

# MAPPING HISTORICAL LANDSCAPES AND ENVIRONMENTS – MORPHOLOGY OR FUNCTION?

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*Among many objectives of the European Landscape Convention are the protection, management and planning of landscape qualities associated with cultural heritage. The paper discusses two methods of mapping historical landscapes and environments in order to meet these international objectives and specific national goals. The Danish Cultural Environment Assessment and the English Historic Landscape Characterisation are GIS-based mapping methods, with different emphasis on the spatial content, historical depth and functional relationship. The available/used source material turns out to be crucial for the choice of mapping method and thus the applicability varies from assessment and designation to understanding and good management practise.*

## 1 INTRODUCTION

In our time there exists a great need to look back into the past. The reasons are diverse, ranging from individual research into genealogy to constructivistic search for historically based identity of a nation or of humanity. In between are also more commercialised approaches including the trade of products with a romanticized look, without authentic content (Lowenthal, 1998). This widespread interest of a historical dimension has also increased the focus in planning towards a historical dimension in the present landscape.

This paper deals with mapping methods to support the decision-making in planning for the management or designation of historical landscapes and environments. In theory landscape and environment are defined in various ways (Darvill, 1999; Muir, 1999; Brendalmo et al., 1997; Welinder, 1993). However Jones (1997, p. 7) recognizes some similarities. Landscape and environment can both be concrete, objective and abstract, subjective and “*both refer to our physical surroundings as well as the esthetical and affective attributes associated with these surroundings*”. In this broad sense landscape and environment are more or less synonymous. Recently Green and Vos (2001) published the anthology “Threatened Landscapes – conserving cultural environments”. Though both concepts are expressed in the title the authors actually refrain from elaborating on the meanings. Nevertheless their approach seems to imply that landscape is the overall analytic concept whereas environment refers to a valuable part of the landscape, which is assessed in terms of certain criterions. Layton and Ucko (1999, p. 3) are far more consequent stating “*From the thoroughgoing postmodernist perspective, there is no environment, only landscape*”. Environments as objects of description do not exist. All physical manifestations are expression of ideas and should be read and analysed as texts – landscapes are subjective. The thoroughgoing post-

modernist approach is not suited for landscape planning, since it by definition rejects the idea of common values.

According to the European Landscape Convention (2000) "*Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*". This definition is very close to Sauer's (1925, p. 321) old definition: "*Landscapes are areas made up of a distinct association of forms (component elements), both physical and cultural*". However the Landscape Convention explicitly acknowledges the postmodernist notion towards multiple human perceptions of landscape and widens the amount of approaches of fulfilling the Convention.

Both man and nature is included in the concept of landscape, but a specific focus on cultural landscape reflects an approach considering nature as the medium, man as the agent and the cultural landscape as the results (Sauer, 1925, p. 343). Alanen & Melnick (2000, p. 3) try to get a little closer to a common definition: "*If asked to consider the landscape continuum that extends from wilderness to city...most respondents undoubtedly would associate the cultural landscape with the places that lie somewhere between the two poles – environments that clearly display the human organization of natural elements*". Again the term environment is intermingled in the elaboration, which emphasizes the difficulties of distinguishing the two concepts.

Attempting to explain the difference between cultural landscape and cultural environment, as we understand it, the concept of cultural area may help. A cultural area is: "*a unit of observation over which a functionally coherent way of life dominates*" (Sauer, 1941, p. 364). An anthropologist would see this definition as all-embracing, whereas historical geographers tend to border such areas by occurrence of common traits. In extension cultural environments can be defined as the material remains of this functionally coherent way of life. A major point is that naturally bordered landscapes often will mediate a somehow uniform cultural landscape pattern, which may be morphologically homogeneous, but not functionally coherent. "*If we can agree on what is a natural region, we are still faced by the fact that cultural units are likely to straddle the boundary zones of physical contrasts*" (Sauer, 1941, p. 363).

When mapping historical landscapes or cultural environments the focus is on the material manifestations of the human culture, whereas the landscapers themselves (the humans) are not object of registration. However, their settlements are regarded as the social and economic centres of the landshaping activity and thus settlements must be recognized as elementary units, especially when dealing with the functional relationships.

