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**VISUAL RESOURCE STEWARDSHIP – AN INTERNATIONAL PERSPECTIVE**

**Dr Andrew Lothian  
Scenic Solutions, Australia**

## SUMMARY

An international perspective to visual resource stewardship is presented in this paper. It examines the history of Great Britain's love affair with its landscapes, then summarises the more recent development of the European Landscape Convention which has been embraced across much of Europe. The recognition of outstanding landscapes under the World Heritage Convention is then covered and the international Protected Areas program which includes landscapes is briefly summarized. Programs in several countries are reviewed. As the United States is very adequately covered in this and the 2017 conference, this paper mainly addresses other countries.

The key message the paper imparts is that most of the provisions focus on the *character* of the landscape, not its *quality*. Because it has been assumed, particularly in Britain, that it is too difficult and subjective to measure scenic quality, landscape character has become the subject. Authorities have stayed clear of subjectivity and applied objective-based analysis to landscape character.

## GREAT BRITAIN



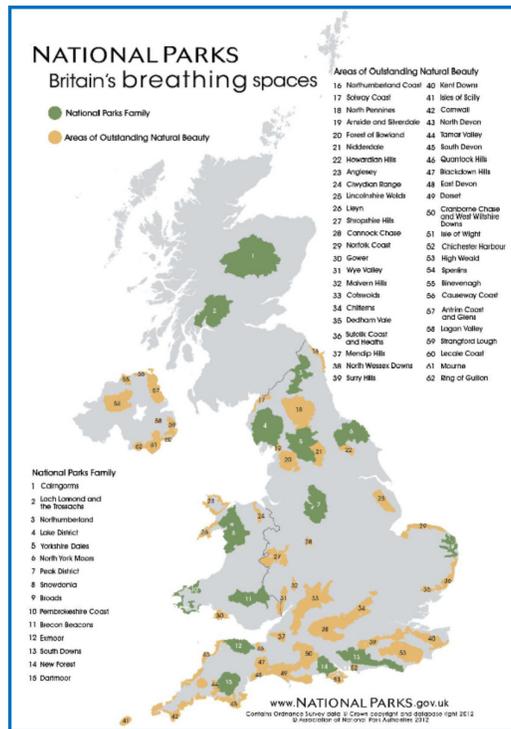
### Pre 1960

Britain has a proud history of appreciating the beauty of its landscapes. Writers, poets, painters, and photographers have a love of their landscapes and have learned to appreciate and protect them (Whyte, 2015). Because Britain has influenced the assessment of scenic quality, particularly via the European Landscape Convention and World Heritage Convention, it is examined in some detail.

Prior to WW2 many books were published on the beauty of the English landscape. The books "naturalized a version of rural England in which timelessness and continuity were powerful recurring motifs" (Brace, 2003). Geographers too regarded the beauty of the earth as within their purview. One argued that: "natural beauty is inexhaustible...: it positively increases and multiplies the more we see of it and the more of us see it. So it has a good claim to be considered the most valuable characteristic of the Earth" (Younghusband, 1920). Another geographer, Dr Cornish wrote: "The combination of the English village, with the setting of field and hedgerow and coppice, is an Arcadian scene unrivalled elsewhere in Great Britain and unsurpassed in any part of the world" (Cornish, 1934). The Addison Committee on National Parks (1931) reported favorably on the establishment of national parks as a "means of access for pedestrians to areas of natural beauty." And during WW2, "the ideal picture of a pastoral countryside became an important symbol for patriotism." (Sarlöv-Herlin, 2016).

During WW2, several Government Inquiries recommended the establishment of national parks to preserve "extensive areas of beautiful ...country" (Dower, 1945) and in 1949, the National Parks and Access to the Countryside Act was proclaimed, the purpose of which included "the preservation of the natural beauty of the area." Over the next decade, ten National Parks were proclaimed along with Areas of Outstanding Natural Beauty (AONB). The National Parks were mainly highland landscapes whereas AONBs covered farmed

lowland landscapes. Today, 15 National Parks cover nearly 10% of the UK and the 46 AONBs cover another 18%. Together they cover one-third of Britain's coastline (Figure 1).



[www.nationalparks.gov.uk](http://www.nationalparks.gov.uk)  
**Figure 1 National Parks and AONBs in Great Britain**

The system of National Parks and AONBs over private land is a uniquely British solution to the competing needs to protect high-quality environments and provide food and fiber for the large population. Scenic preservation and public enjoyment of the parks justified the creation of National Parks; the protection of flora, fauna and biodiversity came later.

Whereas the scenery of wilderness and nature was the basis of national parks in the US, Canada and other nations, in England they were “based on the needs of a densely populated and precociously industrialised society and the legacy from Wordsworth’s time of a high regard for picturesque landscapes visibly shaped by human land use.” (Sarlöv-Herlin, 2016).

Scott and others have been critical of the selection of iconic landscapes by land owning elites while ignoring significant areas of lowland England. “The hierarchy of landscape designations in the UK have all endorsed this upland bias though expert-led approaches, which arguably are not representative of the kind of landscapes that people most want, use and value.” (Moore-Coyler & Scott, 2005; Scott *et al*, 2009).

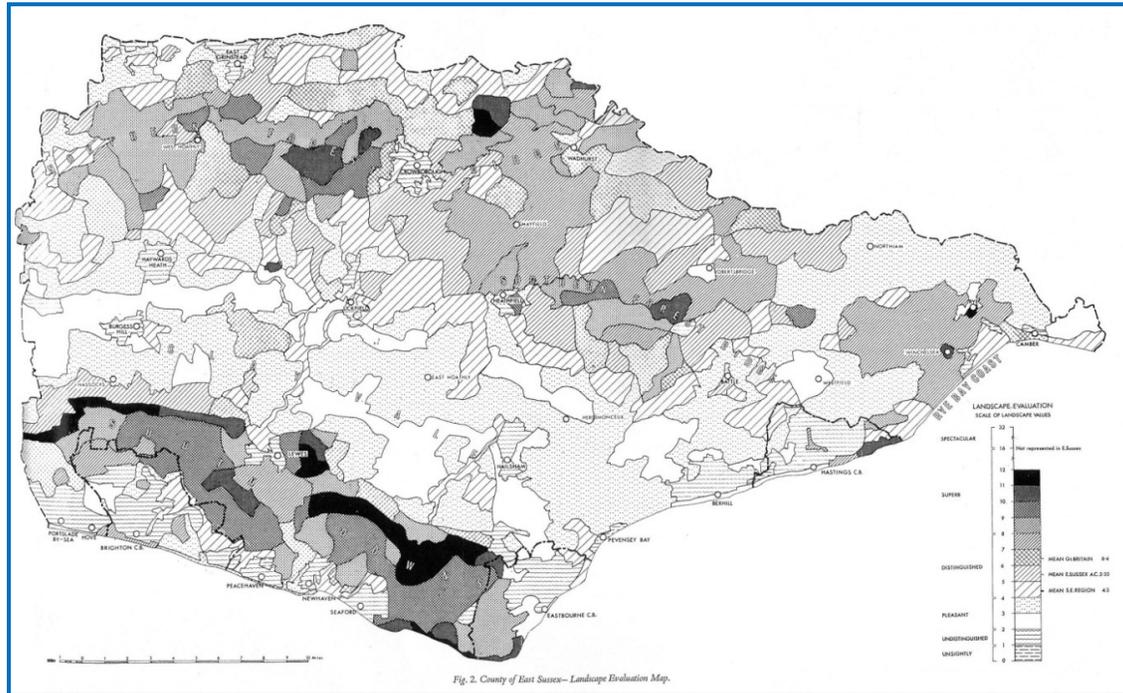
### Post 1960

The first real attempt to move beyond mere descriptions of the British landscape to analyze it more rigorously began with David Lowenthal of the American Geographical Society and Hugh Prince from University College, London. In two seminal papers, *The English Landscape* (1964) and *English Landscape Tastes* (1965) they described the content of the English landscape and English landscape preferences.

