

World Heritage

# papers

# 25



## World Heritage and Buffer Zones Patrimoine mondial et zones tampons



United Nations  
Educational, Scientific and  
Cultural Organization

Organisation  
des Nations Unies  
pour l'éducation,  
la science et la culture



World Heritage  
Convention

Convention du  
patrimoine mondial

# World Heritage and Buffer Zones

Patrimoine mondial et  
zones tampons

International Expert Meeting on  
World Heritage and Buffer Zones  
Davos, Switzerland 11 – 14 March 2008

Oliver Martin / Giovanna Piatti (Ed.)

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## Foreword, preface and introduction

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## Foreword

**Buffer zones are an important tool for conservation of properties inscribed on the World Heritage List. All along the history of implementation of the World Heritage Convention, the protection of the “surroundings” of the inscribed properties was considered an essential component of the conservation strategy, for cultural and natural sites alike.**

The World Heritage Committee valued the concept and included it into the *Operational Guidelines* as one of the elements to be considered in the preparation of a nomination proposal.

The expert meeting on buffer zones held at the Schatzalp in Davos, Switzerland, was organized to foster the reflection on the role of buffer zones in modern conservation practices at the site level and on the support they can offer to cope with new challenges and threats.

The meeting brought together experts of cultural and natural heritage sites from all regions of the world, to exchange experiences, discuss present and future challenges and propose to the World Heritage Committee elements for a reflection on the nature and function of buffer zones.

This important work will hopefully help the World Heritage Convention to improve its ability to enhance protection and to share best practice models with other Programmes or Conventions, such as the UNESCO Biosphere Reserves or the Ramsar Convention (1971).

I would like to express my gratitude to the organizers, and in particular to the Swiss authorities for hosting the event and the Israeli authorities for their financial support.

I would like also to thank the experts who provided their time and knowledge to this task, the States Parties for their support and the Advisory Bodies to the Convention, IUCN, ICOMOS and ICCROM for their contribution to the understanding of this process.

I am confident that the World Heritage Committee, which acknowledged the results of the expert meeting at its 32nd session in Quebec City, Canada, will take into account the results of these considerations in further debates and reflections towards potential revisions of the *Operational Guidelines*.

Finally, I would like to thank in particular Oliver Martin, jointly with Mechtild Rossler and Céline Fuchs from UNESCO, for the excellent preparation of the expert meeting.

**Francesco Bandarin**  
Director, UNESCO World Heritage Centre

## Preface

**A little more than a hundred years ago, a group of innovative men set out to build a daring railway to cross the Alps in the very east of Switzerland. Driven by a vision to connect the secluded valleys of the Canton Grisons, they constructed a line that was to penetrate mountains, to cross the heights of the Bernina and Albula passes and to find its finale in neighboring Italy. Sweeping through the majestic Alpine landscape, the route combines the highest degree of technical challenge with aesthetics and therefore is a remarkable overall work of art worthy of its UNESCO World Heritage title.**

Switzerland proposed this site in 2008 for inscription on the World Heritage List. It was ultimately important issues relating to this project which resulted in the international expert meeting on buffer zones in Davos. At this point, I would like to thank the Canton of Grisons and the Rhaetian Railway for their support in organizing the meeting. Naturally, the World Heritage Centre at UNESCO also deserves our thanks for its solid cooperation and preparation of this meeting as well as Israel for its financial support and important inputs.

The importance of a buffer zone can be discussed using the example of the *Rhaetian Railway in the landscapes of Albula/Bernina* World Heritage site. The site consists of two railway lines: the Albula line is running from Thusis to Saint-Moritz, and the Bernina line, linking Saint-Moritz with Tirano in Italy. Construction of the Albula line started in 1898, the Bernina line followed shortly afterwards.

The two parts of the site differ from each other in the manner of how they tackle the challenge of mastering the journey. The Albula line is bedded into the terrain and has on its 67 km of line 42 tunnels and covered

galleries as well as 144 viaducts and bridges. Most of the constructions are stone-decorated. They offer the travelers views into secluded gorges, the experience of technically advanced construction and a fast journey.

The Bernina line follows quite an opposite route: It has on its 61 kilometers less bridges (only 13) and viaducts (52 respectively) and it runs through the open landscape, offering spectacular views of mountains, lakes and side valleys. Instead of going through the highest pass through a long tunnel as the Albula line does, it crosses its peak at more than 2000 meters above sea level. Travelers are offered spectacular views, unbelievable routes and an unforgettable experience.

During preparations on the nomination of the Rhaetian Railway, there were intense debates on the issue of its buffer zone ultimately resulting in a specific solution. The property (formerly called the core zone) consists of the railway line, totaling 128 km, to include stations and related buildings or construction such as sheds or platforms, and the auxiliary technical structures along the line.

The landscape surrounding the railway supports the outstanding universal value of the object: On the one hand, travelers truly "experience" the environment with the railway and, on the other, the railway itself has become an integral part of the landscape. This perspective was already an important justification for the careful selection of construction materials during original construction: The engineering structures were built in stone since stone fit in an optimum manner with the mountain landscape.

In 1926, the section engineer at the time, Hans Studer, wrote, regarding the stone bridge works along the Albula line, that “the high viewpoint won out to blur the lines between manmade works and nature as much as possible by avoiding materials foreign to nature and selecting in the truest meaning of the word down-to-earth bridge construction materials, to adapt this manmade work as inconspicuously and modestly as possible into the beauty and force of the sublime mountainous nature and to prevent disrupting its harmony or disrupting it as little as possible.”<sup>1</sup> Today, this harmony can be understood as the vision of the buffer zones of heritage sites. If, at the time, the comment was in reference to the possible impact on the landscape by negative interventions, it now conversely refers to the impact of the environment on the heritage sites: Interventions and changes to the environment may have a direct impact on the quality of World Heritage sites.

Buffer zone is intended to protect World Heritage sites from negative influences. In other words, it represents a zone, that in itself is not of outstanding universal value, but that may influence a World Heritage site. The importance of the environment for the object must be properly recognized to be able to define a suitable perimeter as well as required protective measures for the buffer zone.

At issue is the following: To what extent and how far is the environment relevant to the site? What is the importance of the environment to the object? What is its functional, visual and structural relationship to the object? The definition of a buffer zone must inherently be in a position to regulate undesired influences. Provisions that regulate the value of the World Heritage site as well as the function of the environment in this sense must be enforceable (under the law). The discussion on the purpose of a buffer zone is directly linked with site management accordingly.

We now return to our example in the Canton Grisons: The issue of the borders of the buffer zone is clear in this case: The environment includes the entire mountain landscape and ends at the horizon. This provides a very far-reaching perimeter. The purpose of the buffer zone changes as the distance increases to the World Heritage site: Historic village centres in close proximity to the rail are exceptionally important to the site; an influence here would have a much greater impact than in an area on the far-off horizon. This is why it was decided to differentiate the buffer zone. In the end, three different buffer zones were selected: the primary, the near and the distant buffer zone.

The primary buffer zone consists of the immediate environment of the line with great value placed on the authentic cultural landscape, directly linked to the perceptions of the railway passenger, or as cultural elements directly supporting the presence of the line in

the landscape. It is closely associated with the property. Or as the candidature dossier said, it contains “important and valuable cultural assets, places of interest (of national importance) and landscape elements.”

The near buffer zone essentially includes parts of settlement areas that are close to the property and lack the exceptional qualities of the primary buffer zone. These are recently built residential areas together with small commercial and industrial zones and their immediate surroundings.

The last and largest is the distant buffer zone that covers the whole line-of-sight as seen from the railway line as far as the horizon.

Protective regulations were matched to the differing qualities of the buffer zones. Within the primary buffer zone, in direct proximity to the railway in historic village centres, especially strict regulations apply with regard to both construction as well as land use in a detailed scale. Design consultations are mandatory for new construction within this zone. This guarantees careful development of the core buildings within the village. Design consultations are recommended within the near zone. In the distant far zone, large-scale interventions, such as high-voltage lines, must be treated separately. All the measures are set forth in municipal building codes and in the cantonal structure plan.

I have purposely spent a great deal of time outlining an empirical definition of a buffer zone in extenso to illustrate the importance and function of a buffer zone – and the necessary protective measures derived thereof – which differ for each site and must be defined with this in mind accordingly. The expert meeting in Davos staked out the scope of the buffer zones. Case studies on the problems of natural and cultural World Heritage sites from all continents bring home the multitude and diversity of conditions and requirements involved and allow us to gain as comprehensive an overview as possible.

As underscored by the World Heritage Committee, buffer zones are not formal components of World Heritage sites. Nevertheless, it is clear that the site's environment and conservation of the same may have a direct impact, to include even larger distances. Consequently, the importance of an zone of influence – above and beyond the actual buffer zone – was hotly discussed as a reaction to specific challenges facing World Heritage sites. Whether these are now formally considered part of World Heritage sites or not, does not excuse us from debating potential influences.

Influences on historical monuments and natural sites in a comprehensive sense go beyond our understanding to date of the perimeter. Social impacts, contemporary mobility, demographic changes or new leisure-time needs can have a lasting impact on the site and

its environment. Naturally, these types of considerations are outside the scope of defining regulatory requirements for protective areas. We must, however, increasingly take up these issues in order to ensure the conservation of our cultural heritage in the future.

During its 32nd session in Québec, the World Heritage Committee took note of the results of the expert meeting. In view of the recommendations presented, it found that further reflection on the design of future regulations governing buffer zones was needed. Switzerland is convinced about the importance of this discussion and would like to continue to take an active role in the issue. The publication of these papers including the final recommendations of the expert meeting in Davos are intended to enrich the future discussion and provide a foundation for future work.

#### Johann Mürner

Head of Section, Federal Office of Culture

<sup>1</sup> Hans Studer; Steinerne Brücken der Rhätischen Bahnen, in: Schweizerische Ingenieurbauten in Theorie und Praxis, Internationaler Kongress für Brückenbau und Hochbau, Zürich 1926, quoted from: Jürg Conzett; Die Kunstbauten der Albula- und Berninastrecke, in: Bündner Monatsblatt, 4/2008, Chur 2008.

## Introduction

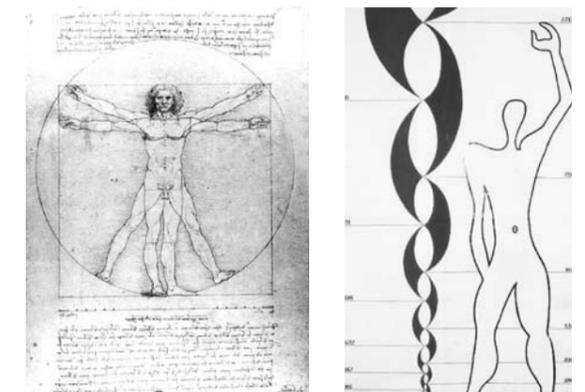
### On Buffs and Buffers

In the tradition that it is mandate for the guests to open with words that pay tribute to the host and acknowledge the innkeeper and his house, on behalf of all the participants, I would like to thank the Swiss Authorities for their hospitality in providing the appropriate abode for these deliberations on sites and their buffer zones. In preparation for the subject matter and arriving at this enchanting place, we are confronted by the thoughts of how much space is needed to retain the Magic of a Mountain and what are the elements that provide isolation for a Berghof sanatorium lying on a peak not only geographically, but also figuratively, in its reclusive and separate world.

Opening the topic let me share with you some thoughts to provide a reflection for our concerns and ensuing dialogue. It is the provision of space for, and its perception by, the individual that is a key issue, being the interrelationship between *being* and *object* setting one of the major parameters for debate.

Let us start with the *being*. The concept of a buffer zone applies equally to individual beings, and the virtual space that they carry with them. It is a kind of aura that is perceived as containing supernatural forces and was depicted in religious artworks in the form of a circular or elliptic space around the saint. But essentially, the relationships in space were historically anthropomorphic relating to the person and *being*, and it was only towards the end of the eighteenth century did the new metric order of the French Academy of Sciences evolve transposing this formula by relating the measure to the *object* of Earth and time. From time immemorial, the cubit was the basic measure while the foot deviated according to anthropology and geography of

its use and with it, the comprehension of the space in which it appeared. These measures were useful inasmuch that you could carry them with you in all senses of the term and could be applied with ease. 'Do we have a ruler or scale in the room?' was not a relevant question in early history.



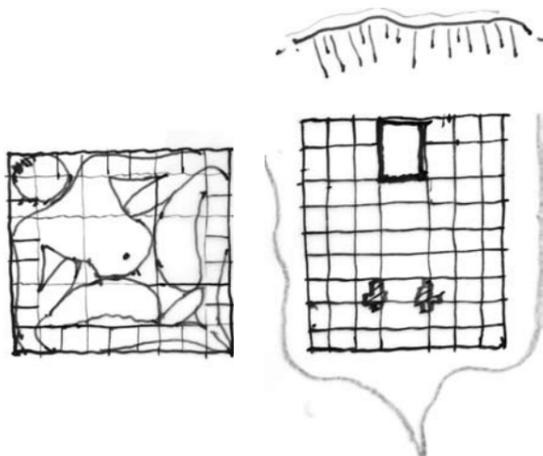
Four cubits was the personal height and to this was added the circumference of the space inscribing a fifth cubit. The design concepts and drawings of Leonardo da Vinci and Le Corbusier showed this very clearly with the Vitruvian Man and Le Modular. The image not only provides the perfect example of Leonardo's keen interest in proportion but also represents a cornerstone of his attempts to relate man to nature. "Leonardo envisaged the great picture chart of the human body he had produced through his anatomical drawings and Vitruvian Man as a *cosmografia del minor mondo* (cosmography of the microcosm). He believed the workings of the human body to be an analogy for the workings of the universe."<sup>1</sup>

But the concept of the four cubits was well developed earlier in Talmudic literature, which discussed

the three-dimensional envelope or aura that a person carried with him – a virtual space of four cubits. The polemics were devoted to the consideration whether the four metres is circumscribed on the omphalos or if the four metres is a measure to be added to the person. Before we dismiss the debate as the 'number of angels that might dance on a pinhead', we might take the opportunity to reflect on the question of the conceptual relationships between core and buffer zones.<sup>2</sup>

Indeed, throughout the ages and around the world, it was considered that every person is the centre of his world, and the circumambient space differentiated in accordance with the schema of his body; it was the very meaning of *being*. Most important, it was truly a *cosmografia del minor mondo*.

And it is not only in the western world that these concepts have root. The Indian mandala was the very model of the ideal city layout. The purusa-demon is pinned down in the squares of the city dedicated to the gods, thus embodying the complete integration of theomorphic and anthropomorphic ideas. Further east, the feng shui of China symbolizes the meanings of space and place. The prestigious Chinese city model had an arc of mountains in the north protecting the city while water flows on the east, west and south. The emperor resides in the north looking south from his palace towards the hierarchy of lords and plebeians. The cities were depicted with references to the gods, nature, the space and landmarks surrounding and defining its context. This was the true buffer zone protecting the city and its inhabitants from the evil spirits, defined by the cosmology of the place and time.



Perception not only changes between people but also between time and state. Yi-Fu Tuan in his seminal book<sup>3</sup> relates to spaciousness and crowding. People crowd us, but they can enlarge our world; people working together for a common cause manage in spaces that others will find difficult. He quotes the eighteenth century theologian Swedenborg "The more angels there are, the more free space", not just the use of space but the creation through selfless acts.<sup>4</sup>

In this world of uncertainty, with the need for experts, cognoscenti and the wisdoms' of our sages to quantify and qualify, it is the buff that is the epitome of the concerned stakeholder as the aficionado, a connoisseur and enthusiast bordering on the fanatic. The World Heritage buff by definition is our barometer and thermometer rolled in one measuring and reacting to the questions raised and responding to our perceptions. So here we are on this Magic Mountain discussing as experts et alia, but with the endearment of the buff, true feinschmeckers of the buffers and their zones.

Let us now turn our attention to the *object*, both natural and man-made, and consider the space and its context. First and foremost it is how far we buffs are willing to balance anthropomorphic or theomorphic analogies between *being* and *object* that will affect our normative conduct for evaluation criteria. And what are the intrinsic differences between the natural and cultural object that shape our understanding of the space around them and their context? Essentially, while culture might also be scientifically measured and nature can also be the subject of poetry and art, it is the perception by the *being* of culture and the consequence on the *object* of nature that differentiates the understanding of context and its definition of the buffer zone. Consequently, there are different methods and applications for nature and culture demanding a more focused resolution.

It is also the difference in the application between *enhancement* and *protection*. Regarding the state of the core and its surroundings, what seems to be consistent in these seemingly incompatible circumstances is that the norm prefers a graduation between worlds and scales. The staccato and sudden can be applied, but it has meaning only inasmuch that this divides the set or is ab-normal and benefits accordingly. The shoreline between the land and the seas and the fortified walled city between the urban and the rural are examples of abruptness that come to mind.

The buffer zone definition has come to us entrenched through the world of science and specifically the Biosphere programme. It usually has a sense of enhancement and support for the core values and is part of the integrity or measure of wholeness<sup>5</sup>. Natural sites seem to have their own Darwinian selection and comprehend their values in an all-encompassing environment. A possible example of a protection mode in nature could be the oceans around the Galapagos Islands and their role in the value of isolation.

Moving through time from nature to culture and the combination of the works of nature and man as embodied in the cultural landscapes, we can identify the isolation of the forbidden cities of the east and the sacred grove or temenos of the west that have meaning as spaces segregated from the everyday life. Vitruvius relates the demarcation of an abaton, an

inaccessible space, by the people of Rhodes around the statue of Artemesia, once again as an act of isolation<sup>6</sup>. But was the city considered the buffer zone for the dedicated places or was this inherent in its distinction between holy and profane. Certainly, this isolation could also be achieved in the mind; however, to do this we have to step out of our inscribed spaces to understand and comprehend their meaning.

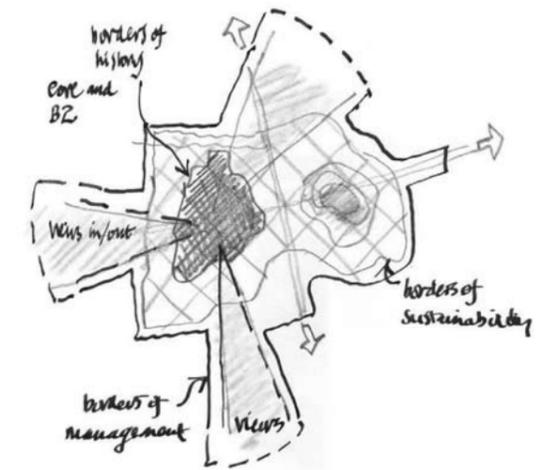
So we are left with more questions than answers, and formulating the questions is half the problem resolved. Are we dealing with the *protection* or the *enhancement* of the object? The ethics of interventions by society in the prevention of the 'bad' or the encouragement of 'good' is at the basis of planning principles and the root of the matter. The arguments that are debated seem to spread evenly between criminal and constitutional law. But it is the normative resolution that is decisive, resting on the ethical commitments of the World Heritage Convention, its committee and professional advisors.



We really need to start with the definitions. Is the buffer<sup>7</sup> zone something inherent to keep two or more areas distant from one another but shared, to *integrate* like a greenbelt? Is it dynamic and flexible element which might cushion impacts being a neutral area separating conflicting forces, broadly speaking an area designed to *separate*; an area of mediation. Could it be the overlapping spaces where the characteristics of each area are noted within a common denominator? Or even abutting spaces with little place for maneuver and possible exchange of pressures, essentially a protective barrier.

Buffer zones cannot, by definition, exist alone. They can be part of a system which involves areas of sustainability or areas of concern<sup>8</sup> and have been defined as a set of problems that a given project is intended to address. These areas are identified not only from *inside-out* but *outside-in*. They will include the areas of concern as defined by the various community interests. Finally their determination is both normative and technical. Technically, the issues of sustainability are the balance between the various interests in time and place through the economics of the mutual benefits within well-defined constraints. This leads us to the question of the necessity of buffer zones in all cases<sup>9</sup> and their application. The interrelationship between integrity and sustainability as a panacea for the buffer zone has been indicated by IUCN for the older defined natural sites and is being hotly debated in the newly formed Historic Urban Landscape encompassing complex relationships in cities. This parallel debate on HUL

is surely going to help us to expand on our vocabulary and enrich us with more relevant terminology. The areas of concern are surely a new way of looking at the problem and we should also read them as part of the urban texture and we could perhaps call the action simply, *contexture*?



There is much experience and interest in the application of buffer zones, but they are *means* and not *ends*. Researchers<sup>10</sup> and practitioners alike are looking at this document with bated breath and have flagged a number of questions which have been formulated at this experts' meeting:

- do buffer zones, not considered part of the world heritage properties, diminish the protection where in fact it is most needed;
- the concept of buffer zone is not very well understood at the local level;
- national legislation, in many cases, still focus on individual monuments;
- core zone and buffer zone tend to be managed by different authorities diminishing the relationship between the two and minimizing its importance;
- most of the pressures are located on the fringes of the world heritage areas, where legal mechanisms are weaker or non-existing;
- limited human and financial resources for cultural heritage protection;
- the division between core and buffer zone further isolates and differentiates the HUL from the remaining urban context as it accentuates the differences between historic urban fabrics from other fabrics perceived as insignificant from the heritage point of view often resulting in polarization of "living museum" or tourism theme parks;
- a single area of protection that includes the necessary extension to ensure the effective protection of the outstanding universal value;
- our texts and case-law refer to the buffer zone as an element of added protection. Is this considered as part of the nomination?

## World Heritage and Buffer Zones

The properties, that we so endear, need love and constant attention. The genetic structures of these sites, like individual beings, are shaped by their environment – it is the classic synthesis of nature and nurture. This approach was initiated in 2000 by the MAB urban forum and the application of essentially natural attributes in the cultural context is innovative and should be pursued<sup>1</sup>. Here in order to preserve the core area, the buffer and transition zones are planned according to sustainable development criteria adding value to the core itself.

The World Heritage Convention offers a comprehensive system of protection for properties with outstanding universal value where listing is like the tip of the iceberg hiding another four-fifths of actions for the conservation of heritage. It is a single element in the mosaic identifying the properties to be protected and not an end in itself.

We encourage the active participation of the World Heritage buff, one of our foremost stakeholders, as an important asset in the process of the buffer zone evaluation and its relevance to the protection of heritage.

### Michael Turner

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<sup>1</sup> Encyclopædia Britannica

<sup>2</sup> For more reading: Distancing and Death in Rabbinic Excommunication: a theoretical-critical study; Eldan, Y. PhD thesis, BIU

<sup>3</sup> Tuan, Yi-Fu; Space and Place, The perspective of experience

<sup>4</sup> For more reading: Robert Sommer *Personal Space, The Behavioral Basis of Design* (NJ, 1969)

<sup>5</sup> *Operational Guidelines*, paragraph 88

<sup>6</sup> Vitruvius, *De architectura*, ii, 8

<sup>7</sup> 1: any of various devices or pieces of material for reducing shock or impact due to contact, usually by interception 2: a means or device used as a cushion against the shock of fluctuations in business or financial activity 3: something that serves as a protective barrier: as a: Buffer State b: a person who shields another especially from annoying routine matters c: Mediator 4: a substance capable in solution of neutralizing both acids and bases and thereby maintaining the original acidity or basicity of the solution; *also* : a solution containing such a substance 5: a temporary storage unit (as in a computer); *especially* : one that accepts information at one rate and delivers it at another – edited from open dictionaries

<sup>8</sup> Khan, Andrea, Editor; Site Matters; Study areas, sites and the geographic approach to public action; Peter Marcuse

<sup>9</sup> *Operational Guidelines*, , January 2008, paragraph 106

<sup>10</sup> Leticia M. Leitao, PhD candidate, unpublished thesis

<sup>11</sup> See the relevant website: <http://www.unesco.org/mab/ecosyst/urban.shtml>

## Position Papers

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## ICOMOS Position Paper

### 1. Purpose of the paper

During the 30th session of the Committee in Vilnius, (Decision 30 COM 9), the Committee accepted the "offer of Israel to support a meeting in Paris on Buffer zones". The World Heritage Centre, in co-operation with Israel and Switzerland, has planned an international expert meeting on World Heritage and buffer zones, 11-14 March 2008 at Davos, Switzerland.

The main objectives of the meeting are the followings:

1. Review the provisions on buffer zones and boundaries in the *Operational Guidelines*;
2. Review case studies of World Heritage properties, natural, cultural and cultural landscape sites to be presented to the workshop;
3. Review background papers by the World Heritage Centre and the Advisory Bodies as well as information analyzed through the Retrospective Inventory Project;
4. Compile specific recommendations from the working groups at the Workshop and a draft decision for the 32nd Session of the World Heritage Committee.

This ICOMOS paper attempts to review issues and questions useful in improving use of the buffer zone concept in World Heritage inscription and management, for consideration during the 11-14 March 2008 expert meeting.

### 2. Introduction to issues and problems

Until the last decade or so, definition of the boundaries of inscribed zones for cultural heritage properties was a rather cursory exercise. In some cases, States Parties drew boundaries fairly tightly, wishing only to

include features which could be argued to directly support or carry OUV; in other cases, the boundaries were drawn more loosely, often in relation to the former historic extent of the place (in recognition of latent heritage values); in other cases, boundaries were chosen to correspond precisely to the zones of jurisdiction of responsible authorities. Buffer zones – where defined – were often established in even more cursory or arbitrary fashion.

However, more recently, the move to strengthen links between cultural and natural heritage which began with the recognition in 1990 of the need to move toward inclusion of cultural landscapes on the World Heritage List, and which was reinforced in expert meetings in La Petite Pierre (1993), La Vanoise (1996) and Amsterdam (1998), has promoted recognition of the importance of evaluating integrity for cultural heritage, and the concomitant greater awareness of the need to underlie choice of boundaries for inscribed properties in ways which will strengthen protection. This move to "integrity" while not yet fully understood or embraced by many of those working in the World Heritage system, offers great opportunities to address many of the recent development crises confronting the Committee, including the proposed insertion of out-of-scale or out-of-context modern (often tall) structures within World Heritage precincts.

Many problems in the application of the provisions of the *Operational Guidelines* to definition of buffer zones have been encountered in recent years. Some of the principal perceived problems are noted below:

- I. Many properties (such as Luang Prabang, Laos) have no defined buffer zone. This has often happened with

early nominations where buffer zone requirements appeared less stringent. The lack of defined buffer zones may also be the result of an oversight in preparing the original nomination. However, planned or not, the lack of a buffer zone inhibits the ability of the State Party to protect the nominated property from unwelcome development pressures planned for adjacent territories which might have a negative effect on inscribed property OUV. Where a buffer zone is lacking, attention should be devoted to the most effective means of bringing the nomination protection conditions up to date and in that context, examining the feasibility of introducing a buffer zone.

2. In some cases (including living historic sites such as historic towns or continuing cultural landscapes), the conditions drawn within a buffer zone to control physical change may inhibit less visible but essential forms of social, cultural and economic exchange critical to survival of the property and its OUV. Such buffer zones may need to be set aside or carefully defined to limit negative consequences on “living” qualities in these situations.

It may be concluded then that buffer zones should not be regarded as universally desirable in all contexts, and the consequences of their application at all levels carefully studied before adoption. (This caution, which already exists in the current *Operational Guidelines*, may need to be reinforced).

3. In other cases, the adoption of strict controls (no change) in a buffer zone may contribute to isolation of a heritage property from its long existing social, cultural and economic context, and may contribute to unplanned and unnecessary museification of the heritage property by conceptually isolating the property from its surroundings.

4. In some cases, the existence of a buffer zone is used to justify inappropriate development proposals, by allowing developers to stress that the new developments are outside the inscribed zone. “Its only in the buffer zone” is used to excuse a multitude of potentially negative impacts on OUV – treating the buffer zone as a zone of lesser importance where developments inappropriate in the inscribed zone could be accepted.

5. In some cases, development proposals outside buffer zone boundaries accepted at inscription, are deemed suitable by States Parties by default, since they fall outside the zones prescribed for review by the Committee. This is often true even where these proposals could have a large negative impact on the OUV of the inscribed property. This may suggest that buffer zone boundaries were initially drawn too tightly and should be reconsidered, or that it may be useful to develop an approach to protective zoning which defines desired conditions useful beyond the buffer zone, inside a related “tertiary zone” of protection.

It may therefore be useful to think of “setting” as including the buffer zone, and defined zone(s) beyond the buffer zone.

6. In some cases, buffer zone boundaries are defined, but the conditions within the zone are not specified or made clear, and appear unsupported by local legislation of any kind. “Flexible” arrangements of this kind are easy to “relax” when unsympathetic development proposals are made. The buffer zone, where meant to protect OUV, must not be a comfortable and reassuring fiction – it needs to be linked to practical and well rooted measures of protection.

7. In some cases, buffer zone boundaries may appear to be drawn too narrowly to fully protect the OUV of the inscribed zone. Some ICOMOS members involved in the ICOMOS evaluation process of the Rideau Canal were initially concerned that the proposed 30 meter buffer zone proposed for the Canadian nomination (2007) was not sufficiently large to protect the viewscape surrounding the canal. Concerning the buffer zone itself, whose boundary is established in provincial legislation as a mandatory “flood plain” setback for construction adjacent a water course, while ICOMOS noted that it “considers that the boundaries of the nominated property are adequate to protect the structure of the canal,” it also noted that it “considers that the visual setting of the canal needs clearer definition and appropriate protection to ensure the visual values of the setting are projected alongside the environmental values.” The Committee itself noted that consideration be given “to strengthening [the property’s] visual protection outside the buffer zone” (Decision 31 COM 8B.35).

8. Provisions for altering buffer zone boundaries or related conditions are not clearly specified. The same may hold true for boundaries of inscribed zones. The boundaries of the monument zones of the Kathmandu Valley inscription, albeit early in the life in the Convention (1979), were only vaguely drawn in the nomination documents submitted. These were later rationalized by Anne Raidl of the Cultural Heritage Division of UNESCO in the mid 1980s; however when inappropriate development reduced OUV in some segments of the original 7 component serial inscription, the Committee and Advisory Bodies launched an effort to re-draw (that is, reduce) the boundaries of the inscribed zone and to introduce related buffer zone boundary definitions (2005). This process resulted in newly reduced boundaries for most of the 7 “monument zones”, and newly defined buffer zones adjacent – but the process was plagued with ambiguities, as there was no clearly set out way to work on this, within the *Operational Guidelines*. Were the modifications “minor”? Were they “major”? What criteria should new boundaries have met? The *Operational Guidelines* need to be developed to help manage proposed changes to boundaries of both inscribed zone and buffer zone.

9. The boundaries of the defined inscribed zone and related buffer zone in some cases do not conform precisely to the areas of responsibility exercised by management authorities responsible for protecting the OUV of an inscribed property. Such lack of congruence can make implementation and monitoring of protective measures within both inscribed zone and buffer zone problematic. This kind of situation often happens within historic cities or cultural landscapes where no single management authority has responsibility. Definition of conditions and boundaries for inscribed and buffer zones should be carried out in careful consideration of the defined zones of influence of all stakeholders and responsible authorities.

10. Many recent cases debated within the Committee have involved efforts to judge the impacts of large scale developments outside the defined buffer zone. These cases have been difficult for the Committee to deal with because there is no guidance within the *Operational Guidelines* for managing the larger setting of properties which may extend beyond buffer zones. Nor are there easily available impact evaluation tools or mechanisms which would permit straightforward assessment of the impact of such development proposals on the OUV of nominated or inscribed properties. This is an area where “policy” needs to be established by the Committee re importance of accepting setting (beyond the buffer zone) as an area to be controlled, particularly for analysis of the visual impact of development proposals on OUV. Such “policy” needs to be placed in the *Operational Guidelines* and scientifically acceptable procedures developed for measuring impacts, to attempt to move the debate beyond interpretation of subjective measures.

11. The key concepts important to consider in use of buffer zones are not themselves well defined or clearly understood. Phrases like buffer zone, core zone, inscribed zone, immediate setting, setting etc. are used in Advisory Body discussion and Committee debate sometimes interchangeably and without being clear and agreed upon understanding. Equally, other significant technical phrases in the current version of the *Operational Guidelines* such as “important views” and “other areas or attributes that are functionally important as a support to the property and its protection” are not explained or illustrated and are likely to be interpreted in different ways by different readers. A buffer zone lexicon needs to be debated, set up and accompanied with illustrative case studies.

### 3. Buffer zones in the *Operational Guidelines*

The concept of “buffer zone” has been treated in every version of the *Operational Guidelines* from the first version produced in 1977, forward to the

present. The initial concept, then defined as one which “may be applied”, appears as an optional inscription requirement, and one without a clear purpose.

The *Operational Guidelines* 1977 state:

“26. When setting the boundary of a property to be nominated to the List, the concept of a buffer zone around the property may be applied where appropriate. In such instances the nominations would include:

- a) a precise definition of the surface area of the property itself, including the sub-surface area where necessary
- b) an indication of the buffer zone around the property itself (i.e. the natural or man-made surroundings that influence the physical state of the property or the way in the property is perceived).

*Such buffer zones will be determined in each case through technical studies and provided with adequate protection.”*

The *Operational Guidelines* of 1978 add “and feasible” after “the concept of a buffer zone around the property may be applied where appropriate”. This addition appears to reflect a concern for cautious application of the concept – only imposing buffer zone definition in areas and situations where it might be deemed to be helpful.

The 1980 *Operational Guidelines* synthesize the above statements and interpret the use of “appropriate” (used previously in the 1977-78 version of the *Operational Guidelines*), to emphasize that a buffer zone should be defined “where necessary for the proper conservation” of inscribed properties. For the first time, the Guidelines also state explicitly that this concept is to be applied to both cultural and natural heritage properties. Finally, the buffer zone concept is strengthened – “should be foreseen” replaces “may be applied” (1977), and the buffer zone itself is seen as a zone to be managed, as it “should be afforded the necessary protection”.

The 1980 *Operational Guidelines* stated:

12. Whenever necessary for the proper conservation of a cultural or natural property nominated, an adequate “buffer zone” around a property should be foreseen and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or on the way in which the property is perceived; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

The wording selected for buffer zone definition in 1980 remained unchanged within the *Operational Guidelines* until 1988 when some small but significant changes to wording were made. The 1988 *Operational Guidelines*

replace the phrase “an adequate ‘buffer zone’ around a property should be foreseen” by “an adequate ‘buffer zone’ around a property should be *provided*” – reflection of an evident desire to strengthen the buffer zone requirement. This version of the Guidelines also replaces wording used to define buffer zones in 1977-78 in reflecting their positive function in influencing development patterns and perceptions (“A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or on the way in which the property is perceived”) by language which strengthens the understanding of the buffer zone as an instrument intended to restrict change (“A buffer zone can be defined as an area surrounding the property which has restrictions placed on its use to give an added layer of protection”).

The reference to buffer zones introduced in the 1988 version remained unchanged until the 2005 version, itself developed over 5 years of deliberation among Advisory Bodies, World Heritage Centre and the Committee. Here the language has been altered to reflect some of the problems beginning to emerge in the previous decade, and for which direction given in the *Operational Guidelines* had proven inadequate. These include:

- a more comprehensive definition of buffer zones and the intent of protective mechanisms (“...an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection.”),
- specification that the rationale for the definition of the buffer zone should be provided (“clear explanation of how the buffer zone protects the property”),
- the need to justify why a buffer zone in some cases may not have been proposed (“a statement as to why a buffer zone is not required”),
- the statement “details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question” which was first inserted in the buffer zone paragraph in the *Operational Guidelines* in 1980, was modified with the addition of the phrase “authorized uses” following “size and characteristics” in the 2005 version of the *Operational Guidelines*, and,
- finally, a clear and explicit recognition that development within a buffer zone is subject to approval by the World Heritage Committee (“any modifications to the buffer zone subsequent to inscription of a property on the World Heritage List should be approved by the World Heritage Committee”). Relevant paragraphs of the *Operational Guidelines* 2005-2008 follow:

103. *Wherever necessary for the proper conservation of the property, an adequate buffer zone should be provided.*

104. *For the purposes of effective protection of the nominated property, a buffer zone is an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection. The area constituting the buffer zone should be determined in each case through appropriate mechanisms. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating the precise boundaries of the property and its buffer zone, should be provided in the nomination.*

105. *A clear explanation of how the buffer zone protects the property should also be provided.*

106. *Where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required.*

107. *Although buffer zones are not normally part of the nominated property, any modifications to the buffer zone subsequent to inscription of a property on the World Heritage List should be approved by the World Heritage Committee.*

It is also worth noting that the efforts of the Committee, Advisory Bodies and the World Heritage Centre to carry out a comprehensive revision of the 1999 *Operational Guidelines* contain a number of interesting ideas concerning use of buffer zones, not included in the final version of the 2005 *Operational Guidelines*. Relevant paragraphs which illustrate these points in the draft (not approved) 2004 version of the *Operational Guidelines* are shown below. Points stressed in that version and accompanying discussions include:

- placing boundary definition of the nominated property and its buffer zone as essential components of necessary property protection, at the same level as “legislative, regulatory, contractual, planning, institutional and/or traditional measures” and “a coherent management system”,
- a more explicit approach to conservation: the use of buffer zones not just to ensure “conservation” but to “protect the nominated property from the direct effects of encroachment and the impacts of resource use outside it”,
- the use of a more comprehensive approach to zoning within and beyond the inscribed property as a protection tool, rather than an exclusive reliance on external “buffer zones” (“zoning within a nominated property may achieve the same goals as a buffer zone”; “use of zoning controls may assist States Parties in ensuring that uses and activities which take place on and adjacent to a nominated property respect the need to protect of the property”, etc.).

Excerpted key paragraphs from the draft (not approved) 2004 *Operational Guidelines* follow below:

77. *Nominated properties must have legislative, regulatory, contractual, planning, institutional and/or traditional measures (Paragraphs 78-84) integrated within a coherent management system (Paragraphs 85-97), and which are appropriate for the protection of the property. In addition, a clear delineation of the boundaries (Paragraphs 98-101) of the nominated property, and of any necessary buffer zone (Paragraphs 102-107), must be provided.*

102. *Wherever necessary, an adequate buffer zone should be provided to protect the nominated property from the direct effects of encroachment and the impacts of resource use outside it.*

103. *[...] In certain circumstances, zoning within a nominated property will achieve the same goals as a buffer zone.*

104. *In all cases, buffer zones and other zoned areas must have adequate protection to enable them to function effectively.*

107. *The use of zoning controls may assist States Parties in ensuring that uses and activities which take place on and adjacent to a nominated property respect the need to protect of the property.*

#### 4. Relationship to defining integrity for cultural heritage

Since 2005, the *Operational Guidelines* have called for States Parties to analyse the conditions of integrity for cultural heritage nominations as well as for natural heritage nominations. This decision has its roots in the Amsterdam meeting on cultural and natural heritage (1998) and the commitment to better align treatment of cultural and natural heritage nominations. The 2005-2008 *Operational Guidelines* define integrity for cultural heritage to include “intactness”, and “wholeness” – and therein, with the latter, have focused attention on defining boundaries of inscribed sites in a manner more closely approximating that used by IUCN, asking what extent of territory should be included (and therefore protected) to preserve the integrity of the property. At minimum, it appears that nominations should include all elements necessary to express the OUV of the property.

State Party understanding of this requirement is as yet mixed; some cultural heritage nominations treat “authenticity/integrity” as if it were a single undifferentiated concept; many ignore it or mis-use it. As well, many “unauthorized” explanations (that is, not yet reviewed or accepted by the Committee) are being used in assessment to help ICOMOS and others understand and apply “integrity” in a tangible way. The favoured unauthorized interpretation – involving questions around visual, functional and structural integrity – derives from the 1996 La Vanoise expert meeting in Integrity for Cultural Heritage. (See Annex 5).

A paper presented by Jukka Jokilehto in Nov. 2007 in Recife, Brazil (5<sup>th</sup> international CECL seminar) illustrates how these unauthorized concepts can credibly creep into practice:

*“The social-functional integrity of a place is referred to the identification of the functions and processes on which its development over time has been based, such as those associated with interaction in society, spiritual responses, utilisation of natural resources, and movements of peoples. The spatial identification of the elements that document such functions and processes helps to define the structural integrity of the place, referring to what has survived from its evolution over time. These elements provide testimony to the creative response and continuity in building the structures and give sense to the spatial-environmental whole of the area. Visual integrity, instead, helps to define the aesthetic aspects represented by the area. It is on such dimensions of integrity that one can base the development of a system of management so as to guarantee that the associated values would not be undermined.”*

While these three concepts first promoted in the La Vanoise meeting report adopted by the World Heritage Committee in Merida, in 1996 are not alien to the world of cultural heritage – a strong family resemblance may be noted to the “firmitas, venustas, commoditas” of the Roman architect/builder Vitruvius (structure, beauty, function) – it should be noted that these concepts were adopted in La Vanoise in relation to natural heritage, not cultural heritage, and that for cultural heritage, they have no official standing within the Committee.

It should also be noted that meetings reviewing authenticity and integrity have proposed merging the two concepts for over a decade now. This proposal first appears in the report of the La Vanoise meeting. This proposal (coming from a natural heritage expert meeting) has not yet been accepted by those involved with cultural heritage, but it has promoted continuing efforts to strengthen parallels within application of qualifying conditions to cultural and natural heritage properties, including the decision to accompany examination of authenticity with integrity for cultural heritage, and still ongoing discussions about how to define authenticity in ways appropriate for natural heritage.

While no consensus exists around these various approaches, it is clear that the treatment of authenticity and integrity is converging, and still in motion. Whatever the outcome of the current round of discussions, they will certainly have an impact on the ability to meaningfully define appropriate conditions and boundaries for buffer zones, and must be concluded in advance of any final recommendations being developed around improved use of “buffer zones”.

Approaches which integrate concern for the concepts which lie behind authenticity (ensuring the ability of the property to convey significance) and integrity (ensuring

the ability of the property to sustain significance) exist in some national jurisdictions. The Canadian concept of “commemorative integrity” refers to the “health” and “wholeness” of a site: a “national historic site may be said to possess commemorative integrity when:

- the resources that symbolize or represent its importance are not impaired or under threat,
- the reasons for its significance are effectively communicated to the public, and
- the heritage values of the site are respected”.

While using the phrase “integrity”, and integrity-like concepts (health, wholeness), the additional inclusion of concern for effective communication of reasons for significance very clearly shows that the tool embraces concern for use of both the World Heritage concepts for integrity and authenticity in one tool. While this does not prove anything more than that such an approach works well in Canada, it does demonstrate that in some contexts, it may still be possible to improve future integrated application of the two concepts inside the World Heritage framework.

ICOMOS believes that it would be useful to clarify implications and modalities of use of the integrity concept for cultural heritage in much more detail than at present, and to integrate this understanding within any effort to improve application and use of the buffer zone concept.

##### 5. ICOMOS reviews of buffer zone issues

ICOMOS has been involved in dealing with the use of buffer zones in relation to World Heritage practice during the life of the Convention, and also the use and application of the concept in contemporary conservation practice. The influence of ICOMOS is already present in the articulation of the paragraphs and procedures in the many versions of the *Operational Guidelines* which treat buffer zone issues.

In this paper, four particular sources of contemporary scientific input are reviewed:

- The 2005 Xi’an Declaration on the importance of “setting”,
- Analysis provided (2006-2007) by ICOMOS Treasurer-General Giora Solar of previous buffer zone case studies and debates,
- The conclusions of the ICOMOS IFLAFI (International Committee for Legal, Administrative and Financial Issues) meeting on World Heritage buffer zones (Nov. 2006) in Hiroshima, Japan,
- Comments by members of the ICOMOS World Heritage Working Group on an early draft of this paper.

##### The Xi’an Declaration, Xi’an, China, October 2005

Setting has been one of the key indicators in analysis of authenticity since the development of the *Operational Guidelines*. Prior to the Nara Document of 1994, it was understood that the test of authenticity was to be applied to design, material, setting and workmanship. While Nara extended the list of authenticity indicators, setting remained an important part of that analysis.

