Ministry of Agriculture, Nature Management and Fisheries, 1990).

Landscape Values and Functions

In order to identify those landscape factors which describe its state, it is useful take first a look at basic landscape functions. According to Bastian (1996) these can be seen along the following three main categories, namely *social*, *environmental (ecological)* and *economic* functions. Since these categories encompass a wide scope of closely inter-related environmental issues (e.g. biodiversity, ecosystem functions, erosion control, groundwater recharge potential, recreational qualities, scenery, etc.), any methodological approach to describe the state and changes of landscapes is facing the tension between integration (according to a holistic approach) versus disintegration of the various issues.

The following example shall help to briefly illustrate the multi-functional aspects of the landscape-concept. The Spanish Dehesa landscape, for instance, is characterised by a traditionally managed system of cork oak trees planted in a systemic pattern over large areas, supplemented with open-range pig and sheep grazing, the latter being subject to long-distance migration (*transhumance*) into the Spanish Pyrenees. The ecological, cultural, social and economic significance of a *Dehesa* landscape has a narrow, common base: the trees and their pattern of growth. To name but a few, the amenity value of these tree patterns is that they are highly attractive characteristics of the landscape (perception), are home to a distinct and closely associated flora and fauna (ecology and environment), provide traditional food, e.g. ham, cheese, as well as erosion and evaporation protection (sustainability). As such, the Dehesa is a one of many unique functionally integrated landscape systems that are typical for specific regions. This is the reason why the assessment of landscapes requires more than adding up parts and is posing severe methodological challenges.

In order to identify policy-relevant landscape issues it is important to be familiar with the most significant landscape *descriptors* such as geo-morphology, bio-geographic information, percentage and type of protected areas, species distribution, character of the settlement or presence and quality of landscape features such as trees, hedges or ponds.

Among the landscape functions, those related to perception and culture are the least objective ones and hence the most difficult ones to assess. According to some authors, the roots of environmental aesthetics can be explained by the phylogentic evolution of the human mind, as a source for survival instincts responding to certain environmental features. Furthermore, people seem to have developed a sense of historical continuity and an interest in the origins of their territories. Though landscape issues such as coherence, visual diversity or cultural identity can be considered as rather abstract notions, it is a matter of providing strict policy-oriented definitions in order to make these terms operational.

How can socio-economic sectors be usefully linked to landscape concepts?

Chair: Emmy Bolsius, National Spatial Planning Agency, The Netherlands

Rapporteur: Carol Somper, Countryside Agency, England, United Kingdom

Rapporteurs' summary

Our chair, Emmy Bolsius, gave a short introduction about the role of agriculture as a major land use in Europe and the changes in agricultural policy and practice that can radically alter landscapes. As our discussion progressed, we agreed that this should not be our sole focus, although agriculture is such a powerful driver of change in the landscape, but that we need to look at the total economy of a region or an area to consider how it functions as a whole.

We then considered these three questions:

1. How important is diversification?
2. Abandonment - what do we do about it, because in parts of Europe it is happening fairly rapidly?
3. How useful are forecasts in identifying trends and helping us to plan for the future?

We suggested topics for discussion as they occurred to us, and we chose the one topic that evoked the most interest to form the focus of our discussion. We chose abandonment because it seemed to be the most popular issue - but with hindsight perhaps diversification would have allowed us to look more broadly at the topic.

There are pros and cons to abandonment. Should these areas be supported artificially, to keep the people on the land, for employment, for community integrity and to foster local knowledge about the landscape that has built up over the decades? It can be very important to maintain the semi-natural systems which many people value culturally, so do we need to think about rural welfare policy? On the other hand, it is an opportunity to create new wilderness, and there is a possibility for diversification in abandonment. New wilderness could be a new opportunity for tourism. However, abandonment is not always good for biodiversity because it can lead to the erosion of species and the degradation of habitats, and diversification that is culturally valued can be lost.

UNESCO work on biosphere reserves was raised as having potential as a model for looking at ways in which we can address these issues, but it became very clear that planning is key. Forecasting is a useful part of the planning process. However, we should not regard forecasts as self-fulfilling prophecies, but as opportunities to develop options in order that we are actively choosing the way in which we want to direct change. That is ultimately more sustainable. Is a diverse economy a more sustainable economy?

We need to make decisions about land use for the longer term. We discussed Euro-corridors - how far or how useful this approach could be - and what other methods are useful. One example of the Euro-corridor is the Massif Central; although it is highly valued as a remote area, opening it up with new corridors could perhaps encourage rural regeneration. There are examples of how this kind of provision of new infrastructure can repopulate rural areas - bringing back a thriving agricultural economy that has been lost. In a sense you can bring the town to the countryside. This may raise people's eyebrows, but it is worth considering.

We decided that we should not wait and see, but must use the knowledge we have about the landscape to make deliberate decisions for the future welfare and well-being of rural communities. Let us be deliberate, and let us be imaginative.

The role of community participation in the landscape assessment process at local and regional levels.

Chair: Dr Alessandra Melucco-Vacarro, Italy

Rapporteur: Donatella Murtas, ECOVAST, Italy

Rapporteurs' summary

Conflicts of interest seem directly related to the degree of awareness among people. What is of primary importance is to be able to give information to people at local level so that they are able to start to understand that the landscape can of value in itself, and not limited to economics or development.

The main points were about information and having a common view. Usually landscape is in the mind of the local community and refers especially to the past, an approach which is often more nostalgic than creative. So it is important to offer the idea of moving and acting on the landscape of today, as that will be the basis of the landscape for the future.

As it is more or less impossible to solve every conflict at local and regional levels, we have to bear in mind that it is difficult – and probably a little idealistic – to think that it is possible to reach a positive answer from everyone at every level. That is the role of politics and politicians.

We found that because information is at the heart of awareness of the importance of landscape, it is important to be able to give messages that are simple and understandable, and to try to clarify the step-by-step approach that leads to final decisions.

To involve local communities is not enough. We also need to have on board representatives of the main associations dealing with the different aspects of the landscape. Landscape is an over-arching term, and there already exist good examples of tools and methodology to involve local communities, which normally is very difficult. These come from the work on protected natural areas. There were examples offered by IUCN showing exercises carried out by them to involve local communities. It is a long-term exercise – not just looking at the situation as it is now, because that would be too limited. It is more than that, to build a pass along which we all walk together.

Another important point that arose is that the European Convention could involve local interests and conflicts. A general framework coming from a European level could be seen as a valid tool to push national and regional governments to bear in mind the importance of the landscape in itself. It could then start local level action so that the landscape is again seen as being of value, because it has a sense of identity and belonging and an economic value. That would therefore push up from the ground a social request from the people asking for the tools – political and technical – that would enable them to help shape the landscape for the future.

Chapter 6 *LOOKING TO THE FUTURE*

Discussion

IV

Final Discussion

GROUP A: Is there convergence of national approaches to landscape within Europe, and how can this information be used?