Variety, openness and atmosphere were key visual qualities and they referred to it as “altogether so tamed, trimmed, and humanized as to give the impression of a vast ornamental farm, as if the whole of it had been designed for visual pleasure.” Components

which epitomized the English landscape were the bucolic (pastoral), the picturesque, the deciduous, the tidy (i.e. order and neatness), façadism, antiquarianism (rejection of the present, the sensuous and the functional; having historical associations), and Alexander Pope's *genius loci* - the spirit of the place.

In the late 1960s, new quantitative approaches were developed by Fines (1968) who used the preferences of experts in a survey of the East Sussex landscape (Figure 2), Linton (1968) of Scotland who applied his own subjective scores to the landscape, and by Hebblethwaite of the East Hampshire AONB (Hampshire C.C. *et al*, 1968).



Fines, 1968. Note exponential scale 0 – 32.

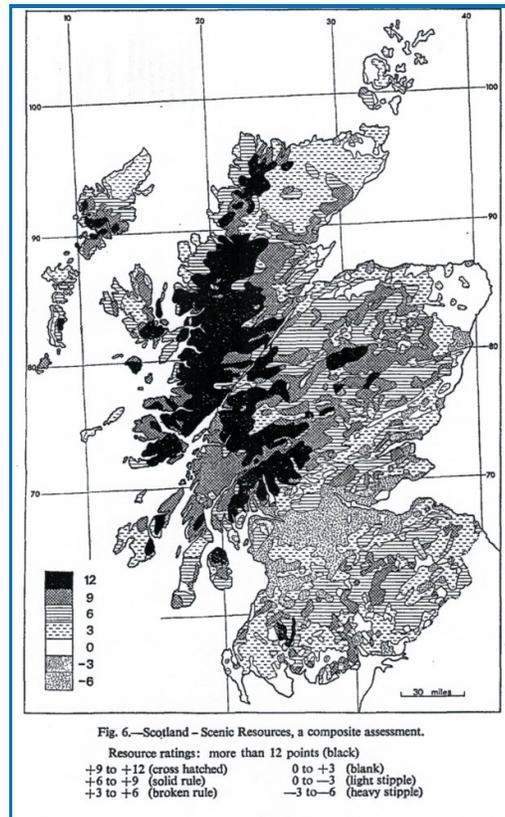
**Figure 2 County of East Sussex, Landscape Evaluation Map**



**East Sussex landscape, near Battle (1066, Norman Conquest)**

Fines attempted to do something not previously attempted. He commenced his paper thus:

“there exists no recognized method of evaluating (Britain’s landscape); probably because the assessment of the quality of landscape, ...must inevitably be subjective. But if subjective judgement is inadmissible, then the planner is culpable whenever he delineates an area of great landscape value or refuses planning permission on grounds of ‘visual amenity.’”



Linton, 1968

### Figure 3 Linton's Scottish scenic resources based on points for land use and land form

Similarly, Linton commenced his paper: "Scenery is a natural resource. Scenery that charms, thrills or inspires is a potential asset to the land in which it is found" (Linton, 1968). Both Fines and Linton regarded landscape quality as a national resource of vital importance to the country. More sophisticated and objective studies followed based on component measurement and statistical analysis, including the Coventry-Solihull-Warwickshire study (Study Team, 1971).

### Manchester Report

To provide guidance for landscape assessment, in 1970, the Countryside Commission engaged the Planning Department at the University of Manchester to recommend a standard approach to evaluate landscape quality. The project examined techniques to evaluate the visual quality of landscapes and tested statistical techniques to assess visual quality (Robinson, *et al*, 1976). The Manchester study recommended two alternatives for landscape quality evaluation:

Method 1. Field-based evaluation method. Survey all 1 km grid square survey units in the area by between 4 and 30 observers using a common scoring system. A control square of fixed landscape quality would be selected, and the quality of all other survey units compared with this to provide a common base for the landscape scores.

Method 2. Predictive evaluation method. Use factor analysis of the independent data (i.e. physical characteristics) to select components and regression analysis to determine their weights based on a sample of survey units and, using the field method; the weights can then be applied to the remaining survey units.

The report detailed the method of each and their application.

Although the Commission had intended to prepare an advisory manual for planning authorities based on the report, its reaction to the Manchester Report was nonplussed.

Years later, Professor Carys Swanwick of the University of Sheffield (2002) identified the Manchester study as an exemplar of a “supposedly objective, scientific, often quantitative approach” which led “to a considerable degree of disillusionment with this type of work.” She went on, “This was largely because many believed it inappropriate to reduce something as complex, emotional and so intertwined with our culture, as landscape, to a series of numerical values and statistical formulae.” According to the 1987 landscape guidance by the Countryside Commission, “Many techniques (especially the so-called statistical methods) fell into disrepute. Practitioners tended to despair of the subject and leave it to the academics.” Similarly, Warnock & Griffiths (2015) wrote of the “disillusion with the concept of landscape as quantifiable... into a typology of ‘better’ and ‘worse’ landscapes”.

It is also possible that many practitioners could not comprehend the statistical methods involved. Selman & Swanwick (2010) stated that the rejection of statistical approaches led the Commission to the view that landscape character had to be “considered separately from the steps of evaluation or other forms of judgement.”

### New approaches

Swanwick (2002) described the evolution of the approach (Table 1). She identified the Manchester-type study as *landscape evaluation* which identified “what made one area of landscape ‘better’ than another.” She asserted that during the 1980s the emphasis shifted to *landscape assessment*, which described why one area was different or distinct from another area rather than their relative value. This was followed in the 1990s by descriptions of landscape character. The Manchester Report cautioned against character assessment: “It is important not to confuse the analysis of landscape character, which is descriptive, and analysis of quality, which is evaluative” – a caution that fell on deaf ears.