The concern for visual impacts which has accompanied introduction of integrity for cultural heritage in 2005 has also renewed focus on the use and significance of setting.

These concerns have been fully explored during the 2005 ICOMOS General Assembly in Xi’an. Analysis of the importance of setting in the Xi’an Declaration offers at least two points of important reflection within the process of improving the definition and application of “buffer zones” and their relationship to the larger concept of setting.

The first of these is the idea that setting is not just a zone of secondary importance meant to support a zone of primary importance, but rather an equal, complementary and inseparable part of the so-called zone of primary importance, given its contribution to helping establish and define “significance and distinctive character”. This statement reinforces the idea that planning conditions and boundaries of inscribed zones, buffer zones and even tertiary zones must be designed together. It suggests further the possibility of considering an entirely new approach, one which defines setting as an indispensable and integral part of the inscribed zone. It would be well worth exploring – in spite of the inconvenience of abandoning approaches used for 30 years – whether such an approach might overcome some of the problems associated with the two tier zoning approach now in place.

The second important point is the idea that setting (and therefore buffer zones) can be concerned with more than “the physical and visual aspects”. Emphasis is given also to the importance of social and cultural context, and to maintenance of intangible traditional practices and knowledge which have shaped the historic development of important heritage places and continue to sustain their significant values – practices such as “interaction with the natural environment; past or present social or spiritual practices, customs, traditional knowledge, use or activities and other forms of intangible cultural heritage”. Ensuring that buffer zones are designed in relation to social, cultural and economic parameters as well as physical parameters would ensure that defined conditions would reflect all sources of the heritage values of a place.

These two points are best illustrated in the first two articles of the Xi’an Declaration, reproduced below:

1. *The setting of a heritage structure, site or area is defined as the immediate and extended environment that is part of, or contributes to, its significance and distinctive character.*

*Beyond the physical and visual aspects, the setting includes interaction with the natural environment; past or present social or spiritual practices, customs, traditional knowledge, use or activities and other forms of intangible cultural heritage aspects that created and form the space as well as the current and dynamic cultural, social and economic context.*

2. *Heritage structures, sites or areas of various scales, including individual buildings or designed spaces, historic cities or urban landscapes, landscapes, seascapes, cultural routes and archaeological sites, derive their significance and distinctive character from their perceived social and spiritual, historic, artistic, aesthetic, natural, scientific, or other cultural values. They also derive their significance and distinctive character from their meaningful relationships with their physical, visual, spiritual and other cultural context and settings.*

*These relationships can be the result of a conscious and planned creative act, spiritual belief, historical events, use or a cumulative and organic process over time through cultural traditions.*

##### Comments by Giora Solar

Giora Solar's paper of 2006-2007 prepared for review within ICOMOS stresses a number of important points in relation to wise use of buffer zones. The most important of these ideas is that buffer zone boundaries and conditions must be defined in legal terms and “not just in the World Heritage nomination dossier”. Mr. Solar also illustrates the difficulties faced by a property like Auschwitz, inscribed without a buffer zone, and where the State Party, to meet Committee requests for a buffer zone established a small (100 metre) buffer zone, whose existence was not communicated to the public and which cannot be “found” when visiting the property.

Mr. Solar also proposes a very useful kind of checklist of questions. His proposal, intended to help an ICOMOS expert carrying out an evaluation mission, could also be of great assistance to States Parties in preparing their nominations. This check-list of questions is summarized below for review and discussion during March 2008 meeting:

1. The role of a buffer zone is to protect the inscribed zone from any activities which could compromise its cultural values. This is true for World Heritage properties as well as other heritage properties. What are the values of the heritage property and how does the buffer zone protect them?

2. What are the potential threats to a site and what is the role of the buffer zone in eliminating or minimizing these?

3. What are the activities and actions which could compromise heritage values? (e.g., all forms of all kinds of pollution, including acoustic, visual, construction, roads, vibrations, natural disasters etc.).

4. What should be the size of a buffer zone and how should it be established?

5. What kind of restrictions should be in place for a buffer zone to be effective?

6. The buffer zone must be part of a property's management plan or system. The buffer zone must itself be managed. What is the management and control system for the buffer zone?

7. Is the buffer zone defined in any plan with legal status?

8. Does the buffer zone have legal protection?

9. Should a nomination without a proper buffer zone (following ICOMOS evaluation) be “referred”?

10. How should the boundaries of a buffer zone be marked on the ground? Should they be marked? (for example: should small signs indicating “Boundary of World Heritage area protection zone” or words to that effect be used?

11. What should be the process for altering a buffer zone by a State Party? What should be the process for a new nomination?

12. Should there be 2 levels of buffer zone? Areas closer to the inscribed zone, and beyond them?

This approach could be useful for high rise building threats. Since this is mainly a visual problem, a buffer zone for visual threats could be much larger than for other threats.

##### Meeting (2006) of the ICOMOS' ICLAFI (International Committee for Legal, Administrative and Financial Issues)

The meeting of ICOMOS' ICLAFI (International Committee for Legal, Administrative and Financial Issues) held in Nov. 2006 in Hiroshima, Japan brought together more than a dozen legal experts and scholars to examine the use of the buffer zone concept in World Heritage practice. The papers presented at the meeting (all of which can be found on the ICOMOS web site) provide an excellent overview of a wide range of concerns and difficulties in applying the buffer zone mechanism effectively, in a variety of national contexts, and constitute a very valuable, timely and practical contribution to the current debate.

The meeting's recommendations are very general and are not as bold as the observations found in some of the individual papers. The recommendations (addressed to ICOMOS – see Annex 3) stress the following:

- need for further study, involving co-operation of ICOMOS committees,
- need to increase awareness of potential for use of buffer zones in the Asia-Pacific region,

- need for efforts to convince those whose actions can affect heritage places to be respectful of such places and their buffer zones, through encouraging ethically responsible commitment within the corporate sector and its business communities, and responsible citizenship,
- need to strengthen through education greater global awareness of the kind of measures needed to protect World Heritage properties, related buffer zones and their intangible aspects and dimensions, and to bring significant issues and measures to the attention of the World Heritage Committee.

While many of the individual papers detail particular local circumstances in various contexts, many also illuminate important principles and observations. It should be noted however that not all are in agreement with each other. Some of the most notable of these follow:

- Hristina Staneva's overview paper (reproduced in Annex 4), written from her perspective as Vice-President of ICLAFI, summarizes many of the broad challenges confronting the effective use of buffer zones on World Heritage properties. Her conclusions pose four important questions:
  1. *Do the buffer zones adjacent to World Heritage properties respond to the dynamic changes and challenges of contemporary world – threats due to global warming; social and economic development; political pressure, etc.?*
  2. *In case we accept that diversity is the intrinsic value of world heritage, should the outstanding representatives be treated in a universal way? Shouldn't we respect different approaches, in the context of the specific cultures, towards buffer zone's role as an instrument for safeguarding this diverse heritage?*
  3. *Isn't it high time to start preparing a sort of guiding instructions for protection, maintenance and presentation of world heritage properties for the different geo-cultural regions, based on their specificities?*
  4. *Isn't it necessary to increase the requests towards the legal and management frameworks and standards of world heritage protection?"*
- Thomas Adlercreutz' paper, which explores national provisions in Sweden relating to buffer zones, suggest that buffer zones are part of dated approaches to heritage protection, hardly surprising given their 30 year old entry into the *Operational Guidelines*. Adlercreutz argues that "a buffer zone might also buffer the preservation message. To UNESCO and the heritage community, the nominator may say: Look, we have an extensive buffer zone in order to control what is happening even far from the protected heritage core. To land owner, developers and other local interests, the message may instead sound: Hey, this is just the buffer zone. Nothing really bad can happen to your projects here."
- Leonard de Wit of the Netherlands notes that while his country does not have legislation which grants buffer zones around World Heritage properties special status, that the Dutch seek to broadly

control what happens beyond the boundaries of World Heritage properties through heritage property management strategies which encourage "preservation by development" – proactively "making cultural heritage values a starting point for development". Mr. de Wit also notes in referring to the Kinderdijk-Elshout mill complex that the area nominated to the World Heritage List (which includes the important mills but also a part of the related landscape as well) is sufficiently large to ensure protection of its OUV. The World Heritage area is a "protected landscape" whose "zoning plan only permits the area to be used in ways that reinforce the cultural value".

- Jadran Antolovic of Croatia, contrary to the conclusions of the above papers, with reference to the Euphrasia Cathedral complex of Porec, itself set as an inscribed zone (zone A) within the protected monument complex of Porec (zone B), and the example of Dubrovnik, inscribed in 1979 without a buffer zone, suggests that "the Croatian experience demonstrates that it is necessary to clearly set the boundaries of the protected monument complex due to the relations with the local authorities as well as owners of real estate in the protected area. It is essential that a buffer zone be a component of the protected area so as to be able to implement the protective measures established by the laws. In the Croatian practice, all other solutions led to doubts and conflicts, involving the obligation to establish zoning within the monument complex, as prescribed by the delegating legislation, in order to be able to establish the necessary protective regime."
- Satu-Kaarina Virtala of Finland examines the case of Old Rauma in relation to the management of change in buffer zones. Virtala describes how a decision by local Council to amend the local detailed plan to permit expansion of retail activity in the buffer zone was appealed by many parties including the National Board of Antiquities and the Society of Old Rauma on the basis that the proposed changes would alter the town's structure, and, by moving retail focus to the buffer zone, turn the historic commercial core of Old Rauma into a "bedroom town". The Supreme Administrative Court dismissed the appeal on the basis that such changes were inevitable, and part of coming to terms with modern needs. While this debate could be continued indefinitely in many other historic towns in Finland and elsewhere, the decision by the Supreme Court and the failed arguments advanced by those opposing the decision demonstrate that the provisions established to govern change in the buffer zone insufficiently took into account the OUV of Old Rauma.
- Christof Machat of Germany, with reference to conflicts surrounding development proposals near the Cologne Cathedral notes that the Cathedral was inscribed in 1996 without a buffer zone, and that although the Committee requested establishment

of a buffer zone at the time of inscription, none has ever been established. Machat notes arguments advanced by the city conservator in 1980 that a buffer zone was not necessary as "the cathedral is protecting itself", even though the "protection areas" established by the Protection Law of June 1, 1980, were never used, and resulted in the vulnerability of the Cathedral to proposals to build large scale towers which would have negative impacts on views of the cathedral.

Other very useful presentations were made by Mr. J. Antolovic, Ministry of Culture, Croatia, Ms. A.M. Draye, University of Hasselt, Belgium, Mr. W. Kowalski, University of Silesia, Poland, Mr. P. Mandawala, University of Sri Jayewardenepura, Sri Lanka, Mr. A. Martorell, Open University of Madrid, Spain, Mr. A. Villanueva, Universidad Complutense, Spain, Mr. W. von Trützschler, Thuringian Ministry of Culture, Germany, Mr. G. Wiffen, Macquarie University, Australia, Ms. A. Umezu, City Office of Kyoto, Japan, and Mr. Y. Utaka, Hyogo University, Japan.

All of these papers may be downloaded by going to the home page of the ICOMOS web site.

#### Comments by members of the ICOMOS World Heritage Working Group

Useful comments were provided by several members of the ICOMOS World Heritage Working Group in the preparation of this paper. Summaries of these inputs follow:

- Susan Denyer noted that it was important to give more attention to the issues of setting and visual integrity and the way these relate to buffer zones, within the context of understanding that these are only one means to the end of protecting OUV. Susan also stressed that it could be dangerous if the buffer zone meeting gave the impression that protection/management ended at the limit of the buffer zone. Somehow responsibility for managing/limiting major impacts outside buffer zones – within setting – needs to be seen as part of the larger responsibility for sustaining OUV. This has been acknowledged in various SOC reports and the *Operational Guidelines* need to address this.
- In particular, Susan set out a number of linked framing considerations:
  - "setting" has been noted as an essential part of the authenticity of the property as noted in the *Operational Guidelines* (1977), both pre- and post- Nara,
  - setting is related to visual integrity,
  - setting can be wider than buffer zones,
  - there is a need for the SP to protect/manage change inside and outside buffer zones,

- buffer zones protect/manage change in the immediate setting (*Operational Guidelines*) not necessarily in the wider setting,
- the wider setting may need to be protected in other ways,
- both wider and immediate setting can sometimes be protected without a buffer zone: the lack of a buffer zone should not imply that protection or appropriate management of change is absent,
- we normally cannot define buffer zones to protect the whole setting or the wider area related to visual integrity of most sites –especially if threats are from tall buildings or wind-farms or noise (e.g., Hadrian's Wall),
- we need to consider what has been said in recent SOC reports on visual integrity where threats are outside buffer zones, and to consider 'case law' developed within planning inquires in various parts of Europe and elsewhere, where development outside buffer zones has been successfully challenged,
- for most properties there is a need to manage change in their settings to protect visual integrity and thus OUV; buffer zones with formal protection are one instrument which can offer a degree of protection/management for part of the setting but cannot provide the whole answer,
- in response to increasing and larger threats, we have to find better ways of defining setting and visual integrity, and of the limits of change appropriate in these areas, and thus how buffer zones can contribute to this process in the "immediate setting".
- Guo Zhan raised a number of important practical points concerning implementation of the results of the Davos meeting: "the position and nature of the suggestions to be passed by the upcoming experts' meeting; what role it will play; and how we shall deal with existing buffer zones and potential nominations". He agrees with the contributors to this report that "great concern must be given to the factors outside current buffer zones that affect severely OUV". He also notes that "apart from theoretical issues, coping with the problem still involves legal principles, laws, practicability, and giving the State Party a strong reason and rational means" to protect OUV. Finally, again stressing practical outputs, he notes the need for "technical standards and rules that are applicable to highly diversified heritage sites, as well as detailed, fully-fledged, feasible and specific standards" set by the Advisory Bodies and the World Heritage Committee.
- Tamas Fejerdy noted in verbal communications (Feb. 20) several key principles to keep in mind in this discussion:
  - that it was important to be able to recognize zone(s) with different purposes and roles around the inscribed zone,
  - that it was important to recognize that the tools in such zones should be different, in relation to those different purposes and different roles,

- that it was important in considering the use of buffer zones to be able to extend this discussion to include and to integrate with the linked concepts of “setting” and “integrity”,
- that it was important in evaluating the proposed approach and the associated tools to be able to use that approach to control risks to OUV, and that this was really the bottom line criterion in evaluating effectiveness of buffer zone controls: impact on OUV.

## 6. Preliminary conclusions for discussion

The following preliminary conclusions are proposed by ICOMOS to provide a basis for discussion in the March 11-14, 2008 meeting to improve the effective use of the buffer zone concept in inscribing and caring for World Heritage properties.

Some of the proposals involve improvements to the status quo: strengthening, clarifying, extending definition of boundaries and conditions of buffer zones, to better protect the OUV of the inscribed zone. These proposals accept the practice of two tier zoning as a useful tool to manage planning decisions, and simply ask: how can such zoning be better managed and used “to achieve protection objectives?”

Some of the proposals offer the prospect of “radical” change, in improving use of the buffer zone system (for example, replacing the system of inscribed zone and buffer zone by a single larger inscribed zone incorporating the basic features of a property and the related landscape around it). Nevertheless these proposals are still rooted in the idea that zoning, understood as control of developmental characteristics of a territory (including use, height, site coverage etc.), is an appropriate tool to manage change.

Some of the proposals – recognizably in the minority – are built around the idea that zoning is an insufficiently flexible tool to protect the values of World Heritage properties. The writings of Jane Jacobs dating back to the early 1960s portray zoning as an urban planning tool which inevitably replaces existing social, cultural and economic diversity by bland, homogeneously organized urban zones, characterized by single use, single height, single lot coverage prescriptions. To this end, some of those commenting in the ICLAFI meeting have suggested that zoning as a planning tool has outlived its usefulness and should be abandoned.

In this context, it is important to recognize that the history of change within World Heritage is generally one of incremental alteration of existing provisions within the *Operational Guidelines*. ICOMOS believes that while a conservative, incremental approach to change may prevail, it would be useful nevertheless to explore the consequences of some of the more

radical and unconventional options suggested above, and to see what useful elements could be considered for incorporation.

The following preliminary conclusions are presented, in no order of priority, for discussion and review:

1. Buffer zones are an important mechanism for improving care, protection and management of inscribed World Heritage properties, both cultural and natural.
2. Development of a single approach to defining appropriate buffer zones is problematic given the large number of types of cultural heritage inscribed on the World Heritage List (single architectural monuments, architectural complexes, archaeological sites, historic cities and centres, cultural landscapes) and the complex and diverse administrative, cultural and socio-economic contexts in which they may be found.
3. It may be important for the Committee to place emphasis on an **appropriate process** for developing buffer zone conditions and boundaries, and to specify the range of considerations to be looked at within that process rather than attempting to define prescriptive “rules” for buffer zones, applicable to all.
4. Buffer zone boundaries and conditions need to be defined in relation to boundaries and conditions established for the inscribed zone of a World Heritage property, and in relation to any tertiary zones defined beyond the buffer zone. Where zoning is seen as important, stronger weight should be given during inscription to presentation by the State Party of an integrated approach to property zoning, rather than treating inscribed zone boundaries and buffer zone conditions as separate issues. This could imply introduction of a component within the nomination format which presents the overall approach to zoning for the inscribed property, and the surrounding buffer and tertiary zones.
5. The purpose of any buffer zone should be carefully established; essentially the conditions established within a buffer zone should work to protect the OUV of the property proposed for inscription. This gain should not happen however at the expense of the heritage values of the buffer zone.
6. Consideration should be given to whether the present system could be improved by replacing the conventional two tier “inscribed zone” and “buffer zone” approach with development of a single large inscribed zone including all important features and the associated landscape. While an approach such as this might de-stabilize efforts to place treatment of buffer zones for all World heritage properties on the same footing, the advantages for some properties (those akin to cultural landscapes for example) are considerable and may offer some constructive ideas which could be applied to improving the present system.

7. Within the “one size does not fit all” category of conclusion is the suggestion advanced by Solar (see above) to define different buffer zones relative to the qualities it is desired to protect – for example, establishing a different (presumably larger boundary) for visual impacts, than for other kinds of impacts.

8. Solar’s proposed question checklist for those carrying out ICOMOS evaluation missions, and for those preparing State Party nomination documents should be examined, modified as necessary, and added to the advice provided to ICOMOS experts carrying out evaluation missions.

9. Since the Committee’s decision to require that cultural heritage sites meet the conditions of integrity (implemented 2005), the definition of the boundary of the inscribed zone has been very closely linked to perceptions of a property’s **integrity**. As well, the relationship of **integrity and authenticity** to **outstanding universal value** has been under review in a number of regional meetings and thematic meetings in recent years. Equally attempts have been made in recent meetings to improve the ability of the Committee to establish **monitoring systems and indicators** for state of conservation analyses, and for **periodic reporting**, inevitably measuring the impacts of time and change on the same variables of authenticity, integrity, OUV and the extent and conditions of inscribed/ buffer zones. Any attempt to draw firm conclusions concerning buffer zones at this stage needs to be integrated and linked with these parallel efforts to prescribe new approaches to definition and use of integrity, authenticity, definition of OUV, and monitoring systems and indicators.

10. The concept of buffer zone is inextricably linked with the concept of setting examined in detail during the Xi’an, China General Assembly in 2005. Provisions for definition of conditions and boundaries of World Heritage buffer zones should be compatible with the provisions of the ICOMOS Declaration of Xi’an drawn up and approved by ICOMOS during the General Assembly (2005). This involves giving serious consideration to some of the key ideas in that document:

- considering a property and its setting as indispensable parts of the same whole, particularly in relation to establishing significance, and,
- recognition of the need to consider the important characteristics of a property’s social, economic and cultural context as much as its physical context.

11. Some attention should be given to the “lost” concepts explored by the Advisory Bodies and the World Heritage Centre in developing the 2005 *Operational Guidelines*, and illustrated in the draft (not approved) 2004 *Operational Guidelines*, including emphasizing the importance of zoning in general terms as a protection mechanism for World Heritage properties, both **within** and beyond inscribed and buffer zones.

12. Some attention should be given to improving use and clarity of buffer zone terms, including possible replacement of the phrase “core zone” by “inscribed zone” (as recommended earlier by the Advisory Bodies and the World Heritage Centre (2004 draft version of the *Operational Guidelines*), and improving consistency of reference to World Heritage properties (rather than “sites”, the latter being only one of three sub-components of the definition of “cultural heritage” found in the World Heritage Convention, and repeated in the *Operational Guidelines*). Other terms to be looked at include integrity, visual integrity, structural integrity, functional integrity (the latter three for cultural heritage properties as much as for natural heritage properties), setting, immediate setting.

13. Every effort should be made to bring approaches adopted or developed for cultural heritage in line with those developed for natural heritage both to strengthen to the extent possible the cultural-natural unification of process so long pursued by the Committee, and also to ensure that the messages communicated to States Parties and property management authorities are as simple, concise and consistent as possible.

14. In proposing improvements to the *Operational Guidelines*, and an accompanying “catch up” strategy to the Committee, it would seem important to propose different sets of recommendations for three categories of properties:

- properties inscribed without buffer zones,
- properties inscribed with buffer zones (possibly investigating with the aid of the Retrospective Inventory the effectiveness of current buffer zone conditions and boundaries) and
- future nominations.

15. The Retrospective Inventory should be developed to include systematically organized data on the effectiveness of the application of the buffer zone concept, constituting reference jurisprudence on this issue, if such measures not already planned and in place.

## 7. Final thoughts: premises for testing

In a concluding summary, this paper offers a number of possible premises for use in the March 2008 meeting as a means to identify and test key assumptions in discussion. Reviewing and testing/rejecting/modifying these premises as they relate to cultural heritage may prove helpful in focusing debate during the meeting.

- The use of buffer zones has generally been understood within the Committee as a means to ensure the “proper conservation of the property”, that is, the OUV of the property – not to ensure the preservation of the buffer zone;
- Within the buffer zone, it has generally been understood that the goal is to manage or control a range of qualities of proposed developments (height,

density, use, design (form, image, patterns) etc.) in order to minimize negative impacts on OUV of the inscribed property;

- The growing strong concern for visual impacts has involved examination of development proposals in buffer zones (as in the past) but also beyond, in a larger undefined zone that some would call “setting”;
- The increased emphasis and attention being given the meaning of setting, and concern for application of integrity for cultural heritage in the WH context have increased the number of factors being assessed in buffer zones and in adjacent settings in order to protect OUV in nominated properties, e.g., functional, visual, structural integrity indicators – but these qualities are being introduced and used in relation to cultural heritage without being described or recognized in the OGs;
- Any effort to embrace setting (understood as something beyond buffer zone) as an important factor in protecting OUV may have many merits but at present this is not supported by any clear WH Committee policy commitment to use of the concept, or by any framework which would allow its consistent application to the assessment of the impacts of developments in “setting” on OUV;
- Improvements can be made in the zoning systems being applied – clearer language, the use of more zones than two, extension of zone perimeters, strengthening protective conditions or provisions in zones, better communication about the purpose and structure of buffer zones – but it should be recognized that in many jurisdictions, zoning is an outdated planning tool, especially where the goal is to maintain diversity of social and cultural interaction within living sites. Zoning may be appropriate where homogeneous forms of development are desired, but is not easily able to deal with maintaining complexity, diversity or multi-faceted character;
- However any tendency to discard zoning for its perceived shortcomings would have the disadvantage of throwing away 30 years of investment in using buffer zones to protect WH values, and would be counter-productive unless it could be immediately replaced with a fully comprehensive and easily implementable approach to managing change in buffer zone/setting to protect the OUV of nominated or inscribed properties. Such new approaches in the planning field, focused less on development control and more on context management (minimizing risk in the various physical, social and economic contextual environments of a property) exist (e.g., the Italian use of risk mapping at national, regional and local scales), but are not well tested in global practice, let alone World Heritage.

## Annexes

### Annex 1. Treatment of buffer zones in various versions of the Operational Guidelines (OGs)

#### 1977 OGs

**26.** When setting the boundary of a property to be nominated to the List, the concept of a buffer zone around the property may be applied where appropriate. In such instances the nominations would include:

- a) a precise definition of the surface area of the property itself, including the sub-surface area where necessary
- b) an indication of the buffer zone around the property itself (i.e. the natural or man-made surroundings that influence the physical state of the property or the way in the property is perceived).

Such buffer zones will be determined in each case through technical studies and provided with adequate protection.

#### 1978 OGs

**26.** When setting the boundary of a property to be nominated to the List, the concept of a buffer zone around the property may be applied where appropriate and feasible. In such instances the nominations would include:

- a) a precise definition of the surface area of the property itself, including the sub-surface area where necessary
- b) an indication of the buffer zone around the property itself (i.e. the natural or man-made surroundings that influence the physical state of the property or the way in the property is perceived).

Such buffer zones will be determined in each case through technical studies and provided with adequate protection.

#### 1980 OGs

**12.** Whenever necessary for the proper conservation of a cultural or natural property nominated, an adequate “buffer zone” around a property should be foreseen and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or on the way in which the property is perceived; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1983 OGs

**14.** Whenever necessary for the proper conservation of a cultural or natural property nominated, an adequate “buffer zone” around a property should be

foreseen and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or on the way in which the property is perceived; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1984 OGs

**14.** Whenever necessary for the proper conservation of a cultural or natural property nominated, and adequate “buffer zone” around a property should be foreseen and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or on the way in which the property is perceived; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1987 OGs

**14.** Whenever necessary for the proper conservation of a cultural or natural property nominated, and adequate “buffer zone” around a property should be foreseen and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or on the way in which the property is perceived; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1988 OGs

**17.** Whenever necessary for the proper conservation of a cultural or natural property nominated, and adequate “buffer zone” around a property should be provided and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has restrictions placed on its use to give an added layer of protection; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1992 OGs

**17.** Whenever necessary for the proper conservation of a cultural or natural property nominated, and adequate “buffer zone” around a property should be provided and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has restrictions placed on its use to give an added layer of protection; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1994 OGs

**17.** Whenever necessary for the proper conservation of a cultural or natural property nominated, and adequate “buffer zone” around a property should be provided and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has restrictions placed on its use to give an added layer of protection; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 1999 OGs

**17.** Whenever necessary for the proper conservation of a cultural or natural property nominated, an adequate “buffer zone” around a property should be provided and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has restrictions placed on its use to give an added layer of protection; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question.

#### 2004 Draft OGs (not approved)

##### Elements of effective protection

**77.** Nominated properties must have *legislative, regulatory, contractual, planning, institutional and/or traditional measures* (Paragraphs 78-84) integrated within a coherent *management system* (Paragraphs 85-97), and which are appropriate for the protection of the property. In addition, a clear *delineation of the boundaries* (Paragraphs 98-101) of the nominated property, and of any necessary *buffer zone* (Paragraphs 102-107), must be provided.

**Boundaries for effective protection**

**98.** The delineation of boundaries is an essential requirement in the establishment of effective protection of nominated properties. Boundaries should be drawn to ensure the full expression of the outstanding universal value and the authenticity and/or integrity of the property.

**99.** For properties nominated under criteria (i)-(vi), boundaries should be drawn to include all those areas and attributes which are a direct tangible expression of the outstanding universal value of the property, as well as those areas which in the light of future research possibilities offer potential to contribute to and enhance such understanding.

**100.** For properties nominated under criteria (vii)-(x), boundaries should reflect the spatial requirements of habitats, species, processes or phenomena that provide the basis for their inscription on the World Heritage List.

**101.** The boundaries of the nominated property may coincide with one or more existing or proposed protected areas, such as national parks or nature reserves, biosphere reserves or protected historic districts. While such established areas for protection may contain several management zones, only some of those zones may satisfy criteria for inscription.

**Buffer zones**

**102.** Wherever necessary, an adequate buffer zone should be provided to protect the nominated property from the direct effects of encroachment and the impacts of resource use outside it.

**103.** For the purposes of effective protection of the nominated property, a buffer zone is an area *surrounding* the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection. In certain circumstances, zoning within a nominated property will achieve the same goals as a buffer zone.

**104.** In all cases, buffer zones and other zoned areas must have adequate protection to enable them to function effectively.

**105.** Where no buffer zone is proposed, the nomination must include a statement as to why a buffer zone is not required for the effective conservation of the nominated property.

**106.** Although buffer zones are not normally part of the nominated property, any modifications to the buffer zone subsequent to inscription of a property on the World Heritage List must be approved by the World Heritage Committee.

**107.** The use of zoning controls may assist States Parties in ensuring that uses and activities which take place on and adjacent to a nominated property respect the need to protect of the property.

**2005-8 OGs****Boundaries for Effective Protection**

**99.** The delineation of boundaries is an essential requirement in the establishment of effective protection of nominated properties. Boundaries should be drawn to ensure the full expression of the outstanding universal value and the integrity and/or authenticity of the property.

**100.** For properties nominated under criteria (i) – (vi), boundaries should be drawn to include all those areas and attributes which are a direct tangible expression of the outstanding universal value of the property, as well as those areas which in the light of future research possibilities offer potential to contribute to and enhance such understanding.

**101. For properties nominated under criteria (vii)-(x), boundaries should reflect the spatial requirements of habitats, species, processes or phenomena that provide the basis for their inscription on the World Heritage List. The boundaries should include sufficient areas immediately adjacent to the area of outstanding universal value in order to protect the property's heritage values from direct effect of human encroachments and impacts of resource use outside of the nominated area.**

**102.** The boundaries of the nominated property may coincide with one or more existing or proposed protected areas, such as national parks or nature reserves, biosphere reserves or protected historic districts. While such established areas for protection may contain several management zones, only some of those zones may satisfy criteria for inscription.

**103.** Wherever necessary for the proper conservation of the property, an adequate buffer zone should be provided.

**104.** For the purposes of effective protection of the nominated property, a buffer zone is an area *surrounding* the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection. The area constituting the buffer zone should be determined in each case through appropriate mechanisms. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating the precise boundaries of the property and its buffer zone, should be provided in the nomination.

**105.** A clear explanation of how the buffer zone protects the property should also be provided.

**106.** Where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required.

**107.** Although buffer zones are not normally part of the nominated property, any modifications to the buffer zone subsequent to inscription of a property on

the World Heritage List should be approved by the World Heritage Committee.

**Annex 2. The Xi'an Declaration**

**Xi'an Declaration on the conservation of the setting of heritage structures, sites and areas. Adopted in Xi'an, China, by the 15th General Assembly of ICOMOS on 21 October 2005. Final version – 22.10.2005**

**Preamble**

Meeting in the ancient city of Xi'an (China) on 17-21st October 2005, at the invitation of ICOMOS China on the occasion of 15th General Assembly of ICOMOS and the celebrations marking the 40th anniversary of its longstanding endeavour to ensure the safeguard and conservation of the World's cultural heritage as part of its sustainable and human development;

Benefiting from the broad range of cases and reflections shared during the General Assembly's International Symposium on Monuments and Sites in their Settings – Conserving Cultural Heritage in Changing Townscapes and Landscapes and learning from a broad range of experiences from China and world-wide authorities, institutions and specialists in providing adequate care and management of heritage structures, sites and areas such as historic cities, landscapes, seascapes, cultural routes and archaeological sites in the context of accelerated change and development;

Taking note of the international and professional interest for the conservation of the settings of monuments and sites as expressed in the International Charter for the Conservation and Restoration of Monuments and Sites – the Venice Charter (1964) – and in the many texts it has inspired, particularly through ICOMOS National and International Committees, as well as the Nara Document on Authenticity (1994) and conclusions and recommendations of international meetings like the Hoi An Declaration on the Conservation of Historic Districts in Asia (2003), the Declaration on the Recovery of Bam's Cultural Heritage (2004), and the Seoul Declaration on Tourism in Asia's Historic Towns and Areas (2005);

Noting the references to the concept of setting in UNESCO conventions and recommendations like the Recommendation concerning the Safeguarding of Beauty and Character of Landscapes and Sites (1962), the Recommendation concerning the Preservation of Cultural Property Endangered by Public or Private Works (1968), the Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas (1976), the Convention for the Safeguarding of the Intangible Cultural Heritage, (2003) and more specifically the World Heritage

Convention (1972) and its *Operational Guidelines*, where setting is listed as an attribute of authenticity and as needing protection through the establishment of buffer zones, and the ongoing opportunity this brings for international and interdisciplinary cooperation between ICOMOS, UNESCO and other partners and for developments on topics like authenticity or the conservation of historic urban landscapes expressed in the Vienna Memorandum (2005).

Stressing the need to address adequately the rapid or incremental transformation of cities, landscapes and heritage routes which result from changes in lifestyles, agriculture, development, tourism or large-scale disasters of natural or human origin, and to recognise, protect and sustain adequately the meaningful presence of heritage structures, sites and areas in their settings as a way to reduce the threat these transformation processes constitute against the cultural heritage in the full richness of its authenticity, meaning, values, integrity and diversity.

Participants of the 15th General Assembly of ICOMOS adopt the following Declaration of principles and recommendations, addressing it to intergovernmental and non-governmental organisations, national and local authorities and all institutions and specialists able to contribute through legislation, policies, planning processes and management to better protect and conserve the world's heritage structures, sites and areas in their settings.

**Acknowledge the contribution of setting to the significance of heritage monuments, sites and areas**

**1. The setting of a heritage structure, site or area is defined as the immediate and extended environment that is part of, or contributes to, its significance and distinctive character.**

Beyond the physical and visual aspects, the setting includes interaction with the natural environment; past or present social or spiritual practices, customs, traditional knowledge, use or activities and other forms of intangible cultural heritage aspects that created and form the space as well as the current and dynamic cultural, social and economic context.

**2. Heritage structures, sites or areas of various scales, including individual buildings or designed spaces, historic cities or urban landscapes, landscapes, seascapes, cultural routes and archaeological sites, derive their significance and distinctive character from their perceived social and spiritual, historic, artistic, aesthetic, natural, scientific, or other cultural values. They also derive their significance and distinctive character from their meaningful relationships with their physical, visual, spiritual and other cultural context and settings.**

These relationships can be the result of a conscious and planned creative act, spiritual belief, historical events, use or a cumulative and organic process over time through cultural traditions.

#### Understand, document and interpret the settings in diverse contexts

##### 3. Understanding, documenting and interpreting the setting is essential to defining and appreciating the heritage significance of any structure, site or area.

The definition of setting requires an understanding of the history, evolution and character of the surrounds of the heritage resource. Defining the setting is a process of considering multiple factors to include the character of the arrival experience and the heritage resource itself.

##### 4. Understanding the setting in an inclusive way requires a multi-disciplinary approach and the use of diverse information sources.

Sources include formal records and archives, artistic and scientific descriptions, oral history and traditional knowledge, the perspectives of local and associated communities as well as the analysis of views and vistas.

Cultural traditions, rituals, spiritual practices and concepts as well as history, topography, natural environment values, use and other factors contribute to create the full range of a setting's tangible and intangible values and dimensions. The definition of settings should carefully articulate the character and values of the setting and its relationship to the heritage resource.

#### Develop planning tools and practices to conserve and manage settings

##### 5. The implementation of effective planning and legislative tools, policies, strategies and practices to sustainably manage settings requires consistency and continuity in application, whilst reflecting the local or cultural contexts in which they function.

Tools to manage settings include specific legislative measures, professional training, development of comprehensive conservation and management plans or systems, and use of adequate heritage impact assessment methods.

##### 6. Legislation, regulation and guidelines for the protection, conservation and management of heritage structures, sites and areas should provide for the establishment of a protection or buffer zone around them that reflects and conserves the significance and distinctive character of their setting.

##### 7. Planning instruments should include provisions to effectively control the impact of incremental or rapid change on settings.

Significant skylines, sight lines and adequate distance between any new public or private development and

heritage structures, sites and areas are key aspects to assess in the prevention of inappropriate visual and spatial encroachments or land use in significant settings.

##### 8. Heritage impact assessments should be required for all new development impacting on the significance of heritage structures, sites and areas and on their settings.

Development within the setting of heritage structures, sites and areas should positively interpret and contribute to its significance and distinctive character.

#### Monitor and manage change affecting settings

##### 9. The rate of change and the individual and cumulative impacts of change and transformation on the settings of heritage structures, sites and areas is an ongoing process which must be monitored and managed.

Incremental as well as rapid transformation of the urban or rural landscapes, the ways of life, the economies or the natural environment can substantially or irretrievably affect the authentic contribution that the setting makes to the significance of a heritage structure, site or area.

##### 10. Change to the setting of heritage structures, sites and areas should be managed to retain cultural significance and distinctive character.

Managing change to the setting of heritage structures, sites and areas need not necessarily prevent or obstruct change.

##### 11. Monitoring should define approaches and actions to appreciate and measure as well as prevent or remedy decay, loss of significance or trivialisation and propose improvement in conservation, management and interpretation practices.

Qualitative and quantifiable indicators should be developed to assess the contribution of the setting to the significance of a heritage structure, site or area.

##### Indicators for monitoring should cover physical aspects such as intrusion on views, skylines or open spaces, air pollution, sound pollution, as well as economic, social and cultural dimensions.

##### Work with local, interdisciplinary and international communities for co-operation and awareness in conserving and managing settings

##### 12. Co-operation and engagement with associated and local communities is essential as part of developing sustainable strategies for the conservation and management of settings.

Inter-disciplinary engagement should be encouraged as standard practice in conserving and managing settings. Relevant cultural heritage fields include architecture, urban and regional planning, landscape planning,

engineering, anthropology, history, archaeology, ethnology, curation and archives.

Co-operation with institutions and specialists in the field of natural heritage should also be encouraged as an integral part of good practice for the identification, protection, presentation and interpretation of heritage structures, sites or areas in their setting.

##### 13. Professional training, interpretation, community education and public awareness should be encouraged to support such co-operation and sharing of knowledge as well as to promote conservation goals, improve the efficiency of the protection tools, management plans and other instruments.

The experience, knowledge and tools developed through the conservation of individual heritage structures, sites and areas should be extended to complement the management of their setting.

Economic resources should be allocated to the research, assessment and strategic planning of the conservation and management of setting of heritage structures, sites and areas.

Awareness of the significance of the setting in its various dimensions is the shared responsibility of professionals, institutions, associated and local communities, who should take into account the tangible and intangible dimensions of settings when making decisions.

Adopted in Xi'an (China) on the 21st October, 2005.

#### Annex 3. Recommendations of ICLAFI meeting on World Heritage and buffer zones, Hiroshima, Nov. 2006.

##### Recommendations for ICOMOS

We, the expert members of the International Committee for Legal, Administrative and Financial Issues of ICOMOS attending the Conference on The World Heritage Convention and the Buffer Zone in Hiroshima, Japan:

Acknowledging with sincere appreciation the International Council on Monuments and Sites Japan (ICOMOS Japan), and the Asia/Pacific Cultural Centre for UNESCO (ACCU) for their valuable organization of the conference; and

Recognizing that the buffer zone issues have been very important in world heritage especially their legal, socio-economic, environmental and political aspects;

Call upon ICOMOS:

1. To further study the issues of buffer zones and how they can be adequately protected and, in the process, support the cooperation of its relevant committees, acting jointly, on buffer zone issues;

2. To increase awareness of the existence, necessity and protection of buffer zones in the Asia-Pacific region and localities;

3. To convince national governments, local governments, corporations and construction companies to be respectful of heritage places and their buffer zones and that any development must be compatible with their protection and enhancement;

4. To conduct activities that emphasize the belief that corporate goals should include the continuing and genuine commitment by the business sector to behave responsibly and ethically and exercise an important duty of care to all of its stakeholders including the community at large;

5. To promote the idea of responsible citizenship as a key element in the preservation and promotion of cultural heritage;

6. To further stress education to intensify global awareness of the measures needed to protect heritage sites and their buffer zones so as to preserve and transmit to future generations the cultural context of World Heritage Sites, both listed and potential;

7. To stress the idea that every World Heritage Site has intangible aspects and dimensions, notably the cultural and historical, that must be respected; and

8. To promote these significant matters to the World Heritage Committee and the member-states of the World Heritage Convention.

These Recommendations were adopted in Hiroshima, Japan, on 29 November 2006, during the Conference on The World Heritage Convention and the Buffer Zone.

#### Annex 4. Paper by Hristina Staneva, Vice-president of ICLAFI, President of ICOMOS Bulgaria, prepared for Nov. 2007 Hiroshima meeting.

The activities and decisions, taken by World Heritage Committee in 2006 regarding buffer zones of World Heritage monuments and sites, were a step forward while defining a balanced, representative and credible World Heritage List. That issue is of substantial importance for better preserving the World Heritage properties and their essential values of authenticity and/or integrity in relevant context – a basic objective of the World Heritage Convention.

As the World Heritage Committee is the main body in charge of the implementation of the Convention, and its main function is to identify and inscribe cultural and natural properties on the World Heritage

List, it should develop a flexible and proactive policy and instrumentation in accordance with the constantly changing challenges of the dynamic social and economic environment. As good examples for that could be taken the Expert meeting on the concept of outstanding universal value (Kazan – 2005), as well as the adoption of the Declaration on the Conservation of Historic Urban Landscapes (2005), based on the Vienna Memorandum.

In the line of the above mentioned, the World Heritage Committee at its Thirtieth Session in Vilnius, Lithuania (July 2006), decided to organise a meeting on Buffer zones in 2008. Consequently the buffer zone issue was included in the working plan of ICOMOS for 2007.

The basic document, which deals with the issues of buffer zone, is “*Operational Guidelines for the Implementation of the World Heritage Convention*” (revised 2005). In Chapter II F (Protection and management) a clear distinction between the purpose of the boundary of a certain property and its buffer zone has been made. While the boundary includes the monument or site and the territory which should “ensure the full expression of the outstanding universal value and the integrity and/or authenticity of the property” (paragraph 99) the role of a buffer zone is different. The provision of a buffer zone, wherever necessary, is considered as a measure for proper conservation, but it is not considered as a part of the nominated property. Regarding the status, buffer zone has “complementary legal and/or customary restrictions”, placed on its use and development, to give an added layer of protection to the property.

At present collective efforts from all actors involved in the process of protection, sustainable conservation and presentation of World Heritage for increasing the importance of buffer zone have been made. Considered as a tool to buffer various types of pressures and threats, the instrumentation is getting more substantial. That was demonstrated through the discussions and decisions taken by the World Heritage Committee during its Thirtieth Session in Lithuania (July 2006). The buffer zone issues were exposed while examining the nominations for inscription in to the *World Heritage List*, as well as the State of Conservation reports regarding properties inscribed, or to be inscribed on the *List of World Heritage in Danger*.

The annual monitoring missions on properties, already inscribed on the *List of World Heritage in Danger*, revealed numerous problems regarding buffer zones. That fact is understandable, as before enlisting, they were threatened by serious factors and needed major operations for improvement of their state. The 2006 *List of World Heritage in Danger* consists of 31 properties. Nine of the properties present serious problems related to buffer zones. These problems may be divided into two groups:

- a) Regarding the territory – inappropriately defined buffer zone boundaries, unclear delineation, or lack of buffer zone;
- b) Lack of proper management – illegal construction in the buffer zone, endangered visual integrity, insufficient protection.

Recommendation and requests from World Heritage Committee’s side towards State Parties have been made on proper delimitation of buffer zones and improvement of management of the concrete site. The benchmarks for corrective measures go beyond that – improvement of national legislative and administrative system; up-dating of master plans; evaluation and actualization of property’s conservation plans, elaboration of action plans and progress reports, timescale and a work plan, improvement of documentation.

This year the World Heritage Committee discussed and decided to add to the *List of World Heritage in Danger* two properties – Dresden Elbe Valley (Germany) and Medieval Monuments in Kosovo (Serbia). The latter were enlisted in this category due to both ascertain and potential danger, and for better perspectives for receiving international support for urgent conservation and restoration work. This valuable serial of ecclesiastical buildings bears the witness of turbulent history, and currently is facing the challenges of a complicated political environment. The evaluation of this case, regarding buffer zone, could show how important may be buffer zone’s delimitation, function and management.