In Denmark the study of functional holistic relationships between man and environment was reinforced during the 1970s as concepts of new archaeology, settlement archaeology and ecological human geography (Kristiansen 1977-78; Thrane 1972/74; Jacobsen 1971). And in the field of settlement history this method was also implemented on basis of historical sources (Porsmose 1987; Møller, 1990). With a delay of 10-15 years the concepts reached the landscape and heritage administration. In Scandinavia the attention was initially gained by ecologists, who saw the consequences of changing farming practise of semi-natural grasslands and recognized the importance of human management.

## **2 CULTURAL HERITAGE**

The European Landscape Convention (2000) obliges its signatory member states to implement a landscape policy aiming at protecting, managing and planning landscapes with landscape qualities. These qualities are to be identified and assessed and furthermore communicated to the public in order to increase awareness on landscape. To the qualities of landscape also belong cultural heritage, meaning that the aims of the convention also should be fulfilled in this field.

In Denmark, 1994 a new term "Cultural Environments" was launched by the Minister of Environment, Svend Auken. It was meant to be a third dimension of the environmental policy adding a more humanistic approach to the efforts towards antipollution and nature

conservation. It was also meant to be an addition to the traditional ways of protection of cultural heritage where focus hitherto has been on limited points and lines in the landscape in terms of sites and monuments – like burial mounds and dikes (according to the Nature Conservation Act dating back to 1937, last edition 1992) and preserved buildings (along with its special act from 2001, dating back from 1918). Another aspect of this third dimension is the involvement of local population according to the Agenda 21 resolution. But local population has no real role, if not qualified material and approach is available for the locals.

No new tools accompanied the new term - existing laws and regulations should be applied for cultural environments. It was especially foreseen that the planning tools should be used to implement an appointment of a cultural environment, that is in the first hand the regional plans stating an appointment, and in the second hand a local plan involving the citizens.

On central level the Forest and Nature Agency launched a project Cultural History in Planning aiming at developing methods for implementing the new term into practice. First a description of possible themes and status of knowledge and methods inside the historical cultural environments was published (Etting and Møller 1997) and in the second phase two pilot projects were undertaken. Both phases involved researchers at universities and museums, but it was a precondition of the pilot projects that only existing material and knowledge should be used and no new investigations undertaken in order to give input to the new term of cultural environment.

The regional counties have had to designate cultural environments as part of the regional plan 2001. The result, which comprises about 1000 environments, reveals great variation throughout the 14 counties. Although on central level (The Forest and Nature Agency) a project has been launched to help the implementation of the concept, the methods, the data, and the aims have been very different from county to county. Especially the aims have been politically determined in some counties, which resulted in a limitation of the number of cultural environments and making the condition that there is a local political acceptance of the designation. The planners had to act on this basis, and in most county administrations there has been a dialogue with the local museums. Thus, the existing data on the historical elements of the cultural landscape have been elaborated by two parties:

- The county administration for planning of preservation areas, not exclusively with historical arguments, but also including landscape values inside the aesthetical sphere.
- The local museums, which are working very independently and differently, depending on the interests of the local curator. This is specifically the case with the cultural heritage from the historical period where historians and ethnologists sometimes disagree about the meaning of culture and environment – from the prehistoric period more central regulations and methods are prescribed.

Neither of these data has been gathered with the object of fulfilling the criteria of a cultural environment. Therefore the result has been that many elements consisting of points in the landscape have been designated (burial mounds, houses etc.), including many archaeological relicts. Another objection is that many well-known elements or well-known types of elements have been designated. But the concept of cultural environments is much wider and there is basis for a much more diverse registration of different types of cultural environments reflecting man's actions in and on landscape over time. There is also basis for a systematic, scientific approach in this field of cultural heritage, which is usually thought of as a humanistic, abstract discipline. But in this paper it will be shown that there are different ways of making systematic analytical registration, which brings the cultural environments on line with other environmental themes, which are accustomed to use measurable and quantitative data.