**Table 1 Key differences in the evolution of landscape assessment**

Early 1970s Landscape evaluation	Mid 1980s Landscape assessment	Mid 1990s Landscape character assessment
<ul style="list-style-type: none"> <li>• Focused on landscape value</li> <li>• Claimed to be an objective process</li> <li>• Compared value of one landscape with another</li> <li>• Relied on quantitative measurement of landscape elements</li> </ul>	<ul style="list-style-type: none"> <li>• Recognized role for both subjectivity and objectivity</li> <li>• Stressed differences between inventory, classification and evaluation of landscape</li> <li>• Provided scope for incorporating other people’s perceptions of the landscape</li> </ul>	<ul style="list-style-type: none"> <li>• Focused on landscape character</li> <li>• Divides process of characterisation from making judgements</li> <li>• Stresses potential for use at different scales</li> <li>• More recent emphasis on need for stakeholders to be involved</li> </ul>

Swanwick, 2002.

In the 1980s, there was continuing debate about the meaning of the phrase, *outstanding natural beauty* in the National Parks Act. In 1985 the Commission determined that the term meant *outstanding landscape quality* as there were few areas in the country that were entirely natural (Selman & Swanwick, 2010). Paradoxically, it is difficult to define an outstanding landscape without some form of evaluation; a mere description of landscape character obviously would not be sufficient.

The factors to be considered in reaching a judgment about *outstanding landscape quality*, however, were entirely descriptive: relative relief, landscape shape, natural quality (or wildness), semi-natural vegetation, dramatic contrasts, remoteness, unspoiled quality,

continuity and extent, harmony of the works of man and nature, and vernacular architecture. Quite a list, but no assessment of landscape quality.

The UK Secretary of State stated that the “assessment of landscape quality necessarily involves a subjective assessment and that within the consensus of informed opinion allied with the trained eye, and commonsense, the matter is one of aesthetic taste” (Selman & Swanwick, 2010). In other words, leave it to the experts!

From the late 1980s onwards, the Countryside Commission and its successors addressed landscape assessment and published the following national guidance documents:

1987 *Landscape Assessment, a Countryside Commission Approach*. CCD 18;  
 1993 *Landscape Assessment Guidance*, CCP 423;  
 1999 *Interim Landscape Character Assessment Guidance* (Scotland);  
 2002 *Landscape Character Assessment: Guidance for England and Scotland*.

The Commission’s first guidance in 1987 comprised a description of its physical characteristics and those which distinguished the landscape from other landscapes, but no assessment of its aesthetic value. The 1993 guidance distinguished landscape types (e.g. chalk downs) from landscape areas (e.g. South Downs) and allowed for national or regional assessments providing the framework for more detailed assessments. It made explicit the criteria for designating landscapes. By including non-visual factors such as history and wildlife; however, the guidance expanded landscape from a solely visual phenomenon.

The 2002 guidance defined landscape character as “a distinct, recognizable and consistent pattern of elements that make one landscape different from another, rather than better or worse” (Swanwick, 2002). Swanwick strongly urged “Subjective value judgements should be avoided and a distinction drawn between adjectives which seek to convey the aesthetic qualities of a landscape and those which deal with personal perceptions or values..”

The 2002 guidelines defined landscape as the relationship between people and place; the interaction between the “natural (geology, soils, climate, flora and fauna) and cultural (historical and current impact of land use, settlements...)”. It appears to be an environmental description rather than a landscape assessment.

Landscape assessment required the participation of local communities rather than just expert assessments.

The 2002 guidelines differentiated landscape quality and landscape value:

- Landscape quality (or condition) is based on judgments about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.
- Landscape value is concerned with the relative value that is attached to different landscapes... because of its quality, special qualities including perceptual aspects such as scenic beauty, tranquility or wildness, cultural associations or other conservation issues.

In considering natural beauty, judgments must be based at least in part on the concept of landscape value. This refers to the relative value or importance that stakeholders attach to different landscapes and their reasons for valuing them. The reasons may be set out according to a range of more detailed criteria that may include the following (Swanwick, 2002): landscape quality (intactness and condition), scenic quality (visual appeal), rarity,

representativeness, conservation (wildlife, cultural etc), wildness, and associations with special people or events.

A field survey is an integral part of the guidance, and this includes a subjective assessment of aesthetic and perceptual aspects. Table 2 lists aspects that could be covered but emphasizes that the list is not exhaustive and surveyors are free to introduce their own words.

**Table 2 Aesthetic aspects of landscape character**

SCALE	Intimate	Small	Large	Vast
ENCLOSURE	Tight	Enclosed	Open	Exposed
DIVERSITY	Uniform	Simple	Diverse	Complex
TEXTURE	Smooth	Textured	Rough	Very rough
FORM	Vertical	Sloping	Rolling	Horizontal
LINE	Straight	Angular	Curved	Sinuous
COLOR	Monochrome	Muted	Colorful	Garish
BALANCE	Harmonious	Balanced	Discordant	Chaotic
MOVEMENT	Dead	Still	Calm	Busy
PATTERN	Random	Organized	Regular	Formal

Countryside Commission, 2002

The checklist renders aesthetic judgment as a cognitive analytical process rather than a product of affect.

The most recent guidance issued by Natural England (Tudor, 2014) includes a chart of “what is landscape?” (Figure 4). The reference to “preferences” suggests landscape aesthetics, however it is the only reference in the document to preferences and does not explain it.



Tudor, 2014

**Figure 4 What is landscape?**

In reference to aesthetics, the 2014 guidance explained the following: the Field Survey Sheet checklist, people's response to landscapes are subjective, and factors to be considered – wildness, light quality, beauty, scenic attractiveness, tranquility, noise, etc.

Recently the concept of the Landscape Description Unit (LDU) has been introduced (Warnock & Griffiths, 2015) which comprise units of similar natural (e.g. geology, soils) and cultural characteristics (e.g. settlement pattern). LDUs have been widely adopted by local authorities to assist in the LCA process. Mapping of LDUs at differing scales has been completed for England and Wales.

### **Evaluation of Landscape Character Assessments**

Butler (2016) reviewed how landscape values are handled in LCAs, and concluded: “the values communicated in these assessments tend to be those of ‘objective’ outside experts, predominantly based on aesthetics and focusing on the physicality of landscape. This I argue leads to a questioning of the legitimacy of the LCA approach.”

The review of landscape assessment methods for World Heritage sites stated in respect of the LCA:

“This is a well-documented methodology that systematically describes the landscape and uses that information to inform judgments including those related to scenic value, protected area designation, and environmental impact assessments.” (Mitchell, *et al*, 2013).

I scanned thirteen landscape character assessments conducted by councils in the UK to assess the extent by which scenic values were cited.

- *Scenic* is rarely referred to; examples include “high scenic value”, “providing strategic scenic viewpoints”.
- *Aesthetics* is scarcely covered.
- The term, *value*, is frequently used, though often in reference to cultural/heritage values, nature conservation values. Valuing the landscape is also cited. The following definition summed up the approach to LCA: “Landscape character assessment is an objective, value-free assessment of landscape concerned with character rather than quality or value.” (emphasis added).