Recently the State Party, assisted by experts from UNESCO and the Council of Europe had to elaborate more comprehensive criteria for defining buffer zones for the monuments and sites in Kosovo, envisaging the political perspectives of this territory. It was suggested that buffer zones, as one of the efficient tool for heritage protection, should include the following criteria:

- **Functionality:** What is the function of the site, how it is developing, what are the connections with the local community, are there conditions for social and economic sustainability in the context of the concrete circumstances;
- **Visual relations:** Preserved aesthetic values of cultural landscapes and sites as part of their integrity and authenticity;
- **Spatial relations:** Organic link with the environment (land and settings immediately around the monument, rivers, roads, etc.), assessing the social aspect;
- **Vulnerability:** Development pressure, tourist flow, potential political or other type of intervention.

Although this set of criteria is partially based on well known international documents, it has some added values, and could be considered symptomatic. Definitely buffer zone issues should be discussed more comprehensively.

The results of the Reactive monitoring on properties, inscribed on *World Heritage List* brought to substantial discussion and decisions by the World Heritage Committee. The objective of such missions is to check the State of Conservation of monuments and sites, and - if needed - to alarm the authorities in concern to undertake corrective measures for avoiding eventual deletion (*Operational Guidelines, Chapter IV*).

While considering the State of Conservation reports on properties, inscribed on the *World Heritage List*, documents are divided in three groups:

- a) For consideration for in-Danger listing;
- b) For adoption requiring discussion by the Committee;
- c) For adoption requiring no discussion by the Committee;

In 2006, the World Heritage Committee reviewed 99 reports on the State of Conservation. In the first group (considered for in-Danger listing) 13 properties were discussed, including representatives only form the natural and cultural properties. For the second group (requiring discussion) 14 monuments and sites, representing natural, mixed and cultural heritage, needed discussions. No discussions were required for the rest of the cases (72 in number). Going through the reports it was found that there were problems with buffer zones for 23 properties (23%). That fact is another proof how vulnerable is the buffer zone fabric. The requests and recommendations from the World Heritage Committee towards State parties are similar to the group, containing those from the *List of World Heritage in Danger*, but stressing on social and economic dimensions, as more of the cases are located in urban environment.

The cases discusses by the World Heritage Committee in 2006 include emblematic examples of the rich and diverse world cultural and natural wealth. Those, connected with buffer zone issue include: Lumbini, the Birthplace of the Lord Buddha (Nepal); Ancient Thebes with its Necropolis (Egypt); Historic Centre of Saint Petersburg (Russian Federation); Old Town of Ávila with its Extra-Muros Churches (Spain); Graz Historic Centre (Austria) etc.. The last one is a representative example of the existence of the well known phenomenon, ephemerally named “development and economic influences”. In 2005 a monitoring mission had identified several problematic large-scale building projects in the core zone and the buffer zone. One of those was the construction project by *Zaha Hadid* at Kommod-Haus location (even great architects and creators can be involved in conflicts between conservation and development). Later the monument was demolished, as the existing legal framework did not appear to provide adequate protection for the property.

Another construction project – that of the Department Store Kastner & Öhler caused public concern also. The project foresees a contemporary construction to replace the traditional store and enlarge its floor-space by adding one floor to the building (Vienna syndrome). That design is considered not suitable to the existing roofscape, and not in the context of the World Heritage property. At present, master and management plans are under preparation, but still remains the lack of mechanisms to fully implement the legal provisions, particularly in view of the priority given to investors’ rights.

There is another facet of the problem – the preparedness of decision makers to resist to the dynamic, sometimes aggressive modern occurrences. In this case it was noted that the State Party and the local authorities have been going through a learning process in the last few years, adjusting mechanisms to meet higher standards and expectations.

To explore the buffer zone issues regarding the *World Heritage List* in 2006 a brief review on the newly inscribed properties should be made also. Taking into consideration ICOMOS’s and IUCN’s recommendations, the World Heritage Committee approved 22 properties. Sixteen out of them represented cultural heritage, two natural properties were inscribed, and the remaining four sites were included in the category of serial nominations. Requests for improvements regarding buffer zones have been given to 7 out of those 22, which makes higher percentage (31%), compared with the already reviewed tow groups. That fact may be interpreted at least in two ways: buffer zone issues are getting more important (especially after Cologne/Dresden cases) and the requirements towards the buffer zone have been increased. Reviewing the results from the Periodic reports, it was found that around many States Parties found necessary to redefine buffer zones of the properties, located in their territories, and/or improve legal and management system. That is a real proof that buffer zone’ role is getting more important, and the instructions in the *Operational Guidelines* for inscription and maintenance of buffer zones should be more comprehensive.

Concluding, I would like just to mark several key questions:

- Do the buffer zones adjacent to World Heritage properties respond to the dynamic changes and challenges of contemporary world – threats due to global warming; social and economic development; political pressure, etc.?
- In case we accept that diversity is the intrinsic value of World Heritage, should the outstanding representatives be treated in a universal way? Shouldn’t we respect different approaches, in the context of the specific cultures, towards buffer zone’s role as an instrument for safeguarding this diverse heritage?

## World Heritage and Buffer Zones

- Isn't it high time to start preparing a sort of guiding instructions for protection, maintenance and presentation of World Heritage properties for the different geo-cultural regions, based on their specificities?
- Isn't it necessary to increase the requests towards the legal and management frameworks and standards of World Heritage protection?

I do believe that the discussions on the buffer zone topic during this respectful meeting of ICOMOS International Committee on Legal, Administrative and Financial issues, kindly supported by the hosts, will contribute to the collective efforts to find adequate solutions in the field of cultural heritage preservation.

### **Annex 5. Report of La Vanoise meeting, March, 1996**

Information document: Report of the Expert Meeting on *Evaluation of general principles and criteria for nominations of natural World Heritage sites* (Parc national de la Vanoise, France, 22 - 24 mars 1996)

(e) Referring to Paragraph 44 (b) of the *Operational Guidelines*, the expert group stated that the notion of integrity has not been fully examined to date and that its complexity needs to be investigated. The expert group recognized that, from the point of view of natural heritage, there are different notions of integrity (e.g. species composition of an ecosystem), functional integrity (e.g. glacial series with the glacier itself and its deposition patterns) and visual integrity (a notion which relates to both natural and cultural heritage).

The expert group referred to the existence of separate criteria and separate conditions of authenticity defined as "test of authenticity" in Paragraph 24 (b)(i) for cultural heritage and "conditions of integrity" described in Paragraph 44 (b) for natural heritage. The experts suggested that the notion of authenticity and integrity could be reviewed to develop one common approach to integrity. This would lead to a more coherent interpretation of the Convention and its unique strength in bringing the protection of both nature and culture together.

The experts recommended that the Committee consider the preparation of a study concerning the possibility of applying conditions of integrity to both natural and cultural heritage, and thus of applying one common approach for the identification and evaluation of World Heritage.

This Paper was prepared by Herb Stovel for ICOMOS. The author is grateful to Regina Durighello and to the members of the ICOMOS World Heritage Working Group for their inputs.

## ICCROM Position Paper

### Introduction

Following a request by the State Party of Israel in 2006, the World Heritage Committee agreed to the organization of a meeting to clarify key concepts surrounding the requirements for buffer zones for World Heritage sites. As stated in the Background Document prepared by the World Heritage Centre, "the aim of the meeting is to address problems, issues, and solutions for World Heritage sites related to buffer zones, examine difficulties in establishing buffer zones and develop recommendations to the World Heritage Committee to review the definition of buffer zones in the *Operational Guidelines of the World Heritage Convention*."

This issue must not be seen, however, outside the context of other ongoing discussions within the World Heritage system to clarify a number of topics of importance for the Convention, including Statements of Outstanding Universal Value, Authenticity and Integrity, Historic Urban Landscapes, and the results of the first periodic reporting cycle. Each is related to the others, and a full and coherent approach is needed to ensure the necessary consistency for all actors in the World Heritage process.

Within this overall context, ICCROM has identified a number of issues that it feels should be discussed. A question and answer format has been used to call attention to some of the questions or confusions that are often heard within the debate on buffer zones. Short responses are then given which indicate ICCROM's initial views on these issues, with the hope that during the three working days of the meeting, more clarity can be achieved on this important aspect of the nomination and management process for sites on the World Heritage List.

ICCROM has limited itself to outlining concepts, recognizing that the meeting has been designed to ensure that there will be a large number of practical case studies to examine in light of the concepts brought out in all of the background and position papers.

### What is a buffer zone?

In beginning to answer this first question, a short Google search was made to see how the term is most commonly used. By far the most common meaning of the word found on the internet is as a zone which separates two things, usually keeping warring or incompatible parties away from each other. It has been noted that within the heritage field, the concept of buffer zones was first used in the area of natural heritage, and this common definition may have been most applicable, that is, separating the natural park or other protected area from incompatible, that is to say, human use.

On the cultural heritage side in some countries, the concept has been used in a similar way for many years in relation to archaeological sites where typically a buffer zone of 200 – 400 meters would automatically be put in place around site to separate it from incompatible use.

Another precedent for buffer zones on the cultural heritage side is land use planning, and in particular zoning. Zoning used by land use planners typically divides the territory into zones where compatible uses are put together and incompatible uses are separated from each other (for example an industrial zone may be kept away from a residential zone). In addition to zoning for uses, many other aspects may be taken account such

as building heights, massing, locations of public open spaces, and health, safety and sanitary issues.

Zoning can, in general, be a powerful tool for ensuring a good quality of life, but can also be dangerous if not planned well. As an example, while it may ensure that people don't live next to noisy or polluting factories, it may also place employment or commercial areas too far away from residential areas causing long commuting times and more pollution. The very act of separating some functions may be detrimental to the life and spirit of a community, particularly dangerous when trying to give the heritage a life in the community as the World Heritage Convention stipulates.

According to the current *Operational Guidelines*, a buffer zone is meant to ensure effective protection of the nominated property through complementary legal and/or customary restrictions placed on its use and development in order to give an added layer of protection to the property. The Guidelines list in particular protection of immediate setting, important views and other functional attributes.

In practice this definition has taken us away from the idea of a buffer zone as a separator or barrier, and brought us closer to the idea of a buffer zone as a management tool to deal with the transition from site to its surroundings through added protection, which safeguards certain aspects of the site.

#### What is a buffer zone meant to protect?

As with most management tools for the protection of World Heritage sites, a buffer zone is meant to protect the Outstanding Universal Value of a site as identified during the nomination process and confirmed by the decision of the World Heritage Committee.

In order for this tool to be effective, it is first important to have a well formulated Statement of Outstanding Universal Value. It is also necessary to identify those attributes on the site which carry the OUV and the desired state of conservation of those attributes and the site as a whole. The authenticity of the attributes and the integrity of the site must also be well understood.

While the *Operational Guidelines* emphasize setting and views, ICCROM would argue that there is a much larger range of issues related to use and function, form and design, traditions and techniques, and spirit and feeling that may also need to be protected when setting a buffer zone for a cultural heritage site.

A full comprehension of all of these issues is essential in order to ensure that a buffer zone is established which can protect the OUV. Here, again, ICCROM would like to emphasize that the work being started

now to reexamine the concept of buffer zones must be strongly linked to the other ongoing discussions of OUV, authenticity, and integrity to ensure that compatible rather than conflicting visions are developed. Further, the process of defining a buffer zone is also an area that needs to be explored more in depth.

#### Are buffer zones always necessary?

The *Operational Guidelines* make clear that a buffer zone is not mandatory. In paragraph 106, it states that, "where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required." The second part of this paragraph, however, does give a strong presumption that in most cases a buffer zone will be required, and it is that presumption that most State Parties, the World Heritage Committee and the Advisory Bodies take into account when writing, evaluating, and making decisions about nominations. For this reason, most State Parties will put a buffer zone around a site whether it is necessary or not, just to ensure that they do not have trouble in the evaluation and decision making processes. This situation leads, sometime to unnecessary buffer zones being drawn around sites. An unnecessary buffer zone may not be dangerous in and of itself, but it may give a false sense of protection to a site and take attention away from other tools that may be useful in a particular case.

One could easily imagine a number of situations in which a buffer zone may not be necessary including:

- the drawing of the World Heritage site boundaries amply enough to ensure protection of the OUV within the site itself;
- the physical geography of a site (either mountainous or a flat plane) which would render a buffer zone meaningless;
- the OUV of a site which is located underground, inside, or in some other way not subject to the types of threats that a buffer zone is meant to protect against;
- an instance where the setting of the site has already radically changed and for which a buffer zone would not longer be useful.

ICCROM feels that more attention needs to be given to exploring case studies and best practice guidelines to help State Parties to better understand when buffer zones would be useful and when they would not. In this way, unnecessary buffer zones may be avoided and attention given to other planning tools where useful.

#### Is a buffer zone part of the World Heritage site or external to it?

The *Operational Guidelines* answer this question rather clearly in paragraph 107 which states, "although buffer

zones are not normally part of the nominated property, any modifications to the buffer zone subsequent to inscription of a property on the World Heritage List should be approved by the World Heritage Committee." (ICCROM is not sure about the use of the term "normally" in this paragraph. What is a normal situation? We would recommend deleting this word from the *Operational Guidelines* the next time a revision is made.)

ICCROM is often surprised, however, at how much confusion there is in this regard. Part of the problem is related to terminology. ICCROM feels that the use of the term "core zone" in relation to the "buffer zone" gives the impression that they are two zones that together make up the World Heritage site. For this reason, ICCROM feels that the use of the term "core zone" should be abandoned and the two territories be referred to as the "World Heritage property (or site)" and the "buffer zone".

This distinction is important for several reasons. First, it would ensure a better understanding by the State Party when preparing a nomination that the boundaries of the proposed World Heritage site be drawn large enough to ensure that all of the attributes that make up the OUV are contained within it.

It would also draw more attention to the fact that the buffer zone is a management tool rather than a part of the site itself. This may lead to more flexibility over time to allow for changes to the buffer zone to take into account the changing management needs of the site (noting that as per paragraph 107, the World Heritage Committee would still need to approve the changes).

#### What are some of the strengths and weaknesses of buffer zones?

Buffer zones can be a very important management tool in protecting World Heritage sites. In controlling the transition between the heightened protection of the World Heritage site and the surrounding territories, a buffer zone may set limits to protect views, settings, land uses, and other aspects, but may also positively encourage developments that would be beneficial to the site and community.

Another advantage of a buffer zone is that it can be a very clear and unambiguous tool. The line on the map and the accompanying regulations can make it very clear to all interested parties what is allowed, what isn't allowed, and where. This certainty is very attractive to governments, decision makers, and developers.

Unfortunately however, as set up, buffer zones in the World Heritage context often are ambiguous and confusing. This confusion stems from a number

of problems. The most serious is that in many cases the buffer zones have no basis in the national or local planning laws. They become simply lines on the World Heritage nomination map without the legal backing to enforce them.

A second problem is that even when the line on the map is clear and enforceable, often there are not the necessary regulations and policies to make them useful. ICCROM finds it very interesting that the *Operational Guidelines* make reference to the fact that the World Heritage Committee reserves the right to approve changes to boundaries of the buffer zone, but nowhere does it say that the Committee will even examine after inscription (much less approve) changes to the accompanying regulations. In some cases due to changes in regulations and policies over time, the buffer zone may wind up being an empty shell.

Another area of concern is that World Heritage buffer zones may not correspond to already existing planning zones. The administration of buffer zones may also be problematic if different government agencies/institutions have overlapping or conflicting responsibilities. Where possible a correlation should be made to existing planning mechanisms and government agencies to ensure compatibility and ease of implementation.

The size of the buffer zone is also becoming an issue of concern. As has been seen in the recent cases related to high-rise buildings, it is often difficult to place a large enough buffer zone around a site to ensure adequate protection.

A final problem to consider is the fact that many people associate buffer zone at cultural heritage sites, only with the visual impact and setting. We have already mentioned this problem above, but it is worth repeating in discussing weaknesses. When used only to deal with "visual issues" a great opportunity is often missed to positively influence many development decisions in the buffer zone that will both improve protection of the site and the quality of life of the community. One needs only look at traditional zoning to see that we could be influencing decisions about land use, traffic, economic development, etc. All these issues could impact on the OUV and its attributes.

#### What tools used in addition to or in conjunction with buffer zones would be useful to ensure the necessary protection of World Heritage sites?

Buffer zones should be seen as one among several useful tools for protecting a World Heritage site and its OUV. But, they must be properly managed and must be seen as part of a larger integrated approach to the management and protection of the site. Buffer zones can play an important part for some

sites in ensuring this protection. It would be very rare, however, if buffer zones would suffice by themselves to accomplish this task. For this reason, the World Heritage system should continue to encourage the development of a variety of tools for use by heritage professionals, planners, politicians and decision makers, and local communities to ensure better protection.

There are a number of possible tools that can be used in conjunction with or apart from buffer zones to help in the protection of the OUV of World Heritage sites. The following are a number of these possible tools. This list is not exclusive; however, as it is clear that new approaches and new tools will still need to be developed.

#### Statement of OUV

The Statement of OUV, itself, could be a powerful tool for planning if adopted as part of the normal site/urban planning instruments. Such a statement adopted as part of a master or management plan would put planners and developers on notice that new development should be compatible with the Statement of OUV. One cannot help but imagine that the discussions taking place now in many cities (such as Cologne and St. Petersburg for example) related to talk buildings would be facilitated if a clear Statement of OUV could be referred to in justification of the concerns expressed in the heritage community. Without such a clear Statement of OUV, however, decision makers often wonder why heritage professionals are manufacturing concerns in response to new developments that they see as improving their cities.

#### Field of View or View Shed Analysis

This technique, which involves doing studies of the visual impacts of a proposed development from key viewing points around the territory can be a very useful tool for measuring impacts before construction begins. GIS and AutoCad systems are also making it easier to carry out such studies. This technique has been used in a number of recent cases including Cologne, St. Petersburg, and Vilnius.

#### Integrated Planning

This is probably the most important tool to be considered. Through an integrated planning process, the heritage values of the World Heritage site (as well as other heritage values in the territory) are taken into account while at the same time ensuring appropriate economic development and improved quality of life from the social, environmental, and cultural points of view. An integrated planning process may include buffer zones (not just one, but sometimes multiple

ones). Conversely, an integrated planning process may render buffer zones unnecessary as they direct more intense or incompatible development to parts of the city or territory that can accommodate them.

An integrated approach also has a tendency to focus, not just on limitation and regulation ("thou shalt not..."), but on positive, proactive planning policies that will benefit the area concerned. It will consider not only spatial aspects but various others such as function, festivals, and community interactions with the sites. ICCROM, through its ITUC programme and Living Heritage programme, have been promoting this approach for a number of years, and consider it one of the best means of protecting cultural heritage over time.

#### Historic Urban Landscapes

A related concept is that of the Historic Urban Landscape approach. The landscape approach may be a very useful way to promote integrated development which takes into account the continued evolution of the landscape, making room for both protection and compatible development. The discussion on buffer zones may help to inform the ongoing development of the new concept.

#### World Heritage Impact Assessment

A last tool that should be mentioned is the potential of developing a new World Heritage Impact Assessment. Similar to the already existing environmental and cultural impact assessments, one could imagine a new tool being put in place to measure the impacts on World Heritage sites of any developments in specific areas. These areas of concern could correspond to a much larger territory than a traditional buffer zone. Such a system would serve to put developers on notice as they plan their projects that they will be subject to an analysis to make sure that impacts to the World Heritage site would be minimized or eliminated. Development of this new tool would obviously require necessary legislation, and it would be best if it could be done as far "up stream" in the development process as possible. In this way, developers would not waste time on projects with little chance of approval.

#### Conclusion

A buffer zone can be an important tool in helping to manage and protect the OUV of a World Heritage site. In order to be effective, however, it is necessary to ensure that it has a logical and clear boundary, and that regulations and policies have been developed which provide for all of the necessary protection of the OUV of the World Heritage site.

Further, buffer zones should be seen as part of a large integrated planning process which brings together the concerns for the heritage with the needs of development and improved quality of life. This planning process and its resulting management system should be effectively implemented and monitored over time, and where necessary regulations and policies should be adjusted in order to make improvements.

In the meantime, the World Heritage system should be providing a number of means to improve the capacity of State Parties and site managers to deal with buffer zones and the larger integrated management process. Guidance documents, training activities, and case studies are only some of the tools that could be developed to help. At the same time, the *Operational Guidelines* should be carefully examined again to ensure that the various concepts related to OUV, buffer zones, authenticity and integrity, and management and protection are consistent and helpful. In this way, States Parties and all the stakeholders within the World Heritage system will be better equipped to manage and protect the common heritage of mankind.

## IUCN Position Paper

### Introduction

This discussion paper provides an IUCN (International Union for Conservation of Nature) perspective on the role of buffer zones in protecting the values of World Heritage Sites, and suggests directions that would improve the application and effectiveness of buffer zones in implementing the World Heritage Convention. The paper is set out in three sections:

- Section 1. Buffer Zones and Protected Areas: Overview
- Section 2. Buffer Zones and the World Heritage Convention: Commentary on the *Operational Guidelines*
- Section 3. Buffer Zones: Key Questions and Possible Answers

### Section 1. Buffer Zones and Protected Areas: Overview

IUCN considers buffer zones, and zonation techniques more generally, provide one potentially effective and valuable strategy in relation to World Heritage Site and protected area management.

There are two important dimensions to buffering World Heritage properties and other protected areas. The first is the need to protect the values of the property from threats that originate outside its boundaries, thus enhancing its integrity.

World Heritage properties, in common with other protected areas face a range of direct and indirect threats, and a range of responses to these threats are possible (Lockwood *et al.* 2006). Buffer zones can help to address threats that arise wholly or in part in the areas that are adjacent to a protected area. They can

do this by extending the influence of the protected area beyond its boundaries, with the aim of ensuring that there is recognition and regulation/management of factors that are external to the protected area and could damage its values. Some examples of roles a buffer zone can play in relation to different threats could include:

- Adopting land-use policies to prevent the location of disturbing or intrusive industrial uses that would impact on the values of the protected area;
- Protecting catchments providing water supply upstream of a protected area from pollution;
- Regulating the scale and location of tourism facilities and access to manage levels of human disturbance;
- Regulating agricultural practices, for example to avoid introductions of alien species or limit impacts from intensive farming techniques.

The second dimension is to create linkages between a protected area and the wider area that surrounds it. Such linkages can connect World Heritage properties to adjacent protected areas or other natural areas including areas not primarily aimed biodiversity and landscape conservation. Buffer zones can also create linkages to facilitate cultural and spiritual, social and economic benefits for communities, and to create the space to provide for the recreational and educational needs of visitors.

In a world influenced by global change, there is a growing imperative for the size and function of buffer zones to be expanded. Climate change, in particular, introduces the need to reconsider the function of buffer zones. Climate change causes biome shift (Welch 2005) in a human land-use environment that has fixed legal boundaries for reserves and other land-use types (Mansergh and Cheal 2007). Consequently, biome shift may threaten the values of protected areas,

including the outstanding universal value of the fauna, flora, landscapes and habitats of World Heritage properties. Over time there is the potential that existing values will migrate and may no longer remain within the inscribed boundaries of World Heritage properties. Climate change therefore means that the scope of the protective roles of buffer zones needs to be expanded and strengthened to ensure that values are protected over time.

In summary IUCN considers that the following functions are required within an effective buffer zone:

1. The effective management of buffer zone lands to maximize the protection of the values of the protected area (including the outstanding universal value of a World Heritage property) and their resilience to change.
2. To maximize the connectivity of the World Heritage property/protected area with other natural lands in a landscape as a basis for responding to climate change caused biome shifts of fauna, flora and habitats - and to maximize landscape connectivity; habitat connectivity, ecological connectivity and evolutionary process connectivity (Worboys *et al.* 2008 in prep).
3. To integrate the World Heritage property/protected area within landscape scale conservation with community initiatives for sustainable use practices including catchment protection, the conservation of healthy environments and the realization of sustainable livelihoods.

Buffer zones need to be both effectively designed, and effectively managed to fulfill both the function of protection as well as contributing to an integrated approach to land use management. The purpose, function, and principal goals of buffer zones need to be articulated clearly in relation to specific sites and issues, and their management needs to be integrated and coordinated with the management of the protected area that they are designed to help protect.

The opportunity to debate and strengthen the approach to the use of buffer zones within the World Heritage Convention is therefore welcomed by IUCN.

### Section 2. Buffer Zones and the World Heritage Convention: Commentary on the Operational Guidelines

The *Operational Guidelines* to the World Heritage Convention provide the entry point for guiding the role and use of buffer zones in relation to World Heritage properties. There are three sections of the *Operational Guidelines* which IUCN considers of particular interest in relation to buffer zones.

Firstly, the key paragraphs are 103-107 which provide the direct advice on the inclusion of buffer zones to States Parties. These define the principal function of buffer zones within the World Heritage Convention is to provide protection for the values inscribed World Heritage properties (Parenthesis 1).

#### Parenthesis 1: Buffer zones (excerpt from *Operational Guidelines*, 2008 version)

*103. Wherever necessary for the proper conservation of the property, an adequate buffer zone should be provided.*

*104. For the purposes of effective protection of the nominated property, a buffer zone is an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection. The area constituting the buffer zone should be determined in each case through appropriate mechanisms. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating the precise boundaries of the property and its buffer zone, should be provided in the nomination.*

*105. A clear explanation of how the buffer zone protects the property should also be provided.*

*106. Where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required.*

*107. Although buffer zones are not normally part of the nominated property, any modifications to the buffer zone subsequent to inscription of a property on the World Heritage List should be approved by the World Heritage Committee.*

#### IUCN notes the following points in relation to the formal expectations of a buffer zone:

1. As conceived in the *Operational Guidelines*, the role of the buffer zone is considered only in terms of restrictions, however in practice there are other roles that buffer zones can perform and so the *Operational Guidelines* can be considered as minimum requirements, but not necessarily providing the breadth of vision that represents best practice in protected area establishment and management. **IUCN considers that the guidance on the use of buffer zones provided to States Parties should be enhanced, considering not only the formal protection role of buffer zones but also other ways in which they can help contribute to sustainable development, including, where appropriate compensation for more restrictive uses that may apply in the WH property.**

2. The *Operational Guidelines* make clear that buffer zones should be established on a case-by-case basis and take a helpful approach in allowing the opportunity for other mechanisms to be put forward to provide a buffer zone function, and not insisting on the creation of a new buffer zone if other measures are in place to provide the necessary protection. **IUCN considers that this is an important principle and that further guidance, including the provision of best practice examples, is required in relation to the roles of buffer zones in relation to different biomes and landscapes. IUCN notes that although no specific guidance is provided on the size of buffer zones, that it is desirable that buffer zones are sufficiently large to function effectively, and so in general larger landscape scale buffer zones should be encouraged.**

Secondly, IUCN also notes that the guidance on *boundaries for effective protection* provided by paragraphs 99-102 of the *Operational Guidelines* (Parenthesis 2) are also relevant considerations when establishing buffer zones.

#### Parenthesis 2. Boundaries for effective protection (excerpt from *Operational Guidelines*, 2008 version)

*99. The delineation of boundaries is an essential requirement in the establishment of effective protection of nominated properties. Boundaries should be drawn to ensure the full expression of the outstanding universal value and the integrity and/or authenticity of the property.*

*100. For properties nominated under criteria (i) - (vi), boundaries should be drawn to include all those areas and attributes which are a direct tangible expression of the outstanding universal value of the property, as well as those areas which in the light of future research possibilities offer potential to contribute to and enhance such understanding.*

*101. For properties nominated under criteria (vii) - (x), boundaries should reflect the spatial requirements of habitats, species, processes or phenomena that provide the basis for their inscription on the World Heritage List. The boundaries should include sufficient areas immediately adjacent to the area of outstanding universal value in order to protect the property's heritage values from direct effect of human encroachments and impacts of resource use outside of the nominated area.*

*102. The boundaries of the nominated property may coincide with one or more existing or proposed protected areas, such as national parks or nature reserves, biosphere reserves or protected historic districts. While such established areas for protection may contain several management zones, only some of those zones may satisfy criteria for inscription.*

#### IUCN notes the following points in relation to these sections of the *Operational Guidelines*:

1. Para 101 carries within it a potential overlap in relation to the definition of buffer zones by referring to the including of "areas adjacent to the area of outstanding universal value". This paragraph is to some extent in contradiction with paragraphs 104-107 and implies that areas that *are not of OUV, but are necessary for the protection of the area that is of OUV* can form part of the nominated property. Although this paragraph may be clear to many managers of protected areas (in relation to the frequent definition of "internal zones" within a protected area), IUCN considers that this paragraph may be part of the source of confusion that is sometimes encountered in World Heritage nominations regarding whether the values of the core area alone, or the core area and buffer zone are the subject of the nomination. **IUCN considers that case studies provide a good means of helping States Parties understand the distinctions and options in relation to the values included within core areas and buffer zones of World Heritage properties.**

2. Para 102 could also be amplified, in relation to its intended advice and further guidance to States Parties on the relationship of World Heritage Sites to other types of designated area. **IUCN also considers that case studies provide a good means of exploring and explaining the relationships between World Heritage properties, biosphere reserves and other types of protected area.**

Thirdly, IUCN also considers that additional context for the scale and requirements for buffer zones can also be drawn out in relation to paragraphs 92-95 of the *Operational Guidelines* (Parenthesis 3) which give specific guidance on the extent of properties proposed under each of the natural criteria of the Convention (guidance that is not available in relation to the cultural criteria, including their use for cultural landscapes).

#### Parenthesis 3 (excerpt from *Operational Guidelines*, 2008 version)

*92. Properties proposed under criterion (vii) should be of outstanding universal value and 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.*

*93. Properties proposed under criterion (viii) should contain all or most of the key interrelated and interdependent elements in their natural relationships. For example, an "ice age" area would meet the conditions of integrity if it includes the snow field, the glacier itself and samples of cutting patterns, deposition and colonization*

(e.g. striations, moraines, pioneer stages of plant succession, etc.); in the case of volcanoes, the magmatic series should be complete and all or most of the varieties of effusive rocks and types of eruptions be represented.

**94.** Properties proposed under criterion (ix) should have sufficient size and contain the necessary elements to demonstrate the key aspects of processes that are essential for the long term conservation of the ecosystems and the biological diversity they contain. For example, an area of tropical rain forest would meet the conditions of integrity if it includes a certain amount of variation in elevation above sea level, changes in topography and soil types, patch systems and naturally regenerating patches; similarly a coral reef should include, for example, seagrass, mangrove or other adjacent ecosystems that regulate nutrient and sediment inputs into the reef.

**95.** Properties proposed under criterion (x) should be the most important properties for the conservation of biological diversity. Only those properties which are the most biologically diverse and/or representative are likely to meet this criterion. The properties should contain habitats for maintaining the most diverse fauna and flora characteristic of the bio-geographic province and ecosystems under consideration. For example, a tropical savannah would meet the conditions of integrity if it includes a complete assemblage of co-evolved herbivores and plants; an island ecosystem should include habitats for maintaining endemic biota; a property containing wide ranging species should be large enough to include the most critical habitats essential to ensure the survival of viable populations of those species; for an area containing migratory species, seasonal breeding and nesting sites, and migratory routes, wherever they are located, should be adequately protected.

IUCN notes that in several parts of these paragraphs statements on the areas to be included within the core area of a nominated World Heritage property are set out. In some cases these could be interpreted to include areas adjacent to the core area of outstanding universal value (e.g. "adjacent catchments", "adjacent ecosystems") that could be very large, and might be better considered in some circumstances as part of the buffer zone to the property. **IUCN considers that the circulation of case study examples on best practice in relation to the application of these sections of the Operational Guidelines would be helpful.** These could address both the relationship of core areas and buffer zones of World Heritage Sites and provide guidance on the selection of areas/features/values to be included in core zones and in buffer zones. Although not a matter for IUCN, it might also be valuable to consider developing parallel guidance to these paragraphs for the six cultural World Heritage criteria.

### Section 3. Buffer Zones: Key questions and possible answers...

IUCN considers that the answers to the following questions would provide a more focused and consistent advice on the use of buffer zones within the World Heritage Convention:

#### 3.1. What are the difference between the values and boundaries of the core zone of the World Heritage Site and those of the buffer zone?

IUCN considers that the current guidance in the *Operational Guidelines* could be further clarified and suggests that the following principles are adopted:

**a.** A World Heritage property is separate from any buffer zone that is designed to protect it. The property should be nominated to encompass all of the features that represent its outstanding universal value, defined in relation to the relevant World Heritage criteria, and that also ensure the required conditions of integrity for the maintenance of these values are met. Areas that are not critical to the nomination meeting the relevant World Heritage criteria may therefore be included in the nominated property if they are essential to protecting its integrity.

**b.** Values in the buffer zone to the nominated property are not considered in the determination of whether a property meets one or more of the World Heritage criteria. It is important that States Parties do not confuse the presentation of values in the World Heritage property and in its buffer zone. In IUCN's experience a frequent problem in nominations is that values that are located within the buffer zone are put forward as though they were part of the World Heritage property. A secondary task for the advisory bodies in evaluating a World Heritage nomination is therefore to assess the values within the buffer zone to determine whether there are features that should be included in the core area of the World Heritage Site. The final assessment of whether the nominated property meets one or more of the relevant WH criteria should be based only on the values represented in the core area (i.e. not in the buffer zone).

**c.** The buffer zone should comprise area/areas that are directly linked to the protection and management of the values of the nominated World Heritage Site, and require policies, regulations and management measures to ensure that the values in the World Heritage Site and its integrity are maintained. The effectiveness of protection and management within the buffer zone should be evaluated as a key considerations for determining whether the nomination is acceptable. The assessment of whether a property meets the requirements for integrity, protection and management set out in the *Operational Guidelines* should therefore be

based on an assessment of the provisions in both the nominated property and the proposed buffer zone.

**d.** In addition to the definition of the World Heritage property and its buffer zone, it should be noted that threats to the property can also arise at a large scale that cannot be addressed by a suitable buffer zone (for example the impacts of climate change, or regional scale changes in socio economics or infrastructure). In addition to buffer zones, States Parties should also be encouraged to adopt landscape scale strategies that help protect the values of the nominated WH property from these wider threats. This may include facilitating the concept of large scale connectivity conservation corridors (of which the World Heritage property and its buffer zone could form part). This in turn may require regional, national and transnational cooperation in the planning of protection measures for corridors, and the evaluation of sustainable development projects.

#### 3.2. What role should World Heritage Site buffer zones perform, in addition to protection of OUV?

As noted above, IUCN considers that the core roles of the buffer zone to a World Heritage property should be to provide protection to the values and integrity of the features of the property. Related to this core task are a number of further roles that a buffer zone could perform:

- To provide additional protection to other natural and cultural values of the World Heritage property, in addition to those that are the basis for its World Heritage values.
- In the case of serial World Heritage properties, to provide connectivity between different elements of the series as well as to facilitate an integrated approach to land/water use that is supportive of the conservation and management requirements of the property.
- To support sustainable use and community benefit, as a means of contributing to human well-being.
- To provide ecosystem services to the community (such as clean water).
- To maintain and build local support, knowledge and practices (including traditional knowledge and practices) and capacity in conservation, site and visitor management.
- To interconnect the World Heritage property to large scale natural connectivity conservation corridors, cultural landscapes, and adjacent protected areas where they exist.

#### 3.3. What are the key requirements for a successful World Heritage Buffer Zone?

IUCN considers a clarification of the purpose and goals of buffer zones would be of value to assist States

Parties in developing their proposals. IUCN suggests the following principles could form the basis for developing guidance.

#### a. A buffer zone should have a clear and effective protection

A buffer zone should be clearly defined by the State Party, and should have sufficient protection or management provision to be effective at addressing key threats, and to provide enhanced protection and management of the World Heritage Site. It is essential that all relevant organizations, including different sections of national, regional and local governments and private property owners recognize the existence and protective requirements of the buffer zone of the World Heritage property. IUCN notes that further exploration is required of models for legislation that can provide suitable planning protection to buffer zones, and notes that relatively few countries have specific legislation or provision for buffer zone areas. It is also essential that all organizations with management authority within the buffer zone, as well as private property owners, NGOs and local communities, recognize the need to protect the values of the World Heritage property and are engaged in planning and implementing the agreed protection and management of the buffer zone to achieve this aim.

#### b. A buffer zone should have clear institutional links to the World Heritage Site that it is designed to protect

It is essential that there are strong and effective links between the management institution(s) responsible for the World Heritage Site, and those for the buffer zone. As a minimum there should be coherent management policies, plans, and actions that incorporate both the World Heritage Site and the buffer zone; and these should be clearly delineated in the management plan for the property. These should ensure that there is effective recognition of the overriding importance of protecting the World Heritage Site as a key planning and management requirement within the buffer zone. Ideally a harmonized management framework for the WHS and its buffer zone would be established.

#### c. A buffer zone should have clearly defined and appropriate boundaries

A buffer zone should be defined according to clear and transparent objectives in relation to the values of the World Heritage property that the buffer zone is designed to protect, and its boundaries should be drawn with respect to those objectives. Buffer zones should be defined at a spatial scale that is manageable and realistic and should be able to be understood,

recognized and supported by the relevant regulatory organizations and stakeholders. Buffer zones should ideally be defined according to boundaries that can be both clearly mapped and readily understood in the field. Recognizable boundaries will assist in ensuring that stakeholders understand the existence and role of the buffer zone. The practicalities of buffer zone demarcation, and the communication of the existence and roles of buffer zones to stakeholders.

#### d. A buffer zone should be effectively managed

As with World Heritage Sites themselves, and all protected areas, buffer zones are only effective if managed with clearly understood objectives and supported by the necessary human, financial and other resources to implement management prescriptions, and monitor their effectiveness. The provision of such resources is a key task to be recognized and addressed by the State Party. One of the most effective means of recognizing these needs is to develop an integrated management plan and system jointly for both the World Heritage property and its buffer zone. However IUCN notes that in some buffer zones this can be a major challenge, especially if significant human populations are present, there are a number of different management authorities and/or conservation budgets are inadequate.

#### e. A buffer zone should be part of an integrated landscape approach to the conservation of nature which includes interconnection with other natural areas

A buffer zone has the potential to interconnect a natural WH Site with other natural lands including large scale connectivity conservation corridors (the purpose of which is to interconnect multiple protected areas across very large landscapes). Such interconnections can help to maintain natural species migration processes, the health of habitats and water catchments, and continue to provide opportunities for evolutionary development and adaptation by species in the face of climate change. Connectivity conservation will need new forms of land-use stewardship incentives, which might recognize benefits provided in relation to the carbon economy or the provision of clean drinking water.

#### f. A buffer zone should support communities and help generate support from them for the World Heritage property

World Heritage buffer zones can increase the level of contact between the World Heritage property and surrounding communities, including indigenous peoples who live in the buffer zone. Thus they can create the opportunities to design interventions that support

sustainable development and support communities. While care is needed to ensure clarity of objectives and to maintain the role of buffer zones in site protection, IUCN considers that an integrated approach combining protection/conservation with promotion of education/interpretation and community and economic benefits within the buffer zone should be encouraged (noting always the specific requirements of the area in question).

#### 3.4. How should the relationship between World Heritage Sites and other international, regional and national conservation instruments be developed?

The relationship between World Heritage Sites and other conservation instruments is an issue that requires a broader discussion than that related only to buffer zones. IUCN considers that the relationships between World Heritage properties and areas protected through other forms of international and regional instruments warrants further exploration.

In relation to buffer zones, a key relationship is with biosphere reserves designated through the UNESCO Man and Biosphere Programme. According to figures from MAB, over 80 World Heritage properties are also wholly or in part biosphere reserves. The MAB programme recognizes the following three areas as a requirement of a biosphere reserve:

- (a) a legally constituted core area or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives;
- (b) a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;
- (c) an outer transition area where sustainable resource management practices are promoted and developed.

The biosphere reserve concept might provide a useful analogue for the functioning/zoning of World Heritage properties and their buffer zones, and IUCN has floated the proposal that a systematic relationship could be established where most, in not all natural World Heritage properties would form core areas of biosphere reserves. Further potential complementary relationships also exist between World Heritage properties and wetlands designated under the Ramsar Convention, and also with landscapes with earth science conservation values identified within UNESCO's Global Geoparks Initiative.

IUCN considers that the complementary relationships between the World Heritage Convention and MAB,

Ramsar and Geoparks require further consideration in order to develop best practice advice. In relation to the specific issue of buffer zones, IUCN considers that, where World Heritage properties and biosphere reserves overlap (or where a biosphere reserve is put forward for World Heritage listing) that normally only the core zone of the biosphere reserve should be considered for inscription and that the buffer zone of the biosphere reserve should be considered as being some or all of the buffer zone of the World Heritage property. However this principle should be considered on case-by-case basis as some areas of outstanding universal value have been found within buffer zones of biosphere reserves that were nominated as World Heritage properties.

#### 3.5. What are the circumstances when a buffer zone is not required for a World Heritage Site?

IUCN encourages the establishment of buffer zones for most World Heritage properties, but notes there may be exceptional circumstances where a buffer zone may not be required. Such exceptions to buffer zone designation should be considered on a case-by-case basis. Situations where a buffer zone might not be required include the following:

- The property is not subject to significant external threats or the only external threats to a property are large scale and cannot be meaningfully addressed or managed within a buffer zone (generally unlikely)
- There are already existing landscape scale regulatory and protection measures in place that provide all of the functions that would otherwise be served by a buffer zone.
- The areas that could serve as a buffer zone are justifiably included in the overall World Heritage property. This situation is also relatively unusual but may occur when the property is large, or where the definition of a buffer zone might result in complex boundaries that would be difficult to manage, or in fragmentation of a World Heritage property

#### 3.6. How should advice on Buffer Zones be developed and delivered to States Parties?

IUCN considers that further guidance to States Parties on the use and management of buffer zones would best be provided through the following measures:

- a. **Operational Guidelines:** reviewing the relative sections of the *Operational Guidelines* and making minor edits if necessary to ensure that they fulfill the objectives of the World Heritage Convention accurately.
- b. **Guidance on boundary modifications:** providing an agreed statement on the principles for the extension/reduction of buffer zones of World Heritage properties. IUCN considers that this should amplify the

guidance in the *Operational Guidelines* that significant changes to buffer zone boundaries of World Heritage properties should be treated as significant modifications to the site requiring the preparation of a new nomination.

c. **Resource Manuals:** integrating the guidance on buffer zones into the series of resource manuals foreseen by UNESCO and the advisory bodies to inform both new nominations/extensions of World Heritage properties and the development of appropriate management plans.

d. **Training:** In conjunction with 3, providing specific training on buffer zones in relation to both nominations and management planning for existing World Heritage properties.

#### References

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- Welch, D. (2005). What should protected area managers do in the face of climate change? *The George Wright Forum* 22. 75-93.
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## WHC Position Paper

### 1. Introduction

At its 30th session in Vilnius, Lithuania in July 2006 the World Heritage Committee accepted an offer by the State Party of Israel to support an international expert meeting on buffer zones. At the 31st Committee Session in Christchurch, New Zealand, Switzerland stated its initiative in preparing the meeting. The meeting will be hosted and additionally financed by the State Party of Switzerland and will take place in Davos, from 11 to 14 March 2008, and will be organized in collaboration between the Swiss authorities (Federal Office for Culture – FOC) and the UNESCO World Heritage Centre.

#### Decision 30 COM 9

The World Heritage Committee, [...]

14. *Decides* to accept the offer of Israel to support a meeting in Paris on Buffer zones; [...]