### **3 METHODS OF MAPPING HISTORICAL LANDSCAPES AND ENVIRONMENTS**

### 3.1 Cultural Environment Assessment

In 2003 a research project started in Denmark called *Digital Atlas on Cultural Environments in Denmark*, involving the authors. One of the aims was to develop a model for a realistic registration of cultural environments comprising all relevant features and structures from historical time and visualizing it in a web-based GIS-database. As investigation area was chosen Vendsyssel, a part of the island North of Jutland, and furthermore a registration in the county of Vejle in Eastern Jutland was possible through a coordinated agreement (see [www.humaniora.sdu.dk/kulturmiljoe/](http://www.humaniora.sdu.dk/kulturmiljoe/) for further information)

A cultural environment is officially defined as “*a delimited area visually reflecting essential features of development in society*” (Etting and Møller, 1997, p. 11). It is a very wide definition, which focuses on a delimited area as a new feature in comparison to the existing regulations on the cultural heritage aiming at “points” in the landscape. The new concept is holistic in terms of cultural features. Clearly the area is in focus (consisting of many points, elements), but still the area is delimited meaning that not a whole region or natural landscape can be included, but an area which can be surveyed. The definition is very blurred concerning the contents of a cultural environment. What is reflecting development in society in a cultural landscape like the Danish or the North European generally? Everything! And how to organise and structure it? On this point the definition is very weak.<sup>1</sup>

Therefore the regional planning work by the county administration assisted by local museums has had two implications. The first one is that several designations have the character of sites reminding of the traditional way of conceiving and protecting the cultural history, typically a lot of archaeological relics. The second implication is that well known themes like villages, estates/manors and in several occasions coastal environments make up the majority of designated historical cultural environments. Whereas less picturesque environments like single farms, industrial plants, land reclamations, and religious institutions were not in focus. And another aspect is the criteria for designating the environments. Focus on the well-known picturesque, undulating, beautiful environments is no guarantee that the most well preserved environments representing all different types of cultural environments are selected. A well preserved character of the historical structure is in our opinion a precondition for a designated cultural environment, i.e. an antiquarian approach. But to make a selection and designation on a poor background concerning knowledge of the total historical landscape is in our opinion not fulfilling qualified objects.

When dealing with cultural environments, two aspects should be added or specified to the definition. The first one is that the elements inside a cultural environment should be connected functionally. The delimitation is including the maximum area that this cultural environment was exercising its primary functions upon: in agricultural areas (villages, estates) the fields, meadows, grasslands, woodland etc. For industrial plants including also raw material holes, transportation facilities, working houses etc. This in the first place means that they should have been in function in the same period and cannot include prehistoric elements and elements from the 19<sup>th</sup> century. This is often seen in the newly made designations and also prescribed centrally as a possibility. (They should instead belong individually to different cultural elements, although they spatially are related.) This reminds of Carl Sauer’s mentioned definition of a cultural area. There are also fresh connotations to the German term Funktionsbereich: „*Funktionsbereiche sind übergeordnete Gruppen von Funktionen und Aktivitäten unabhängig von der Raumkonstellation, die für die Gestaltung der Kulturlandschaft räumlich und zeitlich von unterschiedlicher Bedeutung sind*“ (Burggraaf 2000).

The other aspect concerns the specification that a cultural environment should have a certain spatial size to be conceived as such. This is meant to distinguish from points in the traditional registration of cultural heritage as points like buildings. A windmill in it self is not

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<sup>1</sup> However the definition seems clearer viewed in context with the official guidelines that are structured as a detailed description of every theme of cultural environment (Etting and Møller, 1997).

big enough to be a cultural environment, whereas as a watermill can be, as it besides the buildings consists of a millpond and waterworks and traditionally some agricultural area.

The implementation of a registration of cultural environments is dependent on topographical statistical literature in the first hand and historical maps on the other. In Denmark we have a long tradition for topographical literature, especially concentrated on a work called *Trap: Denmark*, where J.P. Trap in the 1860'es began a tradition which has resulted in 5 ever increasingly revised editions of descriptions and listing of contemporary and historical elements inside each parish (Boje, 1997). Here we get a good overview in a scale, which fits the size of a cultural environment. Only in cases of churches and manor houses the descriptions are detailed. In some cases more detailed information is given like the year of foundation of an element. A precise dating of the various cultural environments is possible for the elements from the last two centuries, whereas dating of Medieval elements can be reduced to the first mentioning of the place name and therefore more based on a typological dating. Especially in the listing of 20<sup>th</sup> century elements the scale is very small, below the scale of a cultural environment – in GIS-terminology *points*, but on the other hand such elements can be connected to a cultural environment and give a more detailed description of the function of this cultural environment.