Chair: Dr Michael Dower,
Cheltenham & Gloucester

Rapporteur: Rebecca Hughes,
Scottish Natural Heritage, Scotland

Rapporteurs' summary

Due to the composition as a multinational group it was possible to make comparisons between different European approaches. While some regard landscape as being synonymous with nature - for example, in the Netherlands where it was very closely linked - in Italy, the emphasis is on landscape as an aesthetic or cultural heritage. England places a focus on natural beauty. In the Czech Republic there is a strong link to national emotion and the arts, for example the music of Smetana.

The trend has been to become more comprehensive in those respects, and to see landscape increasingly as a part of a broader environmental issue, and also as an asset for economic and social development, for example in the fields of tourism, or as being closely linked with agricultural policy.

That was a first point, and the reaction of the group was that in order to understand why we tackle this subject in different ways, we need to understand the national psyches and the different approaches and starting points with which nations address these kinds of issues and to do that from a socio-cultural perspective rather than simply a physical perspective.

As for convergence, this has to be read within that context. People are moving from their very differing starting points towards the broad common ground that landscape is overarching, that it brings together nature and culture, that it is linked to environment and sustainable development, and that it is linked to national identity and quality of life.

I then showed some maps from those seven countries illustrating the radically different approaches that are taken to landscapes, and specifically to protected national landscapes. These vary greatly. The Danes have no protected national landscapes as such and certainly no national parks; they

made a conscious decision not to, but to apply planning and other disciplines across the whole of the country. They have ended up with some internationally designated sites, Ramsar and others, with dune and beach lines protected, conservation orders and some protected forests, but nothing like the pattern of other countries' national parks.

Austria and Italy both have patterns of protected areas. Austria delegates action in that respect to the provincial governments. Italy has delegated all responsibility to its regions, and has by national law demanded that they all prepare national landscape plans, which to a varying extent they are doing. These are effectively becoming protected national landscapes in a different form.

The Czech Republic and the Netherlands are both building on their protected areas by building parts of the European ecological network. The Netherlands has added a very complicated overlay of a national landscape plan and a national policy for rural areas, which brings in valuable man-made landscapes and other features. This effectively covers about half of their territory with protected national landscapes.

We then moved on to discuss the means of protection. I reminded the group of the report prepared by Michel Prieure which compares European law relating to landscape. I went on to describe some of the varied approaches that are taken in the field of legal, administrative, fiscal, financial and practical systems for protecting landscape. It seems that harmonisation and convergence will be more valuable in the field of assessment of landscape than in the precise application of means, but it is also extremely valuable to be able to compare the means which are used with each other.

We then looked briefly at inventories and emphasised the value of those inventories. We moved on to the sense of priorities and the comparison of experience on a European level, with a sense that apart from getting on with any harmonisation of assessment across the broad face of Europe and all landscapes, there was a strong case for focusing upon those which were either or both of these things, of higher European significance, or were changing fast.

An example was given of the Tuscan landscape that has changed radically in the last 30 years. We felt that we ought to be producing a red list of landscapes under threat and a 'green future options' for the future of those that are changing fast.

Next we looked at the difference between plan making, which is what I started by describing, and the actuality on the ground. The delegate from the Netherlands pointed out that plans, particularly if made by distant bureaucrats, often do not reflect in any way what is happening on the ground. The Netherlands, which is the most planned, is arguably the most polluted landscape of Europe - a rather revealing piece of self-analysis given the link between planning and the verbs that we used yesterday of protecting, managing and developing landscapes.

Finally, a plea was made that further work should be done on the issue of convergence of approaches to landscape among different countries. There should be comparative activity on methods of assessment, planning and action. This might then be brought to a further workshop, which would focus not only on this workshop's starting point - the link between PEBLDS and the European Landscape Convention and the work of OECD and the European Commission - but also on the link between landscape and environment on the one hand and the two other parts of the triangle - the economy and society. How do we effectively convey the idea, which nations are realising more and more, that landscape is an asset for socio-economic purposes? How do we really turn the landscape into an asset for the well being and quality of life of the people on one hand and for the strength and diversity of economies on the other?

Box: Examples for National Landscape Protection by Professor Dr Michael Dower, Consultant to CLRAE and Scottish Natural Heritage

Mr Dower was asked by Scottish Natural Heritage to study the systems in seven different countries – Austria, the Czech Republic, Denmark, England, Italy, the Netherlands and Norway, a selection that provided a faire representation of north, west, central and southern Europe. This brief overview addresses two questions:

- What do these countries mean by 'landscape', as examples of different attitudes in Europe; and
- How do they map their landscapes, particularly for the choice of protected national landscapes?

Austria has an approach to landscape that started with nature, then moved on to the idea that cultural elements were also important, and also to recognising the importance of landscape for tourism. There is a very close link between landscape and farming, bearing in mind that a large proportion of Austrian farmers are in disadvantaged farming areas and are given support for, among other things, maintaining landscapes. Austria has a protected area system, which consists of national parks, some protected landscapes, nature parks, two World Heritage sites, and nature reserves where those

fall within the other areas. All of that is delegated as the responsibility – and note this – of the provinces, except for certain rules relating to national parks set by the nation.

The Czech Republic started with a national emotion - the arts. Smetana's music, for example, relates directly to landscape, as does the work of other painters and writers. There is a firmly systematic approach to the protection of nature and landscape together, and recently there has been strong emphasis upon ecological stability, which is a key word for them.

England places, and has done for 200 years, high value upon natural beauty. That has happened since the time of the French Revolution, which may sound odd. That is when the British people who used to travel on the Grand Tour to Italy and elsewhere found that they no longer could, so they started looking at their own landscapes. They appreciated the mountains in particular. William Wordsworth and others, the poets and the painters, raised our national consciousness of natural beauty, and that

is now reflected in a massive popular affection for the countryside, and for public access to the countryside.

In **Italy** the emphasis has always been on aesthetics and the cultural heritage. It is one of the 10 countries in Europe which has the landscape written into its Constitution.

In **The Netherlands** they, at least of those in Europe, invented the word 'landschap'. It is the first record I have seen, anyway, from the sixteenth century. Here is a nation of which half the land has been saved or reclaimed from the sea – a man-made landscape in which nature and landscape are almost synonymous. In the last decade, they have come to recognise the importance of the cultural heritage and the link between landscape and rural development and planning.

In **Norway**, landscape is seen as a major national asset. They are very concerned by the change to the landscape, and particularly changes in the 3.1 per cent of the national territory that is used in farming. Note that tiny figure; but what remains is considered to be very precious. They have a growing interest in the cultural heritage, and also in what the landscape means to the people including the Sami people, the Laps, who follow the reindeer in the north, for whom the landscape is almost a sacred thing.