The discussion will focus on the issues and best practices concerning buffer zones of properties inscribed on the World Heritage List. The aim of the meeting is to address problems, issues, and solutions for World Heritage sites related to buffer zones, examine difficulties in establishing buffer zones and develop recommendations to the World Heritage Committee to review the definition of buffer zones in the *Operational Guidelines of the World Heritage Convention*.

### 2. Objectives of the expert meeting

The main objectives of the meeting are to:

- Exchange information and review case studies on buffer zones for World Heritage properties (natural, cultural and mixed sites);

- Review the provisions on buffer zones and boundaries in the *Operational Guidelines* (Chapter IIF on Protection and Management, in particular paragraphs 103-107; as well as Chapter III.1);
- Review the provisions for integrity and authenticity in the *Operational Guidelines*, in particular Chapter II.E (paragraphs 87-95);
- Review the management provisions as far as applicable to buffer zones;
- Review the possibilities to enhance cooperation with other international Conventions and programmes (e.g. Ramsar, MAB), in particular for the definition and management of buffer zone;
- Provide a concise report in English and French to be presented to the 32nd session of the World Heritage Committee in July 2008 (Québec);
- Disseminate results among States Parties, Advisory Bodies and partners in World Heritage conservation, including NGOs and scientific bodies.

This document provides a summary of the background to this meeting. Further references and documents are listed in the Annexes.

### 3. World Heritage Convention and Buffer Zones

#### 3.1 World Heritage Convention

The 1972 UNESCO *Convention concerning the Protection of the World Cultural and Natural Heritage* currently has 185 States Parties. The purpose of the Convention is to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage of “outstanding universal value”.

To date, 851 properties (see Table 1) from a total of 141 countries have been inscribed on the World Heritage List.

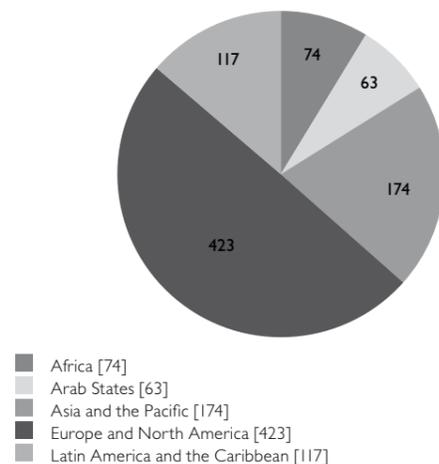
### Type of property

Table 1: Number of properties inscribed on the World Heritage List

Type of property	Total number
Cultural properties	660
Natural properties	166
Mixed cultural and natural properties	25
<b>Total</b>	<b>851</b>

### Number of World Heritage Sites

Table 2: Geographical distribution of the World Heritage properties



### 3.2 Definition of buffer zones

The concept of buffer zones has been a long standing management approach in the conservation and management of natural protected areas. The notion of buffer zones for cultural sites is considered to be different for natural sites and was less developed. However, the objectives of buffer zones have evolved from a purely additional layer of protection for the protected area to a much wider approach. While protection of the core may be the ultimate purpose, it is certainly not the only one – for example, in the case of many natural sites the function of a buffer zone is to act as a two-way “buffer” i.e. to prevent outside influences from affecting the core and vice-versa e.g. damage by wildlife to life and property in the surrounding habitations. Secondly, in many cases buffer zones provide connectivity or linkages in the landscape providing for migratory corridors for fauna and flora. Thirdly, they link the core to the socio-economic context in which it is located by enabling activities which would otherwise

be prohibited, etc (see also the notion of buffer zone for Biosphere Reserves, chapter 5.3).

However, in the framework of the *World Heritage Convention*, the purpose of buffer zones is still exclusively linked to the function of providing an additional layer of protection. Hence, any revisions to the *Operational Guidelines* should also consider these other functions of buffer zones to the core zones of World Heritage sites. According to the current version of the *Operational Guidelines*, the presence of buffer zones is strongly recommended for the inscription of a site on the World Heritage List, but not mandatory.

The availability of a protection ensured through a buffer zone is crucial for the concept of outstanding universal value (OUV) that distinguishes the properties on the World Heritage List. As the Advisory Bodies IUCN and ICOMOS point out in their paper on the application of this concept of outstanding universal value:

“There are three key tests, as set out in the paragraphs 77 and 78 of the *Operational Guidelines*, which the World Heritage Committee applies to decide whether or not a property is of outstanding universal value:

1. A property must meet one or more of the ten criteria for outstanding universal value, of which i-vi apply to cultural heritage and vii-x to natural heritage.
2. A property must also meet certain conditions of integrity (cultural and natural properties) and/or authenticity (cultural properties only).
3. A property must have an adequate protection and management system in place to ensure its safeguarding, including appropriate legal, boundary and buffer zone provisions and a management plan or system that ensures uses supported by the property are ecologically and culturally sustainable.” (WHC-06/30.COM/INF.9, p. 15)

Although the notion of buffer zones exists already in the first version of the *Operational Guidelines* to the *Convention*, a lot of sites do not have a buffer zone. During the early years of the implementation of the *Convention*, buffer zones were rarely identified, so many of the sites inscribed between 1978 and 1990 do not have a buffer zone. The identification of a buffer zone is often being recommended by the Committee in its decisions in order to improve the protection of the properties, and to enhance their integrity.

The level of protection that shall be provided by a buffer zone is different from the protection level assigned to the core zone of a property.

The boundaries of existing buffer zones are often not identified in an adequate way to protect the World Heritage property against all threats and external impacts on its values, as for example, high rise constructions just outside the limits of the buffer zone may still cause a visual impact<sup>1</sup> on the property, thus threatening the outstanding universal value of the site. Therefore new approaches are being considered to

better protect the values of sites and their setting (e.g. in the Vienna Memorandum: <http://whc.unesco.org/archive/2005/whc05-15ga-inf7e.doc>).

### 3.3 Evolution of buffer zones in the Operational Guidelines

The *Operational Guidelines* for the implementation of the World Heritage Convention aim to facilitate the implementation of the World Heritage Convention by defining procedures on the main World Heritage processes such as Nominations, Periodic Reporting, Reactive Monitoring or Delisting. They are periodically revised to reflect the decisions of the Committee and pertinent developments on the concept of heritage.

Buffer zones were first mentioned in the 1977 version of the *Operational Guidelines*. Since then the *Operational Guidelines* have been revised multiple times. The current printed version of 2005 has been updated in web-version with highlights of changed text in January 2008. The paragraphs referring to buffer zones have not been affected by changes since 2005. (see also: <http://whc.unesco.org/en/guidelineshistorical/>).

Currently paragraphs 103-107 of the *Operational Guidelines* refer to buffer zones (see <http://whc.unesco.org/archive/opguide08-en.pdf>):

#### Buffer zones

(extracts of the *Operational Guidelines*)

1. Wherever necessary for the proper conservation of the property, an adequate buffer zone should be provided.
2. For the purposes of effective protection of the nominated property, a buffer zone is an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection. The area constituting the buffer zone should be determined in each case through appropriate mechanisms. Details on the size, characteristics and authorized uses of a buffer zone, as well as a map indicating the precise boundaries of the property and its buffer zone, should be provided in the nomination.
3. A clear explanation of how the buffer zone protects the property should also be provided.
4. Where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required.

5. Although buffer zones are not normally part of the nominated property any modifications to the buffer zone subsequent to inscription of a property on the World Heritage List has to be approved by the World Heritage Committee.

The notion of buffer zones has evolved in the process of enhancing protection of World Heritage properties over the years and was reflected in the *Operational Guidelines*. It has been specified more precisely in the process of this development. While in the 1977 *Operational Guidelines* a buffer zone is defined as “the natural or man-made surroundings that influence the physical state of the property or the way in which the property is perceived”, (§26 b).

The 2005 *Operational Guidelines* set a clear function to the buffer zone as an additional protective layer to the property with restricted uses. It is envisaged as a complementary tool for the management of the property while it was not in the past.

But this complementary function is, for some cases, difficult to ensure on a long term basis. For example, in the case of World Heritage site of Shiretoko in Japan, the inscribed property “includes” the buffer zone which is the entire marine component of the property. The outstanding universal value of the property greatly depends on the formation of sea-ice in its buffer zone” which also offers the habitat for the threatened species which determine the other part of the outstanding universal value of the site. On the same time, this buffer zone allows commercial fisheries operations and culling of threatened species, which was known at the time of inscription.

It is worth noting that in the 1984 *Operational Guidelines* (in point G. Format and content of Nominations), different intermediate zones with different degrees of legal protection were envisaged. This idea has totally disappeared later on and has been replaced by one buffer zone.

As specified in the paragraph 107 of the 2005 *Operational Guidelines*, any modification to the buffer zone should be approved by the World Heritage Committee. This paragraph shows that the notion of buffer zone has gained importance over years within the World Heritage processes but further guidance on how to create a buffer zone (how it contributes to protect the outstanding universal value of the property, degree of legal protection, size...) is not provided.

The buffer zone definition has been specified over time in order to encompass the different cases of diverse sites. It should be noted however, that any definition in the *Operational Guidelines* needs to be flexible enough to be applicable to a range of natural, cultural and mixed properties.

**4. World Heritage processes and buffer zones**

**4.1 Buffer zones in Nomination dossiers**

The nomination dossier is the primary basis on which the Committee considers the inscription of the properties on the World Heritage List. It should be prepared in the following a format specified in the Annex 5 of the *Operational Guidelines*. Within the chapter concerning the identification of the property, the boundaries shall be clearly defined unambiguously distinguishing between the nominated property and any buffer zone (see paragraph 132 of the *Operational Guidelines*). Officially up-to-date published topographic maps of the State Party shall be provided. All other maps should be georeferenced with complete sets of coordinates. A nomination shall be considered "incomplete" if it does not include clearly defined boundaries.

As per paragraph 106 of the *Operational Guidelines*, where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required.

**4.2 A synthesis evaluation of states of conservation regarding buffer zones**

Among the 163 cases of sites on the List of World Heritage in Danger or properties discussed under the item state of conservation during the 31st session of the World Heritage Committee (2007, Christchurch), 73 cases were related to issues regarding buffer zones. During the 28th session of the World Heritage Committee (2004, Suzhou) among the 153 cases discussed by the Committee only 38 were related to buffer zone issues. This clearly shows that issues related to buffer zones seem to come into the forefront of discussion. It seems that the World Heritage Committee discussed buffer zones as a tool for enhancing the protection and integrity of World Heritage properties.

**Issues related to buffer zones**

Table 3: State of conservation reports from previous Committee's sessions (2004 and 2007)

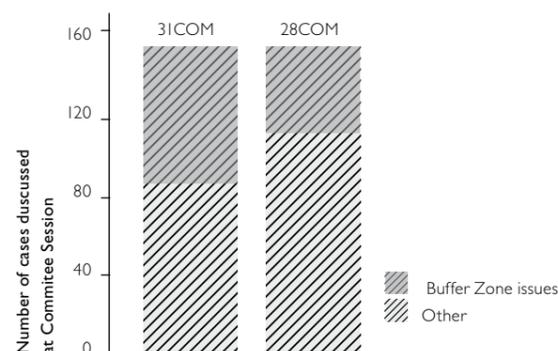


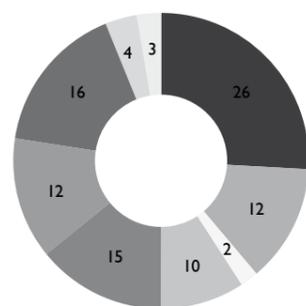
Table 4: State of conservation related to buffer zones at 31 COM, selected specific examples

Among the threats related to buffer zones that were encountered, some problems reoccurred multiple times. Among the predominant issues related to buffer zone issues are:

- 1) Visual impact of (high-rise) construction on the World Heritage Property, impacting the outstanding universal value of the site (encountered in 26 of 73 cases. Multiple problems can apply to one case).
- 2) Legislative problems/management problems of buffer zone (16 of 73 cases)
- 3) Unclear boundaries of buffer zones (in 15 of 73 cases)
- 4) Urban development pressure/economic development pressure within buffer zone (encountered in 12 of 73 cases)
- 5) No buffer zone existing (12 of 73 cases)
- 6) Boundary modification proposed or introduced by State Party (10 of 73 cases)
- 7) Inappropriate activities within buffer zone (4 of 73 cases)
- 8) Insufficient buffer zone size (2 of 73 cases)
- 9) Unsustainable tourism related to the buffer zone (2 of 73 cases)
- 10) Destruction of built fabric within buffer zone (1 case)

**Buffer Zone Issues in 31 COM**

Table 5: Different buffer zone issues discussed during the 31st session of the World Heritage Committee



- Visual Impact
- Urban Pressure
- Tourism Pressure
- Boundary Change
- Unclear Boundary
- No Buffer Zone
- Legal Aspects

**State of conservation related to buffer zones at 31 COM, selected specific example**

Name of Site	Inscription Criteria	Issues related to buffer zones mentioned in working document	Problem Summary
Fertő/Neusiedlersee Cultural Landscape (Austria/Hungary)	2001 (v)	A hotel of 73 metres was planned to be located on a ridge 3.8 km from the core zone and 1.9 km from the buffer zone of the World Heritage property. The project site is located within a development zone on the outskirts of Parndorf. The location of the proposed hotel and its height meant that it would rise above the skyline of the low hills surrounding the World Heritage site.	Construction of high rise just outside buffer zone with visual impact.
Cologne Cathedral (Germany) (C 292rev)	1996 (i) (ii) (iv)	When the site was inscribed, no buffer zone was foreseen. A buffer zone was requested for the site by the Committee several times. New high rise construction impacted the view on the cathedral and its value as a landmark. In 2006, the city council of Cologne adopted the decision to establish a buffer zone with extension to the east bank of the Rhine. A draft map with the new proposed boundaries for the buffer zone was received by the World Heritage Centre.	Urban development pressure. High-rise building visual impact. Lack of buffer zone.
Old Town of Lijiang (China) (C 811)	1997 (ii) (iv) (v)	At the time of World Heritage inscription, a three-level protection zone concept was used to define the core and buffer zones for a total area of 3.8 square kilometres in the old town of Dayan. In the process of elaborating a comprehensive Management Plan for Lijiang Old Town, the relevant authorities attempted to reduce the core area and buffer zone of Dayan Old Town in order to allow the development of tourism-related projects at other sites of the property. There is no clear demarcation of boundary or buffer zones for Baisha and Shuhe. Several tourism-related facilities, real estate development and/or commercial shops have been constructed around the property or even in the buffer zones of Dayan Town.	Buffer zone reduction. Unclear boundaries. Construction and touristic development.
Río Plátano Biosphere Reserve (Honduras) (N 196)	1982 (vii) (viii) (ix) (x)	Within the buffer zone of the site unauthorized activities are occurring, including: agricultural expansion, illegal logging and poaching, specifically by putting into operation permanent and temporary checkpoints located at critical access points.	Illegal activities in buffer zone.
Timbuktu (Mali) (C 119rev)	1988 (ii) (iv) (v)	New construction project within the buffer zone but right in front of the World Heritage site Sankore Mosque. The proposed architectural project has a negative visual impact that seriously affects the outstanding value of the Mosque.	No building regulation has been prepared for the buffer zone.
Ancient City of Damascus (Syrian arab Republic)	1979 (i) (ii) (iii) (iv) (vi)	When the site was inscribed, no buffer zone was foreseen. The limits of the property were the surrounding wall. A buffer zone was requested by the World Heritage Centre several times, notably within the framework of the Retrospective Inventory. New developments are foreseen such as a highway along the city walls and new constructions entailing the destruction of a large zone of the traditional urban fabric, thus impacting on the urban landscape and the values of the property.	No buffer zone. Urban development pressure. Socio-economic and visual impacts.

Some of the problems can be summed up into different issues and problems, which provides a clearer picture:

#### Urban developments within buffer zones (40 of 73 cases)

Urban development pressure is frequently endangering World Heritage Sites. Since high rise construction is mostly a sign of urban economic development as well as other activities that drive the change in cities it has an impact of the condition of World Heritage properties' buffer zones. Another problem related to high rise construction is that it oftentimes has an impact on the property even if the construction site is located outside the buffer zone. The strong visual impact that a high rise has on its surrounding is oftentimes not taken into consideration. Tourism may be triggered by or be correlating with an increase in urban density. Frequently the World Heritage Sites themselves are the cause for an increase in tourism, thus triggering the development of hotels and tourist centres in proximity to the sites.

#### Unclear boundaries (25 of 73 cases)

The presence of precise boundaries is crucial for the efficient protective functioning of buffer zones. Oftentimes, unclarity appears when States Parties decide to change the boundaries of their property and its buffer zones. This may happen due to a renomination, to an extension of the site, or due to other reasons. In many cases the problem is also related to a lack of background studies and expertise that are necessary before establishing the limits of a buffer zone and at the moment of a proposed boundary modification. The Retrospective Inventory process was therefore developed to assist the State Parties in this need for clarification.

#### Absence of buffer zone (12 of 73 cases)

There are a lot of sites that lack a buffer zone. Since it is only recommended in the *Operational Guidelines* of the World Heritage Convention but not mandatory to include a buffer zone into a nomination, there are many sites that do not comprise a buffer zone. Also, early inscriptions often do not have a buffer zone. This becomes problematic when a buffer zone is necessary to provide adequate protection, as in the case of Cologne, where the World Heritage Committee requested the creation of a buffer zone for the protection of the property at the time of the inscription (1996) and where development outside the property threatened the site. The buffer zone was requested by several Committee decisions (Decisions 28COM 15B.70, 29COM 7A.29, 30COM 7A.30, and 31COM 7B.110)

and was finally submitted in 2008. In exceptional cases a buffer zone may not be necessary for the protection of a site, as other protection schemes replace it (e.g. Areas of Natural Beauty in the United Kingdom).

#### Legal aspects (16 of 73 cases)

Many buffer zones are not or insufficiently protected by national or local legislation. For that reason, a protective status for buffer zones is not possible. In some cases, buffer zones could be established, but would have the same legal status as World Heritage core zone according to the existing national and local laws (e.g. discussions going on for the site of Kotor, Montenegro). In addition, any zoning for a World Heritage property and its buffer zone needs to be reflected in the management plan for the property. The management plan needs to clearly define the legal status and appropriate activities in the buffer zone.

Too often a buffer zone exists without any specific legal provisions for its management. Thus, the World Heritage property has "virtual buffer zones", which are basically managed as any other part in the country and which do not provide any additional protection at all. A good example of a "non effective" buffer zone is the property of the Mount Nimba in Guinea. The World Heritage site is the core zone of a biosphere reserve and is surrounded by a huge buffer zone. One would expect that in this buffer zone, there would be certain restrictions on certain uses of natural resources. For example, this being a forest zone, one could prevent the normal slash and burn agriculture and stimulate agricultural practices leaving the forest standing, such as perennials like coffee in an agroforestry system. However, there is no specific legislation and thus the buffer zone is business as usual, managed like any other part of the region, with slash and burn agriculture creeping up to and sometimes into the core zone. In some cases, such as the Borobudur Temple Compounds in Indonesia, the zoning system (five zones) in place has never been officially adopted or formally recognized by any national legislation. In other cases, such as the Kathmandu Valley in Nepal, redefinition of core and buffer zones for the WH property requires the amendment of some building bylaws linked for the inscribed site, buffer zone and the surrounding areas. In fact, it was through the exercise of redefining the WH core and buffer zones that an integrated management framework which was integrated in the site management plan so that a legitimate instrument can be put into place to ensure implementation of such a management plan.

As stated in paragraph 104 of the current *Operational Guidelines*, buffer zone does not normally constitute part of the nominated property; this may cause a certain degree of ambiguity in the interpretation of the World Heritage boundary. In this respect, a **harmonization** of

the core and buffer zones protected by the national legislation (if any) and the requirement of World Heritage protection within the framework of 1972 Convention is necessary. (For instance, the Old Town of Lijiang in China had a three – level zoning system defined by the national Urban Planning Act but the nomination dossier did not clarify its specific implication for World Heritage zoning.

#### 4.3 Periodic Reporting and buffer zones

Every six years, the States Parties are invited to submit to the World Heritage Committee a Periodic Report on the application of the *World Heritage Convention*, including the state of conservation of the World Heritage properties located on its territories in accordance with article 29 of the *Convention*.

It appeared in the different Regional Periodic Reports that questions relating to the boundaries and buffer zones are of great interest for States Parties considering the high rate of response. This can be explained by the fact that many properties inscribed on the World Heritage List in the beginning of the *Convention* were nominated without a clear demarcation of their boundaries and buffer zone, or topographical maps, or geographic coordinates. This lack of information may be very detrimental to the conservation of heritage properties as it prevents the establishment of a coherent system of legal protection, monitoring and maintenance. This is why in some cases, perimeters are judged today inadequate.

The Section 2 of the **Africa** Periodic Report (2002) entitled "Implementation of the *World Heritage Convention* at site level" covers the situation of the buffer zones as regards the African sites. The report shows that over 62% of the respondents to the questionnaire felt that boundaries of the buffer zone, if existing for sites in Africa, are inappropriate. More than half of the States Parties requested revision or extension of the boundaries while two-thirds wished to see buffer zones redefined altogether. It is to be further noted for Africa that according to the fourteen properties analyzed at the time of Periodic Reporting (2001-2002) for sub-Saharan Africa, the population living in the 20km buffer zone varied according to the type of natural surroundings: from 5000 people around Simien National Park to more than three million near Goree Island (Senegal) due to its proximity to Dakar capital. While the demographic trend in Africa has not changed over the seven year period, the peripheral population of the sites is expected to increase further complicating issues of established buffer zones around World Heritage sites. The issues of conflicts are still rife in Africa. While in 2002 this problem affected mostly the World Heritage sites in the Democratic Republic of the Congo and its five natural heritage sites, other properties such as the Comoe NP, Tai NP and Mount Nimba in Cote d'Ivoire,

Manovo Gounda St. Floris in Central African Republic have been added into the list. On the other hand, it is to be noted that the twenty natural properties in Africa inscribed on the World Heritage List since 2000 have included well established buffer zones.

Through the first cycle of the Periodic Reporting exercise in the **Asia and the Pacific region** (2003), most of the countries tended to conclude that the WH core and buffer zones seem to be sufficient to protect the values for which the sites were inscribed on the WH List. In fact, this was not true by simply observing the urban and/or infrastructure development pressure incurred to the WH cities in Asia.

In the Periodic Report of **Latin America and the Caribbean** (2004), 34% of all respondents did not deem the borders and buffer zones of their site adequate to ensure the protection and conservation of the properties' outstanding universal value. Nearly half of all properties, mainly cultural, were even considering the revision of the boundaries or buffer zone. In this context, however, it was felt that the concept and function of a buffer zone in support of the protection of the outstanding universal value of the property needs to be clarified.

In the **Europe and North America region** (2005-2006), for properties inscribed on the World Heritage List up to 1998, 23% of site managers consider also their boundaries inadequate and 42% of properties do not have a buffer zone. As a follow up to the first cycle of Periodic Reporting, France has proposed the creation of new buffer zones for all properties until 1998 which had no buffer zone at the time of their inscription. To be able to draw the perimeters of these new buffer zones, the French authorities have used existing protection perimeters provided by the French Laws<sup>2</sup> but also the perimeter adopted through other international Conventions such as the Ramsar Convention on Wetlands for the Mont-Saint-Michel and its Bay (France). These new buffer zones were then discussed and agreed with local authorities. Eight new buffer zones for eight properties<sup>3</sup> (lacking this additional layer of protection before) were proposed and adopted by the World Heritage Committee at the 31st session (Christchurch, 2007)<sup>4</sup>. The work is summed up within the "Atlas of French properties inscribed on the World Heritage List".

Because of the lack of guidance in the *Operational Guidelines* on the issue of creation of buffer zones, it was agreed by the Committee that the creation of a buffer zone, whether coming out from Periodic Reporting, reactive monitoring, or up-dating of nominations, should always be considered as a minor boundary modification, needing the review of the Advisory Bodies and the approval of the World Heritage Committee. This missing element could be formalized as a suggestion of amendment to the *Operational Guidelines* when revised.

Following the first cycle of Periodic Reporting, different methodologies have been adopted in the process of identification or revision of buffer zones, and sometimes they have been combined. Depending on the typology of property inscribed, the buffer zone is represented by: 1) an area of land around the core; 2) the cadastral parcel on which the property is located; 3) one of the protection layers established through national legislation concerning heritage safeguarding; 4) the territory of the municipality in which the property is situated.

#### 4.4 Retrospective Inventory and buffer zones

The Retrospective Inventory Project was developed in 2004 upon request of the World Heritage Committee (Decision 7 EXT. COM 7.1) in the framework of the Periodic Reporting. It consists of a retrospective inventory of all nomination dossiers of World Heritage properties inscribed between 1978 and 1998. Its objective is to identify critical omissions in, or losses from, the dossiers of inscribed properties and, in particular, to identify the presence or absence of maps, their quality, boundary definitions, the area in hectares of each property, the nature (single area, serial, etc) of the property inscribed and its component parts and to clarify all the elements in close co-operation with the States Parties. This information becomes part of the baseline data needed before the launching the second cycle of Periodic Reporting and is furthermore essential for any monitoring missions requested by the World Heritage Committee. It was already carried out for the European and North America Regions as well as for the Arab States Region. It is now being carried out for the Africa region and will be extended to the two other regions in the coming years.

European States Parties to the *World Heritage Convention* were requested, whenever the boundaries and buffer zones of their World Heritage properties were unclear, to provide "clarifications" of their intention at the time of inscription. Such clarifications were then presented officially to the World Heritage Committee in 2006 and 2007 and officially acknowledged through Decisions 30 COM IIA.2 and 31 COM IIA.2.

The analysis European States Parties developed on the delimitation of their sites offered the occasion for an in-depth reflection on buffer zones:

- whenever a buffer zone had already been foreseen at the time of inscription, either its configuration was confirmed or in some cases, the need for a modification was identified and later on an official proposal for a change was presented to the World Heritage Committee;
- whenever no buffer zone had been foreseen at the time of inscription, the need to identify one in order to ensure a more effective protection of the property was more and more taken into account.

Currently, the percentage of World Heritage properties presenting a buffer zone is approximately established at 40%: however, this figure shows significant increases or decreases depending on the region concerned. 70% of the proposals for minor boundary modifications which will be presented in 2008 and 94% of the ones examined in 2007 refer to the creation or revision of buffer zones.

### 5. Relevant studies and meetings related to buffer zones

#### 5.1 Relevant World Heritage expert meetings

- International Expert Workshop on Integrity and Authenticity of World Heritage Cultural Landscapes 11-12 December 2007, Aranjuez, Spain. (<http://whc.unesco.org/en/events/450>) [This meeting provided an in-depth discussion on integrity issues related to cultural landscapes]
- Follow-up to Periodic Reporting: in many follow-up meetings to Period Reporting the question of the clear definition of World Heritage core and buffer zones was discussed (e.g. Meeting in Poland, September 2007 <http://whc.unesco.org/uploads/events/documents/event-417-2.pdf>). Other recommendations from these meetings can be found at: <http://whc.unesco.org/en/periodicreporting/>).
- Expert Meeting on "Benchmarks and Chapter IV of the *Operational Guidelines*" Paris, 2-3 April 2007 (Recommendations of the Expert meeting on Benchmarks see document WHC-07/31.COM/7.3, [http://whc.unesco.org/download.cfm?id\\_document=8862](http://whc.unesco.org/download.cfm?id_document=8862)) [This meeting provided specific recommendations on the desired state of conservation of sites on the Danger List]
- Vienna Conference "World Heritage and Contemporary Architecture - Managing the Historic Urban Landscape", 12-14 May 2005, Austria, Vienna. (Outcome: Vienna Memorandum, WHC-05/15.GA/INF.7, <http://whc.unesco.org/archive/2005/whc05-15ga-inf7e.doc>) [This meeting provided a new approach on the protection of the historic urban landscape, including important views and the insertion of new development; the meeting was organized in reaction to major conservation issues relating to development in World Heritage cities, and in particular the issue of the delisting discussion by the World Heritage Committee on Vienna in 2002 following a development in the buffer zone of the property]; (and follow-up meetings in St Petersburg, Report Saint Petersburg meeting 2007: <http://whc.unesco.org/uploads/activities/documents/activity-47-7.pdf> and in Olinda, Brazil – Outcome: Report Olinda

meeting 2007: <http://whc.unesco.org/uploads/activities/documents/activity-47-9.pdf>)

- Expert meeting on the concept of outstanding universal value which took place in Kazan, Russian Federation, from 6 to 9 April 2005 (Recommendations of the Expert meeting on outstanding universal value (OUV) see document WHC-05/29.COM/9, [http://whc.unesco.org/download.cfm?id\\_document=5828](http://whc.unesco.org/download.cfm?id_document=5828)) [This meeting provided a diverse range of recommendations on the protection and maintenance of outstanding universal value and specifically recommended enhancing regional capacity building]
- World Heritage at the 5th IUCN World Parks Congress. Durban, South Africa, 2003. Results published in: World Heritage Paper Series n°16. [http://whc.unesco.org/documents/publi\\_wh\\_papers\\_16.pdf](http://whc.unesco.org/documents/publi_wh_papers_16.pdf)
- Conference on Authenticity in relation to the World Heritage Convention, 1-6 November, 1994, Nara, Japan. Report on the Conference on Authenticity in Relation to the World Heritage Convention: <http://whc.unesco.org/archive/nara94.htm>

#### 5.2 Studies by the Advisory Bodies

Position papers will be provided for this meeting by the Advisory Bodies and are not included in this document.

In November 2006 ICOMOS Japan held a "World Heritage Convention and the Buffer Zone Symposium" in Hiroshima, Japan. (<http://www.law.kyushu-u.ac.jp/programsinenglish/hiroshima/index.htm>).

In the introductory page it is stated:

"In Japan, [...] the Law for the Protection of Cultural Property does not protect the buffer zone. The *Operational Guidelines* to the *World Heritage Convention* require that a buffer zone would be determined whenever it is necessary for the proper conservation of the cultural or natural property. In order to fulfil this requirement, Japan has developed the practice of recourse to various laws regulating areas for purposes other than the conservation of its cultural value. Hence, the legal basis for the buffer zone in Japan is very fragile.

Related, the concept of the buffer zone is not legally elaborated, due to which it is not clear what is expected by the preservation of the buffer zone. Under current practice, it fully depends upon the goal of each law separately. We might expect that what is designated as the buffer zone will be regulated by laws to preserve natural resources or the construction of

large size factories. If these laws would be amended for reasons, which have nothing to do with the protection of cultural property, the protection of the buffer zone will be weakened."

The following recommendations were adopted at the meeting ([http://www.law.kyushu.ac.jp/programsinenglish/hiroshima/Hiroshima\\_Recommendation\\_English\\_final.pdf](http://www.law.kyushu.ac.jp/programsinenglish/hiroshima/Hiroshima_Recommendation_English_final.pdf)):

"1. To further study the issues of buffer zones and how they can be adequately protected and, in the process, support the cooperation of its relevant committees, acting jointly, on buffer zone issues;

2. To increase awareness of the existence, necessity and protection of buffer zones in the Asia-Pacific region and localities;

3. To convince national governments, local governments, corporations and construction companies to be respectful of heritage places and their buffer zones and that any development must be compatible with their protection and enhancement;

4. To conduct activities that emphasize the belief that corporate goals should include the continuing and genuine commitment by the business sector to behave responsibly and ethically and exercise an important duty of care to all of its stakeholders including the community at large;

5. To promote the idea of responsible citizenship as a key element in the preservation and promotion of cultural heritage;

6. To further stress education to intensify global awareness of the measures needed to protect heritage sites and their buffer zones so as to preserve and transmit to future generations the cultural context of World Heritage Sites, both listed and potential;

7. To stress the idea that every World Heritage Site has intangible aspects and dimensions, notably the cultural and historical, that must be respected; and

8. To promote these significant matters to the World Heritage Committee and the member-states of the *World Heritage Convention*."

#### 5.3 Link to other Conventions and Programmes

**UNESCO Biosphere Reserves / MAB,**  
[http://www.unesco.org/mab/faq\\_br.shtml#benef](http://www.unesco.org/mab/faq_br.shtml#benef)

Biosphere Reserves are organized into 3 interrelated zones: the core area, the buffer zone, and the transition area. Only the core area requires legal protection and hence can correspond to an existing protected

area such as nature reserve or a national park. This zonation scheme is applied in many different ways in the real world to accommodate geographical conditions, socio-cultural settings, available legal protection measures and local constraints. This flexibility can be used creatively and is one of the strongest points of the biosphere reserve concept, facilitating the integration of protected areas into the wider landscape. On the specific notion on zoning, the MAB secretariat presented a working document during its last MAB council in Madrid, in February 2008 (see document SC-08/CONF.201/5).

### The Convention on Biological Diversity

The Convention's programme on protected areas also refers to buffer zones (extracts)<sup>5</sup>:

*Goal.* To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function

*Target.* By 2015, all protected areas and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity and the concept, where appropriate, of ecological networks.

#### Suggested activities of the Parties

- Evaluate by 2006 national and sub-national experiences and lessons learned on specific efforts to integrate protected areas into broader land- and seascapes and sectoral plans and strategies such as poverty reduction strategies.
- Identify and implement, by 2008, practical steps for improving the integration of protected areas into broader land- and seascapes, including policy, legal, planning and other measures.
- Integrate regional, national and sub-national systems of protected areas into broader land- and seascape, *inter alia* by establishing and managing ecological networks, ecological corridors and/or buffer zones, where appropriate, to maintain ecological processes and also taking into account the needs of migratory species.
- Develop tools of ecological connectivity, such as ecological corridors, linking together protected areas where necessary or beneficial as determined by national priorities for the conservation of biodiversity.
- Rehabilitate and restore habitats and degraded ecosystems, as appropriate, as a contribution to building ecological networks, ecological corridors and/or buffer zones.
- Ramsar Convention <http://www.ramsar.org/> The Convention's mission is the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as

a contribution towards achieving sustainable development throughout the world.

The Conference of the Contracting Parties: "Recommends that the essential character of wetlands be recognized and that measures (notably inclusion of wetland concerns in land-use and water management planning, adoption of a whole catchment approach and/or creation of buffer zones) be taken to ensure that the ecological character of Ramsar sites and wetland reserves is not placed at risk."

There is a need to develop zoning measures related to larger Ramsar sites and wetland reserves, involving strict protection in key zones and various forms of wise use for the benefit of human populations in other zones; and the need to develop ecological corridors linking Ramsar sites." (see: [http://www.ramsar.org/rec/key\\_rec\\_5.3.htm](http://www.ramsar.org/rec/key_rec_5.3.htm) )

### Hague Convention

[http://portal.unesco.org/culture/en/ev.phpURL\\_ID=35744&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/culture/en/ev.phpURL_ID=35744&URL_DO=DO_TOPIC&URL_SECTION=201.html)

The Convention for the Protection of Cultural Property in the Event of Armed Conflict adopted at The Hague (Netherlands) in 1954 in the wake of massive destruction of the cultural heritage in the Second World War is the first international treaty of a worldwide vocation focusing exclusively on the protection of cultural heritage in the event of armed conflict.

#### "Article 4. Respect for cultural property

I. The High Contracting Parties undertake to respect cultural property situated within their own territory as well as within the territory of other High Contracting Parties by refraining from any use of the property and its immediate surroundings or of the appliances in use for its protection for purposes which are likely to expose it to destruction or damage in the event of armed conflict; and by refraining from any act of hostility, directed against such property.

*Article 9.* Immunity of cultural property under special protection The High Contracting Parties undertake to ensure the immunity of cultural property under special protection by refraining, from the time of entry in the International Register, from any act of hostility directed against such property and, except for the cases provided for in paragraph 5 of Article 8, from any use of such property or its surroundings for military purposes."

### European Landscape Convention

<http://conventions.coe.int/Treaty/en/Treaties/Html/I76.htm>

The European Landscape Convention – also known as the Florence Convention, after the city where the convention was adopted – promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. It is the first international treaty to be exclusively concerned with all dimensions of European landscape.

#### "Article 1 – Definitions

For the purposes of the Convention: a "landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors; [...]

#### Article 6 – Specific measures Implementation

To put landscape policies into effect, each Party undertakes to introduce instruments aimed at protecting, managing and/or planning the landscape. [...]"

### 6. Key issues for consideration at the expert meeting

This final section points out a number of questions which might be helpful for the discussion during the expert meeting:

1. Is there a common definition regarding zoning concepts for the World Heritage properties (natural, cultural, mixed); what is the definition of a core zone, a buffer zone, setting, views (important views, view corridors, views sectors...)?
2. What is the relation between the core zone and the buffer zone; what is the relation between the outstanding universal value of the core zone and the buffer zone; are buffer zones always necessary?
3. Are there several types of buffer zones, what are the different functions of buffer zones (legal, protective, visual) and how can they be addressed? Are there different types of buffer zones for one core zone (complementary types related to the values of the World Heritage property)?
4. What specific requirements need to be focused on for cultural/natural/mixed sites? How can the definition of a buffer zone encompass the different cases?
5. How to establish a buffer zone, what kinds of difficulties are occurring in defining a buffer zone for a World Heritage site?
6. How is the level of protection in the buffer zone different from the protection level of the core zone? How should the protection differ from the core zone and buffer zone? Could a buffer zone have different levels of protection for different goals?

7. What are the management provisions for a buffer zone, what are the difficulties that may occur within buffer zones? What are best practice examples in managing buffer zones?

### 7. Annex

#### 7.1 Selected literature

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UNESCO – Biosphaerenreservate: Modellregionen von Weltrang. In: UNESCO heute (Publication of the German Commission for UNESCO in German language). No. 2/2007. <http://www.unesco.de/fileadmin/medien/Dokumente/unesco-heute/unesco-heute-207.pdf>

Protected Areas Programme. 2006. Parks Vol. 16 No. 2, The Visitor Experience Challenge. IUCN, The World Conservation Union.

## World Heritage and Buffer Zones

### 7.2 Selected web pages

World Heritage Cities Programme:  
<http://whc.unesco.org/en/cities/>

UNESCO and Ramsar joint efforts to preserve wetlands:  
<http://www.unesco.org/mab/ecosyst/wetlands.shtml>

Man and the Biosphere Programme (MAB):  
<http://www.unesco.org/mab/mabProg.shtml>

Intergovernmental Oceanographic Commission;  
Partnership on coastal and marine protected areas:  
<http://ioc.unesco.org/iocweb/index.php>

<sup>1</sup> Visual impact is not limited to cultural sites – e.g. the site of Sagarmatha in Nepal is inscribed only under criterion-vii and the proposed construction of an airstrip on the way to the base camp would have brought

<sup>2</sup> Law of 31 December 1913 on historic monuments; Law of 2 May 1930 concerning the protection of natural monuments and sites with artistic, historic, scientific, legendary and picturesque character.

<sup>3</sup> Cistercian Abbey of Fontenay; Abbey Church of Saint-Savin sur Gartempe; Vézelay, Church and Hill; Mont Saint-Michel and its Bay; Roman Theatre and its surroundings and the "Triumphal Arch of Orange; Pont du Gard (Roman aqueduct); Strasbourg, Grande Ile; Palace and Park of Versailles.

<sup>4</sup> Decisions 31 COM 8B.65; 31 COM 8B.66; 31 COM 8B.67; 31 COM 8B.68; 31 COM 8B.69; 31 COM 8B.70; 31 COM 8B.71; 31 COM 8B.72.

<sup>5</sup> See <http://www.cbd.int/protected/pow.shtml?prog=pl#ftn70%20#ftn70%20>

## MAB Position Paper

### **The biosphere reserve buffer zone for contributing to conservation and development**

#### **I. Background**

One of the hallmarks of biosphere reserves is the “multiple zonation” pattern into core area(s), buffer zone(s), and transition area, whereby each zone should fulfil specific functions, in particular conservation, sustainable development, and research on ecosystem functioning as well as human-environment interactions, which can be used for regional planning.

Since the designation of the first sites in the 1970s, the implementation of the functions and zones of biosphere reserves has shown great diversity of practices as well as flexibility of the application of the zonation scheme to meet local environmental and societal needs.

#### **II. From 1974 to today: evolution of the zonation pattern**

1. The idea of zoning originated with the *1974 Task Force on biosphere reserves* (UNESCO, 1974) to accommodate the multiple function of biosphere reserves in a given land area. The Task Force proposed a simple, theoretical zonation pattern of concentric rings combining a central core area, a delineated “inner buffer zone” and an undelineated “outer buffer zone” corresponding to what is known in the Seville Strategy as the transition area.

2. In the *Action Plan for Biosphere Reserves* (Minsk, 1983), characteristics for each zone were defined as follows (see *Nature and Resources: Action Plan for Biosphere Reserves*, UNESCO, 1984):

a) Each biosphere reserve includes representative examples of natural or minimally disturbed ecosystems (**core areas**) within one of the world's biogeographical provinces; and as many of the following types of areas as possible:

- (i) centres of endemism and of genetic richness or unique natural features of exceptional scientific interest (which may be part or all of the core area);
- (ii) areas suitable for experimental manipulation to develop, assess and demonstrate the methods for sustainable development;
- (iii) examples of harmonious landscapes resulting from traditional patterns of land use;
- (iv) examples of modified or degraded ecosystems that are suitable for restoration to natural or near natural conditions.

b) The “**buffer zone**” may consist of any one or some combination of (ii) to (iv) of (c) above, which are areas suitable for research purposes. In addition, the “buffer zone” may also include a large area which may be undelineated [= **transition zone**] but where efforts are made to develop co-operative activities which ensure that uses are managed in a manner compatible with the conservation and research functions of the other areas cited in (c) above. This multiple-use area may contain a variety of agricultural activities, settlements and other uses and may vary in space and time, thus forming an “area of co-operation” or “zone of influence”.

3. In summing up, the 1984 Action Plan for Biosphere Reserves provided a spatial differentiation of the different biosphere reserve zones allocating one or several functions to each zone. Essentially, these functions are:

- Core area: natural or minimally disturbed ecosystem, centre of endemism, genetic richness, unique natural features of exceptional scientific interest;
- Buffer zone: experimental manipulation to develop sustainable development, traditional land use, restoration of degraded ecosystems.
- Transition area: area of co-operation, or zone of influence [note: not delineated in space or in time].

4. A further refinement of the zonation pattern was stipulated in Article 4 – Criteria of the “Statutory Framework of the World Network of Biosphere Reserves” (Seville, 1995). In particular criterion 5 highlights the functions of each zone, while criterion 7 refers to the management of the zones.

#### Criterion 5

It [biosphere reserve] should include these functions [stipulated in Article 3, i.e. conservation, development and logistic support], through appropriate zonation, recognizing:

- a) a legally constituted **core area** or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives;
- b) a **buffer zone** or zones clearly identified and surrounding or contiguous to the core areas, where only activities compatible with the conservation objectives can take place;
- c) an outer **transition area** where sustainable resource management practices are promoted and developed.

#### Criterion 7

In addition, provisions should be made for:

- a) mechanisms to manage human use and activities in the buffer zone or zones;
- b) a management policy or plan for the area as a biosphere reserve;
- c) a designated authority or mechanism to implement this policy or plan;

5. The “Seville Strategy” (Seville, 1995), which originated at the same time as the Statutory Framework of the World Network, translates the biosphere reserve concept physically on the ground by which each biosphere reserve should contain three elements:

- a) one or more **core areas**, which are securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (such as education);
- b) a clearly identified **buffer zone**, which usually surrounds or adjoins the core areas, and is used for cooperative activities compatible with sound ecological

practices, including environmental education, recreation, ecotourism, and applied and basic research; and

- c) a flexible **transition area**, or area of co-operation, which may contain a variety of agricultural activities, settlements and other uses and in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests and others stakeholders work together to manage and sustainably develop the area's resources.

Although originally envisioned as a series of concentric rings, the three zones have been implemented in many different ways in order to meet local needs and conditions. In fact, one of the greatest strengths of the biosphere reserve concept has been the flexibility and creativity in its implementation in various situations.