The next phase is to geocode the information. Historical maps are rarely surveyed contemporarily with the *Trap Denmark*-descriptions, what means that it may be difficult to localize all mentioned elements inside the parish. On the other hand the maps can give further information of elements, which are not mentioned in the literature, so both sources supply us with valuable information on cultural environments. Anyhow many elements are too small to be shown as more than a building on the topographical map (without indicating information on function), especially inside an urban settlement. Many elements can therefore not be geocoded as points, but anyhow they can be linked to a cultural environment because the name of the element clearly indicates its belonging to this environment. A cultural environment will in this way comprise an area consisting of one or usually several elements functioning contemporarily inside this area (table 3.1). This is determined as the biggest area where this type of cultural environment has ever been functioning, especially concerning still functioning environments the latest or newest demarcation is chosen. Turning elements into environments is an interpretation where general knowledge of the type and actual study of maps is guiding.

**Table 3.1 List of Cultural Environment and Element Types**

<i>Main CE Types</i>	<i>Cultural Environment Types</i>	<i>Cultural Element types</i>
<i>Agrarian environments pre 1800</i>	Single farms Villages Estates	Single farms Villages Manor, park, castle mounds, brickworks
<i>Agrarian environments post 1800</i>	Smallholdings (colonies) Reclaimed land Assemblage of farms and houses Dairy small town Larger farms Fish farms	Smallholdings (colonies), assemblage of farms and houses Heathland reclamation, drained lakes and bogs, embanked land, plantations Assemblage of farms and houses Dairy small town Larger farms Fish farms
<i>Recreational environment</i>	Recreational environment	(bath)hotel, leisure and summer houses, camping ground, golf course
<i>Industrial, manufacture mining, raw material environments</i>	Industrial environment Manufacturing environments Mining/raw materiel environments	Industrial plant, working houses Manufacturing factory brickworks, gravel, sand, clay, marl and chalk pits
<i>Infrastructure</i>	Chaussé The Jutlandic cattle road	Chaussé The Jutlandic cattle road

	Railways King's roads	Railway King's roads
<i>Institutional/social environment</i>	Institutional/social environments	Hospitals, psychiatric institutions, educational institutions
<i>Coastal environments</i>	Fishing settlement Ferry place Harbour Loading place Skipper town Coastal town	Fishing settlement Ferry place Harbour Loading place Skipper town Coastal town
<i>Military environments</i>	Military environments	Fortification, bastion
<i>Mill environments</i>	Mill environments	Water mills, wind mills
<i>Religious environments</i>	Religious environments	Churches and houses of religious minorities
<i>Urban environments</i>	Suburbs Market town Rural town Villa house settlement	Suburbs Market town Rural town Villa house settlement

The concept of a cultural environment consisting of settlements of various numbers and functions with attached areas including field boundaries, infrastructure etc. makes it possible to assess the degree of preservation: how much of the structure is preserved today compared to a moment when the cultural environment was flourishing. It is possible to classify degrees of preservation and compare inside types of cultural environments. This strengthens the possibility to select and designate environments with the highest degree of preservation and fulfil political goals concerning development of landscape with a historical perspective. This makes the cultural environment assessment a strong strategic method in on one hand raising awareness of the diverse historical layers in the great landscape archive and on the other hand preserving the best parts of it by designation.

The term cultural environment is really meant for preservation of structures in the landscape, and especially *persistent* structures. That is elements and structures which are still living in the landscape, for instance earthen walls still indicating borderlines or buildings still existing and being used, but no longer with the original functions. The alternative is that we have relics in the landscape which no longer have any sort of use, but are still visible, or elements are totally wiped out and can only be found by archaeological means. Elements and structures living with the original functions are not endangered and will live on, but this group of persistent structures are tricky because they still exist but may be threatened by modern development (either rebuilding or wiping out or total substitution.) The need is to get hold of what is worthy preserving of these structures and designate them as cultural environments.