Finally, in **Denmark** the landscape is considered as a crucial part of their heritage. There is a strong link between landscape and nature for them, and they see landscape as deserving of protection. They made a conscious decision not to have protected national landscapes, not to have national parks for example, or protected landscape areas in the way that other countries do, but to rely upon the planning system across the whole of the country. They do not have, therefore, designated areas, apart from the sites that they have designated for international purposes - nature conservation, not landscape, but a by-product of landscape such as Ramsar, the Bird and Habitats Directive sites. They do have dune and beach protection lines of 100 to 300 metres, along which no development is supposed to take place without approval. They have areas covered by conservation orders, and they have parts of their national forest which are given special protection. They are increasingly interested in the ecological network idea, and this is a hazard of how Denmark might look if it had the EECONET - that is the European Ecological Network system fully applied to it. So - there is a country which has no national protected landscapes, which looks at the whole of its landscape from the point of view of control through the planning system, plus nature reserves and similar features. It is also involved in the international Wadden Sea programme, with The Netherlands and Germany.

Group B: Is an integrated, holistic approach to 'landscape' realistic and achievable?

Chair: Professor Dr Harald Plachter,
Phillips University, Marburg, Germany

Rapporteur: Dirk Wascher,
European Centre
for Nature Conservation (ECNC)

There was overall agreement within the group that a double approach is necessary. The criteria of scientific standards play an important role, but given the difficulties that sometimes arise when communicating these, pragmatic ways of making them more transparent should also be used.

Rapporteurs' summary

One of the first issues was to clarify the tension between the scientific approach that is very much based on research, abstract models and technical understanding, and a more pragmatic approach when understanding and communicating about landscapes.

The multidisciplinary aspects that are strongly expressed in the draft European Landscape Convention were welcomed. These mirror the wide scope that has to be addressed. There was also a warning that more should be done to bridge the gap between so-called hard scientists and soft scientists, hard scientists probably being those using physics and the more analytical tools, versus those that are sometimes

perceived as being softer, i.e. using the landscape elements. We should bring these two closer together and not allow differentiation along these lines. There was a reference to the need when using a multidisciplinary approach to involve social scientists, as this type of science can provide good communication tools, and allows the human role in perceiving developing landscapes to have an input.

English Nature issued a firm invitation for a co-operative approach to be taken, with several disciplines working together to reach goals, not continuing too much along separate scientific routes. We should take a good look at the group of various experts where understanding of each other is needed.

We talked briefly about next steps and about indicators or parameters to be used for landscapes. This was a difficult discussion because the focus was more on the overall role of science rather than specific indicators.

We then moved on to the next topic, which was about assessment procedures and the focus of landscape assessment.

We discussed how much data is necessary, and how much time and effort needs to be put in, to get a good understanding about the state of landscapes. It is landscape characteristics which are appreciated, and which seem to be the most important element. Can this be done? Can such a service be delivered? On the other hand, it is important to understand the ways that landscape processes are closely linked to driving forces. There was some understanding within the group that analysis of processes is already used. One can use existing data from other sectors - socio-economic, bio-diversity, the natural sciences - to understand what the main driving forces within a region are. However, you clearly then need to know which landscape characteristics are affected by these forces, and how. There is no way around having a better understanding about key landscape characteristics, and these need to be addressed at the same time.

The group also felt that the interpretation of these results needs to involve more people at various levels, from national, regional and local. It cannot be that landscape information is interpreted solely at the top level and that the European public is only informed about how the landscapes are doing. They must have the opportunity to understand the criteria and to make their own judgements.

Last but not least was the need to address the role of communication. We wondered, for example, whether a register of landscapes would be an interesting or useful communication tool in the development of policy. Our Swiss colleague expressed some concern that if too much effort is put into tedious registration work one might lose touch with the local base and end up focusing only on the computer screen, not on the real issues. At the same time, participants felt that there was a clear focus on priority setting by addressing landscapes of particular interest. This would help to facilitate the policy process. So I guess one has to find a very good way of avoiding the extreme of being consumed by technology.

Another issue was the role that local and regional populations should play. They should be more involved in the decision-making process. We should not have a political, centralist procedure cemented in, but instead be much more open about what is happening in different regions. That was how we discussed an integrated and holistic approach to landscape.

Speaker: I should like to add one sentence of my personal impression of what we discussed. I got the strong impression that the landscape approach is more than just another approach. It is, as was said by one of the speakers, a basic attitude about how to deal with our environment, how to deal with our real world. It is an attitude which differs in part from politics as it has been in Europe over the past few years, namely to give more responsibility to the local people to decide on their landscape, the specific landscape which they have, and to find ways to help them take the right decisions and not to decide top-down but to help top-down. The decision can then be taken at the local level.

Group C: 'Using landscape assessment to inform strategic planning'

- Chair:** Dr Carys Swanwick,
Sheffield University, England
- Rapporteur:** Joyce McCormack, DOE Northern Ireland

Rapporteurs' summary

The workshop discussion started by exploring what everyone has done, in order to give their own definition of 'landscape'. This diagram, which is in the process of being prepared for guidance is an attempt to show that landscape is about both people and place. I have tried to elaborate on what those two components are. Landscape does not exist without people; we have the land - the physical, natural and cultural aspects of the land - but it takes the perception of that land by people to turn it into landscape.

As a starting point for our discussion, I briefly outlined the approach to landscape assessment that we have taken in England and Scotland. We very clearly divide the process into two stages. The first one is what we call characterisation, which is describing, mapping and classifying landscape in terms of its character. Secondly there is the process of decision-making, which is using that information, attaching values to it in some way in order to take decisions.

From that starting point we discussed our understanding of strategic planning. I want to pull out a few of the key points that were agreed upon. The first was that strategic planning is about shaping the future, and it should be about developing a vision for the future. We must be able to anticipate future trends, and provide not only for regulatory control on activities but also on positive planning - positive incentives to achieve the vision that we are seeking. Within that framework, we concluded, landscape has a very important role to play.

If I can begin with the characterisation part of landscape assessment, this is the process of recognising what makes places different from each other. That process gives us an invaluable geographical framework for thinking through the impacts of initiatives at the strategic level. In particular it can help us to ensure that broad policies have an appropriate effect on landscape at a local level. We used the example of the Common Agricultural Policy in this context. We felt that landscape assessment is a very powerful tool for countering the trend towards what was referred to as the 'homogenisation' of our landscape, something which we felt is apparent throughout Europe. In that area of characterisation we felt that the tool of landscape assessment is already

proving to be extremely valuable. We felt that it is less sure that decision-makers are willing to give enough weight to landscape in their deliberations. We must be willing to argue strongly for the benefits that landscape brings to society, and in some cases it may be necessary to be willing to attach monetary value to those benefits. We were told about the recent, extensive press coverage in Sweden of research that indicates the restorative effects of landscape on health. This is certainly not peculiar to Sweden, and we all exchanged our experiences of being stressed, overworked, and in an unhealthy state throughout Europe at present. We felt that we could attach a monetary value to that particular benefit of landscape, but that this is only part of the picture. We must also be willing to argue passionately for the more spiritual values of landscape, its role in creating local, regional and national identity, and in contributing to our quality of life.