### III. Zonation functions and geographical patterns

In essence, biosphere reserves are to integrate various functions through a holistic management concept that encompasses both protected as well as non-protected areas of a given site. This idea is also expressed in the Seville Vision (1995) which, in paragraph 5, calls upon the global community to “ensure that all zones of biosphere reserves contribute appropriately to conservation, sustainable development and scientific understanding.” It is the integration of the three functions in a balanced manner over space and time which characterizes the distinctive feature of a biosphere reserve.

#### Buffer zones

##### I. Function of buffer zones

Buffer zones as areas of cooperative activities mostly assume functions that relate to both, the core areas and the transition areas. In essence, their role is to minimize any negative and external effects of human-induced activities on the core area(s), while some economic activities that are in line with conservation objectives are permissible in buffer zones, such as recreation and eco-tourism linked with environmental education, and restoration and/or rehabilitation of degraded ecosystems. In particular the latter aspect may contribute significantly to environmental conservation as well as to sustainable development (for example, creation of production forests as afforestation belts around core zones will expand wildlife habitats and will generate income from timber and non-timber products in the long run). For buffer zones, MAB-Germany is using the term “Pflegezone” (*nursing zone or zone for special care*) which underlines the rehabilitation/restoration function of buffer zones.

## 2. Spatial configuration of buffer zones

In the biosphere reserve terminology, the term “zone” already suggests that a buffer zone is smaller in size than core and transition areas (given the fact that its function is primarily that of a “buffer” between the two other areas). To date, no criteria exist with regard to the spatial extension of a core area vis-à-vis a buffer zone vis-à-vis a transition zone in the international designation of biosphere reserve<sup>1</sup>. The Statutory Framework calls for a buffer zone as being “surrounding **OR** contiguous” to core areas (i.e. not necessarily completely surrounding the core areas). While considering new biosphere reserve proposals, the Advisory Committee for Biosphere Reserves in recent years has repeatedly recommended that all core areas be fully surrounded by buffer zones so as to enhance their protective roles for environmental conservation. The Seville Strategy postulates clearly identified (i.e. spatially delineated) buffer zones, but does not give the explicit rationale for such delineation. In terms of conservation ecology, it would seem opportune to provide such justification so that, for example, buffer zones should link core areas in a corridor-type of pattern to the extent possible, thus expanding wildlife habitats.

### IV. Some conclusions on the buffer zone and zonation of biosphere reserves

From Article 4 of the Statutory framework, we can already highlight some key elements:

- the biosphere reserve must have long term conservation objectives (which are site specific and may differ from one biosphere reserve to another);
- **the size of the core area (s) depends of the conservation objectives, and its conservation is reinforced by the buffer;**
- the core area must be legally protected (but the degree of protection can vary, from a strict natural reserve to a national park for instance). In this respect, a NATURA 2000 site can either be part of the core or the buffer zone, depending on the conservation objective of the biosphere reserve;
- the transition area is not delimited, and its aim is the promotion of practices of sustainable resources management; this means that, depending on the nature and impact of the human activities, they will take place in zones which will vary in surface area. It also means that the integration of biosphere reserves into regional planning should be facilitated. Nothing forbids, however, designing a limit which will facilitate local communities to understand and develop a sense of ownership for the biosphere reserve. This limit should be designed with local decision makers, who usually consider the UNESCO designation provides prestige for their region.

A question that could be asked is **whether such a scheme is still needed** with the evolution of biosphere reserves towards territories devoted to test and implement sustainable development, in the context of global change, especially climate change. And, if so, **whether the definitions of each zone** are still valid.

Several elements of reply can be proposed:

1. The zonation scheme, with the three zones, is the landmark and the **identity** of biosphere reserves and is recognized as such.
2. This scheme has had an **enormous influence** on the evolution of the concept of biodiversity conservation and is acknowledged as such.

Julia Marton-Lefèvre, Director General of IUCN, published in UNESCO Today, a recent issue of the Journal of the German Commission for UNESCO entitled ‘Biosphere Reserves: Model Regions with a global Reputation’ an article on ‘Biosphere Reserves – A visionary tool for addressing today's challenges’:

“Biosphere reserves have played a seminal role in influencing the development of tools that are essential in achieving the key goals contained in Agenda 21 as well as a number of international Conventions [...] In all these agreements the need to insure adequate planning and management of biodiversity is of paramount importance. They call for proper ecological zoning and management system that responds to the environmental and socio-economic needs of each particular area. Both concepts, zoning and management, have been tested in biosphere reserves all over the world [...] **Moreover, the idea of having core zones in which protection is enhanced through the establishment of buffer zones [...] has led to a number of crucial principles [such as] the development of biological corridors and other forms of ecological connectivity [...] There is little doubt that the experience obtained from the management of biosphere reserves in relation to zoning and connectivity have greatly influenced the concept and the application of the ecosystem approach.**”

Research in the biological and conservation sciences, as well as the work which has been done in the field of metapopulations and landscape ecology, show the importance of **following a spatial pattern** for conservation, similar to the zonation of biosphere reserves. In other words, it ensures the conservation of interconnected populations which are the hubs in a matrix having ecological function, such as permeability.

3. In view of land use planning, the zonation serves to translate **into space the challenges** which correspond to the three functions: conservation, development and logistic. It also allows to adapt various tools to the field,

## World Heritage and Buffer Zones

according to each zone, such as regulation, contracts, scientific or technical support, coordination, etc.

4. The BR zoning system **integrates conservation** of biodiversity as an **integral part of sustainable development**. In particular, in terms of conservation, cluster biosphere reserves (i.e. with several core areas) allow the application of various conservation tools, with different degrees of binding force, within the context of various challenges, which constitute an integrated regional management scheme.

For instance, in the French part of the Vosges du Nord transboundary biosphere reserve, core areas are protected under different regulations: natural reserve, Réserve biologique intégrale, arrêté de biotope, which limit access and use according to the local challenges of conservation: protection of birds inscribed on European lists of protected species, during some part of their biological cycle; unbridled development of forest dynamics; or protection of peat bogs. This flexibility is even more interesting in a transborder framework, where the zoning provides a common tool for different national systems.

In the same French part of this TBR, which consists mainly of forest, **the buffer zone responds to an objective of sustainable management: while the core areas are small, the buffer is very extended and corresponds to an area for which the authority of the biosphere reserve has signed a convention with the owners of the forest (private or public) in which a series of principles for management are defined to respect biodiversity**. The reduced transition area includes towns and villages and responds to the primary objective of sustainable development.

**Other examples of zonation** in the French biosphere reserves include Mer d'Iroise, an insular biosphere reserve. The core area and the buffer zones are in periphery of the transition. It is a paradox. Up to now there is no core area in marine zone, which probably will move soon with the designation of new protected area (parc naturel marin) between the islands: here the zoning will allow a link between several protected terrestrial areas, and a marine one.

Another example concerns the Mont Ventoux Biosphere reserve where core and buffer zones constitute the water reserve of the Provence Region, providing water to millions of inhabitants.

The various examples above, the implementation of the zoning and application of the definition of each category of zones vary greatly from a site to another. This shows that flexibility is an important characteristic of the definitions.

The zonation pattern is a very useful tool – rather than a constraint – for thinking and acting. There are

still need to make progress on the implementation of the concept: first, on the issue of dialogue and governance, and second on the inter-relations between research/innovation and management, as the socio-ecological systems face rapid and important changes and will have to be managed in an adaptive and open manner. This also confirms the importance of periodic reviews which can be considered as key steps in a biosphere reserve's life ad for which methodologies and evaluation tools must be developed.

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<sup>1</sup> However, it is interesting to note that MAB-Germany has set up minimum requirements in the national criteria for biosphere reserves: the core zone should cover at least 3% of the total area of a biosphere reserve, the buffer zone should cover at least 10% of the total area, and the transition zone should encompass at least 50% of the total area of a biosphere reserve.

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## Réserve naturelle intégrale du Mont Nimba



Situé aux confins de la Guinée, du Liberia et de la Côte d'Ivoire, le mont Nimba domine les savanes environnantes. Ses pentes, couvertes d'une forêt dense au pied d'alpages de graminées, recèlent une flore et une faune particulièrement riches, avec des espèces endémiques comme le crapaud vivipare ou les chimpanzés qui se servent de pierres comme outils.

Mohamed Alhassane

## Guinée

Date d'inscription: 1981  
Extension: 1982  
Inscription du bien sur la Liste  
du patrimoine mondial en péril: 1992

Critères: (ix) (x)  
Bien: 18000 ha

## I. Préservation et gestion des Monts Nimba

Du point de vue de la diversité biologique, cette région présente un intérêt scientifique et écologique certain. Elle est la mieux pourvue du pays et de la sous-région Ouest africaine. Cette richesse est due en grande partie aux facteurs naturels: climat, relief, végétation et faune. Elle est classée dans la catégorie N° I (Réserve Intégrale Stricte) de la liste du patrimoine mondial de l'UNESCO.

En vue de la conservation des caractéristiques exceptionnelles des écosystèmes présentés, elle a connu successivement les classements suivants:

- Réserve Naturelle intégrale en 1944 (réserve N 35 du 13/01/1943/ Arrêté N 44/30/S.E.F) par l'administration coloniale française à l'initiative de l'Institut Français d'Afrique Noire (IFAN), avec une superficie initiale de 17 500 ha;
- Réserve de la Biosphère en 1980: Elle a été reconnue partie intégrante du réseau international des réserves de la biosphère, par le Conseil International de Coopération du MAB, réuni à Nairobi le 20 Novembre 1980. L'appellation de Réserve de la Biosphère des Monts Nimba, RBMN (annexe IV) a été délivrée à Paris par l'UNESCO le 10 février 1981;
- Site du patrimoine mondial en 1981: La moitié nord guinéenne a reçu en 1981 le statut de Site du patrimoine mondial, sous les critères naturels (ix) diversité des écosystèmes et (x) biodiversité. L'inscription de la partie guinéenne de la chaîne des Monts Nimba, non comprise la région Nord concédée au projet minier, fut acceptée par le Comité du patrimoine mondial, lors de sa 5e session tenue à Sydney le 26 octobre 1981, sans délimitation d'une zone tampon et/ou zone de protection

Aujourd'hui, face aux pressions anthropique et minière qu'il subit, ce potentiel biogéographique est menacé par des systèmes d'exploitation non rationnels de ces ressources, qui à terme pourraient modifier son équilibre écologique et compromettre sa diversité biologique. Son classement sur la liste des *biens du patrimoine mondial en péril* en 1992 était donc une nécessité.

Depuis l'accession de la Guinée à la souveraineté nationale, les actes réglementaires coloniaux et statuts internationaux sus mentionnés constituent les seules textes de référence attestant de nos jours le classement du site et de la RBMN. Il n'existe encore aucun acte du droit positif guinéen réglementant le classement et la gestion du site et de sa zone tampon. Ce vide juridique est une des principales causes de la mauvaise gouvernance du site; il en rend difficile la gestion et celle de sa zone d'influence en Guinée. La publication d'un acte d'ordre public s'impose donc pour certifier le classement des aires centrales en réserve naturelle intégrale et gérer rationnellement la zone tampon dans le site

et hors du site. Cela permettra ainsi au Programme de conservation de la biodiversité des Monts Nimba (PNUD/GEF) et au Centre de Gestion de l'Environnement des Monts Nimba (CEGENS) de mener à bien leur mission de conservation sur le terrain.

La décision d'exploiter la partie septentrionale des Monts Nimba, a mis en évidence la nécessité d'approfondir la connaissance des conditions écologiques de la réserve, connaissance indispensable à la bonne gestion du site au cas où le projet d'exploitation minière dans la région du Nimba venait à se concrétiser.

C'est pourquoi, le Gouvernement guinéen, soucieux tout à la fois de valoriser le potentiel économique du pays et d'assurer la conservation et l'utilisation durable des écosystèmes montagneux des Monts Nimba, a sollicité la création du Projet Pilote des Monts Nimba (PPMN) dans les années 1990 – 1993, sous les auspices de l'UNESCO. Ce projet fut lancé dans le but de concilier les objectifs de développement et de conservation, avec les projets d'exploitation minière; des Monts Nimba nés dans les années 70.

Les objectifs du P.P.M.N étaient entre autres:

- d'instituer et de développer un programme scientifique de recherche pour établir un bilan complet de l'état du site avant l'exploitation minière;
- de mettre en place une structure de protection et de suivi de la flore et la faune des Monts Nimba;
- de poser les bases d'un schéma directeur d'aménagement du Haut Bassin versant de Cavally.

Les recommandations de fin d'exercice du PPMN ont conduit à la création du Centre de Gestion de l'Environnement des Monts Nimba (CEGEN 1995), sous la tutelle du Ministère de l'Energie et de l'Environnement. Le CEGEN est un Etablissement Public Administratif et Scientifique (EPAS) dont le niveau hiérarchique correspond à celui d'une Direction Nationale de l'Administration Centrale.

Les objectifs du CEGEN sont la coordination des activités de protection, le suivi écologique et la surveillance scientifique de la réserve de la biosphère des Monts Nimba, afin de promouvoir le développement régional intégré dans le Haut Bassin versant de Cavally.

Les travaux de prospection du minerai de fer du Simandou dans la zone du Pic de Fon ont estimé en 2004 à un milliard de tonnes le gisement de minerai de fer contre 650 million de tonnes de fer dans la partie septentrionale des Monts Nimba. Il est donc indispensable d'étendre les interventions du CEGEN sur la chaîne du Simandou.

Le CEGEN est devenu CEGENS, Centre de Gestion de l'Environnement des Monts Nimba Simandou: Depuis 2004, il est le service technique de l'administration centrale chargé de coordonner toutes les

activités environnementales dans la région du Nimba et Simandou.

La mission principale du CEGENS est la coordination, la promotion des activités de protection et la valorisation rationnelle des ressources biologiques de la chaîne du Nimba et Simandou, et de leurs zones d'influence, afin de concilier les objectifs de conservation de la diversité biologique et celui du développement économique en rapport avec les projets d'exploitation minière dans la région du Nimba et Simandou.

## 2. Problématique de la gestion du bien et de sa zone tampon

- Absence de statut juridique (national) du bien et de sa zone tampon;
- Le programme de suivi écologique du bien est peu suivi;
- La pression anthropique exercée sur le bien se maintient à un haut niveau, ce qui dénote l'absence d'une surveillance efficace du bien et de sa zone d'influence et/ou zone tampon;
- Les agglomérations riveraines très proches du site du patrimoine mondial. Ces facteurs anthropiques sont constitués par des pratiques traditionnelles telles que:
  - Incursions villageoises incontrôlées dans le site,
  - Feux de brousse et élevage dans la zone tampon et dans le bien,
  - Chasse et braconnage illicites dans le bien et dans la zone tampon,
  - Cueillette dans le bien.

À ces facteurs anthropiques s'ajoute l'activité minière contiguë au bien du patrimoine mondial. D'après la dernière évaluation de la mission conjointe UNESCO/UICN menée en collaboration avec le Programme PNUD/GEF, le CEGENS et la société minière SMFG, «*les impacts potentiels de l'exploitation minière sur les valeurs pour lesquelles la RNIMN a été inscrite sur la Liste du patrimoine mondial, même après avoir exclu la concession et l'enclave minière, semblent être importants mais actuellement difficiles à quantifier. Les impacts majeurs potentiels se situent au niveau des changements des microclimats présents dans le bien et les conséquences sur les écosystèmes et la biodiversité et sur des impacts directs au niveau des espèces rares et menacées qui ont motivées l'inscription. Ces impacts devront être clarifiés au cours de l'étude d'impact environnemental, suivant la conception de l'exploitation prévue.*»

A la différence des limites naturelles de la zone tampon de la réserve de biosphère des Monts Nimba, la limite à prévoir pour une zone tampon n'est pas définie pour l'ensemble du bien. Les limites actuelles de la zone tampon de la RBMN ne sont que fictives car aucune activité dans ces aires n'est soumise à un contrôle strict et aux respects de normes environnementales. Les

questions qu'on peut se poser sont les suivantes: comment peut-on gérer rationnellement une zone tampon alors que les pratiques illicites s'opèrent dans le bien intégralement protégé? Comment envisager la gestion des terroirs villageois, avec une population de plus en plus nombreuse vivant depuis longtemps autour du bien sans savoir qu'elle se trouve dans une zone tampon à contrôler? Et qui désormais peut mener des activités raisonnées compatibles avec la gestion durable du site?

Les agglomérations riveraines se développent intensément dans la zone tampon, à proximité immédiate du bien du patrimoine mondial. Les populations ont besoin de logements, de terres pour l'agriculture. L'élevage renforce les pratiques traditionnelles comme le déboisement, le défrichement par le feu, la chasse, le braconnage et la cueillette dans la zone tampon et dans le bien. Ces feux anthropiques passent régulièrement de la zone tampon au bien. S'il reste difficile de mesurer les effets directs du feu sur les valeurs biologiques du bien, il en résulte des effets indirects conséquents, comme par exemple le mitage du territoire du bien par des pratiques agricoles et pastorales.

La gestion de la zone tampon des Monts Nimba ne relève pas uniquement des structures gestionnaires des Monts Nimba (CEGENS), elle est sous le contrôle des autorités préfectorales (Sous Préfecture, Communautés Rurales de Développement CRD et les Districts) qui donnent les espaces pour les aménagements agricoles, pastoraux et urbains. Dans la région plusieurs services techniques environnementaux travaillent aussi dans la zone tampon, où par ailleurs d'importants efforts ont été entrepris par le Programme PNUD et le CEGENS en matière d'organisations paysannes: initiatives de microprojets de développement communautaire et surveillance continue du bien avec participation des communautés riveraines sur l'initiative villageoise en concertation avec le Programme PNUD, le CEGENS et les services préfectoraux des Eaux et Forêts et de l'environnement. Mais il ne pourra y avoir de véritable progrès dans la gestion de la zones tampon du bien qu'avec une pleine participation des autorités et populations locales et l'élaboration d'un plan de gestion intégrée définissant le rôle des parties prenantes et rédigé sur la base de protocoles d'accord définissant le respect de normes environnementales de gestion de la zone tampon du bien.

La surveillance du bien et de sa zone d'influence n'est pas suffisamment assurée pour dissuader les pratiques qui portent atteinte à son intégrité. Le programme de construction de 16 postes de surveillance est achevé autour de la réserve de biosphère des Monts Nimba dont 8 autour du bien, avec le recrutement de 16 écogardes locaux et la mise en place de neuf comités villageois de surveillance (C.V.S) dans les huit districts riverains sur l'initiative villageoise. Les 16 postes ont pour objectif spécifique, en collaboration avec le

Programme et le CEGENS d'appuyer les actions d'éducation environnementale (information, formation, communication, sensibilisation, etc.) auprès des communautés riveraines des aires centrales du bien et de la R.B.M.N sur les questions de conservation et de gestion durable de la biodiversité des Monts Nimba. Cependant il ne pourra y avoir de véritable progrès dans la surveillance qu'avec le recrutement des éco-gardes dans le service des Eaux et Forêts, la participation effective des populations riveraines et la clarification du statut juridique de ces éco-gardes au niveau national.

Le statut juridique (national) des Eco-gardes et du territoire du bien (le seul statut national existant est celui de réserve intégrale selon la loi coloniale de 1944) n'étant toujours pas défini, il en résulte une difficulté de gestion au quotidien qui ne favorise pas la bonne information des populations riveraines. Même le statut de l'enclave minière n'est pas totalement clair du fait que le décret de 1944 n'a pas été modifié pour prendre en compte un changement d'affectation d'une partie du territoire protégé. A ce sujet un important travail vient d'être achevé par le Programme PNUD/GEF et le CEGENS, qui concerne la consultation publique des parties prenantes à la gestion des Monts Nimba (CEGENS, Programme PNUD/GEF, IREB, SSMN, société minière, populations et autorités locales) pour la légalisation des actes de classement et de gestion du bien, la réserve de biosphère des Monts Nimba et de l'enclave minière. Un projet de décret de classement est préparé qui définit le statut juridique national du territoire du bien et de l'enclave minière.

Au niveau institutionnel, si une structure globale de gestion (le CEGENS) a bien été créée en 1995 conformément aux recommandations de la mission de 1993, elle n'est réellement présente sur place que depuis 2005. Les moyens qui lui sont alloués par sa tutelle guinéenne sont nettement insuffisants pour lui permettre d'assurer au minimum ses missions (surveillance, relations avec les populations riveraines, inventaires, étude d'impact...). Pour une gestion efficace du bien et de sa zone d'influence, le plan de gestion doit être doté de mécanisme institutionnel local pour assurer le suivi de sa mise en œuvre (comité de gestion du bien y compris de sa zone tampon et élargie à la réserve de biosphère).

Le programme PNUD/GEF « conservation de la biodiversité des Monts Nimba », dont les principes avaient été émis par la mission de 1993 n'a pu commencer réellement qu'à la fin de 2006. Ce retard a empêché les populations riveraines de prendre mieux conscience des avantages qu'elles pourraient retirer d'un programme de conservation et de développement durable du massif (mesures socio-économiques). Il affecte également les études sur les milieux et les espèces, études qui vont être capitales pour l'avenir des valeurs biologiques, face aux différentes menaces

(pressions anthropiques, exploitation minière). La bonne coordination de ce programme avec le travail du CEGENS et le concessionnaire minier est sûrement la clé du succès de préservation du bien et de sa zone d'influence.

### Conclusion

En matière de protection, de conservation et d'aménagement du bien et de sa zone tampon, il s'agit de:

- Clarifier le statut juridique du bien et de sa zone tampon dans la législation nationale avec les parties prenantes (CEGENS, PCB/Monts Nimba, SSMN, IREB, société minière, autorités et la population riveraine);
- Élaborer des conventions de gestion du bien et de sa zone tampon;
- Mettre en place un dispositif efficace de conservation du bien et de sa zone tampon pour sauver ce qui reste de forêt naturelle dans le bien et sa zone tampon en vue de permettre aux populations animales de se reconstituer;
- Apporter des solutions nouvelles dans les systèmes de production par des actions pilotes et engager en pratique un changement radical du comportement de la population mobilisée à plus de 90% par l'agriculture dans les zones tampon;
- Entreprendre des actions pilotes en agroforesterie et dans le domaine de l'élevage pour éviter un appauvrissement supplémentaire de la population et la forte menace qui pèse aussi sur le bien et sa zone tampon à très court terme (extinction de certaines espèces animales devenues déjà très rares (chimpanzés, hippopotames nains ...) du fait du braconnage et de la disparition de leurs biotopes naturels);
- Favoriser un mécanisme de financement durable (Fondation internationale) du bien dans un contexte de gestion transfrontalière de son intégrité, de son authenticité et de son développement durable;
- Mettre en place un Comité pour le bien et sa zone tampon;

Ainsi la solution passe inévitablement par le développement d'un cadre institutionnel local et sous-régional de gestion du bien et de sa zone tampon, une coopération scientifique trinationale, et par les projets industriels régionaux et sous-régionaux qui pourront, en contrepartie des modifications qu'ils vont causer au milieu naturel, contribuer directement au financement du plan de gestion du bien et de sa zone tampon pour un développement durable de la population par la gestion rationnelle des ressources naturelles.

### Summary

Located on the borders of Guinea, Liberia and Côte d'Ivoire, Mount Nimba rises above the surrounding savannah. Its slopes are covered by dense forest at the foot of grassy mountain pastures, harbouring an especially rich flora and fauna. The site and its buffer zone undergo increasing anthropogenic and mining pressure, which will, in the end, modify their ecological balance and endanger their biological diversity. The main problem lies in the fact that in Guinea, there is no law regulating the classification and the administration of the site or of its buffer zone. Thus, none of the activities in the nature reserve are submitted to a strict control or to the respect of environmental standards. Moreover villages grow intensely in the buffer zone and bushfire, livestock farming, hunting, poaching and crop picking threaten the protected area daily. Several institutions, amongst which UNDP (UN Development Programme) and CEGENS (Centre de Gestion de l'Environnement des Monts Nimba, Simandou) have been supporting projects of communitarian and sustainable development. Nonetheless, no real progress will be made in the management of the buffer zone without a full participation of the local population and authorities, and the working out of a management plan defining the precise role of the stakeholders, and put together on the basis of protocols defining the respect of environmental norms in the buffer zone.

# Cape Floral Region Protected Areas



Guy Palmer



## South Africa

The Cape Floral Region Protected Areas is a serial World Heritage Site in the Cape Province of South Africa and is made up of eight protected areas, covering 553000 ha, and a buffer zone of 1314000 ha. The Cape Floral Region is one of the six floral kingdoms of the world. It represents less than 0.5% of the area of Africa but is home to nearly 20% of the continent's flora. The site displays outstanding ecological and biological processes associated with the Fynbos vegetation, which is unique to the Cape Floral Region. The diversity, density and endemism of the flora are among the highest worldwide. Unique plant reproductive strategies, adapted to fire, patterns of seed dispersal by insects, as well as patterns of endemism and adaptive radiation found in the flora, are of outstanding value to science.

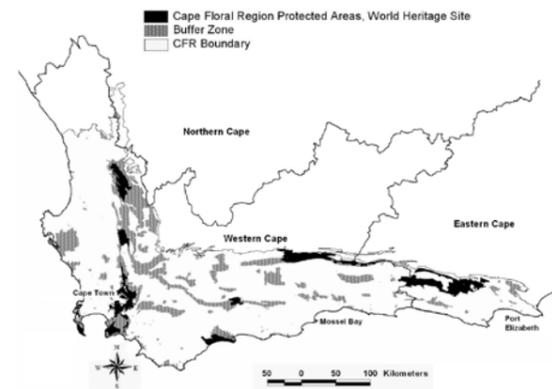
Date of inscription: 2004

Criteria: (ix) (x)  
Property: 553000 ha  
Buffer zone: 1315000 ha

Due to the extremely complex and dispersed nature of the biodiversity within the CFR, its maintenance does not depend only on the CFRPA WHS or the 1315000 ha "buffer zone". A holistic approach is required, and is being implemented, that involves numerous layers of planning, implementation, management, awareness raising, and legislation. This to counter each of the various threats which include an increasingly inappropriate fire regime, alien invasive organisms, habitat destruction, fragmentation, climate change, resource/budget limitations, etc.

For the maintenance of biodiversity, "ongoing ecological and biological processes associated with the evolution...", and the delivery of ecosystem services within the CFR, it is necessary that Protected Areas in general do not become isolated and that activities in the adjacent landscape are sensitive to these requirements. This must be accompanied by the appropriate levels of planning, management, legislation and compliance.

Over the years various local, national and international initiatives have evolved to address the ever increasing number and complexity of threats to the integrity of the CFR.



Some of these are:

- The declaration of Mountain Catchment Areas (DMCA) which include privately owned land as well as that managed by the state. These areas were originally managed primarily for the production of water, which fortunately corresponds with that required for the maintenance of biodiversity. Six of the eight areas comprising the CFRPA WHS are connected through these DMCA's, thus contributing significantly to the "buffering" of the WHS. It is primarily these areas that make up the 1314000 ha designated Buffer Zone of the CFRPA WHS.
- Several national initiatives have been launched in recent years to address various environmental issues each with the added bonus of poverty alleviation and empowerment of "previously disadvantaged communities". These include "Working for

Water" (alien invasive plant eradication), "Working on Fire", "Working in Wetlands", "Land Care", and "Coast Care".

- Other national initiatives included the establishment of "Catchment Management Associations" and "Fire Protection Associations". These are complimentary and contribute to a more focused approach to landscape management particularly of the DMCA's and adjacent land.
- There are currently three proclaimed Biosphere Reserves in the CFR, two of which have sections of the Boland Mountain Complex (one of the eight CFRPAs) as their cores, the Kogelberg and Winelands Biosphere Reserves. The core of the third, the West Coast Biosphere Reserve, is due to be included in the anticipated CFRPA WHS extension nomination.
- Overlaying all this is the CAPE Programme, a GEF funded initiative that serves, amongst many other things, to facilitate the coordination of efforts of the various organisations involved directly or indirectly in the conservation of the CFR. Within this programme is an initiative referred to as the "Landscape Initiative", which entails several large scale efforts to create "biodiversity corridors" within the landscape, connecting various PA's through stewardship agreements. The objective being to secure connectivity to facilitate the maintenance of biodiversity and the continuation of ecological and evolutionary processes. The planning domains of these areas is extensive and are generally aligned along rivers and run from the coast inland including several altitudinal gradients and a wide range of habitats, vegetation types and ecotones. This compliments the connectivity facilitated by the DMCA's which generally run parallel to the coast.
- The evolution of our system of conservancies into the well planned and motivated, but under resourced, "Stewardship Programme", a CAPE Initiative, aims to capture the most significant and threatened areas for conservation. Legally binding contracts are signed with land owners of top priority sites giving these areas the equivalent status of formally declared Protected Areas.
- Also within the CAPE Programme is the "Fine Scale Mapping Programme" that has and is continuing to refine the representation of our biodiversity in a spatially explicit manner. These products allow for more accurate strategic planning to be applied. This information is also fed into the "Landscape Initiatives" as well as the municipal "Spatial Development Frameworks" and their "Integrated Development Plans", amongst many others, and is web based thus available to all.

All these efforts are primarily designed to prevent the loss of biodiversity in the CFR as a whole. The CFRPA WHS is seen as the "cherry on the cake" that cannot persist in isolation and that, without the necessary "support structures" mentioned above, would not fulfil its function, maintain its integrity or in fact persist in the long term. It should also be noted that this is a very dynamic process that is continually developing as our knowledge, insight and resources improve. Thus it is also envisaged that there will be an "extension nomination" submitted to UNESCO, for the CFRPA WHS, in the not too distant future. This would serve not only to capture a larger more representative set of Protected Areas and include additions to the ever growing "Buffer Zone", but also to consolidate and rationalise boundaries thus facilitating more efficient management. An exciting probability is the inclusion in the CFRPA WHS of qualifying Marine Protected Areas, many of which are adjacent to existing terrestrial protected areas.

Therefore it becomes clear that the "buffer zone" of the CFRPA WHS, to be effective, needs to be multi layered, multi faceted, fully capacitated and totally integrated with the rest of the legislative, planning, development and management initiatives that are relevant to the maintenance of biodiversity in the CFR.



### Résumé

Les Aires protégées de la Région florale du Cap constituent un site sériel du patrimoine mondial situé dans la province du Cap en Afrique du Sud. Composé de huit aires protégées couvrant un total de 553000 ha, et d'une zone tampon de 1314000 ha, le site couvre moins de 0,5% de la superficie de l'Afrique, mais abrite presque 20% de la flore du continent et présente des processus écologiques et biologiques extraordinaires associés à la végétation du fynbos (brousse fine). Des phénomènes uniques au monde, notamment en matière de stratégie de reproduction végétale, de réaction des plantes au feu, de pollinisation des plantes par les insectes, ainsi que des structures intéressantes d'endémisme et de rayonnement adaptatif confèrent à la région une valeur exceptionnelle pour la science.

Afin de conserver cette biodiversité complexe, qui ne dépend pas uniquement du bien du patrimoine mondial ou de sa zone tampon, mais de toute la région, les Aires protégées ne doivent pas être considérées de manière isolée. Les exigences de protection sont à respecter lors des activités ayant lieu à l'extérieur du bien également. Pour ce faire, différentes couches de planification, de gestion, de sensibilisation et de législation sont à appliquer dans une approche holistique.

Au fil des ans, de nombreuses initiatives locales, nationales et internationales ont ainsi vu le jour et s'attaquent aux menaces, toujours plus nombreuses et complexes, qui pèsent sur l'intégrité de l'ensemble de la Région florale du Cap. L'objectif est de contrer chacune des différentes menaces, parmi lesquelles on compte notamment un régime d'incendies de plus en plus inapproprié, des organismes invasifs étrangers, la destruction de l'habitat, la fragmentation, les changements climatiques, les limitations budgétaires et financières, etc. Le bien du patrimoine mondial est considéré comme la « cerise sur le gâteau » de cette région. Le soutien global qui porte sur toute la région et qui s'inscrit dans un développement dynamique, est nécessaire pour maintenir l'intégrité du bien.

Il devient donc clair que pour que les zones tampons du site de la Région florale du Cap soient efficaces, elles doivent avoir plusieurs couches, plusieurs facettes, être pleinement habilitées et complètement intégrées aux autres initiatives de législation, de planification et de gestion s'appliquant à la Région florale du Cap.

## Ruins of Kilwa Kisiwani and Ruins of Songo Mnara



Eliwasa E. Maro

United Republic  
of Tanzania

Kilwa Kisiwani and Songo Mnara are two small islands found in the Indian Ocean off the East African Coast. The World Heritage site features ruins that date back to the 12th century, but also buildings of the late 18th century, constructed during the revival of slave trade.

The ruins symbolize great achievements, prestige and authority of an African civilization – a true testimony to a rich historical past and unique Swahili architecture comparable to any medieval city in the world at the time.

As a result of its prosperity in trade, Kilwa Kisiwani minted its own currency and used it in trade transactions between the 11th and 15th century.

The sites are equally important in terms of their architectural, archaeological and historical significance.

Date of inscription: 1981

Inscription Year on the List of World  
Heritage in Danger: 2004  
Criterion: (iii)

The two islands were great ports on the East African coast which flourished between the 12th and 16th centuries and they contain ruins of great antiquity. From the 13th to the 16th century, the merchants of Kilwa traded in particular with the Arabs, Persians, Indians as well as Chinese states. Goods included gold, silver, pearls, perfumes, Arabian crockery, beads as well as Persian and Chinese ceramics.

Apart from their contribution to architecture and archaeology, the islands are also important for the environment, with reserves of various species of mangrove trees, used in the past for the construction of houses and floating vessels.

Recent research on the island of Kilwa has provided evidence of settled communities since the 8th century B.C.

**The status of the buffer zone for the Property**

At the time of inscription on the World Heritage List, the Ruins of Kilwa Kisiwani and Ruins of Songo Mnara were already nationally protected under the Preservation of Monuments Ordinance of 1937 and under the Antiquities Act of 1964. The Ruins were considered to be the core property and guidelines to safeguard them were provided. There were no buffer zones created for the purposes of development management and community interactions.

The nomination dossier for the site focused on individual monuments and made no mention of the specific area coverage for individual ruin or the historic townscape. It appears the listed properties on both islands served both as core and buffer zone at the same time. No revision of the file has been made up to now and this caused, and still causes, some problems:

1) Unlike Songo Mnara where the ruins are located away from residential area, the inhabitants of Kilwa Kisiwani live on and around the historical buildings and on top of the ancient city. There is developmental pressure from within the community for expansion of their homes and construction of houses for both residential and other social activities. The site is slowly getting surrounded by residential buildings. Individuals claim to have right of land occupancy and also the right to develop their land. Unfortunately, where there is new construction, there is often stone digging near ruins and hence damaging archaeological sites. This is posing a direct threat to the property. Here are some examples:

- The Great Mosque is currently surrounded on three sides by domestic dwellings with new structures, some even with modern roofs.
- A new business centre built on privately owned land located within the vicinity of the Gereza Fort.

- Not only is there negative visual impact but it also threatens the integrity of the site as a whole.
- Community centres are under construction or have been built.

In the absence of a clear buffer zone, the site is in great danger of losing its integrity due to the building of modern houses.

2) Documentation of the site at the time of inscription focused on provision for site maps for the specific ruins. Unfortunately, the requirement for a professionally developed general map to allocate the actual positions and coverage of all the components of the site were left out. Such a map could now help in deciding on the size and location of the buffer zone for the World Heritage site. Alas, this map has not yet been produced by the State Party, but it is a necessity that is planned to be completed. To achieve this, available planning maps from the Kilwa District Council will be utilized for basic data. A study and an assessment on land use in Kilwa Kisiwani were done in October 2007 by the Ardhi University College in Dar es Salaam. The information in this report will be used by the relevant stakeholders for harmonization of decisions in drafting a plan for buffer zones of the World Heritage Property in Kilwa Kisiwani.

- 3) In 2002, ICOMOS experts recommended to reconsider the criteria under which the sites are listed, to re-list them as historic towns. Arguments were as follow:
- valuing the archaeological and historical quality of the monuments, the community and its identity,
  - recognizing their tangible and intangible heritage and
  - allowing the government to increase the size of the World Heritage site by incorporating some of the currently inhabited zones.

It was further advised that these areas – when included – could be designated as buffer zones, and building and land utilization regulations could be put in place as safeguards.

By implementing the recommendation by ICOMOS, the State Party – thanks to the support of UNESCO – has developed a draft proposal on the extension of the site to include the historic town of Kilwa Kivinje. However, this draft document doesn't deal with the issue of the buffer zone due to its complexity. The challenge is the issue of the size of the buffer zone for each property and whether a buffer zone should be localized to specific ruins or generalized. The Songo Mnara Ruins Committee has proposed a 500-meter buffer zone where constructions, grazing animals and/or cultivation were not allowed. However, due to the physical setting of the ruins, this could be difficult to implement in Kilwa Kisiwani.

**Problems resulting from environmental influences**

Erosion along the beach of Kilwa Kisiwani is yet another problem posing a great danger to some ruins along the northwestern shoreline, especially the Mkutani wall, the Gereza, Mlindi graves and mosque and part of the Husuni Kubwa, but also a large part of the western shoreline. The ICOMOS experts suggested to erect a wall like the one in Lamu or Zanzibar, or to install tide breakers in the form of large boulders along the shore similar to those on the pier at Robben Island. However, the decision is pending on a study looking into the harmful effects on the cultural landscape/seascape of Kilwa and its integrity. With international assistance, the state party has been able to fit some gabion sea walls at some sections of the coast to protect the Gereza Fort, the Malindi Graves and Husuni Kubwa.

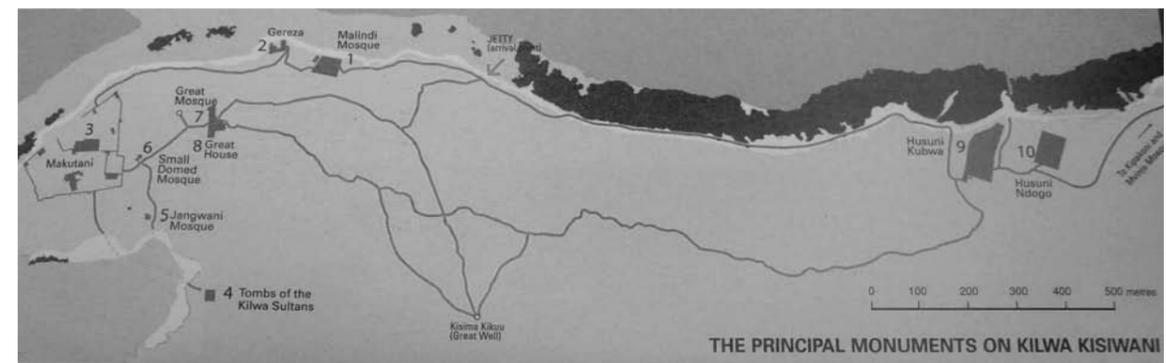
The magnitude of the problem is huge and requires international assistance in both expertise and finances. If action is not taken, there is a real threat of the property diminishing in size.

**Résumé**

Sur deux petites îles toutes proches de la côte tanzanienne, subsistent les vestiges de deux grands ports, datant du XIIIe au XVIIe siècle. Ces ruines de Kilwa Kisiwani et de Songo Mnara sont regroupées en un seul site culturel inscrit sur la Liste du patrimoine mondial en 1981. En 2004, le site a été inscrit sur la Liste du patrimoine mondial en péril. La zone tampon a été omise au moment de l'inscription. Etant donné la localisation du site et le mode prédominant de peuplement général, identifier et démarquer une zone tampon à Kilwa Kisiwani pose de grandes difficultés.

De plus, le littoral de Kilwa Kisiwani est mis en péril par l'érosion due aux vagues; il est donc nécessaire de poursuivre la coopération internationale pour contrer cette menace.

Il est généralement admis que ces problèmes, y compris ceux associés à la détérioration des ruines, pourraient être résolus en réalisant les propositions faites par les experts d'ICOMOS qui ont visité le site en 2002 et en 2007. Il faudrait trouver une stratégie permettant de créer un équilibre entre les habitants du site et la préservation de l'intégrité de ce même site.



## Site archéologique de Volubilis

Abdellah Salih



Maroc

La capitale de la Maurétanie, fondée au III<sup>e</sup> siècle av. J.-C., fut un avant-poste important de l'Empire romain et a été ornée de nombreux beaux monuments. Il en subsiste d'importants vestiges dans le site archéologique, situé dans une région agricole fertile. La ville devait devenir plus tard, pendant une brève période, la capitale d'Idriss I<sup>er</sup>, fondateur de la dynastie des Idrissides, enterré non loin de là, à Moulay Idriss. Situé au Maroc, le site dépend sur le plan administratif de la Province de Meknès El Menzeh Moulay Driss Zerhoun, Wilaya de Meknès, Région de Meknès-Tafilalet.

Date d'inscription: 1997  
Extension: 2008

Critères: (ii) (iii) (iv) (vi)  
Bien: 42 ha  
Zone tampon: 5000 ha

La cité antique de Volubilis se trouve à 3 km à l'ouest de la ville de Moulay Driss Zerhoun, à une trentaine de kilomètres de Meknès. Elle s'est développée sur les pentes douces du massif de Zerhoun, à la limite d'une vaste plaine agricole. Le site est traversé à l'est par l'oued Fartassa et il est contourné au sud et au sud-ouest par l'oued Khoumane.

La cité s'est progressivement étendue jusqu'à atteindre une superficie de 40 hectares. Sa fondation remonte à l'époque maurétanienne au III<sup>e</sup> siècle avant J.-C., et ne sera abandonnée qu'au XIV<sup>e</sup> siècle, à l'époque mérinide. Cette longue histoire, attestée même dès la pré-histoire, est due à plusieurs facteurs qui ont fortement favorisé l'établissement ancien de l'homme sur le site. Parmi ces facteurs: une position topographique facile à défendre, un réseau hydrographique riche notamment par la présence des deux oueds et la fertilité du sol propice à l'agriculture et surtout à l'arboriculture.

La ville de Volubilis était la capitale de la Maurétanie et un centre important par ses monuments publics, ouvert sur les autres centres urbains du Maroc antique et ceux des autres régions du pourtour méditerranéen. Elle connaît pendant la période romaine une grande prospérité dont témoignent son extension urbaine et la construction de nouveaux monuments publics et privés, remarquables par leur beauté dont il subsiste d'importants vestiges archéologiques. La cité constituait un avant-poste important de l'Empire romain. Elle devait devenir plus tard, pendant une brève période, la capitale d'Idriss I<sup>er</sup>, fondateur de la dynastie des Idrissides.

### La zone tampon du site de Volubilis

Le site archéologique de Volubilis bénéficie d'une protection juridique nationale adéquate permettant d'assurer sa conservation ainsi que celle de sa zone environnante. Il s'agit des dahirs du 19 novembre 1920 et du dahir du 14 novembre 1921. Le dahir de 1920 stipule dans l'article 8 que: «est classée une zone de protection autour de la ville de Moulay Driss et des ruines de Volubilis et sur toute la vallée reliant ces deux points dans toute la partie teintée en jaune au plan annexé à l'arrêté viziriel du 7 mai 1920 (17 châabane 1338), et limitée comme suit:

- A l'ouest, route de Meknès à Petitjean (ville actuelle de Sidi Kacem), depuis le col jusqu'à sa rencontre avec l'oued Khoumane;
- Au nord, la crête de la colline passant derrière Fartassa jusqu'à un endroit nommé Ain Cherraf;
- A l'est, une ligne nord-sud partant de la ligne Cherraf jusqu'à la rencontre du ravin de Ain Cherraf;
- Au sud, une ligne passant sur la crête partant du ravin de Ain Cherraf jusqu'à la piste Meknès-Petitjean (au col)».