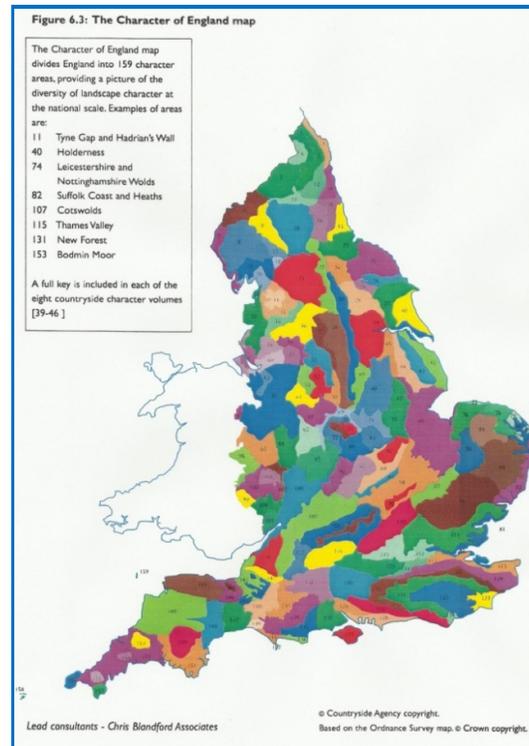
The survey of these LCAs indicates that they are not used for valuing scenic quality but rather stress the objective approach that underlies landscape character assessment.

A review of 78 LCAs conducted between 2007 and 2012 (Butler & Åkerskog, 2014) found that 43 did not contain a definition of landscape while the remainder defined it as a perceived entity. The survey found that all LCAs raised awareness of landscapes but the ambiguity of the word meant that it was “problematic to communicate the concept of landscape to the public.” However, the public's involvement expanded their landscape awareness, even if it is “difficult to comprehend exactly what is being assessed.” Because the LCAs were prepared by professionals with minimal public input, they probably fail to “recognize diverse and conflicting values bound up in the landscape and see it as a relatively harmonious and static entity.” Butler and Berglund (2014) concluded from their study of 52 LCAs that “although ‘experts’ views are invaluable, for much of a landscape assessment they are unreliable for judging the values people attach to ‘their’ landscape.”

From his review of the treatment of landscape values by LCAs, Butler (2016) found that:

“rather than addressing landscape as a lived experience, landscape planners, through LCAs, tend to handle it as an objective unit of analysis, ... contrasting with the intimate experience of those who inhabit the landscape. The representations expressed in the individual LCAs ..(miss) the relationships and practices which underpin the landscape, communicating it as a neutral surface; an area rather than the perception of that area.”

In 1993, the Countryside Agency commenced a pilot program called the New Map of England, which aimed to identify, describe and analyze landscape character types at a broad regional scale, and in 1996 produced the map. Figure 5 shows the latest iteration of the map (2014). It classified and described 159 character areas. Interestingly the word 'landscape' is diminished, it is termed the “Character of England Map”, not the “*Landscape* Character of England Map”.



Countryside Agency

**Figure 5 (Landscape) Character of England map**

Natural England’s program, Countryside Quality Counts, monitors the state of each of the 159 character areas. The second assessment covered the 1999 – 2003 period (Haines-Young, 2007) and found that landscape character was maintained in 51% of the areas and enhanced in a further 10%. Twenty per cent showed a loss while 19% had new characteristics emerging.

### **Britain - Conclusions**

Great Britain has a long and distinguished history of regard for its landscapes as evidenced by its poets, writers, painters and photographers. During WW2, Britain drew strength from the appeal and constancy of its rural landscapes.

Through the 20<sup>th</sup> century much was written to describe and delight in Britain’s landscapes and much action was taken, via the establishment of National Parks, AONBs and planning policies, to safeguard landscapes from deleterious developments. From the late 1960s onwards, planners developed methods to measure and map the quality and features of the

landscape. Quite sophisticated quantitative methods were developed and had they been further refined, there is much they could have achieved. However, it was not to be.

For reasons best known to itself, the Countryside Commission (and its successors) with the statutory responsibility for Britain's landscapes, retreated from evaluating scenic quality, instead describing and classifying its landscape character. Fear of being accused of subjectivity may have been the underlying reason for the agency's reticence. The new approach was devoid (as far as humanly possible) of subjective judgement. Scenic quality was largely obscured through the additional considerations, all of which could be objectively measured and mapped.

The meaning of the term *landscape* has shifted from the beauty of the land to a relationship between people and the land. This provides a footing for the focus on landscape character, a neutral and objective field to explore.. Landscape quality no longer refers to its qualitative value but to its condition and whether it needs repair!

In Britain, landscape has digressed far from its original meaning, spurred by an aversion to subjectively valuing landscape quality. It is a sad state that Britain can no longer refer to the beauty of its landscapes but rather to a landscape in prime condition!

## EUROPEAN LANDSCAPE CONVENTION



### History

The European Landscape Convention originated in a 1994 local and regional authorities recommendation "to draw up...a framework convention on the management and protection of the natural and cultural landscape of Europe as a whole". In 1995, the World Conservation Union (IUCN) advocated an international convention on rural landscape protection in Europe. In response to these and other requests, the Council of Europe's Congress of Local and Regional Authorities (CLRAE) prepared a draft convention. CLRAE held a consultative conference in Florence in 1998 and a final draft was prepared. On 19 July, 2000, the Committee of Ministers of the Council of Europe adopted the Convention and it opened for signatures in Florence on 20 October, 2000. It entered into force on 1 March, 2004.

### Why a Landscape Convention?

Of the reasons for the Landscape Convention, Maguelonne Déjeant-Pons, the Executive-Secretary of the Convention, wrote in 2005:

As an essential factor of individual and communal well-being and an important part of people's quality of life, landscape contributes to human fulfilment and consolidation of the European identity. It also has an important public interest role in the cultural, ecological, environmental and social fields, and constitutes a resource favourable to economic activity, particularly to tourism.

While European landscapes have been agricultural for centuries, the intensification of food and fiber production, producing more on less land is resulting in greater landscape impacts (Mander, *et al*, 2004, Pedrolí *et al*, 2016). The re-structuring of agriculture in the EU and the radical socio-economic changes in parts of Europe have additional impacts on the landscape (Mander, & Jongman, 1998).

### **Purpose & Contents**

The Explanatory Report of the Convention describes its purpose as:

“to encourage public authorities to adopt policies and measures at local, regional, national and international levels for protecting, managing and planning landscapes throughout Europe so as to maintain and improve **landscape quality**...”

Landscape quality is clearly a qualitative attribute, not its condition, as in Britain's Landscape Character Assessment.

The Convention covers the entire territory of the Parties including natural, rural, urban and periurban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday and degraded landscapes thus recognizing the importance of all landscapes.

The European Landscape Convention comprises a preamble and four main sections:

- Chapter I, Objectives and scope of the Convention, plus definitions;
- Chapter II, Measures to be taken at national level;
- Chapter III, Basis for European co-operation, measures at international level, monitoring the implementation of the Convention;
- Chapter IV, Procedures for adoption of the Convention.

The Convention defines "landscape" as *an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*.

Note that the focus is on *character*, not quality. The UK was “highly influential in the development of the ELC, the text can be seen to embed much of the thinking ... by which landscape was already being planned, managed and designed in the UK” (Roe, 2013, Sarlöv-Herlin, 2016).