### 3.2 Historic Landscape Characterisation - a Danish review

In the recent years Danish archaeologists and the Cultural Heritage Agency have shown growing interest in the method of Historic Landscape Characterisation (HLC) developed during the mid 1990s by archaeologists at English Heritage (Herring, 1998; Aldred and Fairclough, 2003). The fascinating GIS maps characterising the historic landscapes of the counties and soon the entire nation is a dream to most landscape appreciators. In Britain, much more than in other European countries, there has been a long-standing association between national map-makers and archaeology (Muir, 1999, p. 32). Perhaps that is why the HLC was initiated by archaeologists rather than historical geographers

Basically, several of the objectives behind the HLC-work are similar to the Danish strategy towards CEA, such as – to develop a consistent repeatable comprehensive overall approach, - to improve the understanding of the historic dimension of the landscape, - the

need to view the archaeological and historic monuments and buildings in a landscape context, - the need of producing a planning tool which will support an Environmental Impact Assessment (EIA) for urban and rural development enterprises. However, the application differs in one important point, namely the question of designation or not. As applied the HLC only offers knowledge of the historical landscape character, which thus can be maintained or enhanced by public information and good management, e.g. specific agro-environmental schemes (ESA).

Mapping HLC is a total covering of the human made land. Fairclough (1999) gives a thorough description of the theoretical background. The method is based on morphological interpretation of the Ordnance Survey master map of the modern land use and the dominant historic character of present-day visible landscape patterns. Characteristic patterns/fabrics of hedgerows, ditches, fields, roads, settlements, woodlots etc. are bordered by polygons. The content of the polygons may thus be heterogeneous. The polygons often, but not always, consist of a matrix of farmland including several land use types and linear elements (patches and corridors). The grain size of the polygons is individually dependant of the block size in the landscape. The assumption is that specific patterns reflect a certain land shaping activity (type) and can be assigned to a certain landscape history (period). As example the different periods and types of enclosed fieldscapes are highly dependant on the interpretation of the landscape pattern. The morpho-genetic method demands experienced critical senses and a wide landscape historical knowledge. Most interpretations are highly confident, but some are unsure or even false. The weakness of the morpho-genetic method is acknowledged by Fairclough (2002) who suggests that rate of confidence is added to the attributes (certain, probable and possible). The interpretation is supported by verification and appropriate consultation of other sources.

The landscapes are classified hierarchal in terms of general land use categories (e.g. woodland) further divided into subcategories (ancient woodland, plantation etc.). The equal focus on the history of the biotic and cultural patterns, e.g. semi-natural grasslands and enclosure types, is a major strength of HLC. Hereby the generic influence of human utilization is emphasized. The HLC is a single layered GIS coverage of the landscape. The first attempts of HLC were classification-led approaches aiming at simple visualisation of the historic character of the present-day landscape. Later attempts have been keen on incorporating historic data in the attribute table collected through historic maps, registers and surveys (Aldred and Fairclough, 2003). The enhanced amount of attributes makes the database more complex. Some attribute data will not fit the present-day borders of the landscape character and thus polygons must be split into smaller units to represent the attribute information. The improvement of this spatio-temporal GIS influences the grain size since the scale of characterisation tend to go from landscape level to patch (land use) level. However, the spatio-temporal method fruitfully widens the research potential, e.g. enable retrospective search for disappeared features, commons and settlements. The borders of the split polygons will neither represent the present-day landscape situations nor the historic. Certain landscape types, periods etc. are solely revealed visually by making queries in the attribute table. To researchers it is no problem, but to public 'amateur' applicators the data may seem inaccessible in their search for inspiration to historic landscape management.

Dating the characterised historic landscapes is another question. By morphological interpretation only rough periods can be traced while the exact year(s) of the landshaping event are left for further investigation. Often the years of the individual map surveys are major bearings in the classification of period though the maps may represent a very early or late stage of transformation. Again, this is the art of the possible. According to the objectives of the HLC a rough dating of the county wide historic landscape character is much more valuable than exact dating of a smaller area. Refinements due to archive studies or fieldwork are easily incorporated later.

## 4 DISCUSSION

The two different methods have some similarities, but basically also some differences, which makes them useful in respective matters (table 4.1). The geographic scale is almost the same, which makes other comparisons reasonable.