Le Dahir en question prévoit clairement qu'«aucune modification de quelque nature que se soit, ne pourra être apportée à l'aspect des lieux compris dans cette zone, sans l'autorisation et autrement que sous la surveillance du Service des Antiquités, Beaux-arts et Monuments Historiques».



Tenant compte de:

- La portée juridique indéniable de ce Dahir (loi);
- L'étendue de la superficie que couvre cette zone (soit environ 50 km<sup>2</sup>);
- La prise en considération de l'arrière-pays de Volubilis dans sa totalité;
- La présence d'un grand nombre de sites archéologiques, antiques et islamiques, découverts autour du site;
- Des liens historiques et culturels qui lient Volubilis à la ville de Moulay Driss.

Le Maroc a décidé de considérer cette zone de protection établie par le Dahir cité ci-dessus comme zone tampon du site. D'ailleurs, la délimitation du site ainsi que celle de sa zone tampon ont été effectuées et une carte les illustrant a été fournie au Centre du patrimoine mondial en réponse à la décision 29 COM 7B du Comité du patrimoine mondial.

### Les menaces

Les biens marocains inscrits sur la liste du patrimoine mondial disposent tous d'une zone tampon bien définie. Mais, ces zones font l'objet de menaces réelles dues principalement à la pression de la croissance urbaine que ce soit dans les villes où se trouvent les

médinas comme Fès, Meknès, Marrakech, Essaouira et Tétouan ou dans des localités comme Moulay Driss Zerhoun dont l'extension du périmètre urbain menacerait la perspective visuelle du site de Volubilis. En effet, le plan d'aménagement urbain de Moulay Driss Zerhoun est, pour le moment, bloqué par le ministère de la Culture. Des négociations sont prévues avec la Région de Meknès-Tafilalet, le Conseil Municipal de la ville de Moulay Driss et l'Agence urbaine pour définir les modalités qui permettront de prendre en compte le respect de la zone de protection du site et de son intégrité visuelle.

En revanche, le plan d'aménagement urbain de la commune de Fartassaa été visé et validé par les services du ministère de la Culture, mais nous avons constaté quelques infractions. Il faudrait les discuter avec les autorités locales, afin de trouver ensemble un terrain d'entente, surtout pour empêcher le débordement de toute construction en dehors de l'agglomération de Fartassa, et notamment en contrebas de la route qui relie la ville de Meknès au col de Zegota. D'ailleurs, nous avons remarqué dernièrement la présence de quelques constructions nouvelles, clandestines, dans l'environnement immédiat du site.

Pour ce qui est du plan d'aménagement urbain de la commune de Bou Assal, ce dernier a aussi été visé et validé par les services du ministère de la Culture, mais nous avons également constaté quelques constructions qui débordent sur une partie du versant nord du Jebel Zerhoun où s'ouvre un panorama sur le site de Volubilis.

Par ailleurs, le développement du village de Sdari, situé à environ 400 m à vol d'oiseau à l'ouest de Volubilis dans la plaine de Bouriah, et son extension constituent une menace sérieuse et incontrôlable sur la zone tampon du site. Nous avons remarqué depuis l'électrification du village, l'apparition de nouvelles maisons rurales, clandestines. Ceci constitue un grand problème pour les axes visuels du bien classé.



### Conclusion

La zone de protection du site de Volubilis a été établie au début du siècle dernier. La situation topographique exceptionnelle du site et la richesse des ressources naturelles de son environnement immédiat ont permis le classement d'une grande zone de protection autour du site.

Depuis quelques années, la ville de Meknès et sa région connaissent une croissance urbaine et un développement économique et social qui ont nécessité une révision de la politique d'aménagement du territoire. La ville de Moulay Driss, qui en fait partie, se trouve concernée par ce développement. Mais, ce dernier ne saurait se faire au détriment de la conservation et de l'intégrité visuelle du site de Volubilis. Il importe donc d'adopter une approche qui permettra une protection efficace du site et un développement réfléchi et adapté de Moulay Driss et des agglomérations contiguës, notamment Fartassa et Bou Assel.

### Summary

The ancient town of Volubilis was founded in the 3rd century BC. During the Roman period, the Mauritanian capital became an important outpost of the Empire. It underwent a period of great prosperity and showed a significant urban extension. Many public and private monuments built at that time still subsist as considerable archaeological remains. In 1920, a protection zone expanding on 50 km<sup>2</sup> was established in the surroundings of the site by the Dahir law. When in 2008, the State of Morocco implemented the decision of the World Heritage Committee to create a buffer zone around Volubilis, it chose to consider the 1920 established protection zone as the buffer zone. Currently, this zone is facing serious threats, mainly because of the pressure of urban growth around the site of cities like Fès, Meknès, Marrakech, Essaouira or Tetouan. The development of several towns and suburbs situated in the buffer zone could damage the visual axis of the site. In order to suppress those considerable threats and protect the site, the Ministry of Culture is currently discussing appropriate measures which should allow the population to benefit from fitting projects within the buffer zone.

## Le Parc national de l'Ichkeul

Marie-José Elloumi



## Tunisie

Le lac et les marais de l'Ichkeul constituent un relais indispensable pour des centaines de milliers d'oiseaux migrateurs – canards, oies, cigognes, flamants roses, etc. – qui viennent s'y nourrir et y nicher. Le lac est l'ultime vestige d'une chaîne de lacs qui s'étendait jadis à travers l'Afrique du Nord.

Le Parc national de l'Ichkeul est également inscrit sur la liste des réserves de Biosphère (UNESCO – 1977) et comme zone humide d'importance internationale comme habitat des oiseaux d'eau (RAMSAR – 1980).

Date d'inscription: 1980

Critère: (x)  
Bien: 12600 ha

### 1) Présentation générale du site

Le Parc National de l'Ichkeul, situé dans le Nord de la Tunisie, est composé de trois entités paysagères : un lac d'une superficie moyenne de 8500 hectares, les marais de près de 3000 hectares qui l'entourent et un jebel, massif calcaire isolé culminant à 511 mètres et qui le surplombe au sud.

Le lac Ichkeul est une lagune secondaire alimentée en eau douce, durant l'hiver, par un bassin versant au réseau hydrographique très développé. Il est également relié à la mer dont il reçoit les eaux, en été, par l'intermédiaire du lac de Bizerte via un canal naturel de 5 km de long. C'est ce fonctionnement hydrologique particulier, caractérisé par une double alternance saisonnière de niveau et de salinité des eaux, qui confère à l'Ichkeul son originalité écologique, en conditionnant une végétation aquatique spécifique, support alimentaire de milliers d'oiseaux d'eau migrateurs. La gestion hydrique du système lac-marais est ainsi un des éléments fondamentaux de la gestion du Parc.

### 2) Environnement géographique et socioéconomique du Parc

#### Description de l'environnement immédiat du site

L'environnement immédiat du Parc national de l'Ichkeul est à dominante rurale avec une densité de population relativement faible, excepté les délégations de Tinja et Menzel Bourguiba. Les impacts directs sur le site sont jusqu'à présent relativement limités.

On peut ainsi noter :

- À l'est : un développement urbain limité à la petite ville de Tinja (moins de 20000 habitants) abords immédiats du lac et de Menzel Bourguiba, situé en arrière, sur le lac de Bizerte;
- Au sud et au nord-est : des zones agricoles plus ou moins intensives. Au sud, le parc est adossé à la plaine agricole à vocation céréalière de Mateur, au nord-est la zone est exploitée pour des cultures annuelles et des vergers;
- À l'ouest et au nord-ouest : des zones à vocation agro-forestière et de parcours occupant les collines et montagnes des Hedhils et des Mogods;
- À l'intérieur du Parc il existe une soixantaine de familles dont une part des revenus est liée à la gestion du Parc : postes de gardiens, autorisation d'un nombre restreints d'animaux, ouvriers de la société de pêche.



#### Le nord et l'extrême nord de la Tunisie comme cadre de la gestion de l'eau dans la région

Si d'un point de vue spatial, la dimension à donner au problème de gestion du parc est, comme on l'a vu, une dimension essentiellement locale, se limitant à la prise en compte des intérêts de la population résidente dans le parc et des riverains immédiats, il n'en est pas de même pour l'utilisation des ressources naturelles comme l'eau qui ont une dimension socio-économique régionale voire nationale.

La stratégie de mobilisation de la quasi-totalité des ressources en eau de surface disponibles dans le nord et l'extrême nord du pays par la construction de grands barrages interconnectés pour le transfert vers les autres régions du pays met en effet en jeu un espace sans commune mesure avec une zone tampon dans son acception la plus commune et dépasse ainsi le cadre strict du Parc National de l'Ichkeul. Elle a pourtant une influence directe sur le fonctionnement de ses écosystèmes laguno-lacustres.

Ce dispositif permet ainsi depuis 2002 l'amenée d'eau, à partir des bassins les plus arrosés vers les barrages du bassin de l'Ichkeul, pour suppléer aux transferts d'eau hors de la région, allégeant par là même la demande en eau sur ces barrages, mais aussi, si nécessaire, pour alimenter en eau directement le lac Ichkeul, considéré comme un consommateur d'eau à part entière.

La mise en eau de trois barrages (1983-1984 et 1994) dans le bassin versant de l'Ichkeul conjuguée à des périodes de sécheresse prolongées durant cette période avait effectivement entraîné des déséquilibres des écosystèmes et l'inscription du site sur la liste du patrimoine en péril (1996-2006). Les mesures de gestion hydrique prises depuis, en même temps qu'une amélioration des conditions climatiques, ont permis la reprise totale des écosystèmes et le retrait de l'Ichkeul de la liste du patrimoine en péril en 2006.

### 3) Plan de gestion et zonage proposé à l'intérieur du parc

Le Plan de gestion du Parc établi à la fin de l'année 2007 prévoit un système de zonage à l'intérieur du Parc National de l'Ichkeul tenant compte des objectifs assignés au parc, à savoir la conservation des écosystèmes tout en assurant un développement socio-économique harmonieux des populations sur place.

a) Une zone de protection intégrale (ZPI) de 4129 ha couvrant i) le versant nord du Jebel Ichkeul, le mieux conservé; ii) les zones du lac importantes pour les oiseaux migrateurs et/ou nicheurs regroupant les zones à Potamots situés le long de la rive nord du Jebel et ouest du lac, les embouchures des oueds à l'ouest et les roselières de la rive nord du lac; iii) les zones basses des marais, plus facilement inondables, situées de part et d'autre du Jebel Ichkeul.

b) Une zone tampon (ZT) interne au Parc de 8273 ha, composée de plusieurs entités :

- Le versant sud du Jebel (à partir de la ligne de crête E-W);
- En continuité avec la précédente, la zone de marais au sud et sud-est du Jebel;
- La zone exploitable du lac Ichkeul (c'est-à-dire la zone centrale du lac où s'exercent les activités de pêche), d'une superficie d'environ 6000 ha.

L'objectif prévu de cette zone tampon est une valorisation contrôlée des ressources naturelles afin de diminuer la pression exercée sur la zone de protection intégrale. Dans cette zone tampon seront ainsi tolérées des activités légères d'écotourisme ou d'élevage familial et de pêche. C'est dans cette zone par exemple qu'une portion limitée des parties hautes des marais de Joumine (à plus faible potentiel écologique) a déjà été transformée avec succès, sous l'autorité du gestionnaire du Parc et en concertation avec la population résidente, en prairie artificielle pour leurs troupeaux et ce afin d'éviter le pâturage de portions plus sensibles des marais.

c) Une zone périphérique (ZP) d'une superficie de 4231 ha autour du parc, la presque totalité de cette zone périphérique se trouvant en dehors des limites du Parc national de l'Ichkeul dans les zones agricoles attenantes. Cependant, il s'avère opportun qu'un droit de regard des autorités de gestion du Parc national de l'Ichkeul puisse s'exercer à ce niveau afin de prévenir toute pratique qui pourrait avoir un impact négatif sur l'intégrité du parc national et/ou sur le fonctionnement normal des écosystèmes.

Le zonage à l'intérieur du parc est actuellement progressivement mis en place dans le cadre de la mise en application du nouveau plan de gestion. Cependant les modalités de mise en œuvre de ce plan pour la zone périphérique (ZP) directement attenante au Parc

mais hors contrôle direct du gestionnaire du Parc restent encore à identifier. Un processus d'agenda 21 local pour la commune de Tinja et ses environs a été entamé en janvier 2008, en concertation avec les autorités du Parc et du Ministère de l'Environnement et basé sur l'adhésion des populations aux actions de développement durable du système «Parc-Zone périphérique» à mettre en place.

Le plan de gestion a également identifié une zone d'influence (ZI), évaluée au minimum à 12500 ha au-delà de la ZP et où les activités actuelles et prévues devront faire l'objet d'une surveillance accrue de la part des autorités régionales, voire nationales pour éviter les risques d'impacts négatifs sur le parc. Cette surveillance peut s'appuyer sur la réglementation tunisienne, notamment en matière d'aménagement urbain (code de l'aménagement du territoire et de l'urbanisme qui régit les schémas directeurs d'aménagement et les plans d'aménagement urbain) et en matière d'études d'impact sur l'environnement avec des dispositions particulières relatives aux zones protégées dans la procédure des Etudes d'Impacts sur l'Environnement (EIE) en vigueur en Tunisie depuis 1991. Il est ainsi prévu explicitement que le gestionnaire d'un site protégé (Parc National ou autre) se situant dans la zone probable d'impact d'un nouveau projet soit obligatoirement consulté et donne son avis sur l'EIE avant que l'Agence Nationale de Protection de l'Environnement puisse émettre son avis final. Cela a été le cas pour l'EIE du projet d'autoroute Tunis-Bizerte (réalisé à la fin des années 90) dont une variante de tracé, qui passait en bordure du lac Ichkeul, a été abandonnée à cause des impacts irréversibles qu'elle risquait d'avoir sur le Parc National de l'Ichkeul.



## World Heritage and Buffer Zones

### Summary

The Ichkeul Lake and wetland are a major stopover point for hundreds of thousands of migrating birds, such as ducks, geese, storks and pink flamingoes, who come to feed and nest there. Ichkeul is the last remaining lake in a chain that once extended across North Africa.

The Ichkeul Lake shows a specific ecological situation due to its particular hydrological conditions: during winter, the lake is fed by fresh water by a highly developed hydrographical catchment basin while during summer, water comes from the sea through the Lake Bizerte connected by a natural canal.

Direct negative impacts caused by the settlements and rural land use in the immediate surroundings of the lake are relatively limited. However, the lake and its ecosystem reacted sensitive to the construction of three retaining dams in the area of the catchment basin of the lake, built for water supply of the whole region and country, leading to the inscription of the site in the List of World Heritage in Danger. Although these dams are situated outside the park and a possible buffer zone, they are still of great influence on the integrity of the lake. Thanks to hydrological technical measures and positive climate conditions, the site could be removed from the List of World Heritage in Danger in 2006.

The park's management plan implemented a zoning system inside the National Park, dividing the area in a full protection zone of 4129 ha to protect the migrating and/or nesting birds, the mouths of the wadis, the reed beds and the lower swamps, an internal buffer zone of 8273 ha where fishing is allowed and a peripheral zone of 4231 ha enabling the park authorities to supervise activities on the farming land outside the park.

The management plan also identified a zone of influence of at least 12 500 ha outside the peripheral zone in which activities could have a negative impact on the park and must be supervised by regional or national authorities, based on the legal framework concerning urban planning and environmental impact studies.

## Wet Tropics of Queensland

Greg Terrill



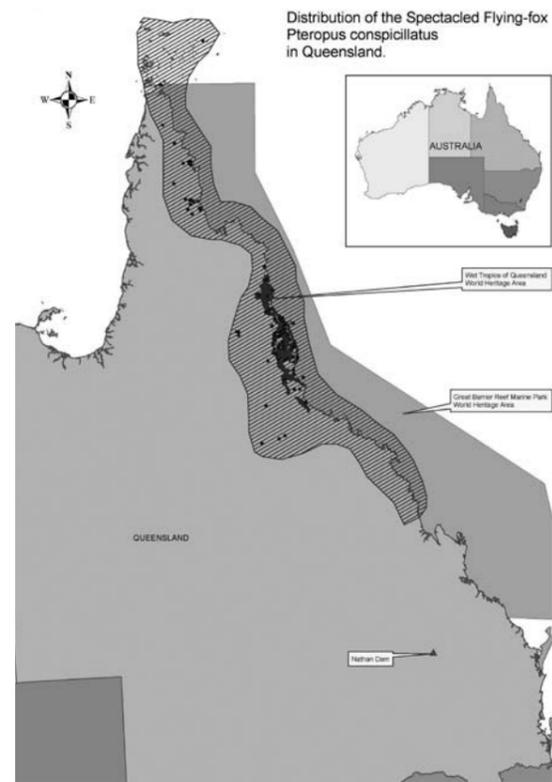
## Australia

This area, which stretches along the north-east coast of Australia for some 450 km, is made up largely of tropical rainforests. This biotope offers a particularly extensive and varied array of plants, as well as marsupials and singing birds, along with other rare and endangered animals and plant species.

Date of inscription: 1988

Criteria: (vii) (viii) (ix) (x)  
Property: 894420 ha

The Wet Tropics WH property does not have a buffer zone. Alternative measures are in place to protect the values of the property and respond to specific challenges posed by mobile values. These measures are capable of protecting the property from a larger set of threats, from a greater geographic area, than any buffer zone.



The Wet Tropics World Heritage property on the north-east coast of the State of Queensland, Australia, covers an area of approximately 894,000 hectares. The property provides the only habitat for numerous rare species, including the southern cassowary which is listed as one of the World Heritage values of the property. The cassowary is a solitary bird and moves regularly through its home range, which can be extensive. The shape and area of the range changes depending on food and the annual breeding season. The mobility of the birds' range means that they would not always be protected by any reasonable buffer zone.

The World Heritage values of the property are protected through State and Federal legislation. Queensland's *Wet Tropics Heritage Protection and Management Act 1993* allows for the creation of the Wet Tropics Management Plan. The Wet Tropics Management Authority administers the Plan which applies within the Wet Tropics World Heritage Area and provides different levels of protection through a system of zoning and permits. Indigenous land use agreements are also in place.

The values of the Wet Tropics World Heritage area are also protected under the *Environment Protection and Biodiversity Conservation Act 1999*. Unlike the Plan, this Act also applies outside the World Heritage Area. By law, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. Substantial penalties apply for taking such an action without approval. Once a heritage place is listed, the Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

The Act has been tested in court. These cases show the protective value of an impacts based approach in situations where a buffer zone would not have been effective.

- The *Minister for the Environment and Heritage v Queensland Conservation Council Inc [2004]* (Nathan Dam) case concerned a proposed dam project in Central Queensland. Of concern was the possible indirect impact of the dam on the world heritage values of the Great Barrier Reef World Heritage Area which might occur as a result of the use of water from the dam for agricultural irrigation, with consequent runoff of chemicals downstream to the Great Barrier Reef. The Full Court of the Federal Court held that there was a clear chain of consequence from the action which would impact on the values of the World Heritage property, regardless of proximity.
- In *Booth v Bosworth [2001]*, a private citizen sought an injunction under the Act to restrain a lychee farmer from using elevated electric grids to kill spectacled flying foxes who fed on his crop. Spectacled flying foxes roost in the adjacent Wet Tropics World Heritage property. The Federal Court granted the injunction. This case again illustrates the protective reach of the Act for mobile World Heritage values and suggests the importance of community education in providing protection for World Heritage values.

Résumé

La région des Tropiques humides de Queensland s'étend le long de la côte nord-est de l'Australie et comprend principalement des forêts tropicales humides, très riches en espèces végétales et animales rares et menacées. Le site ne dispose d'aucune zone tampon, mais il est protégé et géré par des dispositions légales portant sur la zone du site, ainsi que par des contraintes appliquées à l'extérieur du site également. En fait, selon la loi sur la protection de l'environnement et de la biodiversité, toute action qui peut ou pourrait avoir des impacts négatifs sur le site, indépendamment de la distance géographique, doit être examinée et approuvée. Cette loi s'est avérée efficace dans la pratique, dans des cas où une zone tampon n'aurait pas satisfait aux exigences de protection.



## Mount Huangshan

Rui Yang



China

Huangshan, known as 'the loveliest mountain of China', was acclaimed through art and literature during a good part of Chinese history (e.g. the Shanshui 'mountain and water' style of the mid-16th century). Today it holds the same fascination for visitors, poets, painters and photographers who come on pilgrimage to the site. It is renowned for its magnificent scenery made up of many granite peaks and rocks emerging of a sea of clouds.

Date of inscription: 1990

Criteria: (ii) (vii) (x)  
Property: 15400 ha  
Buffer Zone: 49000 ha

### Background

Mt. Huangshan National Park, located in the Huangshan City in the southern part of Anhui Province, has a total area of 160 square kilometers. Mt. Huangshan is a famous mountain scenic area known for its peculiar pine trees, odd stones, cloud sea and hot springs. Rich in scientific and aesthetic value, the landscapes of Mt. Huangshan have played an important role in the formation and development of the famous Huangshan school of Chinese painting. In 1982 Mt. Huangshan became one of the first national parks in China. In 1982, Mt. Huangshan became one of the first national parks in China. In 1990, it was inscribed on the World Heritage List for its compliance with criteria concerning cultural and natural heritage. In 2004, it became one of the first world geo-parks.

The Mt. Huangshan National Park is located in the middle of the Huangshan mountains and is of an altitude ranging between 200 and 1864 meters. The park takes the natural ridges, rivers, mountains and roads as the boundaries that were approved by the State Council in 1988.

The objective of a buffer zone in the Mt. Huangshan National Park is to protect it and prevent or slow down external influence and interference with the core zone. This may be realized in a variety of ways:

- (i) Protecting ecological environment of the buffer zone to provide a good migration corridor for plants and animals under protection in the core zone.
- (ii) Limiting artificial facilities and production activities in the buffer zone to avoid a negative impact on the environment of the core zone.
- (iii) Building tourist service facilities in the buffer zone to avoid intensive construction projects in the core zone.
- (iv) Building optional scenic spots in the buffer zone to alleviate the visitor pressure in the core zone at the peak season, etc.

In general, whether these actions will be taken and what benefits they will bring are closely related to the communities within the buffer zone. In some ways, the communities are passive as they are the ones under restriction and the ones whose interests are affected; in other ways, they are the producer or the executor of such influence. Therefore, communities play a key role in the proper functioning of the buffer zone. Community issues and planning should be focused on when dealing with buffer zone issues, if we want to reduce or control the negative impact.

### Community Issues

The communities with a collective land ownership within the Mt. Huangshan National Park and within the buffer zone are under the management of the local

government. Except for the difference in geographical location, they are much the same with regard to challenges and problems, and so they are put together in the discussion. In general, the challenges and problems encountered by the communities within the Mt. Huangshan National Park fall into six categories, namely rules and regulations, administrative management, planning and construction, environment and resources, economic benefits, qualities and capacities.

### Community Planning Guidelines

Community planning within the national park and the buffer zone complies with the following three principles:

- Community benefits
- Balanced rights, obligations and benefits
- Resource and environment protection

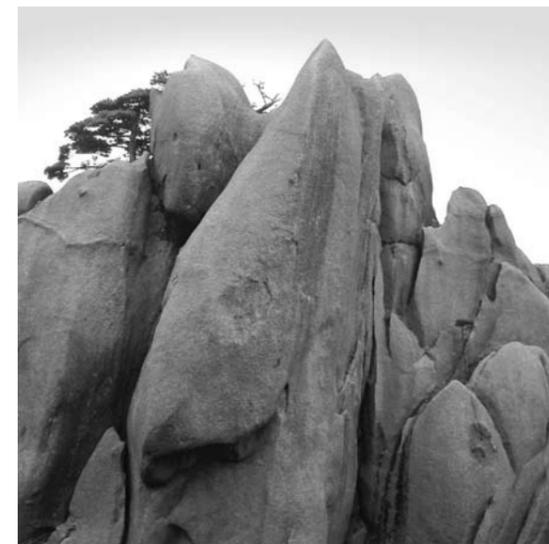


### Non-Material Dimension of Planning

The non-material dimension of planning shall cover institutional planning, economic steering planning, promotion and educational planning etc. and is for solutions to problems with the rules and regulations, administrative management, economic benefits as well as qualities and capacities. In this context, the planning for the national park and for the buffer zone is much the same.

### Material Dimension of Planning

The material dimension of planning aims to solve problems related to planning and construction, environment and resources. Planning for the national park and for the buffer zone is different. The former is more demanding with regard to resource protection and is under more restrictions for development and utilization. Therefore, when it comes to the material dimension of planning, the control shall be more specified and thorough. Control of the buffer zone is more general and relaxed. It leaves more room for community development and encourages initiative and creativity of the local communities.



### Résumé

Huangshan, la plus belle montagne de Chine, a été célébrée durant une bonne partie de l'histoire chinoise dans l'art et la littérature. Le site est connu pour son paysage grandiose composé de nombreux rochers et pics granitiques émergeant d'une mer de nuages.

L'objectif de la création d'une zone tampon dans le parc national du Mont Huangshan est de protéger, de prévenir et de ralentir l'influence externe sur la zone centrale du site. Il existe différents moyens d'y parvenir; la protection de la nature dans la zone tampon, la limitation des constructions et des activités de production sur ce territoire, ainsi que la mise en place d'infrastructures touristiques en font partie. L'efficacité de ces mesures est néanmoins étroitement liée au comportement des communautés vivant à l'intérieur de la zone tampon. Il est donc primordial de se focaliser sur l'impact de celles-ci pour que cet espace puisse pleinement jouer son rôle protecteur pour la zone centrale.

Deux types de planification ont été mises en œuvre pour assurer le bon déroulement des opérations:

- La planification de dimension «immatérielle»: elle couvre, entre autres, les projets liés à la réglementation, à l'administration, à l'économie et à l'éducation. La planification est de même nature pour les communautés vivant dans la zone centrale que pour celles établies dans la zone tampon du bien;
- La planification de dimension «matérielle»: elle vise à résoudre les problèmes liés à la construction, à l'environnement et aux ressources. Cette planification est plus stricte et restrictive dans la zone centrale que dans la zone tampon.

## Royal Chitwan National Park

Prabhu Budhathoki



## Nepal

At the foot of the Himalayas, Chitwan is one of the few remaining undisturbed vestiges of the 'Terai' region, which formerly extended over the foothills of India and Nepal. It has a particularly rich flora and fauna. The biological richness of the park is outstanding and includes many rare as well as globally endangered animal species. One of the last populations of the one-horned Asiatic rhinoceros is found in the park. The park is also one of the last refuges of the Bengal tiger.

Date of Inscription: 1984

Criteria: (vii) (ix) (x)  
Property: 93200 ha  
Buffer Zone: 76600 ha

The (Royal) Chitwan National Park (RCNP) was established in 1973 as the first national park of Nepal to conserve remaining natural habitats of many endangered wildlife species of Chitwan valley in the lowland Terai region of the country. Although a complete inventory of biological diversity in RCNP has not yet been accomplished, an outstanding biological richness of 570 species of flowering plants, 50 different mammals, 486 species of birds, 17 different reptiles, and 68 fish species have been recorded so far. The unique and rich biodiversity has been one of the main tourist attractions of the country. More than one quarter of the tourists visiting Nepal will also go and see this park.

The total registered area of the park is 1682 sq km, divided into 932 sq km core zone and 750 sq km buffer zone. The buffer zone (BZ) on the periphery of the RCNP was set up in 1996 and extends up to 9 km from the park boundary. The BZ is inhabited by nearly 250'000 people, mostly poor farmers. More than 60% of the population own less than 1 ha farmland and about half of the households within the buffer zone are in risk of food shortage. Most of the people depend on the resources of the park and forest within the buffer zone for their sustenance. A survey in 2001 revealed that local people extract about one third of their firewood and about one quarter of the needed fodder from the national park forests.



The core zone has been under strict protection of the Nepalese army with no or minimal participation of local communities and the administrators of the park. By contrast, the buffer zone's management has been trying to balance protective and participatory approaches to conserve the natural resources while trying to grant a sustainable human development based on self-reliance and community mobilization principles. A well-structured three-tier community-based institutional model has been formed for the management of conservation and development activities in the buffer zones. 'BZDC' is its superior body which is responsible for the mobilisation of the allocated revenue (50% of the park income) that the government has assigned for development and conservation activities in the buffer zone. In the last decade (1998-2007) approx. US\$ 3.3

million of park income were used for various community development and natural resource management activities in the BZ. The criteria for disbursing funds include the size and coverage of the user group; the impact of the local communities on the protected area; the impact of the park on the livelihood of local people; the community's geographic location (proximity to park); the community's willingness to participate in the buffer zone's process; and the level of support from other agencies for proposed projects.



Benefit-sharing schemes at local level were introduced as an attempt to redress the inequities of wildlife conservation that directly affect rural resource consumers. It aims to provide alternative natural resource base and livelihood opportunity to buffer zone communities so that their dependence on resources could be minimised, resulting in better long term biodiversity conservation. The management of the buffer zone is based on the principle of equitable development of human, social, financial and environmental capitals. As a result of these actions, it has been generally believed that the park - people relationship has improved over time. The buffer zone management practices of Chitwan National Park are based on a careful integration of conservation and development priorities and thus worth considering to adopt in other World Heritage sites with necessary local adjustment.

However, there are still many issues which have been impeding the smooth implementation of Buffer Zone management programmes in Chitwan. Some of the key issues which are necessary to address for the tangible support of Buffer Zone communities in conservation are i) more empowerment of community institutions – UG, UC and BZDC, ii) reasonable compensation of wildlife depredation, iii) reaching out to park affected people, iv) handing over of management responsibility of the buffer zone forests to its communities, v) halting poaching of endangered wildlife in the aforementioned forests and farm lands, vi) promotion of environmental friendly development activities and farming practices. Similarly, developing inter-agencies

coordination and collaboration, control of unplanned tourism activities, preparation of people-driven BZ management plan and regular flow of funds to support those implemented plans are equally important.

Despite having protective and participatory conservation measures, the park has been suffering from both ecological and anthropogenic related problems. The major challenges the park is currently facing are poaching of endangered wild animals, decline in aquatic flora and fauna due to industrial pollution and loss of key habitats such as reduction of grasslands because of succession of woody vegetations and encroachment of alien and invasive species such as the *Mikania micrantha*. The park has lost about a quarter of its one-horned rhino population mostly due to poaching within the last 8 years. The status of the Bengal Tiger, another endangered species of global significance, is largely unknown. These problems are posing a great threat to the overall integrity of the World Heritage site and urgently warrant serious attention from both national and international agencies to safeguard the park's national and global significance.

<sup>1</sup> Users Groups (UG) at the settlement level, Users Committees (UCs) at the Sector/Unit level by grouping together several of these settlement-based organizations, the User Groups and Buffer Zone Development Committee (BZDC) at the park level

Résumé

Le Parc national de Royal Chitwan (Royal Chitwan National Park) est le premier parc national népalais à avoir été fondé (en 1973) dans le but de protéger une zone sauvage attrayante et l'habitat de plusieurs espèces sauvages en voie de disparition comme le rhinocéros (*Rhinoceros unicornis*) et le tigre (*Panthera tigris*). L'UNESCO a reconnu que le RCNP (catégorie 2 IUCN des Aires protégées) disposait de ressources biologiques uniques et l'a inscrit sur la Liste du patrimoine mondial en novembre 1984. Pour maintenir l'intégrité écologique du parc, la direction a essayé d'équilibrer les approches protectrices et participatives visant à conserver les ressources. La zone centrale ou le parc lui-même est placé sous la protection rigoureuse de l'armée népalaise. La zone tampon en périphérie du PNRC a été établie en 1996 dans le but de fournir une réserve alternative de ressources naturelles et une source de revenus aux communautés qui y vivent. Le programme de la zone tampon du Parc national de Chitwan a été réalisé dans le cadre de politiques et de programmes bien articulés qui permettent à la direction d'investir 50% des revenus du parc dans le développement de zones tampon. Des programmes de répartition des bénéfices au niveau local ont été introduits pour essayer de compenser les inégalités dues à la protection de la vie sauvage qui affectent directement les consommateurs des ressources rurales.

## Butrint National Park

Ylli Cerova



Albania

Inhabited since prehistoric times, Butrint has been the site of a Greek colony, a Roman city and a bishopric. Following a period of prosperity under Byzantine administration, then a brief occupation by the Venetians, the city was abandoned in the late Middle Ages after marshes formed in the area. The present archaeological site is a repository of ruins representing each period in the city's development.

Date of Inscription: 1992  
Extension: 1999, 2007

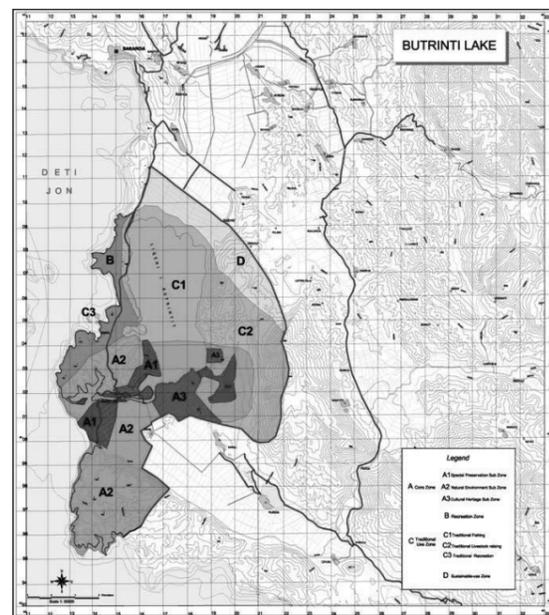
Criterion: (iii)  
Property: 3980 ha  
Buffer zone: 4611 ha

Butrint National Park (BNP) is situated in the south-western part of Albania. In the centre of its terrain is the ancient city of Butrint that was named a Cultural Monument in 1948. Butrinti has a surface of 16ha. The first archaeological excavations were carried out in the period between the two World Wars by an Italian mission led by the archaeologist Luigi Maria Ugolini. The city's beginnings of life date back to the time after the destruction of the ancient Troy by the Greeks and life continued until the 19th century. The woodland at Butrint became a site of environmental importance in 1981.

The antique city, with its monuments dating back to the Greek-Roman and Byzantine periods, is surrounded by rich nature, making it a special site in the West Balkan. Based on its archaeological and historical values the ancient city was inscribed as a Unesco World Heritage in 1992. Due to the dramatic events that took place in Albania in 1997, Butrint was inscribed in the List of World Monuments in Danger.

For a better management of Butrint, the Albanian government created the Office of Administration and Coordination in 1998. The team consists of four people who represent the main institutions that are involved in this site.

In 2000, the Albanian government declared the surrounding area of 25 km<sup>2</sup> as a National Park. The borders of this zone are the village Ksamil in the north, the river Pavlo passing by the Vrina village in the south, the Ionian Sea in the west, the foot of the mountain Milese in the east.



The ligatin (also bog or fen) area of Butrint and its surroundings were named a natural zone of particular protection by the Albanian government in 2002. Butrint was included in the list of ligatins of international importance, especially the habitats of water birds. In 2003, this territory became part of the List of World Monuments in Danger. By the end of 2005, the Albanian government decided to declare the ligatin area as a National Park.

The territory of the Butrint National Park is 8591.2 ha in total, divided as follows:

- water area (lagoon, sea and temporary ligatins) 2509 ha
- Makie dominated by ilqe, 4272 ha
- Pines, 39 ha
- Bare rocks, 208 ha
- Islands, 6,2 ha
- Fruit trees, 202 ha
- Inhabited areas and farming lands, 1355 ha

The Park is divided into the following zones:

a) There is the central zone of preservation of biodiversity marked on the map with the letter "A" with a surface of 3980 ha that is defined as a zone of great value for nature and biodiversity. In this zone there are the ancient city of Butrint and other archaeological sites of particular importance. This territory is called a core zone and a high level of protection is applied. All the other zones marked with B, C and D are situated in the northern part of the park and act as buffer zones. We emphasize that in the territory of the park there are two distinguished zones; one lays in the southern part which has a relaxed protection regime and the buffer zone lies in the northern part.

b) The recreational zones are marked on the map with letter "B", with a surface of 592 ha. They are defined as zones where a range of educational, recreation and other kinds of activities can take place that do not interfere with the functions of BNP and its ecological cultural and natural value. In this zone, a secondary level of protection is applied.

c) The zones of traditional usage marked on the map with the letter "C" have a surface of 3081 ha. They are defined as zones with natural resources where various traditional and economical activities may take place. A tertiary protection level is used.

d) The zones of sustainable use are marked on the map with the letter "D" with a surface of 938 ha. Within these zones, the developments of new sustainable activities are possible. The zones have the functions of a buffer zone for the neighboring urban zones and for the intensive economic activities that take place there.



The village of Ksamil in the north of the core zone has seen a big boom of illegal constructions after 1998. With the extension of the park's size, this village was included in the buffer zone. This new situation requires a better coordination between the staff of BNP and the local and central government for a more efficient management of this community. What is remarkable for the whole territory of BNP (buffer + core zone), is the good preservation of the territory. Unfortunately, this doesn't apply to the village.

This is the situation in the territory of Butrint National Park and the challenges that the members of staff have to face in order to preserve and protect this site of the World Heritage.

### Résumé

Le Parc national de Butrint se trouve au sud-ouest de l'Albanie. Au centre du parc se dresse la cité antique de Butrint, nommée Monument culturel en 1948. Habité depuis la préhistoire, le site de Butrint a été successivement colonie grecque, cité romaine et évêché. Après avoir traversé une période de prospérité sous l'administration byzantine puis avoir été brièvement occupée par Venise, la ville fut abandonnée à la fin du Moyen-Âge après que des marais se sont formés dans les environs. Le site archéologique actuel est un ensemble de ruines représentant chacune des périodes du développement de la ville.

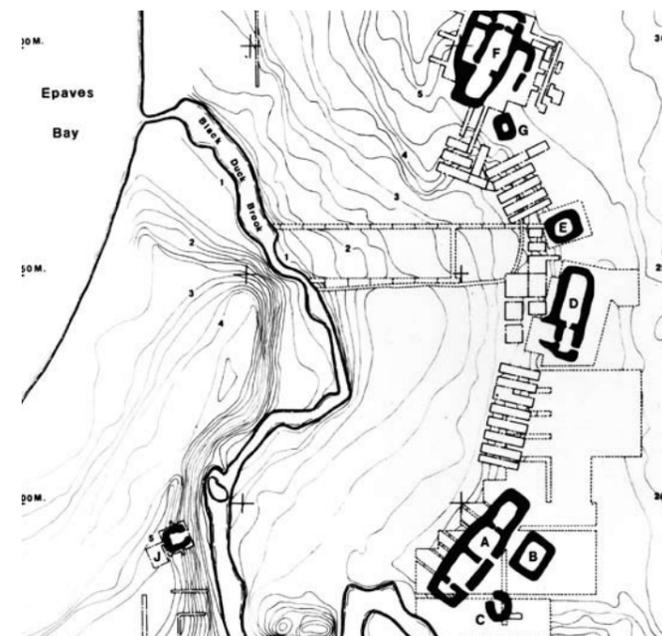
Butrint est géré par l'Office d'administration et de coordination, créé par le gouvernement albanais en 1998.

Le site est divisé en zones qui ont des niveaux de protection distincts: la zone centrale (3980 ha), des zones tampon au nord de la zone centrale, des zones récréationnelles (592 ha), des zones d'utilisation traditionnelle (3081 ha) et des zones de développement durable (938 ha).

Malgré le niveau de protection élevé, le village de Ksamil au nord de la zone centrale a vu une explosion de constructions illégales après 1998. Ce village a été inclus dans la zone tampon lorsque le parc a été agrandi. Cette nouvelle situation requiert une meilleure coordination entre le personnel du Parc national de Butrint et les gouvernements central et local afin de mieux gérer cette commune. La bonne conservation de l'ensemble du territoire du Parc national de Butrint (zone centrale et zone tampon), à l'exception du village, est remarquable.

# L'Anse aux Meadows National Historic Site

Gordon W. Fulton



Canada

At the tip of the Great Northern Peninsula of the island of Newfoundland, the remains of an 11th-century Viking settlement are evidence of the first European presence in North America. The excavated remains of wood-framed peat-turf buildings are similar to those found in Norse Greenland and Iceland.

Date of inscription: 1978

Criterion: (vi)  
Property: 8056 ha

Buffer zone: Included in the above area; no distinction as to the World Heritage property ("core") boundary and the buffer zone boundary was made in the nomination

The L'Anse aux Meadows World Heritage Site nomination document (March 1978) made reference to a property owned and managed by the Government of Canada consisting of "3,047 hectares of adjacent land and 5,009 hectares of adjacent sea" that, "in addition to providing a buffer zone, will be protected in the event that it may also contain archaeological material." The World Heritage property ("core") and buffer zone boundaries were not differentiated in the nomination, nor was a buffer zone described when the property was inscribed on the World Heritage List in September 1978, during the second session of the World Heritage Committee.

According to paragraph 26 of the *Operational Guidelines for the World Heritage Committee* (1977), which was in force in September 1978:

26. When setting the boundary of a property to be nominated to the List, the concept of a buffer zone around the property may be applied where appropriate. In such instances the nominations would include:

- a precise definition of the surface area of the property itself, including the sub-surface area where necessary
- an indication of the buffer zone around the property itself (i.e. the natural or man-made surroundings that influence the physical state of the property or the way in the property is perceived).

Such buffer zones will be determined in each case through technical studies and provided with adequate protection.

When the *Operational Guidelines* were revised in October 1978, the paragraph related to buffer zones was modified slightly by adding the phrase "and feasible" to the end of the first sentence: "When setting the boundary of a property to be nominated to the List, the concept of a buffer zone around the property may be applied where appropriate and feasible. ..." It was not until 1988, after six more rounds of revisions, that the *Operational Guidelines* were modified to indicate that a buffer zone was required, and then only that it "should be provided" whenever necessary:

17. Whenever necessary for the proper conservation of a cultural or natural property nominated, an adequate "buffer zone" around a property should be provided and should be afforded the necessary protection.

This wording remained in the *Operational Guidelines* until 2005, when the paragraphs on buffer zones were revised to express the clear expectation that, unless specifically argued to the contrary, a buffer zone must be included in the nomination:

106. Where no buffer zone is proposed, the nomination should include a statement as to why a buffer zone is not required.