Writers have commented on the ambiguity of the definition, necessitated to ensure its adoption across the disparate European communities (Butler & Åkerskog, 2014). In Sweden, from interviews at all levels, Dövlén (2016) found that the definition of landscape: “is advantageous in that it provides an inclusive approach, strengthening democratic values and gives emotional values legitimacy in decision-making....”

The Convention is in 41 languages but the landscape definition varies across these languages which cause communication gaps in its implementation (Sarlöv-Herlin, 2016).

Olwig (2016) noted that the “notion of landscape as an ‘area’, to be judged by social criteria as a humanly shaped and perceived place ... contradicts traditional landscape architectural and expert oriented ideas of landscape as a scenic space of land surface constructed and judged largely on visual aesthetic criteria and zoned spatially according to scientific data.”

The Guidelines to the Convention state:

The concept of landscape in the Convention differs from the one that may be found in certain documents... This new concept expresses, ... the desire to confront, ... the theme of the quality of the surroundings where people live; this is recognised as a precondition for individual and social well-being ... and for sustainable development, as well as a resource conducive to economic activity.

*Landscape protection* means actions to conserve and maintain features while *landscape management* is the “regular upkeep” of the landscape, guiding and harmonizing changes. *Landscape planning* concerns “strong forward-looking” actions to enhance, restore or create landscapes.

## **Requirements and Objectives**

Parties to the Convention are required to:

1. Recognize landscapes in their law;
2. Implement landscape policies for protection, management and planning;
3. Ensure participation by the public and of relevant authorities;
4. Integrate landscape into regional and town planning policies as well as agricultural and economic;
5. Identify and assess their landscapes;
6. Increase society’s awareness of the value of their landscapes;
7. Promote training and education to this end.

"Landscape quality objective" means the formulation of the aspirations of the public with regard to the landscape features; i.e. a detailed statement of the characteristics which local people want recognized in their surroundings.

Parties are required to define landscape quality objectives. This involves, according to the Convention’s guidelines providing “a basis for judging what landscape features of an area are so valuable that they should be protected; what features need management in order to maintain the quality of the landscape; and what features or areas should be considered for enhancement.”

Regarding the landscape quality objectives, the Guidelines state:

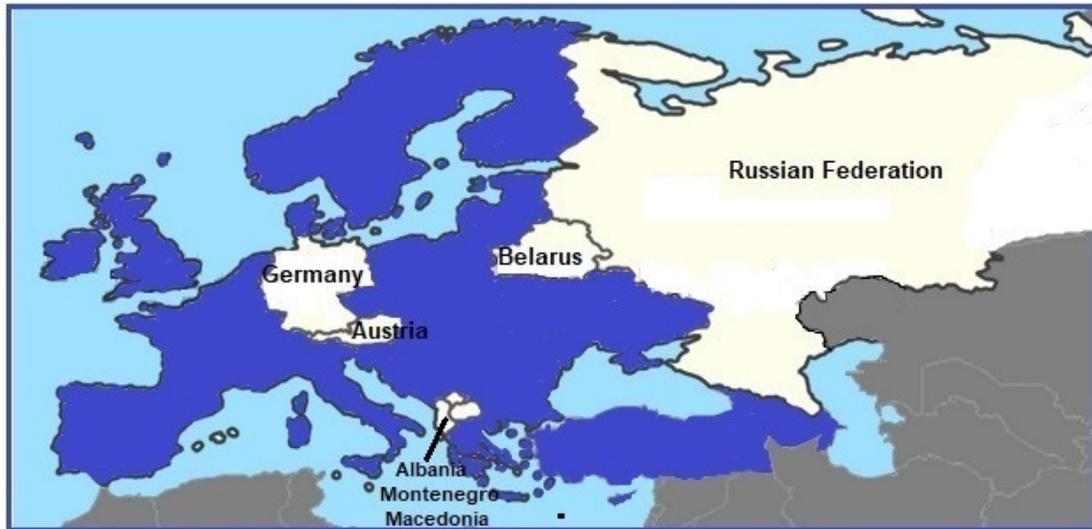
Every planning action or project should comply with landscape quality objectives. It should in particular improve landscape quality, or at least not bring about a decline. The effects of projects, whatever their scale, on landscape should therefore be evaluated and rules and instruments corresponding to those effects defined.

The Convention regards landscape quality as central to its purpose..

## **Parties**

There are 47 possible signatory countries to the Convention and by September, 2019, 39 had ratified it – 83% of the total (Figure 6). Notable absences from the Convention are Austria, Germany and Russia.

In 2016 the decision was taken by the Committee of Ministers to offer the Convention world-wide as an opportunity to protect, manage and plan landscapes according to common principles that apply to landscapes worldwide (Secretariat, 2018).



Areas in blue have ratified the European Landscape Convention

**Figure 6 European Landscape Convention Ratification**

### Processes

The process leading to landscape action involves (Guidelines):

- Knowledge of the landscapes: identification, description and assessment;
- Definition of landscape quality objectives;
- Attainment of these objectives by protection, management and planning;
- Monitoring of changes, evaluation of the effects of policies.

Roe (2013) noted that although it requires monitoring implementation progress, it provides no indicators to assist. Participation, consultation, pooling of ideas and approval (between institutions and the population, horizontal and vertical) should be organised at all stages in this process. The Aarhus Convention on Public Participation in Decision-making defines “public” as “the public affected or likely to be affected by, or having an interest in, the environmental decision-making” (UNECE, 1998).

Jones (2007) examines the role of public participation under the Convention and wrote:

Landscape is not simply a collection of material artefacts, but is concerned with the immaterial meanings and values people attach to their material surroundings. *Nearly all landscapes are special in some way to someone*, although not always consciously expressed. (emphasis added)

In examining public involvement in landscape-related research, Conrad *et al* (2011) found limited involvement of stakeholders. In Britain, Landscape Character Assessments have been used as the tool to achieve the ELC’s requirements but only a quarter of 52 LCAs involved the public (Butler & Berglund, 2014).

Landscape knowledge should understand the physical characteristics of the landscape, identifying traces left by natural and human processes; examine developmental processes, pressures and risks facing landscapes; and recognize the value systems of expert and the public in their perceptions of the landscape. Actions should aim to integrate different sources of knowledge of the landscape and its history; cover the entire landscape, ensure access and transparency of the knowledge gained and encourage the development of landscape databases covering all aspects.

## Instruments for landscape policies

The Convention's Guidelines list a range of instruments including landscape planning, charters, contracts & strategic plans, impact and landscape studies, landscape awards, and observatories.

### Landscape Award

Commencing in 2009, a Landscape Award of the Council of Europe has been conferred every two years for exemplary achievement. The 2019 Winner was the Republic and Canton of Geneva, Switzerland for the renaturation of the watercourse of the River Aire. Figure 7 shows the winners and others winning prizes.