We went on to discuss transport as a key area of strategic planning where landscape can have a very important role in decision-making. This area also demonstrates the complexities of the issues. For example, one of the solutions to the abandonment of land throughout Europe may be to build a road to open up the landscape, to improve access both in and out - out for jobs, in for tourists, perhaps. But that could also have a very detrimental effect on landscape character. We all agreed that making those decisions is a very complex process.

Finally we came to the question: 'Which landscapes are we dealing with?'. We had no difficulty in answering, because we feel that we are dealing with all landscapes in all their diversity. All of them can be described and characterised, but when it comes to decisions, and especially to setting priorities, the many different layers of information must come into play - of which landscape is but one. Indeed, many different stakeholders have to be involved in such decisions.

That finally led us to think of landscape character areas as being like unit trust funds. We felt that some might be ticking along quite nicely, requiring little intervention. Others will require some attention and perhaps some topping up. Others may be in dire difficulty and will need some creative redesign if they are to be rejuvenated.

That was our analogy for the way in which we must respond to character in all landscapes, and act upon that in an appropriate way in strategic planning.

Chapter 7 *CLOSURE OF THE WORKSHOP*

Final address

Ms Susan Carter

Department of the Environment, Transport and the Regions, United Kingdom

The organisers thought it might be useful if I said a few words about what the last two days have looked like to someone who is a relative newcomer to this field, and also to someone who will have to advise Ministers on the way forward internationally.

My Division in the Department of the Environment, Transport and the Regions, is concerned with people's enjoyment of the countryside - everyone's enjoyment of the countryside - and as part of that we are concerned with conserving and enhancing landscapes, and also with promoting recreational opportunities. Within the UK we have the responsibility for co-ordinating action on landscape issues.

I have been in my present post only just over two years, and I am working for Ministers who have been there less than two years, so it is a slightly inexperienced team.

I am part of a generation in England and Wales that has grown up with landscape protection. I was born in the same year as the key legislation was introduced that brought us national parks, areas of outstanding natural beauty. Neither I nor the Ministers for whom I work need convincing of the importance of landscape in bringing together both natural and cultural issues. These are important parts of our heritage and we value them.

My Ministers have pledged to put the environment right at the heart of government, and they have important political commitments to introduce a new law on access to the countryside for recreation and to improve our protection for wildlife, and they will honour those commitments. They are also looking very hard at policies for our own nationally protected areas, the national parks and the areas of outstanding natural beauty.

We have a clear commitment to international action, too. We were very happy as a Department to give direct financial support for this conference, and for our Agencies, the Countryside Agency and English Nature, to play major roles as well.

My job has thus far been very concerned with England, to a slightly lesser extent with Wales, and this conference is the first time I have had to act as a UK representative. It has reminded me that our island is not necessarily typical of Europe, that there are key landscape differences. Not everyone has the same problems as us of intensification - Finland and Belgium, for example, have very much higher proportions of forest than we have in the UK.

The conference has been a useful reminder, too, of our position in the world. We do pride ourselves on our landscape protection. We have a fine tradition of which we are very proud. We also pride ourselves on adopting new techniques. The countryside character approach that you heard about yesterday has played an enormously valuable part in developing our roads programme, and is playing an increasing part in our planning system.

However, we should not be too complacent about what we are doing in the UK. There is a lot going on elsewhere in Europe. We have a lot to learn, and this is very humbling.

I have been reassured by what the European group of experts is doing, and impressed by the amount of careful expert work that is going on.

I am reassured, too, that Europe is going in the same broad general direction, that the Agencies that I sponsor are not out of line with the rest of the world, and that we can make progress together. A great deal of very solid progress has already been made on assessment systems in particular.

It has been made very clear to me that landscape is important, but you have emphasised how it needs to be integrated and how it needs to be over-arching – what you are doing is offering a tool, an umbrella, where account is taken of different interests. Decisions should be based on information and reason, not purely on emotion – and this group is interested in providing information.

You have also acknowledged that the world is changing and dynamic, and that you have to move with it, and that you have the tools that can help you to do it. These tools are not, and can never be, absolutely objective. There will always be an element of subjectivity in what is put before us in landscape terms, and the decisions that have to be made at every stage.

I like the emphasis that landscapes matter to people everywhere - people in towns, people in the country. This very much echoes my government's commitment to making the countryside available, and landscapes available, to deal with the many and not with the few.

The Workshop has left me with a perception of the challenges that you are facing, and I would like to share with you some additional ones and what you need to do to meet governments' perspectives.

I felt yesterday that there was not enough emphasis on the world of competing priorities in which we live. We do all have competing priorities. People have pressed and crowded lives, and we need to think about priorities; if people are pressing for more international action they have to be aware that they are competing with national pressures as well.

There is a dilemma too within government as a whole on priorities. Changes in the Common Agricultural Policy offer new opportunities for people with an interest in landscape, and have been very encouraging. However, if we want more money spent on landscape in Europe we shall need to show that it will be better spent than money spent nationally on health and education. There are certainly feelings among some in the UK that they would like overall agricultural support reduced.

In the field of international work too, the UK has been, and will want to be, an active participant in what is going on. We have been supporting PEBLDS. We have made very active use of agri-environment schemes, and we shall want to do so in future. We are actively involved too in the Council of Europe's guiding principles for the spatial development of the European continent, which is where we are committed, to integrating work on rural areas, mountain regions and landscapes. We are also involved in the European Union's European Spatial Development Perspective.

Like other countries, the United Kingdom takes its obligations under international conventions very seriously. We can certainly support the underlying principles of the draft European Landscape Convention, but we need to be very clear what it will achieve both in the UK and elsewhere before we sign it.

In clarifying priorities, some key general questions have been raised. We are wrestling with these nationally, just as we need to internationally. Who owns landscapes? Who should pay for them? What landscapes are we talking about?

It is quite easy to say that we need to be concerned about all landscapes. It is quite easy too to say that local people should have a say in what happens to the landscapes where they live; but it can become quite difficult, as everybody here recognises, to put that into practice where there are real conflicts. For example, in the UK we have a tradition of regarding all of the countryside as part of our common heritage. We have designated our national parks for their importance to the national as a whole, and in our legislation we increasingly acknowledge that we need to take account of the social and economic needs of those who live in the parks. However, there is a constant tension between these various levels, and that is an area which needs to be given more thought.

There are still questions too about exactly which landscapes we are talking about, and where designations like national parks fit into this. This is relevant to the draft European Landscapes Convention's suggestion of a list of landscapes of European significance.

It is very nice, and people like it, to single out areas as requiring special protection, but if those areas are special, what are we saying about the rest? What are our targets, both for the special areas and for other areas, in a world where resources are limited?

These are big questions, with no single, simple answers - but this conference has reassured me that answers are being sought to the big questions, and that careful thought is being given to them, with people not just seeking simple solutions.