**Table 4.1 Schematic comparison of CEA and HLC**

	Cultural Environment Assessment (CEA)	Historic Landscape Characterisation (HLC)
<i>Geographic scale</i>	Landscape level (1:20.000)	Landscape level (1:10.000)
<i>Registration unit</i>	Area - settlement(s) and production matrix	Area – land use pattern, heterogeneity allowed
<i>Basic sources</i>	Topographical-statistical literature Maps	Maps Registers
<i>Bordering</i>	Economic-functional	Morphological
<i>Time depth</i>	Historic-modern (1000-2000 AD)	Prehistoric-modern (500.000 BC - 2000 AD)
<i>Dating</i>	Specific	Period
<i>Spatial coverage</i>	Overlapping polygons - both wiped out and existing landscapes	Single coverage – attribute query (wiped out landscapes)
<i>Application</i>	Assessment and designation	Understanding and good management
<i>Academic bias</i>	Historical geography	Archaeology

One of the basic differences is the way of bordering the single units. Using the morphological method (HLC) visible (i.e. mapable) limits are the skeleton of the pattern put down on landscape added some information based on an interpretation of the modern map and eventually more detailed information from other sources. In the CEA the basic borderlines are made up of lines around functional units. The borderlines are not necessarily visible, neither today nor formerly when the cultural environment was in function, but particularly when dealing with agricultural environments the borderlines are in many cases identical with natural borders or fences in the landscape (see figure 1). The key issue of a CEA is to comprise all physical features of an activity functioning in correlation with other elements at the same time in the landscape. It reminds of the American geographer Carl Sauer's term *cultural area* (Sauer, 1941 p. 364). He is aware of the vagueness of the term, but sees it clearly as indicating something different from a natural area.

The functionality of a cultural environment is very much connected to settlements (or in enlarged terms to incorporate industrialization: plants). Therefore registration of cultural environments is depending on a basic knowledge of settlements in an area, which means that disciplines like settlement history, settlement archaeology and human geography are geared for working with CEA. On the other hand it is a precondition that relevant data are available and anyhow it is more time consuming than looking at maps and generating lines on this basis.

The CEA is meant for overlapping areas belonging to each chronological layer, whereas the HLC is less complex as it operates with existing borderlines in the present-day landscape with different historical character of each polygon. There is a strong correlation with the basic sources and the methods of dating in the two models. Dependency on alpha-numerical sources like topographical-statistical literature means that there is a basis for more detailed information on for instance dating and indicating different functions, not visible any longer. Anyhow, this method is dependent on this kind of sources existing for the whole region and it is more time-consuming than a method based on interpretation of modern topographical maps.