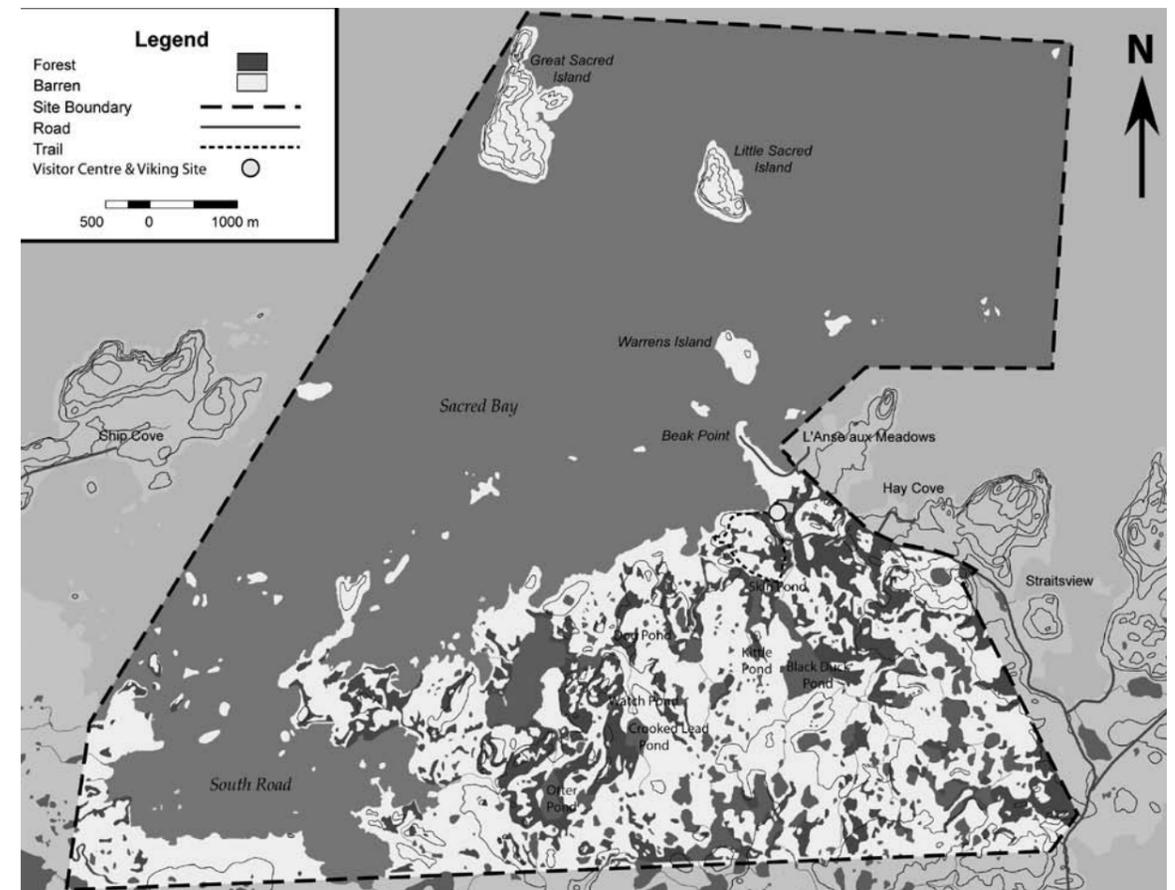
For about two decades, therefore, a large number of properties were inscribed on the World Heritage List

without a buffer zone, or without a World Heritage Committee-sanctioned buffer zone. Many of these properties were inscribed under the implicit understanding that the World Heritage Committee did not feel a buffer zone was necessary. In other cases, the lack of a buffer zone could be interpreted as an omission. A pertinent question is whether there are any circumstances envisioned whereby the World Heritage Committee would consider retroactively requiring a State Party to create a buffer zone for properties inscribed without one?

Clearly, the answer to this question should be based on the specific circumstances of each property, as related to the overarching objective for delineating a buffer zone – that is, to provide an added layer of protection to the World Heritage property in order to ensure its proper conservation and effective protection.

In the case of L'Anse aux Meadows, which was the first property inscribed on the World Heritage List, there is no buffer zone *per se* (that is, none sanctioned by the World Heritage Committee). Nevertheless, the World Heritage property may be understood to include a "core" zone – the archaeological site – and a *de facto* buffer zone – the remainder of the property – the totality being managed as a heritage property by the Government of Canada.

The inscribed property includes reconstructions of the original wood-framed peat-turf buildings, located outside the archaeological site area and used to demonstrate and explain to visitors the constructions and lifestyle of the 11th century Norse inhabitants. A modern visitor centre is also located outside the archaeological site area. These have all been carefully placed to respect the Outstanding Universal Value, authenticity and integrity of the property.



The lack of a formally defined buffer zone for L'Anse aux Meadows has not created any problems in terms of the effective protection of the inscribed World Heritage property (2005 *Operational Guidelines*, paragraphs 99 and 104); in terms of direct effect of human encroachments and impacts of resource use outside it (2005 *Operational Guidelines*, paragraph 101); or in terms of the proper conservation of the property (2005 *Operational Guidelines*, paragraph 103).

An investigation of the state of conservation of properties inscribed on the World Heritage List during the first decade of inscriptions under the Convention could be useful to determine whether the lack of buffer zones has had an impact on the properties' proper conservation and effective protection. The case of L'Anse aux Meadows may well be indicative that the retroactive creation of a buffer zone would not be necessary for proper conservation and protection, particularly when properties were inscribed under the implicit understanding that the World Heritage Committee did not feel a buffer zone was necessary.

### Résumé

Le site de L'Anse aux Meadows présente des restes archéologiques en bois, premiers témoins construits de la présence européenne sur le continent nord-américain. Ce site n'a pas de zone tampon définie formellement. Toutefois, le site archéologique proprement dit peut être compris comme zone centrale et le reste du bien comme zone tampon «de facto», la totalité étant gérée et protégée en tant que site patrimonial. Il s'avère qu'en 1978, le Comité du patrimoine mondial ne demandait pas encore l'établissement de zones tampons pour les sites nommés («une zone tampon ... peut être établie là où on le juge approprié»), et ce, jusqu'en 1988, où il suggérait seulement qu'elles «devraient être établies» lorsque nécessaire. Pour de nombreux sites, le Comité du patrimoine mondial n'a pas estimé qu'une zone tampon était nécessaire. Cette opinion s'est avérée correcte dans des cas comme celui de L'Anse aux Meadows, où l'absence d'une zone tampon définie formellement n'a pas affecté la bonne conservation du site.

## The White City of Tel-Aviv



Chezy Berkowitz  
Jeremie Hoffmann

Israel

Tel Aviv was founded in 1909 and developed as a metropolitan city under the British Mandate in Palestine. The district 'White City' was constructed from the early 1930s until the 1950s based on the urban plan by Sir Patrick Geddes, reflecting modern organic planning principles. The buildings were designed by architects who were trained in Europe where they had practiced their profession before immigrating to Israel. They created an outstanding architectural ensemble of the Modern movement in a new cultural context.

Date of Inscription: 2003

Criteria: (ii) (iv)  
Property: 140 ha  
Buffer zone: 197 ha

### The Buffer Zone

By definition, the main goal of the buffer zone of any World Heritage site is to protect the site from the pressures and the effects created by surrounding areas.

In most cases, the boundaries of the World Heritage sites and their buffer zones are clearly defined; there are instances, however, in which those boundaries are fluid and difficult to perceive. In places like the Old City of Akko or Massada, for example, the boundaries of the heritage site and its buffer zone are clear, such as the sea surrounding the city walls or the desert enclosing the mountain.

Tel-Aviv's White City was built entirely within 20 years. Due to this short period of construction, there are no clear borders to define the different historic developments. Consequently, the area of the World Heritage site and the buffer zone are separated from areas of urban fabric with similar characteristics, resulting in borders that separate neighborhoods and thereby unintentionally effecting some change in the surrounding areas.

One example is the street of "Iben Gbirol" in Tel-Aviv, which is a central avenue in the city. Its southern section is entirely included in the buffer zone, its central part contains the border line of the buffer zone placed in the middle of the street, and the northern end is entirely outside of the buffer zone. This current condition raises some interesting questions: How will this situation influence the future development of the "Iben Gbirol" as a main artery in the city? Where is the "right place" to locate the borderline of the buffer zone? Should the borderline be placed in the centre of the street, severing it into two different parts, or should it instead cut through the middle of an urban block across the yards of private residences?

Perhaps all borderlines connecting the buffer zone with the rest of the city should be a wider strip that allows for gradual change, generating a continuous landscape.

### Support

The buffer zone can be very useful in helping to maintain the World Heritage site as a lively part of the city by offering communal facilities such as public parks, office spaces, parking and public buildings such as schools and hospitals. While these may be difficult to place within the core zone of a World Heritage site, if situated in the buffer zone, they provide easy access to its inhabitants. This allows for a more active community and will prevent the site from becoming a museum and disabling activities of daily life like in the cities of Toledo in Spain or Carcassonne in France.

### Osmosis

In addition to being a protective layer around the site, the buffer zone can also be seen as a connection between the site and the rest of the city. The buffer zone acts as a link on the one hand with the World Heritage site and on the other with the remaining areas of the city. This results in two types of boundaries to the buffer zone that can take on different forms according to their position. Again, this situation raises a series of questions: Should not the qualities of the outer city find their way into the buffer zone? Should we perceive the areas within the buffer zone differently because they are connecting the World Heritage site with different city zones? For example, a buffer zone that borders on one edge to a declared World Heritage site and on the other to a high rise development, should it adapt an intermediate height in order to bridge between the two areas in a gradual manner?



### Balance

A city is composed of different parts, each one with its own values and qualities. The nomination of one of these parts as a World Heritage site with its surrounding buffer zone may cause a shift in the delicate balance of a city, especially when the declared area is not the historic heart of the city, as is the case in Tel-Aviv.

Parts of the historic heart of the city, which are of local but not global significance, may become part of the buffer zone of the World Heritage site, which becomes the centre of attention. For example the "Ahuzat Baite" neighborhood, that was the first planned area of Tel-Aviv and the origin of Tel-Aviv as a modern Garden city, built in the eclectic style, has great local importance, but has become a marginal area located outside of the southern part of the buffer zone.

### Identity

The buffer zone may be composed of different areas, each one with its own identity, history and character. All these areas still belong to the same entity. For example, in Tel-Aviv, the southern part of the buffer zone was built in the eclectic style, which is the typical style of the early city, while the northern part was built in the international style in accordance with the Geddes plan.

Despite being part of the buffer zone, each one of these areas should grow and develop in an organic way, preserving its initial identity.

### Integration

The areas of the declared site and the buffer zone are new urban "layers" that have been imposed on pre-existing city plans. In different places, there are different forms of city planning. Cities may be of a centralized urban plan, or, as in Tel Aviv, built from a mosaic of connected urban plans superposed on each other.

This raises the question whether the buffer zone regulation should be adapted to acknowledge the fact that there are different existing city plans.

### Test case: "Kiryat Sefer"

As mentioned above, these questions come up from our daily working experience in or with Tel-Aviv. One example that illustrates these questions is the new plan for a site situated within the buffer zone of the "White City" called "Kiryat Sefer." This site is intended to contain, next to living space, facilities such as a big park, parking lots, and kindergarten for the use of the area's inhabitants.

Two options were submitted; the first proposes 90 apartments in a 21-floor tower, which is to be integrated into the building scheme to its west (outside the buffer zone) in order to create larger green space. The second option suggests the same number of housing units, but spread over an 8-story building complex, which is closer to the scale of the declared site, but results in the loss of less open space which is needed for the tenants.

In conclusion, we can say that while the declared heritage site has its own clearly defined identity, the buffer zone's definition may be more complicated due to the fact that this area is an intermediate zone connecting the new and the ancient, renovation and conservation. The subjects presented here are fascinating in our opinion and are of great importance regarding the balance between the conservation of the heritage site on the one hand and the progression of the city on the other.

The possibility exists to further examine these subjects within a local context, and to make necessary adaptations for each unique location.



### Résumé

Tel-Aviv fut fondée en 1909 et se développa en ville métropolitaine sous le mandat britannique en Palestine. La « ville blanche » de Tel Aviv fut entièrement construite en vingt ans. Étant donné que ce laps de temps est très court, il n'existe pas de frontières claires entre les différents développements historiques, et le bien du patrimoine mondial ainsi que sa zone tampon s'inscrivent dans un tissu urbain continu avec des caractéristiques similaires. Par conséquent, la zone tampon est de caractère intermédiaire et multiple. Afin de la définir, les fonctions et les relations spécifiques des différentes parties de la ville doivent être prises en considération.

La zone tampon peut être un soutien pour un bien du patrimoine mondial en offrant des services publics, tels que des parcs, des bureaux, des parkings et des bâtiments publics – des écoles et des hôpitaux par exemple – qui peuvent être difficiles à installer dans la zone centrale elle-même, mais qui contribuent à y maintenir une vie locale.

En plus d'une zone de protection autour du bien, la zone tampon peut aussi être considérée comme une partie de la ville reliant le site propre aux espaces environnants. Cette fonction osmotique de la zone tampon pourrait se concrétiser en une transition lisible des qualités spatiales des parties urbaines limitrophes.

L'inscription à la Liste du patrimoine mondial d'une partie d'une ville et la définition de sa zone tampon accordent une importance spécifique à celle-ci, ce qui peut d'agir sur le fragile équilibre de la ville, en particulier si le site protégé n'englobe pas le cœur historique de cette dernière, comme c'est le cas à Tel-Aviv.

La zone tampon peut être composée de différentes zones, qui chacune ont leur identité, histoire et caractère propres. En plus d'appartenir à la zone tampon, chacune de ces parties doit grandir et se développer de manière organique en préservant son identité initiale.

Les périmètres d'un bien et de sa zone tampon se superposent sur différents plans d'urbanisme existants et leur intégration dans ces régulations doit être clarifiée.

À Tel Aviv, l'urbaniste est confronté quotidiennement à ces différents points. Toutefois, il est tout à fait envisageable d'examiner chacun d'eux dans d'autres contextes et de les adapter selon les cas.

## Belovezhskaya Pushcha / Bialowieza Forest



Situated on the watershed of the Baltic Sea and the Black Sea, this immense forest range, consisting of evergreens and broadleaved trees, is home to some remarkable animal life. These include rare mammals such as the wolf, the lynx and the otter, as well as some 400 European Bison, a species which has been reintroduced into the park.

Renata Krzysciak-Kosinska

Poland / Belarus

Date of inscription: 1979  
Extension: 1992

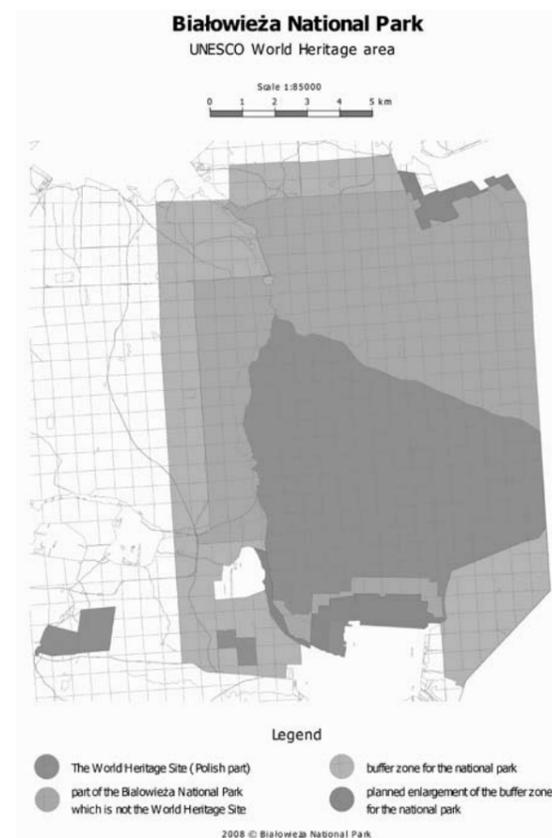
Criterion: (vii)  
Property: 92669 ha

The “Belovezhskaya Pushcha/Bialowieza Forest” World Heritage Site covers the central part of the Bialowieza Forest, between the Republic of Poland and the Republic of Belarus. It encompasses the best preserved fragment of the two adjacent national parks and protects the unique temperate deciduous forest of primeval character with additional mixed and pure coniferous stands. It is the remnant core of the forest type which prevailed in Europe in the past. The site is characterized by rare fauna of forest dwelling birds, saproxylic invertebrates and fungi. Natural processes running unbroken thousands of years make this site very valuable. It is a multi-species and uneven-aged tree population with a diverse spatial structure. It still presents exceptional natural features such as uprooted or broken trees, dead trees and high diversity of fungi in their natural setting. It is the last place where the largest terrestrial mammal of Europe, the European bison, survived in nature until the beginning of the 20th century. After restoration of the species, it roams the entire area of the Bialowieza Forest.

The Site encompasses over 10'000 ha of forest subjected to a strict legal protection regime for several decades on both sides of the border (IUCN category I). It is surrounded by more than one hundred thousand of hectares of forest of different protection levels as well as managed forest which plays the role of the buffer zone. The size of the Site ensures that all stages of natural forest development are present. As long as natural processes are allowed to run with no human interference, aesthetic values will not be threatened.

The Bialowieza Forest was the focus of different forms of protection throughout several centuries. The first written record concerning Bialowieza dates from 1409 when the forest was already reserved for selective use. The area which at present forms the World Heritage Site has never been cut down and never been planted by men. There were however other forms of human activity, such as ancient form of beekeeping, grazing of domestic animals, fruit and mushroom picking as well as haymaking on open areas. There was no settlement within the forest apart from the very few small villages. Even though the owners and rulers changed throughout the centuries, the area was kept as hunting ground for the most privileged. The forest escaped the fate of the majority of similar habitats across Europe as it was the last refuge of the European bison. They survived because the forest remained in the same state as it was centuries before. Before the outbreak of World War I there were still over 700 individual bisons roaming in the Bialowieza Forest. During the war, however, the animals were left unguarded and were an easy prey to military troops and poachers. The last free living animal was killed by a poacher at the beginning of 1919. It is unarguable that the Bialowieza Forest would not be the same without the European bison. The history of the species is the story of success in nature conservation. Exterminated in nature, the species survived

thanks to individuals kept in animal parks in Sweden, Germany and other European countries. The recovery programme was started in Bialowieza in 1929 when the first individuals were brought and released into specially prepared enclosures. Since then the long process of species restoration has been carried out constantly. The whole world population of the European bison exceeds 3'000 individuals scattered across the globe. Nevertheless, one should never forget that all those animals have just seven ancestors and there is a high danger of decrease in survival rate and population number because of a very small genetic diversity. Being the very symbol of the Bialowieza Forest, the European bison may be regarded as an umbrella species for many other elements of the ecosystem.



Apart from the European bison, the Bialowieza Forest is home to four other ungulates such as the elk, the red deer, the roe deer and the wild boar. It is also home to big carnivores such as the wolf and the lynx as well as smaller ones such as the otter, the pine marten, the polecat and many others. This cohabitat gives us the rare opportunity to observe the special predator and prey relations. The Avifauna is rich with forest-dwelling birds including species that are confined to old tree population and dead trees such as the white-backed and three-toed woodpeckers on the top of the list. There are over 10'000 invertebrate species known from the area but every year new species

are observed so that the total number of species from the Animal Kingdom is estimated at approximately 20'000. The world of fungi is also extremely diverse with an estimate of 4'000 species. The average age of the tree population is 140 years and trees of exceptional dimensions are numerous. The whole natural environment and all processes related to it are under protection. Within the strictly protected area one can find an exceptionally high amount of dead trees. While it is estimated that there are approximately 400 cubic metres of wood volume per hectare, another 120 cubic metres are dead trees, standing or lying on the forest floor in different phases of decomposition.

Even though there was no statement of outstanding universal value attached to the nomination dossier, the following phenomena may be regarded as such:

- Ancient forest where natural processes were not interrupted during historic times
- Numerous relict species of primeval forest
- Free ranging European bison population
- presence of rare and endangered species, e.g. wolf, lynx, three-toed and white-backed woodpeckers, numerous plant and fungi species

The strictly protected area which forms the main part of the World Heritage Site is shielded from most human activity. It is allowed to carry out scientific research, but only if they are non-invasive and do not alter natural components and processes, no experiments are allowed. Field courses for students and senior school children are possible after receiving the permission from the Director of the Park. Visiting is possible only with a qualified guide and in a limited area. Hunting and timber exploitation are not allowed.

There is no officially established buffer zone for the transboundary World Heritage Site on either side of the border. Nevertheless, in both countries there are areas which may serve as a buffer zone. In Poland this role is carried out by the part of the Bialowieza National Park which is not the World Heritage Site but was included into the park in 1996. It protects the northern and western border of the Site. Furthermore, the National Park has the official buffer zone which adds an additional layer of protection for the Site. A buffer zone for the national park is recognized by the Polish law for Nature Conservation and the Director of the park has the right to intervene should any development of an area included into the buffer zone pose any threat to the integrity of the park.

The most vulnerable part is the southern border of the Polish part of the Site which adjoins the Bialowieza Glade. Bialowieza is a village situated in the centre of the Glade and is developing fast, especially in terms of tourist infrastructure. There are several big hotels and there are plans to build even more. Improvement works on this part of the buffer zone of the Bialowieza National Park are in progress at the moment. When it

is established officially, it will also serve as a buffer zone to the World Heritage Site. However, the village itself is not considered to be a part of the buffer zone as it is separated from the Site by a large open area which once was arable land, nowadays mostly abandoned. This fast development of the village is presumed to have an indirect disadvantageous influence on natural values through increased traffic in the vicinity of the site, noise as well as water pollution. The tourist access to the Site is however strictly controlled.

On the Belorussian side, the forest and former arable land included in the park after inscribing the area on the World Heritage List also have the role of a buffer zone.

### Résumé

Le site du patrimoine mondial «Forêt Belovezhskaya Pushcha / Bialowieza» comprend la partie centrale de la forêt de Bialowieza, située à cheval entre la République de Pologne et la République de Bélarus. Il englobe la partie la mieux préservée des deux parcs nationaux adjacents et protège cette exceptionnelle forêt primaire de zone tempérée, composée principalement de feuillus, mais qui comprend également des zones de peuplement de conifères purs et mélangés. Le site est caractérisé par une faune rare d'oiseaux forestiers, d'invertébrés saproxyliques et de fungi. Des processus naturels se poursuivant sans relâche depuis des milliers d'années font la valeur exceptionnelle du site. La population d'arbres d'espèces et d'âges différents a une structure spatiale diversifiée. On y trouve encore des caractéristiques naturelles exceptionnelles comme des arbres déracinés ou endommagés, des arbres morts et une grande variété de fungi dans leur environnement naturel. C'est le dernier endroit où le plus grand mammifère terrestre européen, le bison d'Europe, a survécu en liberté jusqu'au début du XX<sup>e</sup> siècle. L'espèce a été réintroduite et occupe maintenant toute la forêt de Bialowieza. Le site recouvre plus de 10 000 ha de forêt protégés par un régime légal strict depuis plusieurs décennies des deux côtés de la frontière.



## World Heritage and Buffer Zones

Ce site transnational n'a pas de zone tampon officielle dans aucun des deux pays. En Pologne, la partie du Parc national de Bialowieza qui n'est pas inscrite sur la Liste du patrimoine mondial joue le rôle de zone tampon. De plus, le Parc national a une zone tampon officielle sur la plus grande partie de son pourtour. Le fragment le plus vulnérable se situe à la frontière sud de la partie polonaise du site qui longe la Clairière de Bialowieza. Bialowieza est un village situé au centre de la clairière qui se développe rapidement, particulièrement en termes d'infrastructures touristiques. On pense que ce développement rapide du village pourrait avoir une influence nocive indirecte sur les valeurs naturelles par l'augmentation du trafic près du site, par le bruit ainsi que par la pollution de l'air et de l'eau qu'il engendre. Cependant, l'accès des touristes au site est strictement contrôlé. Des travaux d'amélioration sur cette partie de la zone tampon du Parc national de Bialowieza sont actuellement en cours.

Du côté biélorusse, la forêt et les anciennes terres agricoles comprises dans le parc après l'inscription de la zone sur la Liste du patrimoine mondial jouent aussi le rôle de zone tampon.

## Vieille ville de Berne



Bernhard Furrer

Suisse

Fondée au XIIe siècle sur une colline ceinturée par l'Aare, Berne s'est développée selon un concept urbanistique exceptionnellement clair. Les bâtiments de la vieille ville, de diverses périodes, comprennent notamment des arcades du XVe siècle et des fontaines du XVIe siècle. La majeure partie de la ville médiévale a été rénovée au XVIIIe siècle, mais a conservé son caractère originel.

Date of inscription: 1983

Critère: (iii)  
Bien: 85 ha

### Les abords sous protection communale – un équivalent aux zones tampons?

Les atouts principaux et exceptionnels de la vieille ville de Berne ne sont pas ses différents monuments historiques. Certes, la ville possède un des hôtels de ville les plus anciens et plus importants de Suisse, et la collégiale construite à partir de 1421 compte, avec son portail principal, parmi les œuvres les plus significatives du gothique européen. Mais ce n'est pas en raison de ces monuments et de tant d'autres que la ville fut inscrite sur la liste du patrimoine culturel mondial. Sa valeur universelle exceptionnelle réside plutôt dans l'ensemble bâti qui, lors de sa fondation en 1191, fut planifié selon des règles urbanistiques claires, lesquelles, pour l'essentiel, restèrent inchangées pendant plus de 800 ans.

Sur le dos de la longue péninsule formée par un méandre de la rivière Aare fut tracée une rue principale d'une largeur exceptionnelle (90 pieds, soit 26.40 mètres) qui servait au marché quotidien et qui, après le grand incendie de 1405, fut agrémentée des célèbres arcades. Des rues secondaires parallèles accompagnent cette artère principale. Le lotissement prévoyait de grandes unités fiscales de dimensions uniformes (60 x 100 pieds), subdivisées en parcelles étroites et profondes qui, jusqu'à ce jour, déterminent les proportions des façades. Le plan de la ville ne comprenait ni places ni squares, la grande rue tenant lieu d'espace public. En revanche, les bâtiments publics n'étaient pas situés au cœur de la ville, mais sur sa frange, le centre restant uniquement dévolu à la vie citoyenne. L'alimentation en eau était assurée par un ruisseau au milieu des rues, l'évacuation des eaux usées s'effectuant entre les rangées de parcelles – ce principe ultramoderne pour l'époque est encore en fonction aujourd'hui.

«La ville entière constitue le monument»: ce titre du livre de Paul Hofer (en allemand «Die Stadt als Monument») caractérise la vieille ville de Berne. Par conséquent, la sauvegarder signifie s'efforcer de restaurer scientifiquement les «grands» monuments tels que la cathédrale par exemple, mais aussi conserver, autant à l'intérieur qu'à l'extérieur, l'authenticité et l'intégrité des maisons bourgeoises, tantôt patriciennes, tantôt modestes. C'est ce que nous appelons «la physionomie urbaine intérieure de la ville» (en allemand: inneres Ortsbild). Même dans les années suivant la 2e guerre mondiale, lorsque, partout en Europe, les centres historiques souffraient d'abandon ou d'interventions parfois brutales, la population de Berne défendit «sa» vieille ville. Lors d'une manifestation devant la cathédrale, plusieurs milliers de citoyens protestèrent contre la destruction de maisons particulières et leur remplacement par des copies. Par la suite, les maisons furent sauvegardées et le règlement municipal régissant la construction dans la vieille ville modifié, de sorte que la protection des maisons et de leurs murs mitoyens se trouva garantie.

À juger la physionomie urbaine intérieure de la ville médiévale, on peut constater les effets d'efforts intenses couronnés de succès évidents dans la conservation et la restauration des édifices privés et publics. Tous les travaux d'une certaine importance sont suivis par un service spécialisé qui peut s'appuyer sur une législation contraignante. Il est probable que, dans son ensemble, la vieille ville de Berne soit l'une des cités les mieux conservées en Europe. En revanche, un manque évident d'attention de la part des autorités politiques doit être déploré. Dans le périmètre même du bien, des réalisations récentes, telles que l'immense baldachin en verre près de l'église du Saint-Esprit ou des planifications futures, comme la surélévation projetée d'un bâtiment administratif de 10 étages, démontrent la prédominance des intérêts pour le marketing ou pour les exigences économiques de la part de la ville.

Un suivi plus proche des biens inscrits sur la liste du patrimoine mondial semble être indispensable à terme, soit par les organes de l'UNESCO soit par ceux de l'ICOMOS, surtout quand il s'agit d'un bien complexe comme un ensemble urbanistique. Les rapports périodiques, tels qu'ils sont conçus aujourd'hui, se concentrent sur des questions administratives, quantitatives. De plus, ils sont établis par les états partis qui n'ont aucun intérêt à se mettre eux-mêmes en cause. Les questions de fond, de nature qualitative, n'entrent pas en considération. Il est vrai que quelques comités nationaux de l'ICOMOS organisent un suivi continu de leurs biens; c'est le cas, notamment, en Allemagne. Mais il faudrait absolument que les biens inscrits soient revus tous les 4 ou 5 ans avec la même intensité et précision, selon une procédure semblable à celle qui est appliquée pour leur candidature. Il s'agit d'un suivi qualitatif indispensable. Ce ne sont pas seulement les interventions à grande échelle qui nuisent à l'intégrité d'un site; les villes font particulièrement comprendre à quel point la somme de nombreux petits changements inadéquats peut avoir un effet nettement plus néfaste qu'une seule altération lourde.

Il est intéressant de constater que beaucoup de cas concrets discutés en Europe ces dernières années concernaient des projets situés aux abords de biens, alors que des interventions massives à l'intérieur du périmètre passaient inaperçues. La sensibilité accrue aux alentours des biens, dans les zones tampons ou même en-dehors de celles-ci, aussi juste qu'elle soit, ne devrait pas diminuer l'attention à la sauvegarde du bien lui-même.

Incontestablement, un noyau urbain nécessite un espace libre pour garantir une vue non perturbée. La perception d'une ville doit rester possible sans obstacle visuel; elle ne doit pas être gênée par des bâtiments ou des installations. Nous appelons cet aspect «la physionomie extérieure de la ville» (en allemand: äusseres Ortsbild).

Lors de la candidature Suisse à l'inscription de la ville de Berne, la désignation de zones tampons ne fut pas demandée, le terme n'étant même pas introduit. L'inscription s'est donc limitée à définir un périmètre qui correspondait alors à la zone «vieille ville» du règlement municipal de construction (entre temps l'étendue de cette zone a été marginalement modifiée, mais, bien entendu, le périmètre du bien inscrit reste inchangé).

Ce règlement prévoyait, et prévoit toujours, une protection sévère des rives extérieures de la rivière, espace que l'on désignerait aujourd'hui comme zone tampon. En effet, bien avant la candidature à l'inscription, les milieux politiques, sous pression de l'opinion publique, ont soumis au vote populaire un projet de protection exigeant pour cette zone. La partie centrale des pentes raides de la rive droite est propriété publique; les rives ne sont pas constructibles et doivent être maintenues en petites forêts ou pâturages. Le secteur destiné aux ours – animaux héraldiques de la ville – est entrain d'y être modifié: on y aménage un complément à la célèbre fosse. Deux grandes rues accompagnées d'allées d'arbres structurent cette partie en face de la vieille ville. Les parties en propriété privée, principalement situées au nord de la vieille ville, sont en zone de protection et soumises à des règles de construction strictes. Ces dernières décrètent, par exemple, un faible taux d'utilisation du terrain et une hauteur limitée des bâtiments, et comprennent des prescriptions pour les toitures et l'aménagement des terrains libres.

Un danger particulier peut provenir d'immeubles tours. Cette forme de construction, quasiment abandonnée en Suisse après le «boom» des années 70, est redevenue à la mode ces dernières années. Bien qu'à Berne les gratte-ciels se limitent généralement à 20 ou 24 étages, des volumes bâtis de cette taille peuvent concurrencer la silhouette de la vieille ville. La municipalité a donc planifié le développement de cette forme spécifique de densification. Elle a défini les emplacements possibles pour les futurs gratte-ciels dans un plan directeur détaillé, en prenant garde de réserver une distance suffisante par rapport au noyau urbain. Ce plan doit être voté prochainement.

Malgré ces précautions et prescriptions au niveau municipal, la question reste posée, si une zone tampon officielle, validée par l'UNESCO, ne garantirait pas un niveau supérieur de sécurité contre des interventions futures qui pourraient porter atteinte à l'intégrité du site. Dans le cas concret, le contrôle de la part des services et des autorités municipales sur la base de règlements locaux est probablement assuré. Toutefois, la création d'une zone tampon, avec des définitions adéquates, pourrait améliorer considérablement la conscience collective que ces questions ne sont pas seulement des affaires locales, mais font partie des engagements pris à l'égard de l'UNESCO, et donc de la

communauté internationale. À Berne, cette conscience semble parfois faire défaut.

Il serait donc nécessaire d'ouvrir le débat pour déterminer si l'UNESCO ne devrait pas inviter les états partis disposant de biens «anciens» à proposer des compléments à l'inscription définissant des zones tampons; les biens et leur périmètre resteraient sans modification. Ces propositions feraient l'objet d'un examen identique à celui de l'inscription-même.

En conclusion, il semble que deux améliorations significatives doivent être discutées et mises en œuvre: d'une part un suivi qualitatif régulier des biens inscrits par l'UNESCO (probablement en collaboration avec l'ICOMOS), d'autre part un complément aux «anciennes» inscriptions créant une ou plusieurs zones tampons.



## World Heritage and Buffer Zones

### Summary

Founded in the 12th century on a hill site surrounded by the Aare River, Berne developed over the centuries in line with an exceptionally coherent planning concept. The Outstanding Universal Value of its old city lies not in its diverse historic monuments, but rather in the ensemble of residential and public buildings that are all integrated into an 800 year old urban plan.

The protection of the site focuses on the one hand on the academic restoration of the 'big' monuments and on the other on the preservation of the integrity and authenticity of the bourgeois residential buildings. All the works of a certain level of importance are supervised by the local heritage service which can rely on restrictive laws and regulations. Therefore, it is possible to say that the old town of Berne with its ensemble of buildings is one of the best preserved cities of Europe.

As a site inscribed in 1983, Berne has no official buffer zone. However, its surroundings, important

for the visual integrity of the site, are well protected through communal law and urban planning regulations. Nevertheless, in or close to the property, there were and will be some building projects that are more in the interest of touristic marketing or economic demands than are trying to fit into the existing scheme.

As a result, it is thoughtful to believe that the establishment of an official buffer zone, validated by UNESCO, would enhance the protection towards building projects that might harm the integrity of the old city. In general, the obligation to implement buffer zones for "ancient" World Heritage sites should be examined by UNESCO and ICOMOS. Also, a regular monitoring of World Heritage sites by ICOMOS or UNESCO examining the developments of the properties' values, in a similar manner like during the nomination process, should be introduced.



## Swiss Alps Jungfrau-Aletsch



Bruno Stephan Walder  
Carlo Ossola

Switzerland

The extension of the natural World Heritage property of Jungfrau – Aletsch – Bietschhorn (first inscribed in 2001), expands the site to the east and west, bringing its surface area up to 82400 ha, up from 53900. The site provides an outstanding example of the formation of the High Alps, including the most glaciated part of the mountain range and the largest glacier in Eurasia. It features a wide diversity of ecosystems, including successional stages due particularly to the retreat of glaciers resulting from climate change. The site is of outstanding universal value both for its beauty and for the wealth of information it contains about the formation of mountains and glaciers, as well as ongoing climate change. It is also invaluable in terms of the ecological and biological processes it illustrates, notably through plan succession. Its impressive landscape has played an important role in European art, literature, mountaineering and alpine tourism.

Date of inscription: 2001  
Extension: 2007

Criteria: (vii) (viii) (ix)  
Property: 82400 ha

### Outstanding Universal Value

The Jungfrau-Aletsch-Bietschhorn region is the most glaciated part of the European Alps, containing Europe's largest glacier and a range of classic glacial features, and provides an outstanding record of the geological processes that formed the High Alps. A diverse flora and fauna is represented in a range of habitats, and plant colonization in the wake of retreating glaciers provides an outstanding example of plant succession.

Criterion (vii): The impressive landscape within the property has played an important role in European art, literature, mountaineering and alpine tourism. The area is globally recognised as one of the most spectacular mountain regions to visit and its aesthetics have attracted an international following. The impressive north wall of the High Alps, centred on the Eiger, Mönch and Jungfrau peaks, is a superlative scenic feature, complemented on the southern side of the Alpine divide by spectacular peaks and a valley system which supports the two longest glaciers in western Eurasia.

Criterion (viii): The property provides an outstanding example of the formation of the High Alps resulting from uplift and compression which began 20-40 million years ago. Within an altitude range from 809 m to 4,274 m, the region displays 400 million-year-old crystalline rocks thrust over younger carbonate rocks due to the northward drift of the African tectonic plate. Added to the dramatic record of the processes of mountain building is a great abundance and diversity of geomorphological features such as U-shaped glacial valleys, cirques, horn peaks, valley glaciers and moraines. This most glaciated part of the Alps contains the Aletsch glacier, the largest and longest in Europe, which is of significant scientific interest in the context of glacial history and ongoing processes, particularly related to climate change.

Criterion (ix): Within its altitudinal range and its dry southern/wet northern exposures, the property provides a wide range of alpine and sub-alpine habitats. On the two main substrates of crystalline and carbonate rocks, a variety of ecosystems have evolved without significant human intervention. Superb examples of plant succession exist, including the distinctive upper and lower tree-line of the Aletsch forest. The global phenomenon of climatic change is particularly well-illustrated in the region, as reflected in the varying rates of retreat of the different glaciers, providing new substrates for plant colonization.

### The Site

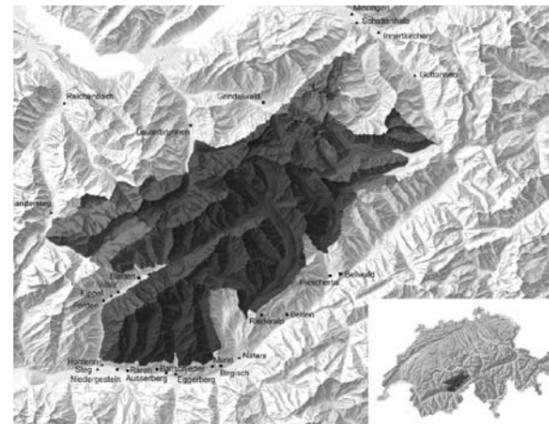
The property is well managed, with a management strategy and plan in place which have been developed through an exemplary participatory process. Almost all of the property is under some form of legal

protection. Key management issues include the potential impact from climate change, the management of tourism, and the need to ensure effective coordination of management responsibility between federal, cantonal and communal levels of government.

Human use has occurred only at isolated points, though some such use dates back several decades. The limited and relatively highly regulated uses for farming, forestry and tourism (shelters) have not altered the character of the property. While such interventions have a certain significance locally, they can therefore be neglected in the larger picture.

Among the impacts of protected status are those on the creation of infrastructure. Upgrading of infrastructure is banned inside the area or made subject to stringent requirements bearing on landscape protection and conservation. Already-existing infrastructure in the World Heritage property (extract):

- Tourist transport railways: 2 + private cablecars,
- Shelters and guesthouses: 39,
- High-altitude landing strips: 7,
- Underground tunnels for the power stations (Massa and Grimsel), water reservoirs,
- Alpine huts, barns and stalls,
- Hiking paths, via ferratas,
- Forestry roads and paths.



Natural conditions limit the number of visitors, yet infrastructure intended primarily to support tourism is located inside and immediately on the perimeter of the World Heritage site. In the property are 34 shelters and five mountain cabins, seven high-altitude landing sites, two railways for tourists (Jungfraujoch and Trümmelbachfälle), and hiking trails in some marginal sections. Transportation facilities for tourists are already found outside the property.

Winter conditions make parts of the valleys, as well as other tourist attractions such as the Trümmelbach, inaccessible. Other areas, however, are heavily impacted in winter by heliskiing, ski treks, and other skiing activities.

There are bans on such activities for sensitive areas such as the Aletschwald. Additional visitor pressures are not to be expected in the winter, however. The situation changes somewhat in the summer. Places of heavy tourist use are the Jungfraujoch, followed by the Trümmelbach, the Aletsch forest-Märjelen area and the Fafleralp-Langgletscher in the Lötschental. No problems are anticipated at the Jungfraujoch and the Trümmelbach even if visitor numbers rise further. Delivery of supplies and disposal of wastes are already under control. As for the hiking areas in the Lötschental and on the Aletsch plateau, well-maintained trails and a suitable trail network will serve to control visitors.

In this way it is possible to lower the risk that the populations of sensitive species such as black grouse and rock ptarmigan will be threatened by increased tourist use of their habitats. This kind of control together with appropriate informational efforts and supervision, as in the Aletsch forest, can help to minimize damage or at any rate hold it to present levels.

As the glaciers recede, hiking trails may have to be upgraded or new access provided to shelters. While these actions are minor, they must be planned with due attention to landscape and habitat concerns.

Economic use is to be dictated by market conditions, the social and cultural situation, and legal regulations, but also by the long-term viability of the natural systems as outlined in overall goals. Man is welcome in the World Heritage Site as a visitor, actor and user who is mindful of the risks of natural hazards and pays due regard to the sensitivity and need for protection of the natural resources. Appropriate infrastructure is to be maintained and, if necessary, expanded in line with the capacity of the natural systems to tolerate use. As part of the Regulated Outdoor Activities field of action, ecological concepts for outdoor sports, leisure and recreation must be designed, negotiated and implemented. Where necessary, "use" of the perimeter shall be subject to regulatory intervention (wherever possible on the basis of laws rather than prohibition) and thus adapted to utilization of the viability. This will encourage environmentally friendly visitor management. Visitors to the JAB will be made aware of the sensitivity of the natural surroundings and will "use" them with this in mind. The following measures will appeal to visitors on an active and passive level: Evaluation of air traffic, formulation of a JAB code of conduct, activity tables and conflict maps. Preparation of the legal basis for outdoor activities, a general infrastructure concept (for tourism), etc.

In details: JAB activity table and conflict map

Existing outdoor activities are characterized in terms of their impact on the natural environment and on other activities, and potential future trends and developments are projected. A conflict map shows

all current and potential areas of conflict within the perimeter and its neighboring regions, which result from imposing the activities on the sensitive habitats and protected areas.

Regional activity tables and conflict maps are drawn up as a common basis for coordinating and planning outdoor activities in the perimeter.

Traditional cultural landscape (instigate implementation of core group projects)

As part of its instigator/coordinator function, the MC lobbies the relevant project partners (federal government, cantons, private individuals, organizations) to canvas for implementation of the projects drawn up by core group "Traditional Cultural Landscape"; "Natural Forest" and "Traditional Agricultural System", and coordinates the work. The cultural landscape, its distinctive characteristics and its importance for the protection of alpine biodiversity, are sustainably preserved (perimeter and region).

The Management Centre and the Association act as the coordination hub and driving force or instigator for projects for the conservation of the world heritage site, and bear responsibility for the preservation of world heritage sites under the terms of the UNESCO World Heritage Convention. Since the project objectives are based on the management plan objectives, the projects will be the central building blocks for efforts to preserve and develop the world heritage site.

The solution for the conservation problems should partly be found in collaboration with the surrounding community. In this way the management of JAB has created a sort of "sphere of influence" in the surrounding region, due to projects that affects the neighboring territories. The aim of all these projects, which have risen in a democratic participatory process, is the protection of the natural value of the site and the sustainable development of the region.

The participation of the surroundings communities is guaranteed by the operation of core groups. Participation becomes an active experience by setting up/ implementing core groups. The projects designed and defined by the core groups are submitted to the Association along with a proposal and a final report for implementation, and prepared for implementation. "Round tables" consisting of actors from the region are set up for conflict management. In the World Heritage Region 21 core groups and provision of "round tables" are operative.

The implementation of the projects designed and defined by the core groups is supported within the context of the Management Centre's coordinator and instigator function.

## World Heritage and Buffer Zones

The Association and the Management Centre coordinate the projects defined by the core groups and endeavor to find ways of implementing them in collaboration with the proposed companies, organizations and institutions, and to find solutions for their financing. Controlling of the projects defined by the core groups is the responsibility of the Management Centre (or the affiliated independent committee).

With the creation and implementation of the management plan of the site a "sphere of influence" were created. This new participatory perimeter has permitted ditto to lower the impacts on the inscribed area and on the outstanding universal value of the region.



### Résumé

La région Jungfrau-Aletsch-Bietschhorn est la partie la plus glacée des Alpes européennes; elle contient le plus grand glacier d'Europe et est définie par une série de caractéristiques glaciaires classiques. Elle constitue une archive exceptionnelle des processus géologiques qui ont formé les Hautes Alpes. Une flore et une faune diverses sont représentées dans toute une palette d'habitats et la colonisation par les plantes, dans le sillage des glaciers en retraite, fournit un exemple exceptionnel de succession végétale.

Le site couvre une zone de 824 km<sup>2</sup>, dont près de 90 pour cent sont couverts de rochers et de glace. Sur le versant sud du Bietschhorn, ce paysage d'hautes alpes se transforme graduellement, en passant par diverses zones de végétation d'altitude, en une steppe rocheuse subméditerranéenne.