Chairman:
Dr Michael Dower

Chairman: I would like to turn the floor over to discussing a little bit about the future and where we go from here.

Roger Clarke: To reflect points emerging from the Workshop so far. The Workshop is called 'Landscapes and Sustainability'. My own view is that we have met our objectives of understanding the different processes for landscape assessment across Europe and their application to policy, but there is still some way to go in developing our thinking.

Landscape, it has become clear, is about nature and culture. It is everywhere, not just in special areas. We use the term in a variety of ways. Landscape is a tool for sustainability, a tool for sustainable development. Words like 'integration' and 'multi-functionality' have been used a lot, and you could say that a good landscape is an output from sustainable patterns of development and management.

Different countries use the concept of landscape in different ways. 'Paysage' and 'landschaft' and 'landscape' do not mean exactly the same things, and I have enjoyed watching how different countries attempt to address the issue, not always seeing things exactly the same way. I do not offer a solution, apart from recognising that the words mean slightly different things in the three main languages, and I am sure they mean something different in Slovene or Swedish.

We all recognise that we need to work at a variety of scales from the local to the European, and the way in which we use these concepts needs to be appropriate to the scale. There has also been quite a lot said about the landscape scale as an appropriate level for resolving problems, making assessments, deciding on objectives and implementation. That scale is something less than the national scale, except perhaps in Luxembourg, and something more than the local farm or individual community.

We have all agreed that landscape is all about scientific and analytical understanding and popular participation and political processes.

So what do we need to do next? Several points. Many people have said that experience across Europe is very disparate at the moment. We do not know what is going on. As a minimum requirement - and this is for the organisers to think about afterwards - we need some sort of network of contacts so that those who are thinking about, and are responsible for, landscape issues across Europe can get the best information about what is happening. How can we establish a European 'Landscape for Sustainability' network?

In terms of more specific action, what should such a network concern itself with? Some people are very concerned about terminology and methodology and the use of the concepts of landscape assessment, evaluation - ascribing a value to different aspects of landscape - setting objectives, establishing indicators, monitoring progress, evaluating the results. I suspect that some of the more northern European perspectives are very focused on this analytical approach, and that is helpful to all of us. We need to pursue those things and develop some common understanding through a process of convergence, and not from a top-down direction.

We also need to do more work on the relationship between the political and popular aspects of landscape and a more scientifically orientated understanding. That perhaps is where southern Europe, with its strong feel for the cultural and political dimension, can help the process.

We need to do more work on the use of landscape concepts in different sectors. Agriculture has been identified as pre-eminent - but there are other sectors as well.

The culmination of the observation that there is more work to be done is that we need a European work plan programme for landscape, or a diary at a minimum level, so that we know who plans to undertake which initiative at a European or national scale, for the years ahead. The initiative is not then solely with the Council of Europe or the European Centre for Nature Conservation, but is with all of you, and some of you or your governments may be thinking about international initiatives in this field. Outcomes should be formally presented so that we are aware of what is happening.

The organisers of the conference, and in particular the Council of Europe and the European Centre for Nature Conservation, recognise a responsibility to bring together more closely the pan-European strategy action theme and the proposed European Landscapes Convention. They will be producing proposals about how the two strands might converge, both in the stage up to the creation of any Convention, and in the stage after the Convention is realised - if that is what happens - to work together with each other and also with other European institutions, including the European Environment Agency, the European Union, the OECD and no doubt others. The organisers will prepare a plan about how their efforts can be more convergent, but that should not stop any of you, if you want to take some European initiative, from proposing it.

The European Landscape Convention itself will be a landmark, and my own perception is that there is a lot of support in principle for this Convention. The Council of Europe is leading the process for its realisation. As I see it, there are three issues to be tackled. Several delegates have spoken to me about the need to clarify or amplify the aim of the Convention. Not everybody has agreed about the role of landscapes of European significance, and it would be a pity if that issue stopped the Convention process simply because opinion was divided on that item. Lastly, the legal status of the Convention and its relationship to other international Instruments needs further clarification. I hope those problems will be overcome, because it is very widely recognised that the Convention could provide a legal umbrella for what is an extremely important area of work.

Meanwhile we need to get on with the action. The organisers will provide delegates by mid-April with a short summary of the outcomes of the Workshop as seen by the organisers, including some indication of how we plan to carry the work forward. If you have ideas now, or immediately after the Workshop, please communicate with us so that we can put them into the follow-up Action Plan.

Chairman: We have a very short time for any brief comments before we close this session and the Workshop.

Speaker: I would like to express the commitment of the Council of Europe to continue working on this subject. We are very enthusiastic about the possibility of this Convention, but in any case it is not for tomorrow. Meanwhile I want to express our will to continue working on landscape, and we do not think we should wait for a Convention to be finalised and signed by all countries before we start work. We think work has to be done soon, and obligations will perhaps come with time.

Speaker: In the discussion we have talked a lot about the top-down approach being binding and the bottom-up being more democratic. For most countries of Europe, a multi-tiered level of responsibility is necessary; you have national, regional or local levels of decision-making, and it is within these different levels that we find different components of responsibility and planning, which govern landscape and all of the landscape issues.

However, we have to discover an over-arching approach to perception and management of landscapes, and we need the subsidiarity principle to help regional and local populations. We can enable people through subsidiarity to develop a new set of values in their approach to landscapes if we want beautiful landscapes. I was recently in Romania; you find magnificent landscapes in Romania but the people are so poor - I think even poorer now than in Mexico - and co-operation continues to be necessary. We need to perceive our responsibilities in the light of these principles, which are included as ethical principles: solidarity, subsidiarity, are ways of supporting local authorities and local populations, and we must not forget that we need to think about things in human terms and enable people, through their identification with regional cultures, to retain their human dignity. They need support to that end.

Rob Wolters: During the Pan-European Biological and Diversity Strategy Council meeting in April, some options will be on the table to further the very good ideas which have been discussed here, and ECNC is committed to working together with the Council of Europe, the OECD, the EU and other organisations and countries to develop the process in a very practical and efficient way.

Chairman: It is clear that there are many challenges, but more work needs to be done and we need more workshops in order to advance the process, and that is a very healthy development.

In the longer term, we might consider widening the dialogue outside Europe to see how these things are dealt with elsewhere, as well perhaps as some widening of the disciplines that are involved.

Perhaps we should see this whole question of landscape, and other questions such as sustainable development and multi-functionality, rather like a car: on the one hand there are people who are trying to put their foot on the accelerator to make the thing go faster, and on the other hand there are those at the same time putting their foot on the brake to make it go slower. It is important to try to get the balance right so that we go at the right speed and take on board all of the interests and concerns of Europeans and others.