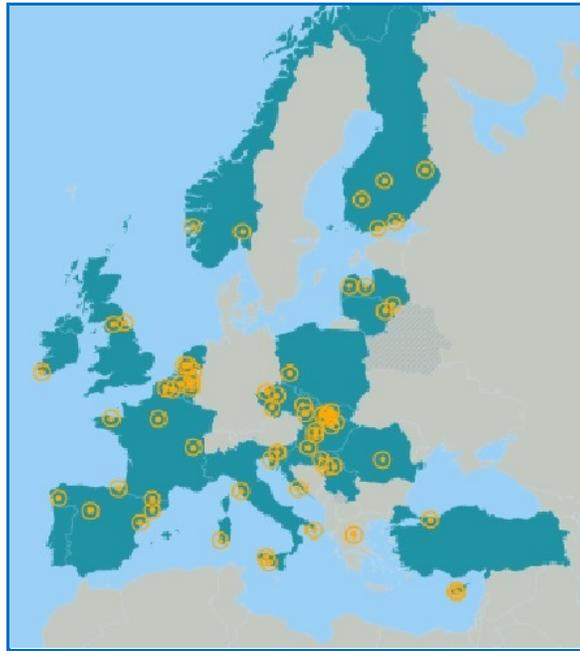


Figure 7 Prize winners of the Landscape Award

### Effectiveness of the Convention

The ELC website provides access to the many international conferences, workshops, working group reports, national and regional symposia that have been held regarding the Convention. These provide a wealth of detailed information, particularly at the city, region and country level about the implementation of the Convention.

There does not appear to be any overall synthesis and evaluation of the effectiveness of the Convention. In 2018, the Executive-Secretary of the Convention, Mrs Déjeant-Pons, wrote:

Since the adoption of the European Landscape Convention, major progress has been made towards the establishment of landscape policies at national, regional and local level. Drawing on shared objectives, these policies foster the quality of a common living environment.

She also wrote that the Convention has:

“...led to developments in numerous European States, not only in their national and regional legislation but also at various administrative levels, as well as in methodological documents and experiments with active participatory landscape policies”...The Convention “is used as a benchmark by some countries to initiate a process of profound change in their landscape policies; for others it constitutes an opportunity to define their policy.”

A legal expert optimistically stated:

The Convention thus acts as a catalyst whereby these countries will be stimulated to rethink – through a process of coming together, gathering and meeting between differing interest groups, administrators and experts – what it is that is meant by landscape in their *res publica* (i.e. that which is known by and concerns everyone), and how this landscape can provide an overarching framework for both cultural and scientific policy. It is thus the practice of implementing the Convention that is important, not the letter of the Convention understood as if it were statutory law. (Olwig, 2007).

In their survey of British Landscape Character Assessments, many based on the ELC, Butler & Åkerskog (2014) found the documents to be essentially professional discourses on landscape, “as a tool for experts in the field of landscape and enhancing justification for those professions.” They acknowledged that this was “contra to that contained in the ELC.”

Scott (2011) examined Scottish development plans, landscape policy and six case studies to ascertain how well they contributed to ELC policy and practice. He found landscape needs to be more effectively integrated into land use planning and policy, and new ways are needed to involve the community. A National Landscape Strategy would assist. Overall he found the ELC “champions a new way forward, moving from top-down elitist approaches” to more inclusive public involvement. However the extent that this is achieved in practice is questionable.

De Montis (2014) examined the implementation of the ELC in planning systems in Spain, France, Italy, Switzerland, the Netherlands and the UK. He found the ELC does influence planning practices, even in countries outside the ELC. Regional planning in France, Italy and Catalonia includes landscape protection and management while landscape monitoring is carried out by observatories in Catalonia, the Netherlands and France. Dempsey & Wilbrand (2017) examined the role of the Convention at the regional level, focusing on the Catalina region of Spain and found it “lacks strong incentives or sanctions for effective implementation at the regional level”.

In Switzerland and Italy, the constitution and specific regulations protects the landscape. Article 9 of the Italian Constitution provides for protection of “the landscape and the historical and artistic patrimony of the Nation.” However in Italy, criminal syndicates have illegally constructed resorts on the Amalfi coast, and have built dozens of illegal wind turbines on mountains, heritage areas and the coast in order to gain government subsidies, but many of the turbines stand idle (Oles & Hammarlund, 2011). They note that the ELC in its emphasis on local participation “does not acknowledge the possibility of *destructive or destabilizing* local actors at all.” (author’s emphasis).

A survey in Norway found the “engagement of people is limited to the gathering of feedback from interest groups, politicians and organisations, rather than a comprehensive understanding of the use, perception and values that residents place on the city’s landscapes.” (Olwig, 2016). Dowlén (2016) in Sweden found the “local level is central to translating the ELC definition of landscape into workable strategies” but this was contingent on support and resources from the regional authorities.

## **European Landscape Convention - Conclusions**

The Convention is an innovative instrument which reinforces the significance of landscapes in the life of the community. Implementation of Convention is having positive outcomes. However, its requirements on Parties are quite onerous and demanding and the extent to which it represents community views rather than expert input is problematic. Despite its requirement for landscape quality objectives to be articulated, the definition of landscape and the focus of the Convention is on the character of the landscape.

## WORLD HERITAGE AREAS



The World Heritage Convention was adopted in 1972 and provided for the conservation of cultural and natural sites. Article 2 defines “natural heritage”:

- natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the **aesthetic** or scientific point of view;
- geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
- natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or **natural beauty**.

The World Heritage Convention established ten criteria, #7 of which was: “Superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance”

Figure 8 shows the global location of World Heritage sites and illustrates the strong Eurocentricity of listings. South America, Africa and Asia are, by comparison, poorly represented and UNESCO is emphasizing these regions in future listings.



<http://whc.unesco.org/en/list>

**Figure 8 Global locations of World Heritage Sites**

Regarding sites proposed under Criterion 7, the Operational Guidelines state that it should: “include areas that are essential for maintaining the beauty of the property. For example, a property whose scenic value depends on a waterfall, would meet the conditions of integrity if it includes adjacent catchment and downstream areas that are integrally linked to the maintenance of the aesthetic qualities of the property.”

Nominations of sites for World Heritage listing are evaluated by two international bodies:

- Natural heritage nominations (including Criterion 7) are evaluated by IUCN (International Union for the Conservation of Nature based in Switzerland);
- Cultural heritage nominations are evaluated by ICOMOS (International Council on Monuments and Sites based in France);
- Cultural landscapes and mixed sites involve both ICOMOS and IUCN.

Cultural landscapes are defined by the Convention as "combined works of nature and of man" and include the following:

- Landscapes designed and created intentionally by man – gardens and parks;
- Organically evolved landscape – e.g. agriculture, either still current or extinct;
- Associative cultural landscape – religious, artistic or cultural associations.

Sixty-six cultural landscapes have been inscribed on the World Heritage list (Mitchell, *et al*, 2009).

Examples of cultural landscapes include:

- Hadrians Wall, UK – part of the Frontiers of the Roman Empire theme.
- Blaenavon World Heritage site, Wales, - a relict industrial landscape covering approximately 33 square kilometers.
- The Rideau Canal Corridor, an extraordinary cultural landscape running 202 km from Ottawa to Kingston which was constructed between 1826 and 1832.