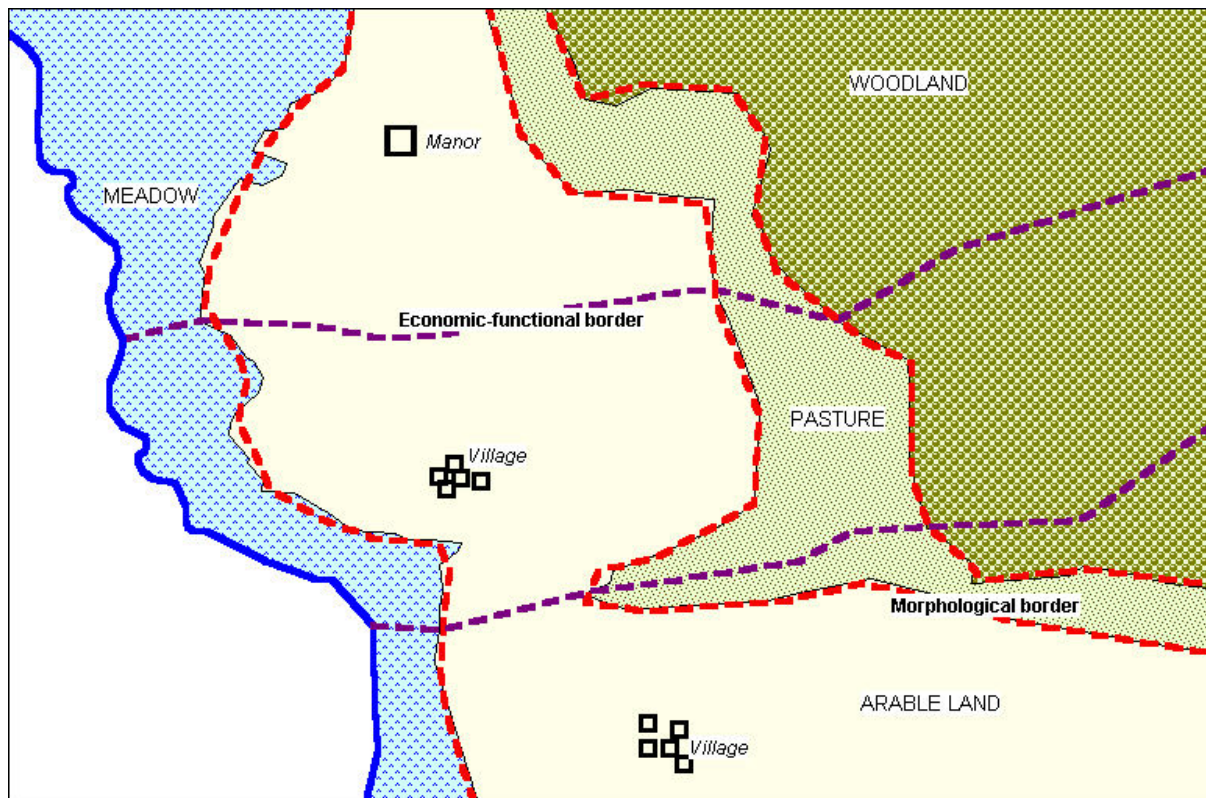


Figure 1. A fictive model illustrating the different borderline systems in HLC – morphological borders (red) – and CEA (economic-functional borders – purple).

The CEA has problems of combining the prehistorical and historical periods, but it is more a problem of commensurable data than a methodological difference. As shown the concept of cultural environment fits very well with the new trends in archaeology and geography for the last 40 years. But again it is a precondition that there exists information on the same scale for the prehistoric periods as for the historic periods. In most regions archaeological data do not allow a total representation of different periods unless you are using predictive methods to show the prehistoric layers (Ejstrud, 2001) or you reconstruct landscapes on basis of place names and territorial borderlines, which is possible back to the Iron Age. It is more easily done in HLC to classify an area as having the character of old undisturbed prehistoric land with lots of burial mounds.

The HLC has priority to characterize land use and other visible linear features connected to it like dikes, fences, roads etc. Settlement is a morphological element on line with other area elements. The method of interpreting the genesis by the morphology is developed in physical geography (geomorphology), but has been adopted and caused great advances in historical geography during the 20<sup>th</sup> Century (Helmfrid 2000). However, adding humans to the physical landscape the number of ongoing processes increases, which results in a more complex process-form relationship. Different processes can generate the same form and the same process can generate different forms (Norton, 1984). This problem is posed by Widgren (1999) in the study of deserted Iron Age farms, but it is also relevant to studies of more modern landscapes. Nevertheless, the morphological mapping method has clear advantages. It adds a historical dimension to land use administration, which much traditional landscape management is aiming at, and numerous measures geared at, like the Agro-environmental Schemes.

The CEA with its focus on settlement demands corresponding tools in landscape management to handle as well areas and linear features as buildings. At least in Denmark such a holistic tool is developed and useful concerning urban areas, where a local plan according to the planning act (dating back from 1971) can be used to protect buildings, roads,

trees, fences and other visible elements. But in rural areas local plans cannot be used, as it hinders the free enterprise of agriculture. Therefore the CEA is not fully applicable at the moment (Møller, 2004).

On the other hand CEA as a tool to designate cultural environments is a good instrument as it allows qualifying the different CE's inside each type. This is very hard to exercise in HLC as there is no holistic concept to compare the different areas. The numerous ways of classifying the historical character throughout the counties weakens the comparative studies and may obstruct fruitful research and antiquarian studies. The landscapes are the largest material archives of the human beings – if understood properly. Some of our leftovers are clearly more valuable than others, and those relics have to be assessed in order to be preserved for our grandchildren.

## 5 CONCLUSION

Two methods of mapping historical landscapes and environments have been discussed. The Cultural Environment Assessment (CEA) and the Historic Landscape Characterization (HLC) work on landscape level and have more or less similar objectives. They both serve as tools to fulfil the historic dimension of the European Landscape Convention. However, the objectives are different in application since the CEA is suited for assessment and designation whereas the HLC only offers knowledge and understanding for good management. In that sense the CEA can be considered as an antiquarian top down approach, while the HLC is an "all-perceptions-have-equal-value" bottom up approach. Though both methods exclusively consider the visible material traits of human activity in the landscapes they do it differently. The CEA has focus on bordering functionally related historical elements and features. The HLC is bordering morphologically homogeneous landscape patterns, which by experience can be related to certain landscape types and periods. The CEA-method is very dependant on appropriate topographical-statistical literature. Without this basic source the Danish CEA would be designed very much like the English HLC, where modern and historical maps are the dominant sources.

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