ANNEX *LIST OF PARTICIPANTS*

Professor Frederick Aalen
Professor of Geography
Trinity College
Dublin University
Dublin 2
Ireland

Ms Anna Barnett
Administrator
European Commission
DG Environment
Rue de la Loi 200
1049 Brussels
Belgium

Ms Leonara Becker
Mayor of Palknoya
FAU 70
7771 Palknoya
Hungary

Mr Peter Berkowitz
Administrator
European Commission
DG Agriculture
Rue de la Loi 130
1040 Brussels
Belgium

Mrs Martina Bleischwitz
Deputy Head of Section
Federal Ministry FT Environment
Godesberger Allee 90
53175 Bonn
Germany

Ms Emmy Bolsius
Senior Research Office
Rijksplanologische Dienst (RPD/MVROM)
Rijnstraat 8
2515 GX Den Haag
The Netherlands

Mr Enrico Bürgi
Chef de la Division Paysage
BUWAL
3003 Bern
Switzerland

Ms Susan Carter
Head, Countryside Division
Department of the Environment,
Transport and the Regions
Tollgate House
Houlton Street
Bristol BS2 9DJ
United Kingdom

Professor Charles Christians
Institut de Geographie
Université de Liege
Bat. B11
Allee du 6 Aout 2
4000 Liege
Belgium

Dr Roger Clarke
Director
Countryside Agency
John Dower House
Crescent Place
Cheltenham GL50 3RA
United Kingdom

Mr Bertrand Creuchet
Sous-Directeur des Sites at Paysages
Ministère de l'Aménagement du
Territoire et de l'Environnement
Avenue de Ségur 20
75302 PARIS 07 SP
France

Professor Michael Dower
CLRAE Director
CCRU, Cheltenham & Gloucester
College of Higher Education
Francis Close Hall
Swindon Road
Cheltenham GL50 4AZ
United Kingdom

Dr Mark Felton
Strategy Manager
English Nature
Northminster House
Peterborough PE1 1UA
United Kingdom

Mr Eladio Fernández-Galiano
Head of Environment Conservation and
Management & Regional Planning
Council of Europe - Secretariat
Palais de l'Europe
67075 Strasbourg
France

Professor Gary Fry
Norwegian Institute for Nature
Research (NINA)
Dept. of Landscape Ecology
PO Box 736
Sentrum
0105 Oslo
Norway

Mr Eiden Gerd
CESD Communautaire
Rue Wenceslas 3
2724 Luxembourg
Luxembourg

Mr Tapio Heikkilä
Senior Adviser
Ministry of Environment
PO Box 399
00121 Helsinki
Finland

Ms Rebecca Hughes
Principal Landscape Architect
Scottish Natural Heritage
Anderson Place 2/5
Edinburgh EH6 5NP
United Kingdom

Mr Hans-Peter Jeschke
Senior Advisor
Amt de Oberösterreichischen
Landesregierung
Kartnerstraße 12
4020 Linz
Austria

Mr Jan Klijn
Senior Researcher
Alterra – Green World Research
PO Box 23
6700 AC Wageningen
The Netherlands

Mr Wilfrid Legg
Head of Policies and Environment
Agriculture Directorate
OECD
Rue Andre Pascal 2
75016 Paris
France

Mr Yves Luginbuhl
Directeur de Recherche
Centre for Scientific Research
Rue Saint Jacques 191
75005 Paris
France

Mr Francis Mallia
Environmental Management
Unit Team Manager
Planning Authority
St Francis Ravelin
CMR 01 Floriana
Malta

Mrs Joyce McCormack
Senior Planner
Department of Environment,
Northern Ireland
Environment & Heritage Service
Commonwealth House
Castle Street 35
Belfast BT1 1GU
United Kingdom

Professor Alessandra Melucco-Vaccaro
Airigente/Archaeologo
Ministero Beniattivita Culturali
Piazza del Popolo 18
00187 Roma
Italy

Mr Valery Morard
Administrator
European Commission
DG Agriculture
Rue de la Loi 130
1040 Brussels
Belgium

Ms Donatella Murtas
Consultant
ECOVAST
Via C
10129 Torino
Italy

Mrs Katerina Nikolovska
Senior Adviser
Ministry of Urban Planning,
Construction and Environment
Urban Planning Department
Dame Gruev Street 14
91 000 Skopje
FYR Macedonia

Dr Rob Owen
Head of Landscape Policy Group
Countryside Council for Wales
Plas Penrhos
Fford Penrhos
Bangor
Gwynedd LL57 2LQ
United Kingdom

Mr Bas M. Pedroli
Manager of Nature & Landscape Europe
Alterra – Green World Research
PO Box 23
6700 AA Wageningen
The Netherlands

Ms Ulla Pinborg
Project Manager
European Environment Agency
Kongens Nytorv 6
1060 Copenhagen
Denmark

Dr Teresa Pinto Correia
Associate Professor
University of Evora
Dept Planeamento Biofisico
University of Evora Colegio Luis Verney
7000 Evora
Portugal

Dr Hans-Peter Piorr
ZALF
Assistant Head of Department
Eberswelderstraße 84
15374 Müncheberg
Germany

Dr Danielius Pivoriusas
Deputy Director Head of Landscape
Division
Ministry of Environment
Jaksto g-ve 4/9
2060 Vilnius
Lithuania

Professor Harald Plachter
UNESCO World Heritage
Phillips Universität
Fachbereich Biologie
Fachgebiet Naturschutz
Karl-von-Frisch-Straße
35032 Marburg
Germany

Mr Keith Porter
Conservation Audit Manager
English Nature
Northminster House
Peterborough PE1 1UA
United Kingdom

Mr Riccardo Priore
CLRAE Secretariat
Council of Europe
Palais de l'Europe
67075 Strasbourg
France

Dr Oskar Puschmann
Section Leader Landscape
Norwegian Institute for Land Inventory
(NIJOS)
PO Box 115
1430 s
Norway

Dr Ödön Rádai
Head of Department
Hungarian Ministry for the Environment
National Authority for Nature Conservation
& Regional Policy
Költö Utca 21
1121 Budapest
Hungary

Ms Annette Schou
Project Manager
Forest and Nature Agency
SKOU-09 Naturstyrelsen
Haraldsgæche 53
2100 Copenhagen
Denmark

Mr Jean-François Séguin
Chef de la Division du Paysage
Ministère de l'Aménagement du
Territoire et de l'Environnement
avenue de Ségur 20
75302 PARIS 07 SP
France

Professor Marie Françoise Slak
ENITA de Bordeaux
Laboratoire Sols at Paysages 1
PO Box 201
33175 Gradignan Cedex
France

Mrs Carol Somper
Senior Countryside Officer
Countryside Agency
John Dower House
Crescent Place
Cheltenham GL50 3RA
United Kingdom

Dr Rudolf Specht
Bundesamt für Naturschutz
Konstantinstraße 110
53179 Bonn
Germany

Mr Arthur Spiegler
Chair
Österreichisches Kuratorium für
Landtechnik und Landentwicklung
(ÖKL)
PO Box 30
1041 Wien
Austria