The Lake District in England was rejected as a natural landscape because of the adverse effect of human activities such as forestry, but was re-submitted as a cultural landscape and accepted.

There are no cultural landscape sites inscribed as World Heritage in the United States.

### **World Heritage Areas in the United States**

Figure 9 shows the location of the 23 sites in the United States that have been designated as of World Heritage status. Table 3 indicates that the most sites were listed under Criteria 7 and 8, aesthetics and geology. A notable absence is Niagara Falls which is not listed as a joint nomination of the US and Canada.



<https://whc.unesco.org/en/list/>

Figure 9 World Heritage sites in the United States

Table 3 World Heritage Areas, United States and their listing criteria

Criteria (Criterion 7 highlighted)

	1	2	3	4	5	6	7	8	9	10
Cahokia Mounds State Historic Site			X	X						
<b>Carlsbad Caverns National Park</b>							X	X		
Chaco Culture			X							
Everglades National Park								X	X	X
<b>Glacier Bay</b>							X	X	X	X
<b>Grand Canyon National Park</b>							X	X	X	X
<b>Great Smoky Mountains National Park</b>							X	X	X	X
Hawaii Volcanoes National Park								X		
Independence Hall						X				
La Fortaleza & San Juan National Historic Site in Puerto Rico						X				
<b>Mammoth Cave National Park</b>							X	X		X
Mesa Verde National Park			X							
Monticello and the University of Virginia in Charlottesville	X			X		X				
Monumental Earthworks of Poverty Point			X							
<b>Olympic National Park</b>							X		X	
Papahānaumokuākea			X			X		X	X	X
<b>Redwood National and State Parks</b>							X		X	
San Antonio Missions		X								
Statue of Liberty	X					X				
Taos Pueblo				X						
<b>Waterton Glacier International Peace Park</b>							X		X	
<b>Yellowstone National Park</b>							X	X	X	X
<b>Yosemite National Park</b>							X	X		
<b>Total</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>7</b>

**Criteria**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>1. Human creative genius;</li> <li>2. Architecture or technology;</li> <li>3. Cultural traditions;</li> <li>4. significant stage(s) in human history;</li> <li>5. Traditional human settlement;</li> </ul> | <ul style="list-style-type: none"> <li>6. Events or living traditions;</li> <li>7. Exceptional natural beauty and aesthetic importance;</li> <li>8. Earth's history;</li> <li>9. Ecological and biological processes;</li> <li>10. Conservation of biological diversity</li> </ul> |
|---|--|

## Review of Criterion 7

In 2012 IUCN carried out a comprehensive review of Criterion 7: *Study on the application of Criterion 7* (Mitchell *et al*, 2013). The report examined the development of the Criterion and its application in several nominations, differentiated between *superlative natural phenomena* and *exceptional natural beauty and aesthetic importance*, examined trends and issues in its application, and examined methods for assessing natural beauty and aesthetic importance.

The report made the following key findings:

Criterion 7 contains two distinct ideas, firstly, *superlative natural phenomena* and secondly, *exceptional natural beauty and aesthetic importance*. The first concept includes animal gatherings and migrations and the highest, biggest, deepest or largest examples of physical features such as cliffs, mountains, canyons, waterfalls, glaciers, caves and trees all of which should be judged objectively on a global basis.

The latter concept, *exceptional natural beauty and aesthetic importance*, addresses people's subjective perceptions of aesthetic beauty contained in the natural environment. Nominations can be under either one or the other concepts, or both; most nominations cover both. Assessment of *exceptional natural beauty and aesthetic importance* is regarded as the harder of the two.

The UNESCO manual on preparing nominations offers little assistance beyond using current scholarship and recognized assessment approaches to support the justification (UNESCO, 2011). Criterion 7 has the same standing as other criteria under the World Heritage Convention and refers clearly to natural beauty.

As at 2012, 133 properties were inscribed on the World Heritage List on the basis of Criterion (7), generally in combination with other natural or cultural criteria. Of these, 110 were natural properties and 23 were mixed properties. The number of sites nominated under Criterion 7 has declined over the years, probably because it was most strongly linked with iconic sites in the early years of the Convention. Nine properties are inscribed solely under Criterion 7 (Table 4).

**Table 4 Sites listed only under Criterion 7**

Site	Nation	Year
Sagarmatha (Mt Everest)	Nepal	1979
Belovezhskaya Pushcha / Białowieża Forest	Poland, Belarus	1979
Kilimanjaro	Tanzania	1987
Huanglong	China	1992
Jiuzhaigou Valley	China	1992
Wulingyuan	China	1992
Mount Sanqingshan	China	2008
Monarch Butterfly	Mexico	2008
Lakes of Ounianga	Chad	2012

Since 1995, 45 properties have been inscribed under Criterion 7, 23 for their superlative natural phenomena, and 16 for their exceptional natural beauty and aesthetic importance. There has been a recent trend towards “describing the simultaneous presence of various natural features of the physical landscape as conveying aesthetic value.” An example is Wadi Rum in Jordan:

“Key attributes of the aesthetic values of the property include the diversity and sheer size of its landforms, together with the mosaic of colors, vistas into both narrow canyons and very large wadis, and the scale of the cliffs within the property.”



**Wadi Rum, Jordan**

The challenges of the Criterion: *exceptional natural beauty and aesthetic importance* are firstly, to assess it in a systematic, rigorous and transparent way; secondly, to conduct a comparative analysis at a global scale; and thirdly, to clarify the relationship of aesthetic values applying to natural beauty with the aesthetics of cultural features.

### **Basis of IUCN Assessment**

The IUCN review relied heavily on Britain’s landscape character approach. Landscape character is differentiated from the term “scenic value” which is as “an assessment of the attractiveness or the aesthetic experience of a particular landscape” (Churchward *et al.* 2010). Although most nominations have relied on expert aesthetic assessments, there is increasing recognition of the need to involve the public and stakeholders in the assessment.

While nominations should be based on measurable indicators of scenic beauty along with quantified comparisons of natural beauty and aesthetic importance, few nominations have attempted this, relying instead on qualitative descriptions. One measurable indicator used is tourism data (which is only a surrogate of scenic beauty and is influenced by affluence, accessibility and interest). Providing only photographs of the area is judged as inadequate.

The Recommendations of the IUCN Review were:

1. Nominations to clarify whether they contain *superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance* or both.
2. Nominations should provide a rigorous and systematic identification of attributes;
3. Nominations should provide the same degree of global comparative analysis as expected under other criteria, including of natural beauty and aesthetic importance;
4. Global typologies should be further developed as a framework for comparing properties internationally;
5. The relationship between natural and cultural beauty should be further developed.

The report addressed the very difficult area of aesthetic quality and of the need to make judgments between areas on the basis of their significance relative to other areas. It makes a valiant attempt and covered the field very well. It does however tend towards maintaining the present expert-based qualitative assessment of aesthetic quality and failed to examine

further the methodologies that have been developed to quantifiably assess the aesthetic quality of natural beauty. The need for a “global comparative analysis” of scenic quality provides an opportunity for research.