Mr Andreas Stalder
Head of Section
BUWAL
Division du Paysage
3003 Bern

Professor Carys Swanwick
Head
Department of Landscape
Sheffield University
Arts Tower
Western Bank
Sheffield S10 2TN
United Kingdom

Mr Daniel Tarschys
Secretary General
Council of Europe
Palais de l'Europe
67075 Strasbourg
France

Dr Willem Vos
Coordinator Internationalisation
Wageningen University & Research
PO Box 58
6700 AB Wageningen
The Netherlands

Mr Dirk Wascher
Senior Programme Coordinator
European Centre for Nature Conservation
PO Box 1352
5004 BJ Tilburg
The Netherlands

Mr Rob Wolters
Executive Director
European Centre for Nature Conservation
PO Box 1352
5004 BJ Tilburg
The Netherlands

Mrs Marija Zupancić-Vicar
Regional Vice Chair WCPA,
IUCN - World Conservation Union
Rodine 51
4274 Zirovnica
Slovenia

**European Centre for Nature Conservation
Head Quarters – Tilburg**

PO Box 1352
5004 BJ Tilburg
The Netherlands
tel: +31.13.4663240
fax: +31.13.4663250
e-mail: ecnc@ecnc.nl
WWW: www.ecnc.nl

**European Centre for Nature Conservation
Central and Eastern European Regional Unit**

Budapest 1121 Költó Utca 21
Hungary
tel: +36.13553699
fax: +36.13553699
e-mail: ecnc.bp@pronet.hu
WWW: www.ecnc.nl

Co-publisher

Countryside Agency
John Dower House
Crescent Place, Cheltenham
Gloucestershire GL50 3RA
United Kingdom
tel: +44.1242.521381
fax: +44.1242.584270
e-mail: info@countryside.gov.uk
WWW: www.countryside.gov.uk

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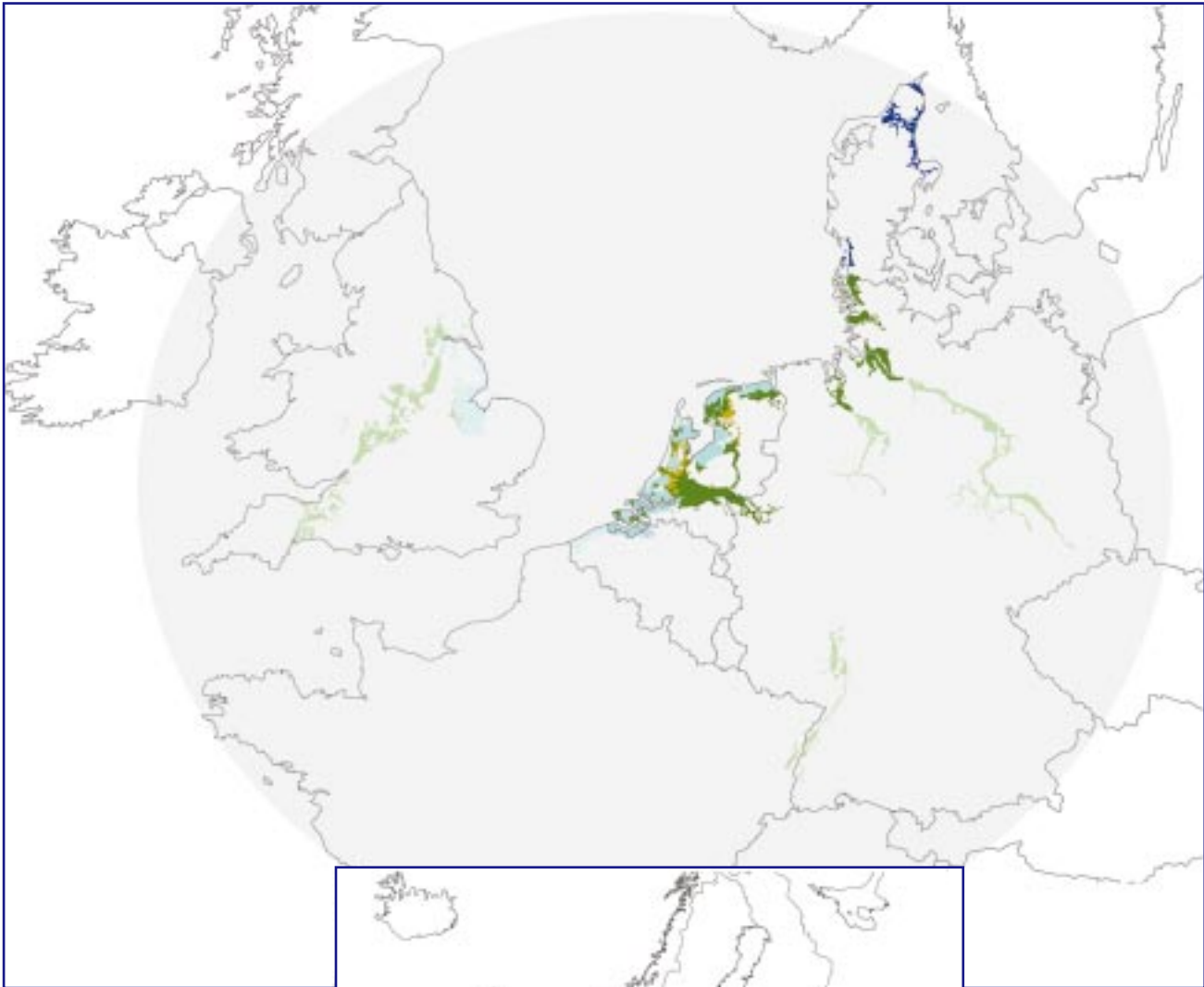
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map 2: English landscape character map (see page 46)

Legend

- | | | | | | |
|----|---|----|---|-----|---|
| 1 | North Northumberland Coastal Plain | 28 | Vale of York | 55 | Manchester Conurbation |
| 2 | Northumberland Sandstone Hills | 29 | Howardian Hills | 56 | Lancashire Coal Measures |
| 3 | Cheviot Fringe | 30 | Southern Magnesian Limestone | 57 | Sefton Coast |
| 4 | Cheviots | 31 | Morecambe Bay and Lune Estuary | 58 | Merseyside Conurbation |
| 5 | Border Moors and Forests | 32 | Lancashire and Amounderness Plain | 59 | Wirral |
| 6 | Solway Basin | 33 | Bowland Fringe and Pendle Hill | 60 | Mersey Valley |
| 7 | West Cumbria Coastal Plain | 34 | Bowland Fells | 61 | Shropshire, Cheshire and Staffordshire Plain |
| 8 | Cumbria High Fells | 35 | Lancashire Valleys | 62 | Cheshire Sandstone Ridge |
| 9 | Eden Valley | 36 | Southern Pennines | 63 | Oswestry Uplands |
| 10 | North Pennines | 37 | Yorkshire Southern Pennine Fringe | 64 | Potteries and Churnet Valley |
| 11 | Tyne Gap and Hadrian's Wall | 38 | Nottinghamshire, Derbyshire and Yorkshire Coalfield | 65 | Shropshire Hills |
| 12 | Mid Northumberland | 39 | Humberhead Levels | 66 | Mid Severn Sandstone Plateau |
| 13 | South East Northumberland Coastal Plain | 40 | Holderness | 67 | Cannock Chase and Cank Wood |
| 14 | Tyne and Wear Lowlands | 41 | Humber Estuary | 68 | Needwood and South Derbyshire Claylands |
| 15 | Durham Magnesian Limestone Plateau | 42 | Lincolnshire Coast and Marshes | 69 | Trent Valley Washlands |
| 16 | Durham Coalfield Pennine Fringe | 43 | Lincolnshire Wolds | 70 | Melbourne Parklands |
| 17 | Orton Fells | 44 | Central Lincolnshire Vale | 71 | Leicestershire and South Derbyshire Coalfield |
| 18 | Howgill Fells | 45 | Northern Lincolnshire Edge with Coversands | 72 | Mease/Sence Lowlands |
| 19 | South Cumbria Low Fells | 46 | The Fens | 73 | Charnwood |
| 20 | Morecambe Bay Limestones | 47 | Southern Lincolnshire Edge | 74 | Leicestershire and Nottinghamshire Wolds |
| 21 | Yorkshire Dales | 48 | Trent and Belvoir Valleys | 75 | Kesteven Uplands |
| 22 | Pennine Dales Fringe | 49 | Sherwood | 76 | North West Norfolk |
| 23 | Tees Lowlands | 50 | Derbyshire Peak Fringe | 77 | North Norfolk Coast |
| 24 | Vale of Mowbray | 51 | Dark Peak | 78 | Central North Norfolk |
| 25 | North Yorkshire Moors and Cleveland Hills | 52 | White Peak | 79 | North East Norfolk and Flegg |
| 26 | Vale of Pickering | 53 | South West Peak | 80 | The Broads |
| 27 | Yorkshire Wolds | 54 | Manchester Pennine Fringe | 81 | Greater Thames Estuary |
| | | | | 82 | Suffolk Coast and Heaths |
| | | | | 83 | South Norfolk and High Suffolk Claylands |
| | | | | 84 | Mid Norfolk |
| | | | | 85 | Breckland |
| | | | | 86 | South Suffolk and North Essex Clayland |
| | | | | 87 | East Anglian Chalk |
| | | | | 88 | Bedfordshire and Cambridgeshire Claylands |
| | | | | 89 | Northamptonshire Vales |
| | | | | 90 | Bedfordshire Greensand Ridge |
| | | | | 91 | Yardley-Whittlewood Ridge |
| | | | | 92 | Rockingham Forest |
| | | | | 93 | High Leicestershire |
| | | | | 94 | Leicestershire Vales |
| | | | | 95 | Northamptonshire Uplands |
| | | | | 96 | Dunsmore and Feldon |
| | | | | 97 | Arden |
| | | | | 98 | Clun and North West Herefordshire Hills |
| | | | | 99 | Black Mountains and Golden Valley |
| | | | | 100 | Herefordshire Lowlands |
| | | | | 101 | Herefordshire Plateau |
| | | | | 102 | Tem Valley |
| | | | | 103 | Malvern Hills |
| | | | | 104 | South Herefordshire and Over Severn |
| | | | | 105 | Forest of Dean and Lower Wye |
| | | | | 106 | Severn and Avon Vales |
| | | | | 107 | Cotswolds |
| | | | | 108 | Upper Thames Clay Vales |
| | | | | 109 | Midvale Ridge |
| | | | | 110 | Chilterns |
| | | | | 111 | Northern Thames Basin |
| | | | | 112 | Inner London |
| | | | | 113 | North Kent Plain |
| | | | | 114 | Thames Basin Lowlands |
| | | | | 115 | Thames Valley |
| | | | | 116 | Berkshire and Marlborough Downs |
| | | | | 117 | Avon Vales |
| | | | | 118 | Bristol, Avon Valleys and Ridges |
| | | | | 119 | North Downs |
| | | | | 120 | Wealden Greensand |
| | | | | 121 | Low Weald |
| | | | | 122 | High Weald |
| | | | | 123 | Romney Marshes |
| | | | | 124 | Pevensey Levels |
| | | | | 125 | South Downs |
| | | | | 126 | South Coast Plain |
| | | | | 127 | Isle Of Wight |
| | | | | 128 | South Hampshire Lowlands |
| | | | | 129 | Thames Basin Heaths |
| | | | | 130 | Hampshire Downs |
| | | | | 131 | New Forest |
| | | | | 132 | Salisbury Plain and West Wiltshire Downs |
| | | | | 133 | Blackmoor Vale and Vale of Wardour |
| | | | | 134 | Dorset Downs and Cranborne Chase |
| | | | | 135 | Dorset Heaths |
| | | | | 136 | South Purbeck |
| | | | | 137 | Isle of Portland |
| | | | | 138 | Weymouth Lowlands |
| | | | | 139 | Marshwood and Powerstock Vales |
| | | | | 140 | Yeovil Scarplands |
| | | | | 141 | Mendip Hills |
| | | | | 142 | Somerset Levels and Moors |
| | | | | 143 | Mid Somerset Hills |
| | | | | 144 | Quantock Hills |
| | | | | 145 | Exmoor |
| | | | | 146 | Vale of Taunton and Quantock Fringes |
| | | | | 147 | Blackdowns |
| | | | | 148 | Devon Redlands |
| | | | | 149 | The Culm |
| | | | | 150 | Dartmoor |
| | | | | 151 | South Devon |
| | | | | 152 | Cornish Killas |
| | | | | 153 | Bodmin Moor |
| | | | | 154 | Hensbarrow |
| | | | | 155 | Carnmenellis |
| | | | | 156 | West Penwith |
| | | | | 157 | The Lizard |
| | | | | 158 | Isles of Scilly |
| | | | | 159 | Lundy |

map 3: SWOT analysis for European polder landscapes (see page 60)



Legend

-  Lowland river polder
-  Upland river polder
-  Peat polder
-  Dry sea clay polder
-  Drained sea clay polder
-  Pumped sea clay polder
-  Study area





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European Centre for Nature Conservation
Head Quarters - Tilburg
PO Box 1352
5004 BJ Tilburg
The Netherlands
tel: +31.13.4663240
fax: +31.13.4663250
e-mail: ecnc@ecnc.nl
WWW: www.ecnc.nl

ISBN 90-76762-01-5

Co-publisher
Countryside Agency
John Dower House
Crescent Place, Cheltenham
Gloucestershire GL50 3RA
United Kingdom
tel: +44.1242.521381
fax: +44.1242.584270
e-mail: info@countryside.gov.uk
WWW: www.countryside.gov.uk

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