## PROTECTED AREAS



Protected Areas are “A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Dudley, 2008).

Category 5 covers protected landscapes or seascapes. Their primary purpose is:

To protect and sustain important landscapes/seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.

Their distinguishing features are that they include high and/or distinct scenic quality, a balanced interaction between people and nature over time, and unique or traditional land-use patterns such as in agriculture or forestry.

Under Category 5 there are 45,277 Protected Areas covering 1,392,646 square miles – about the area of the five largest States in the US. Around 550,000 square miles are terrestrial protected areas of Category 5, the remainder being the marine environment. Figure 10 shows the Protected Areas in North America.



Figure 10 Protected Areas in North America

## OTHER NATIONAL PROGRAMS

### EUROPE

In 2005, Wascher co-ordinated a review of Landscape Character Area mapping in Europe. It summarized 51 examples of LCAs in 14 countries. The review found the meaning of LCA to differ from country to country, “expressing different views on what qualities and elements of the landscape are considered as most relevant.”

### **Norway**

Norwegian Landscape Reference System covers landform; geology; water surfaces; vegetation; agriculture; buildings, technical installations and infrastructure. Landscape character is the combination of these components. Norway has 45 landscape regions, comprising 444 landscape sub-regions, which are further subdivided into landscape areas.

### **Austria**

LCA was used for identifying spatial reference units and describing their potential for recreation activities such as hiking and biking. Landscapes were ranked and the results mapped and used to allocate finance to municipalities to invest in “soft tourism” - hiking trails, horse riding trails and biking routes.

### **Denmark:**

Denmark counties designate valuable landscapes for protection including cultural-historic, aesthetic/visual and recreational. Aspects related to perception and visual impression have been included.

### **Germany**

Brandenburg has conserved the diversity, character and beauty of the landscape through a geographical classification of natural landscapes. Lower Saxony divided the county into landscape character spaces based on native character/natural impact, historical continuity and diversity.

### **Hungary**

In a 10,000 km<sup>2</sup> area of conflict between nature, landscape and housing, the regional plan aims to protect the ecology and landscape character. The plan designates protected landscape zones and LCAs in which housing is prohibited and infrastructure is required to be underground.

### **Switzerland**

LCA amalgamates all policy sectors at the cantonal level. – called Landscape Development Plan. The LCA comprises: a) development of a LCA for Switzerland and b) development of indicators for sustainable landscape development. Cantons prepare management plans and landscape assessments. The Swiss Landscape Monitoring Program uses indicators of physical properties, evolutionarily and culturally determined landscape perception, and land use (Kienast *et al*, 2015)

### **The Netherlands**

The Ministry of Agriculture monitors the effects of change on the Dutch landscape.

### **Belgium**

In Flanders, traditional pre-1950 landscapes have been inventoried and serve as reference for development assessment.

### **Australia**

The Australian landscape is vastly different from the English landscapes from which the early settlers came, and it took a century before the landscape was appreciated for its indigenous qualities. The first national parks were established in the 1870s to protect outstanding scenery. A century later, in the 1970s, the National Trust, a not-for-profit NGO,

compiled lists of outstanding landscapes and then sought to develop a standardized approach for their classification.

Aesthetic areas were nominated for the newly established National Estate Register, however the Australian Heritage Commission declined to register them until a methodology for classifying aesthetic landscapes could be developed. Professor Julius Gy Fabos from the United States was engaged to review the state of the art of landscape assessment, to examine the studies undertaken and to provide directions for future landscape assessment (Fabos & McGregor, 1979). He was critical of the National Trust nominations and advocated the parametric approach for future studies.

A review of some 85 landscape assessment studies between 1970 and 2015 found nearly half the studies were for environmental management purposes, a further 24% were academic research and 12% for forestry visual management systems (Lothian, 2017). Of the studies, 55% were physical descriptions, 27% were preference based, and 13% were experiential. The author has carried out eight of these studies (See Chapter 21, Lothian, 2017).

Despite the national government not undertaking a national assessment of outstanding landscapes, this has not prevented it from nominating eight World Heritage Areas based on their “exceptional natural beauty.” under the World Heritage Convention including the Great Barrier Reef, Kakadu, and the Tasmanian wilderness.

### **New Zealand**

During the 1970s up to the mid-1980s, landscape assessment was conducted by landscape architects in public agencies mapping biophysical and visual features and identifying landscapes of similarity (Swaffield, 1999). In 1991 the far-reaching Resource Management Act was passed which included protection of *outstanding natural features and (outstanding) landscapes* from inappropriate subdivision, use, and development (emphasis added). Landscape assessments were largely of effects for resource consent applications and/or site selection and design. District and regional landscape assessments, based largely on visual/biophysical features, were conducted. The criteria used varied from consultant to consultant and community input was generally minimal. The outputs were used to guide councils' decisions on development applications, and in appeals to the Environment Court.

Since 2000, landscape assessment has benefitted from community input and descriptions of aesthetic value reflect community preferences. A deficiency is that they remain descriptive, not quantitative. The Environment Court, rather than the landscape profession, has played a key role in defining the terms of the Resource Management Act.

### **NATIONAL SCENIC AREAS**

The dedication of National Scenic Areas reflects a nation's desire to recognize, protect and manage areas of outstanding scenery. National Scenic Areas exist in the US, Scotland, Taiwan and China.

Nine National Scenic Areas have been designated in the United States and a further six have been proposed. The existing areas include the Columbia River Gorge and the Mono Basin. These are areas popular with people and of less stringent management than wilderness areas.

Scotland has 40 National Scenic Areas, mainly remote mountainous areas, coastal areas and seascapes. The NSA's are a substitute for national parks of which there are only two in Scotland. They are under local authority control.

Four National Scenic Areas have been declared in Taiwan: each with its unique character and under careful management. Additional areas are planned.

China has designated the Top Ten Scenic Areas based on their natural beauty including the Yellow Mountains, Li River & Yangshuo and Hangzhou Mountain. These areas are heavily promoted for tourism.

## CONCLUSIONS

Despite its long and distinguished history of valuing its beautiful landscapes, Britain retreated from attempting to measure and map them, instead describing the character of the landscape. While there are many outstanding landscapes in Britain, describing landscape character as outstanding makes no sense! Landscape character is a poor substitute for comprehending landscape quality.

Britain's experience has been replicated in the European Landscape Convention which Britain had a close hand in drafting. It defines landscape as *an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*. While the ELC has had a positive influencing in awakening interest and concern about the state of Europe's landscapes, and in stimulating remedial action, it is difficult to excite the community about the character of the landscape in the way that people travel to see beautiful landscapes and which had had such a major influence in art, literature and music.

The World Heritage Convention, which predates much of Britain's work in this area and also the ELC, recognizes *areas of exceptional natural beauty and aesthetic importance* although it offers no guidance on how to measure this. The 2012 review suggested a global comparative analysis, comparing the nominated area with other areas of natural beauty and aesthetic importance. However, it tended to endorse the British approach on landscape character assessment.

While Britain has led the world in recognizing landscape character, it has failed to embrace the psychophysics research from the US and apply this to measure and map scenic quality.

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