La protection du site est garantie par des dispositions légales ainsi que par un plan de gestion complet et détaillé, développé avec les communes locales dans un large processus de participation. Les 26 communes concernées ont signé une charte dans laquelle elles s'engagent à préserver la diversité esthétique et le caractère unique du site. De possibles menaces qui proviennent surtout des activités touristiques et de

loisir ont pu être anticipées et contrôlées par une série de mesures et de projets spécifiques.

Le site n'a pas de zone tampon, mais dans le cadre du plan de gestion, une « sphère d'influence » plus large a été définie en collaboration avec les communes locales, dans le but de réduire de possibles impacts négatifs extérieurs sur le bien inscrit.

# Mammoth Cave National Park

Jonathan Putnam

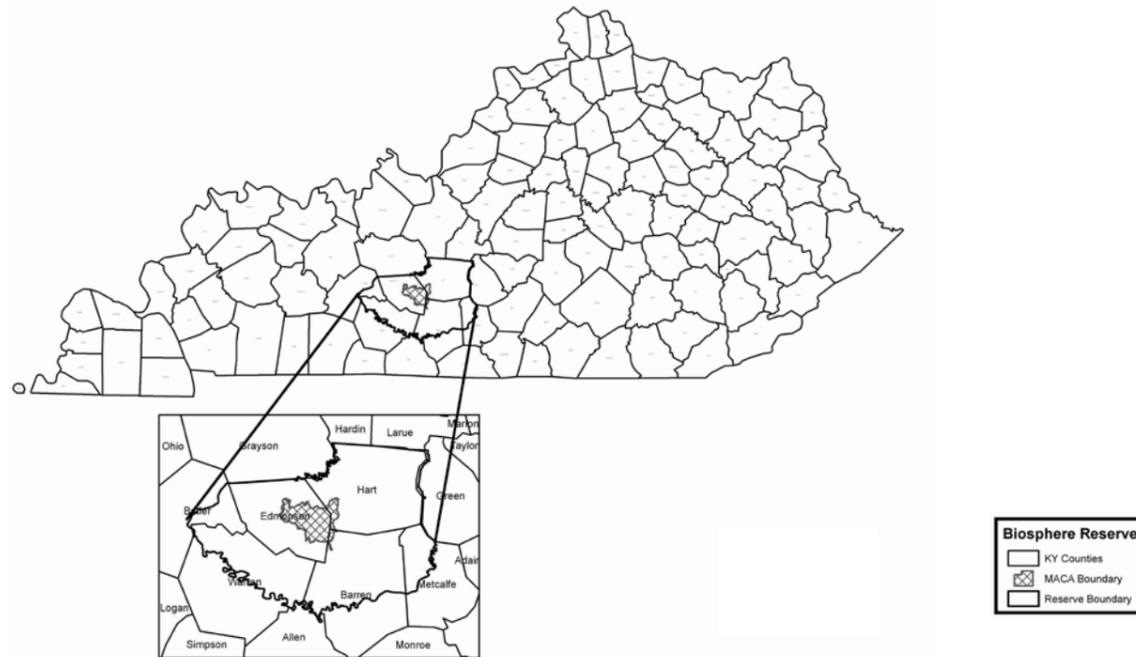


United States  
of America

Mammoth Cave National Park, located in the state of Kentucky, has the world's largest network of natural caves and underground passageways, which are characteristic examples of limestone formations. The park and its underground network of more than 560 surveyed km of passageways are home to a varied flora and fauna, including a number of endangered species.

Date of inscription: 1981

Criteria: (vii) (viii) (x)  
Property: 21191 ha



While none of the existing World Heritage sites in the United States includes an official buffer zone, a few sites have established “areas of cooperation” around them under the auspices of the UNESCO Man and the Biosphere programme.

One of the most active and successful uses of this “area of cooperation” (or “zone of cooperative use”) concept is that of Mammoth Cave National Park, designated a World Heritage site in 1981 and as a Biosphere Reserve in 1990.

The Mammoth Cave Biosphere Reserve includes the National Park as the “core area” and its primary groundwater recharge basins in the “zone of cooperative use”, an area totalling approximately 45,000 hectares (twice the area of the park itself). In 1996, the Biosphere Reserve was enlarged to include a further 300,000 hectare “zone of interaction” to more fully protect the entire watershed.

The zone of cooperative use is a karst landscape including numerous sinking streams and sinkholes, complex underground watercourses, and a multi-layered cave system. The karst landscape efficiently transports precipitation runoff (along with any contaminants) to subsurface streams, posing a potential threat to the park’s water quality. Of particular concern to Mammoth Cave National Park is the impact of agricultural, commercial and residential land use (including septic tank and sewage drain field effluent) on ecosystems – especially with respect to the effects of groundwater pollution on cave biota.

At the suggestion of the NPS, the Barren River Development District (BRADD) selected the

UNESCO Biosphere Reserve model as the tool to address regional water quality issues. Chartered by the Commonwealth (State) of Kentucky, BRADD is responsible for regional planning within the 10-county area surrounding Mammoth Cave National Park. BRADD’s board of directors consists of locally elected officials – because of this, the biosphere reserve programme has been viewed as a truly locally managed effort rather than a federal initiative. As essentially all the land in the “zone of cooperative use” is privately owned, this organizational structure has been essential to the success of the biosphere reserve programme at Mammoth Cave.

BRADD established a biosphere reserve council to coordinate resource management activities. The council consists of specialists from Western Kentucky University, US Forest Service, USDA Farm Services Agency, USDA Natural Resources Conservation Service, Tennessee Valley Authority, agencies of the Kentucky natural resources cabinet, the Caveland Sanitation Authority and the NPS.

Under the Biosphere Reserve programme, several initiatives have been developed to protect the watershed of Mammoth Cave. These include:

- Mammoth Cave Area Water Quality Project – a partnership among farmers, universities and agencies to protect the watershed by promoting best management practices.
- Regional GIS/GPS Data Centre – has developed groundwater hazard maps indicating where highways and roads cross the groundwater basins; this is used by emergency responders to identify where hazardous waste spills would pose the greatest threat to the aquifer.

### Résumé

Aucun des sites du patrimoine mondial aux Etats-Unis n'a une de zone tampon officielle, mais certains sites ont établi des «zones de coopération» les entourant sous les auspices du Programme de l'UNESCO concernant «L'homme et la biosphère».

Un des exemples les plus actifs et les mieux réussis de ce concept de «zone de coopération» est celui du Parc national de Mammoth Cave, inscrit sur la Liste du patrimoine mondial en 1981 et classé comme réserve de biosphère en 1990. Ce site contient le plus grand réseau de cavernes et de galeries souterraines naturelles du monde. Le bien lui-même est constitué par le Parc national, tandis que tout le bassin-versant du Mammoth Cave est inclus dans la «zone d'utilisation coopérative» qui s'étend sur approximativement 45 000 hectares (deux fois l'aire du parc lui-même) et dont les limites sont définies de manière précise d'un point de vue écologique et hydrologique. En 1996, la réserve de biosphère est agrandie et une «zone d'interaction» de plus de 300 000 hectares y est incluse, afin de mieux protéger le bassin-versant.

Les menaces et risques auxquels est exposé le bien sont principalement l'évacuation des précipitations – avec d'éventuels contaminants – par les rivières souterraines du paysage karstique de la «zone d'utilisation coopérative» qui peut nuire à la qualité des eaux du parc ainsi qu'à sa faune unique, et les impacts négatifs – notamment le risque de pollution de la nappe phréatique – causés par l'agriculture, le commerce et le peuplement.

Sur les conseils du National Park Service, le Barren River Development District (BRADD) a choisi le modèle de réserve de biosphère de l'UNESCO pour traiter la problématique régionale de la qualité des eaux. BRADD est un organisme dirigé par des élus locaux, responsable de la planification régionale dans la zone des 10 comtés qui entourent le Parc national. Divers projets de protection et d'autres initiatives ont été réalisés par BRADD pour aider à la protection du bassin de réalimentation de Mammoth Cave. Ils vont du développement de mécanismes de réponse des services d'urgence dans le cas de débordement de contaminants à des programmes de sensibilisation à l'environnement. La structure organisationnelle du BRADD, avec la participation locale, est une composante essentielle pour le succès de la mise en œuvre de ces programmes.

En général, l'utilisation du concept du zonage des biosphères pourrait être un modèle pour la définition des zones tampons des sites du patrimoine mondial.

- Personal Responsibility In a Desirable Environment (PRIDE) – works to foster environmental stewardship through education and awareness; eliminate all illegal dumps and greatly reduce the incidence of litter in Central Kentucky; restore and maintain state water quality standards in all streams, rivers, and lakes in the Central Kentucky region to achieve waters suitable for fishing and swimming; provide for the long-term protection of groundwater sources in Central Kentucky.
- The Conservation Reserve Enhancement Programme (CREP) – is a voluntary land retirement programme that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water. The programme is a partnership among producers; tribal, state, and federal governments; and, in some cases, private groups. CREP is an offshoot of the country’s largest private-lands environmental improvement programme – the Conservation Reserve Programme (CRP).
- Mammoth Cave Resources Conservation and Development Area – receives grants to accomplish projects relating to solid waste management, non-point source pollution, conservation education, and rural infrastructure.

### Observations

- This “zone of cooperation” has a very well defined ecological and hydrological boundary – the watershed of Mammoth Cave
- Since the programme was developed and led by local leaders, rather than federal ones, residents of the local community felt much more comfortable participating in biosphere reserve initiatives.
- The Biosphere Reserve concept could perhaps be used in conjunction with other World Heritage sites in the development of effective buffer zones.
- At least in the U.S., using a name other than “buffer zone” may help achieve many of the same objectives.



# Jesuit Missions of the Guaranis

San Ignacio Mini, Santa Ana, Nuestra Señora de Loreto  
and Santa Maria Mayor (Argentina),  
Ruins of Sao Miguel das Missoes (Brazil)



The Ruins of São Miguel das Missões in Brazil, and those of San Ignacio Miní, Santa Ana, Nuestra Señora de Loreto and Santa María la Mayor in Argentina, lie at the heart of a tropical forest. They are the impressive remains of five Jesuit missions, built in the land of the Guaranis during the 17th and 18th centuries. Each is characterized by a specific layout and a different state of conservation. They represent five of the thirty Guarani-Jesuit Missions, located throughout Argentina, Brazil and Paraguay.

Two other Jesuit Missions, La Santísima Trinidad de Parana and Jesus de Tavarangue, both from Paraguay, were inscribed separately on the World Heritage List in 1993 (648 - C iv).

Elias Mujica

Argentina / Brazil

Date of inscription: 1983  
Extension: 1984

Criterion: (iv)

The heritage group of Guarani-Jesuit Missions, one of the most singular creations of the Catholic missionary activity in South America during the 17th and 18th century, is comprised of a number of immovable and movable, tangible and intangible cultural properties of great historical and cultural significance. Intended to establish a new model for integrating indigenous population – socially, culturally as well as economically – the function of the Jesuit Missions was partly to catechize the Guarani Indian population and also to protect them from Spanish and Portuguese slave traders.

Over a short period of time, spanning between 1610 and 1767, thousands of Guarani Indians built dozens of towns and set up a supplementary common economy which provided them with high standards of living as well as artistic and cultural development. This phenomenon, which transcends the material vestiges they left behind, represents one of the clearest efforts to develop a solitary society within a geocentric vision, such as that implemented by the clergy.

Thirty sites make up the group of Guarani-Jesuit towns, and are located in the provinces of Misiones (Argentina), Itapua (Paraguay) and Rio Grande do Sul (Brazil). Eight of them are presently in Paraguayan territory (the most preserved missions, with continual occupancy), seven in Brazil and fifteen in Argentina. Several of them were resettled during the nineteenth-century colonization of the missionary territories, and coexist today with urban centres, while others have been abandoned in the jungle, awaiting the rescue and recovery of their testimonial presence.

**Limits and buffer zones**

The delimitation of the Jesuit-Guarani World Heritage sites, the legal protection and their buffer zones has been of concern from the very beginning. The Committee's decision to inscribe the missions of Argentina drew the authorities' attention to the need to protect the surrounding areas of the missions. In 1993, the Bureau requested precise information on the buffer zones around the sites proposed by Paraguay. The issue of the limits and buffer zones would arise again at the Bureau sessions held in 1999.

As a result of the Systematic Follow-Up of the State of Conservation of Latin American and Caribbean Cultural Heritage (1991-1994), a report on the state of conservation was presented to the Committee in 1993, during its seventeenth session. The report revealed a number of issues and concerns, still valid to-day, which included the need to protect and manage the urban and natural environment of the Missions; the need for consensus and efficient cooperation among the national and provincial authorities; the need for municipal participation; and the lack of a full-scale general plan for the Missions.

One of the main conclusions of the "Capacity building programme for the conservation, management and sustainable development of the Jesuit Missions of the Guaranís" (2003-2005) organized by UNESCO and the World Monuments Fund, with the support of the Netherlands Funds-in-Trust, World Heritage Fund and World Monuments Fund, was the need to extend the sites' protection areas (including buffer zones) and reinforcing their control, to guarantee the integrity and authenticity of the wholesite and of all of its components.



**Buffer zones: Conserving the authenticity and integrity of the Missions**

Buffer zones are crucial for conserving the authenticity and integrity of the Guarani-Jesuit Missions, due to the characteristics of the properties and their setting. Firstly, they are officially named "ruins", in the sense of "abandonment" or "partially destroyed", but also as if they were archaeological sites. And to some extent that is what they are: many of their elements are still buried and must be recovered through archaeological excavations. Secondly, an intrinsic value of the Missions are the surroundings that enabled the sustainability of the Jesuits' economical project. Moreover, the conditions of the surroundings are decisive to understand the lifestyles of the Guarani Indians, past and present.

Under this scenario, firstly, the site borders are highly restricted, simply because the exact limits of the Missions' core are unknown, and in several cases significant parts of the Mission compounds are located outside the legal limits of the sites. Buffer zones are therefore highly relevant for the preservation of the integrity of the sites.

Buffer zones are essential for many reasons. Firstly, the site borders are highly restricted, simply because the

exact limits of the Missions' core are unknown, and in several cases, significant parts of the Mission compounds are located outside the legal limits of the sites.

Thirdly, we must remember that one of the particular values of the Missions is the environmental characteristics and conditions of the surroundings as they are intrinsically related to the economic basis of the Jesuit project that generated the construction and development of these unique sites, and the only way to understand adequately their historical significance. Located outside the nominated properties, only well-defined buffer zones will make this possible.

Last but not the least, present day Guaranis still live in the region, most of them in marginal conditions. The Missions are part of their history, and the surroundings were originally the lands of their ancestors. Buffer zones can be linked to sustainable development and community participation through mechanisms to improve the quality of life for the Guarani communities that are in line with their own development processes.

**Jesuit Mission of the Guaranis and buffer zones: State of the art**

In the case of the Jesuit Mission of the Guaranis in Argentina, according to the 2004 Periodic Report, "The Jesuit Missions Programme" – in charge of the management of the properties –, in conjunction with the municipalities, is developing a comprehensive zoning of all the Jesuit monuments, giving priority to the sites included in the World Heritage List. It proposes to locate a "Protection Area" or "cushioning" around the monumental area, which purpose is to create a transition zone between the rural / industrial / etc. areas and the monument itself.

For the specific case of San Ignacio Mini, located in the middle of the town bearing the same name, where the urban influence is particularly strong, a "protection area" or "buffer zone" was proposed to be set.

According to the 2004 Periodic Report, the conclusion of this work will be implemented through the enactment of local ordinances, provincial laws for the expropriation of land, and effective control of the entire process. Nevertheless, an up-date of the real situation is missing.

In the case of the "Ruins of Sao Miguel Das Missoes" (Brazil), both the town and the monument are protected by regulatory measures given by the Instituto do Patrimônio Histórico e Artístico Nacional (IPHAN). Regulations include both development and constructions in the city and its surroundings, as well as the specific management of the buffer zone, which was legally

established in 1980. Since 1995, the buffer zone was extended from 20 to 38 hectares. Currently (March 2008) the IPHAN is reviewing the norms.



**Résumé**

Le patrimoine des missions jésuites des Guaranis est l'une des créations les plus singulières de l'activité missionnaire catholique en Amérique du Sud pendant les XVIIe et XVIIIe siècles. Servant de nouveau modèle d'intégration des populations indigènes – socialement, culturellement et économiquement parlant – la fonction des missions jésuites était non seulement de convertir les Indiens Guaranis, mais aussi de les protéger des marchands d'esclaves espagnols et portugais. Trente sites répartis entre les provinces de Misiones (Argentine), Itapua (Paraguay) et Rio Grande do Sul (Brésil) forment le groupe des villages jésuites des Guaranis.

La délimitation des sites et des zones tampons des missions classées au patrimoine mondial a été source de préoccupations dès le commencement. Etant donné que, dans la plupart des cas, l'étendue exacte des territoires des missions est inconnue, les zones protégées sont souvent très restreintes et une partie significative des sites se situe en-dehors des limites légales. De plus, l'impact du développement urbain et rural est massif. La création de zones tampons permettrait de conserver l'authenticité et l'intégrité des sites tout en participant à l'amélioration de la qualité de vie des communautés Guaranis vivant encore aujourd'hui dans ces régions.

## Final report of the Expert Meeting

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Note this text was presented and read in full in the plenary session, and notes comments made in the discussion.

## Summary

1. This expert meeting is based on the World Heritage Committee's Decision **30 COM 9** (enclosed in annex 1). The participants of the International Expert Meeting on World Heritage and Buffer Zones which took place from 11-14 March 2008 in Davos, Switzerland, appreciated the support by the Swiss authorities, in particular the Swiss Federal Office of Culture, the Swiss Federal Office for the Environment and the Canton of Graubünden and the sponsoring Israeli authorities for the financial support for organizing and hosting this important event in collaboration with the UNESCO World Heritage Centre.
2. The meeting was attended by 35 participants and experts from 16 countries, as well as by Representatives of IUCN, ICOMOS, ICCROM, the Ramsar Convention, and the UNESCO World Heritage Centre. The list of participants and agenda of the meeting are attached as Annexes 2 and 3.
3. The meeting provided a venue for rich debate, strengthened by the reflection of a significant range of case studies from World Heritage Properties, the inputs of the World Heritage Centre and the Advisory Bodies, and the participation of a number of World Heritage Committee Members and the Ramsar Convention Secretariat. The World Heritage Centre, IUCN, ICCROM and ICOMOS presented position statements that will be included in the future publication of the proceedings of this expert meeting.
4. The meeting reflected on a wide range of issues, and the key conclusions are set out under the following headings:

## Conclusions of the meeting

### Definitions of terms in relation to World Heritage buffer zones

1. There is scope for clarification of the terms related to buffer zones and differing practices. In formal legal terms there is the need to distinguish the inscribed **World Heritage Property**, which is the area that contains the outstanding universal value (OUV) as defined in the *Operational Guidelines*, and the **World Heritage buffer zone**. A consistent set of terminology used *within* the World Heritage system is required for use by State Parties, the World Heritage Centre, the Advisory Bodies, and others involved in World Heritage activities.

2. The meeting noted that buffer zones are a useful tool to address external threats and opportunities but are not the only ones. Furthermore, they will not address every threat or respond to every opportunity or issue as some of these will come from beyond the buffer zone. A third concept, **Area of Influence**, may be useful for certain sites that might not have limits and boundaries, but where anything in the area that impacts the World Heritage property would need to be considered. Such a proposal could follow best practice as found in the Man and Biosphere (MAB) Programme where such an area is defined for all Biosphere Reserves. It is not proposed that such a concept should be included in the *Operational Guidelines*.

3. The concept of a **World Heritage buffer zone** should be regarded as a summary term used by the World Heritage Committee for a diverse range of buffer zone typologies that are used to provide additional protection to an inscribed World Heritage property, or to support its sustainable use (as defined in Paragraph 119 of the *Operational Guidelines*). The term “buffer zone” should not be mandatory for areas

that are designed to protect the outstanding universal value of a World Heritage property. States Parties should use terminology for buffer zones that meet their own management requirements and reflect cultural/linguistic situations and the need to clearly communicate buffer zone concepts to local stakeholders in a nominated or inscribed World Heritage property. The UNESCO World Heritage Centre should keep a note of the nomenclature used for buffer zones. A first draft of a lexicon of buffer zone terms is set out in Annex 4 of this report to begin this process.

4. It was noted that sometimes more than one buffer zone could be created for a single property to enhance integrity and management. For instance the boundaries of an area to preserve important views and settings of an urban area might be different to that required to manage traffic impacts or visitor pressure.

### Creation of and amendments to World Heritage buffer zones

5. The most effective way to set up a World Heritage buffer zone is to agree on its establishment at the time of inscription, although it was noted that buffer zones could also be established and updated subsequent to inscription. Proposals for suitable buffer zone arrangements need to be developed as part of the process of creating the nomination file for or extension to a World Heritage property, as well as within modifications to boundaries. In principle they require the same level of attention to planning and management, including consultation with stakeholders, as the World Heritage property.

6. One practical issue is that proposals to extend and amend buffer zones would add a significant amount of

work for the World Heritage Committee which will be beyond its ability to accommodate. Solutions should be identified to strengthen protection of World Heritage properties through States Parties to create, enlarge or reinforce World Heritage buffer zones.

#### World Heritage buffer zones, Authenticity and Integrity

7. In principle, the designation of World Heritage buffer zone enhances the integrity of the World Heritage property. The World Heritage criteria provide entry points to the definition of integrity, and at present there is more specific guidance available on natural integrity than cultural integrity, although a range of more useful examples to illustrate integrity of natural properties would enhance the advice available. There are different notions of integrity including structural, functional and visual aspects which should be taken into account in the identification of buffer zones for cultural properties (this could conceivably be provided as an explanatory note of paragraph 89 of the *Operational Guidelines* concerning criteria (i) to (vi)). In summary, further guidance on the application of integrity in relation to the different World Heritage criteria is desirable, and needs further exploration by the Advisory Bodies.

8. The identification of appropriate boundaries for a World Heritage buffer zone is critical in relation to the management issues related the property, including but not limited to the protection of the integrity or authenticity of World Heritage properties. A key issue is to establish the outstanding universal value of the proposed World Heritage property and then determine the area necessary to contain those values. The area of the World Heritage buffer zone(s) should then be determined to provide the necessary protection from outside threats. It was noted that paragraph 172 refers to “area protected under the *Convention*” as a further term which may be considered to be applicable to matters which affect outstanding universal value, whether included in buffer zones or beyond. It was noted that although the emphasis of the *Operational Guidelines* is on protection, connections to achieve positive benefits (e.g. community or economic) could also be a consideration in relation to the identification of buffer zone boundaries.

9. Any action or activity in a World Heritage buffer zone should take into account the outstanding universal value, authenticity and integrity of the World Heritage property. The requirements of authenticity and integrity have an influence on the size and shape of a World Heritage buffer zone. It is important to define the key aspects of authenticity and integrity of the World Heritage property as a precursor to identifying the appropriate buffer zone or other protective measures required outside the boundaries of the property.

10. The meeting noted that a series of meetings took place and are planned on the notion of setting, historic urban landscapes, “spirit/sense of place” (genius loci) and integrity. The World Heritage Committee has launched a formal process for a recommendation on the Historic Urban Landscape. It was noted that, where appropriate, States Parties should take into account the notion of setting in the next cycle of Periodic Reporting when considering the significance of sites, and the need to modify boundaries.

#### Requirements for World Heritage buffer zones

11. The meeting noted that it is important to ensure that greater attention is paid to the appropriate function and effectiveness of World Heritage buffer zones. The meeting noted some of the key features that buffer zones can perform, which include:

- protection of the outstanding universal value (OUV) of the World Heritage property;
- enhancement of the outstanding universal value of the World Heritage property;
- completion of the measures to protect or manage the outstanding universal value associated with a World Heritage property, for instance by addressing dispersed values or addressing specific threats that arise from wider land use surrounding the property;
- defining and protecting the setting of a World Heritage property, including the setting of Cultural Landscapes (as defined in paragraph 47 of the *Operational Guidelines*);
- complementing the measures for protection of the World Heritage property;
- promoting activities within the buffer zone that enhance the World Heritage property while bringing benefits to the local community.

12. It is critical to understand the intended functions of a World Heritage buffer zone in order to be able to assess its effectiveness - and to report when appropriate to the World Heritage Committee. The effectiveness of buffer zones should continue to be examined by the Advisory Bodies as part of evaluation of new nominations, extensions to existing World Heritage properties, and by the World Heritage Committee and Advisory Bodies and States Parties in relation to the different monitoring and reporting processes of the *Convention*. A unified approach should be taken to the concepts and standards for buffer zones for both cultural and natural properties at the level of advice provided within the *Operational Guidelines*. Further guidance on the standards and effective means of defining buffer zones in relation to different types of World Heritage properties should be developed by the Advisory Bodies.

13. It was noted that there were common requirements for landscape scale sites (whether cultural of

natural) in relation to buffer zones. Individual sites, such as natural or cultural monuments required different approaches. Urban areas are a further category of sites with particular buffer requirements, specially, in relation to the impacts of new buildings on the visual integrity of urban landscapes.

14. The meeting noted the importance of a range of points in relation to the management of World Heritage buffer zones and recognized the following points:

- A buffer zone should be clearly linked to the appropriate level of legal and management frameworks in order to provide protection;
- Relationships need to be strengthened between the management within the World Heritage property, and the need for a holistic (integrated) approach that encompasses management of a wider area including the designated buffer zone(s). Where possible, management systems should include both the World Heritage property and its World Heritage buffer zone(s). However, it was noted that in many cases this was not possible;
- There should be a process for stakeholders at all levels to endorse the designation of any World Heritage buffer zone;
- Management of World Heritage properties and their buffer zones needs to encourage all levels of decision makers (and especially local and regional authorities) to be brought into the management process and the assessment of the management framework. Attention should be paid to the levels of involvement when evaluating properties (Paragraph 148), and when monitoring management effectiveness (Paragraph 173);
- It was noted that the meeting had heard many good case study examples that demonstrated good practice in relation to buffer zone establishment and management.

#### Buffer zones as a Means of Connecting to Communities and Stakeholders

15. The meeting noted the central importance of connecting World Heritage property management more directly to sustainable development use for local communities and other stakeholders. The following points were noted as significant in delivering this objective within a World Heritage buffer zone:

- As with all management of conservation areas, the degree of interaction with the community during planning and implementation is a key dimension of management effectiveness. It requires a significant investment of time, and needs to be built into both the planning of projects and the identification of budgets for nomination and management;
- World Heritage buffer zones provide an important potential means to share the benefits of World Heritage listing or respond to community needs

in areas surrounding World Heritage properties. In principle more should be done to enhance the role of World Heritage buffer zones in realizing community benefits in ways that reinforce, support and draw on the values of the World Heritage property;

- It was noted that World Heritage buffer zones can be linked to sustainable development by acting as cooperation zones which connect the site to the people who live alongside it. The support and empowerment of communities to take part in the management of World Heritage properties and their buffer zones was an important dimension in many properties;
- Effective communication in relation to World Heritage nominations, and site management with communities is always required. This should include communication at all stages of the consideration of a nomination and in relation to the ongoing management of World Heritage sites. Communities living in or affected by proposals for both a World Heritage property and its buffer zone should be target audiences for such communication;
- It was noted that approaches to community engagement reflected a wide range of local cultural and social factors and the approaches above always needed to reflect these circumstances and would not always be easy.

#### Legal Considerations regarding buffer zones

16. A World Heritage buffer zone is not only a line on a map but should enhance the effective protection and management of the World Heritage property. States Parties should develop legal frameworks and regulatory instruments that will ensure buffer zones can function in relation to the protection of the outstanding universal value of the World Heritage property. Any enforcement of legal provisions should be taken into account within the management plan/system.

17. It was noted that a difficult legal issue in relation to buffer zones can arise when the areas that should be included in buffer zones are located in a different country to the one nominating the property to the World Heritage List. Such transboundary issues needed to be considered on a case-by-case basis. Concerning potential buffer zones outside the territory of one State, the meeting encouraged States Parties – wherever appropriate at a very early stage - to cooperate to fully ensure protection of the outstanding universal value, including integrity and to develop harmonized management practice to enhance the value and function of the property.

18. Different zoning provisions may be considered to effectively protect the outstanding universal value, including visual corridors and influence zones (e.g. watershed). Regulatory mechanisms including urban

## World Heritage and Buffer Zones

and land-use planning are important within and outside of the World Heritage property to protect outstanding universal value and make buffer zone(s) operational. If buffer zone(s) are too large, implementation of management provisions may be difficult.

**19.** The meeting encouraged national and local authorities to ensure that people living in and around World Heritage sites are aware of the legal status and enforcement but also of the beneficial provisions and sustainable use compatible with the value and integrity of the World Heritage property. Wherever traditional practices exist they should be considered. It was noted that the complexities of working with local populations and other stakeholders was an issue both within and outside World Heritage properties. The meeting noted support for the principle of empowerment of communities within the governance structures for World Heritage properties and their buffer zones, and that participatory planning processes can be considered as good practice. However, further reflection on this area of discussion was required as it was beyond the core tasks of the expert meeting.

**20.** It was noted that Climate Change impacts are a particular challenge where buffer zones may provide part of an effective response in helping to provide some World Heritage properties with additional space and/or connectivity to other conservation areas in order to allow their values to adapt to change or to assist mitigation. Climate Change impacts should therefore be considered as a factor when considering the requirements for, and design of a buffer zone. Extensions to buffer zones and new management measures should also be actively considered for existing properties. However, other measures (such as conservation corridors), and national and regional scale connectivity strategies should also be considered as part of the nomination process. It was noted that the World Heritage Committee had established policy in relation to climate change.

### Sources of Guidance for the creation and implementation of buffer zones

**21.** As part of the discussions at the meeting advice on good practice was developed and a range of case studies on the definition and management of World Heritage buffer zones was presented. This has been consolidated in Annex 5 of this document for easy reference and provides an immediate source of guidance. This material will be published and expanded in the World Heritage Papers series in due course.

**22.** Further examples of the use and configuration of World Heritage buffer zones should be prepared in a format that can be easily disseminated to States Parties and site managers. This guidance should include principles, design concepts and terminology.

**23.** Problems with buffer zones are symptomatic of a general lack of awareness of the *Operational Guidelines*. There is a need for workshops and orientation sessions on the *World Heritage Convention* at the regional and national levels.

## Recommendations of the meeting

1. The participants address the following recommendations to the World Heritage Committee, States Parties to the *World Heritage Convention*, the Advisory Bodies and the UNESCO World Heritage Centre as appropriate.

2. The meeting **recommends** that States Parties prepare nominations that include both the World Heritage property **and** any necessary World Heritage buffer zone(s) for consideration by the World Heritage Committee at the time of inscription. The meeting concluded the following key points of principle:

a) That the inscribed World Heritage property possesses the outstanding universal value of the property as *recognized by the World Heritage Committee*;

b) Any World Heritage buffer zone does not include outstanding universal value but provides additional protection for the outstanding universal value and integrity of the property;

c) Only values within the boundaries of the nominated World Heritage property should be assessed in relation to whether a World Heritage nomination meets the relevant criteria within the *Operational Guidelines*. The features and values of the buffer zones are therefore not included in this assessment, but may be relevant to the assessment of whether a nomination meets requirements for integrity, authenticity, protection and management in the *Operational Guidelines*;

d) World Heritage buffer zones are established, where required, in relation to paragraphs 103-106 of the *Operational Guidelines* and are not regarded as part of the inscribed World Heritage property. However, their effectiveness in protecting the outstanding universal value is assessed as part of the evaluation of a

nomination and their boundaries are formally registered at the time of inscription (or at the time of modifications noted by the World Heritage Committee) as an integral component of the State Party commitment to the protection and management of the property (*Operational Guidelines* Paragraph 155);

e) Major modifications to a World Heritage buffer zone are subsequent to acceptance and recoding by the World Heritage Committee (*Operational Guidelines* Paragraph 107);

f) Many World Heritage properties have internal management zones within their boundaries. For clarity, such internal management zones are not, and to prevent confusion should not be referred to as, World Heritage zones;

g) There is a range of potential threats to the outstanding universal value and integrity of World Heritage properties which require mechanisms other than buffer zones to be addressed.

3. The meeting notes that buffer zones were able to be more effective in countries that already recognize this concept in legislation. Recalling Article 5 of the *World Heritage Convention*, the meeting **recommends** that World Heritage properties and buffer zones be taken into account, as appropriate, in the legal systems of States Parties.

4. The meeting **recommends** the following key points be noted in relation to the tasks required in establishing a buffer zone, although the order of them could vary:

- a) Analysis of the characteristics and values (outstanding universal value) of the property and integrity to define the external issues;
- b) Delineation of buffer zone(s), as appropriate;
- c) Analysis of the potential positive opportunities of the zone;
- d) Consideration of national law and local legislation/regulations relevant to the implementation of the buffer zone;
- e) Ensure effective implementation and mechanisms in relation to the functions of the buffer zones.

5. The meeting **recommends** that the following standards be considered by the World Heritage Committee in relation to the establishment and amendment of World Heritage buffer zones by States Parties:

- a) The relationship between the function, extent, protection, and management of any World Heritage buffer zone and the World Heritage property needs to be made clear by the State Party when it requests inscription (or extension/modification) of a property;
- b) The State Party should demonstrate that there is an effective integrated approach to protection of the outstanding universal value and integrity/authenticity of the World Heritage property, within its boundaries and through measures in any buffer zone;
- c) Management responsibility will vary depending on the specific situation of the site. The State Party should demonstrate adequate institutional commitment and coordination arrangements between the management authority for the World Heritage property and those responsible for implementing measures to protect and/or realize benefits from sustainable use within any World Heritage buffer zone.

6. In line with paragraph 123 of the *Operational Guidelines* and the new fifth C of Community within the Budapest Declaration on World Heritage (2002/2007), the meeting recommends that the function of World Heritage buffer zones in supporting communities required a much greater emphasis and a change in mindset within the World Heritage system. The role of buffer zones in supporting cultural and natural heritage through encouraging positive measures which enhance the value and provide benefits for local communities requires greater emphasis by States Parties in nominations, the Advisory Bodies in their evaluations, and the World Heritage Committee in its decisions. In particular it was noted that World Heritage buffer zones had an important role in delivering the requirements set out in *Operational Guidelines* Paragraph 119 concerning sustainable use. The governance of buffer

zones provides an important opportunity to give appropriate recognition of local people.

7. The meeting notes that World Heritage buffer zones need to respond to new and emerging threats or opportunities. Reporting on these issues is already able to be covered under the existing procedures of the World Heritage Committee including state of conservation reporting, boundary modifications and Periodic Reporting and its follow-up.

8. The meeting also notes that major modifications to World Heritage buffer zones subsequent to inscription (as defined in Paragraph 107 of the *Operational Guidelines*) should continue to be approved by the World Heritage Committee. The meeting **recommends** in relation to modifications to World Heritage buffer zones:

- a) That the process that exists for considering changes to boundaries to World Heritage buffer zones as minor modifications (paragraph 163 – 164 of the *Operational Guidelines*) **should be used** for extensions and enhancements of the effectiveness of buffer zones. Revisions which have a potential significant impact on the outstanding universal value and integrity of the World Heritage property fall outside the scope of the minor modification process;
- b) Noting that recommendations for creation of or changes to buffer zones often stem from Reactive Monitoring processes, States Parties should be requested to **fully implement** decisions of the World Heritage Committee in relation to the creation or modification of buffer zones. The World Heritage Centre, with input from the Advisory Bodies, should strengthen its monitoring of the implementing of such decisions.

9. The meeting **recommends** that there should be a greater consideration of the potential for synergy between World Heritage buffer zones and other conservation instruments that provide alternative and complementary protection of heritage, in line with paragraph 102 of the *Operational Guidelines*. This should include relationships with UNESCO and other Conventions, programmes and initiatives.

10. The meeting **recommends** that the World Heritage Committee prioritize support for creation and monitoring of effective World Heritage buffer zone measures for properties included in the List of World Heritage in Danger where this would provide better protection to those properties; any buffer zones should be appropriately recognized in the state of conservation processes for properties on the List of World Heritage in Danger.

11. The meeting **recommends** that capacity building on the management of World Heritage properties and World Heritage buffer zones be strengthened. There is a lack of awareness of provisions and requirements for buffer zones as well as many aspects of nomination, protection, management and monitoring within the *World Heritage Convention*. Guidance on World Heritage buffer zones should be integrated into resource manuals prepared by the Advisory Bodies (e.g. for nominations and management), the training curricula for the World Heritage and related courses and workshops, supplemented by material prepared by the States Parties and others. Capacity building on Buffer Zones should be targeted at a range of audiences including local communities.

12. The meeting recommends that IUCN and ICOMOS reflect on the incorporation of evaluation of buffer zone (and other wider provisions) as a consistent factor in their evaluation reports to the World Heritage Committee on nominations to the World Heritage List. The meeting considered that this could be part of a more harmonized approach to the preparation of evaluation reports, which could be based on the subheadings on Protection and Management set out in section II.F of the *Operational Guidelines*.

13. The meeting **welcomes** the proposal to prepare a report on buffer zones (and other external measures to protect the outstanding universal value and integrity of the World Heritage property) in the World Heritage Papers series based on the proposals of the meeting, and **recommends** effective dissemination of the findings.

## Points in relation to the text of the *Operational Guidelines*

1. The following points were made in relation to either possible amendments to the *Operational Guidelines* in relation to buffer zones, or the provision of further guidance to complement the *Operational Guidelines* (in relation to the updated version to be prepared in 2009):

a) The introductory paragraphs to Subsection **II.F** on Protection and Management (Paragraphs **96 and 97**) should make clear the importance of **integration** between the different protection and management requirements for World Heritage properties outlined in the subsequent subsections (Legislative, regulatory and contractual measures for protection, Boundaries for effective protection, Buffer Zones, Management Systems, Sustainable Use);

b) an explanation of the different **attributes of authenticity** listed in paragraph **82** should be developed, and could become an addition to the existing Annex 4 of the *Operational Guidelines* on authenticity in a future revision;

c) A range of other examples should be provided in **supplementary guidance** to explain the expectations for the integrity of natural properties as set out in paragraphs 92-95. Complementary examples should be provided for the six cultural criteria. Resource manuals on World Heritage nominations provide an adequate avenue for this advice;

d) The words “of the outstanding universal value and authenticity and integrity” should be added after “proper conservation” in paragraph **103** of the *Operational Guidelines*;

e) That a cross-reference or footnote should be added to paragraph **107** of the *Operational Guidelines*

to refer to paragraphs 163-165 (which set out the procedures for minor and major boundary modifications). Suggested wording: “Modifications to boundaries of buffer zones are considered through the processes set out in paragraphs 163-165”;

f) In paragraph **148** related to the nomination process, a point (g) should be added to request the Advisory Bodies to consider the effectiveness of buffer zone arrangements including their legal status as part of the evaluation of nominations. There should also be further consideration of amendments to the guidance provided in Annex 5 and Annex 6 of the *Operational Guidelines* to ensure that buffer zones are considered in nomination and evaluation processes;

g) In paragraph **173** on monitoring, a point (d) should be added to note that reactive monitoring reports should consider specifically the effectiveness of buffer zones and/or other protective measures outside the boundaries of the World Heritage Property;

h) In paragraph **201** related to Periodic Reporting, a point (d) should be added to request States Parties carry out assessments of buffer zones and other protective measures as appropriate.

2. The World Heritage Centre and Advisory Bodies were requested to reflect on other issues raised by the meeting that could also be given effect through a screening process of the *Operational Guidelines* to ensure **consistent** references to buffer zones, and recommend amendments as appropriate to the World Heritage Committee. Incorporating references to buffer zones, care is needed not to narrow down protective options, and consideration should also be given to other measures that provide wider protection to World Heritage properties.

## Annex

**Decision 30 COM 9**

1. **Having examined** Document *WHC-06/30.COM/9*;
2. **Takes note** with satisfaction of the outcomes reflected in the papers presented by IUCN and ICOMOS contained in Document *WHC-06/30.COM/9*;
3. **Conscious** that outstanding universal value is a concept that shall embrace all cultures, regions and peoples, and does not ignore differing cultural interpretations of outstanding universal value because they originate from minorities, indigenous groups and/or local peoples;
4. **Recognises** that the identification of outstanding universal value on the basis of the established criteria needs to be analysed also in their cultural and natural context, and that in some instances, the tangible and intangible interpretations cannot be separated;
5. **Emphasises** the importance of international assistance for countries which have no properties or are under-represented on the World Heritage List, as a primary means to help lead to a greater representation of outstanding universal value;
6. **Requests** the World Heritage Centre in close cooperation with the Advisory Bodies to undertake a careful review of past Committee decisions, and create two compendiums of relevant material and decisions, compiled into the form of guidance manuals, from which precedents on how to interpret and apply discussions of outstanding universal value, in terms of nominations to both the World Heritage List, and the List of World Heritage in Danger, can be clearly shown;

7. The first compendium shall cover outstanding universal value and the inscription of proposed properties by criteria onto the World Heritage List and shall be presented to the Committee at its 31st session in 2007; the second compendium shall cover outstanding universal value with regard to debates about seeking to inscribe, or remove, properties from the World Heritage List in Danger and shall be presented to the Committee at its 32 session in 2008. Both compendiums shall cover:
  - a) Successful case studies under the relevant criteria;
  - b) As far as possible, elaborate under each criterion, what was the 'threshold' for successful inscription or removal;
  - c) Show how the relevant decisions interpreted the inscription criteria;
  - d) Explain how these inscriptions or removals related to the recommendations from the Advisory Bodies;
  - e) Specifically include the utilization of, or note the obvious omission of the values of minorities, indigenous and/or local peoples.

The compendiums shall be available in both paper and electronic forms, and shall be fully indexed, easily accessible, fully searchable and publicly available.

8. **Requests** the Director of the World Heritage Centre, in cooperation with the Advisory Bodies, to prepare for discussion at the 31st session:
  - a) A prioritized list of guidance manuals, in addition to the compendiums noted above, complete with a fully costed budget;
  - b) A prioritized list of future global studies and thematic frameworks, complete with a fully costed budget;
  - c) A training programme on outstanding universal value for new Committee Members, complete with a fully costed budget.

**9. Requests** the World Heritage Centre, in consultation with the Advisory Bodies to propose a new format for Tentative Listing, while taking into account each State Party's situation, to include a level of information to allow:

- a) A preliminary evaluation by the Advisory Bodies to guide State Parties in the preparation of their nominations;
- b) An evaluation of the Global Strategy by the Advisory Bodies to inform State Parties of possible comparative advantages that might be considered in their nominations, based on the categories and criteria for Outstanding Universal Value;
- c) A preliminary study on the Statements of Outstanding Universal Value in the tentative lists in order to assess the entries on those lists against the objectives of the World Heritage Global Strategy.

**10. Encourages** State Parties to develop feasibility studies for their Tentative Lists;

**11. Requests** the World Heritage Centre to identify State Parties without Tentative Lists and recommend to the Committee the necessary actions to be taken to assist these countries;

**12. Stressing** the need to maintain consistency in the decisions of the Committee regarding State of Conservation, inscription of properties on the World Heritage List, and the List of World Heritage in Danger and **recognizing** that the concept of outstanding universal value is at the core of these decisions;

**13. Decides** to accept the offer of the Netherlands to host a meeting of experts to elaborate on Chapter IV of the *Operational Guidelines*, including, but not limited to developing criteria for determining adequate protection and management, the format for the State of Conservation reports, standards for establishing and measuring benchmarks for conservation, criteria for the removal of properties from the List of World Heritage in Danger, and criteria for delisting World Heritage properties;

**14. Decides** to accept the offer of Israel to support a meeting in Paris on Buffer zones;

**15. Further decides** to review progress made on this Decision at its 31st session in 2007.

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**Agenda****Tuesday, 11 March 2008****08.30 – 09.00**

Registration at the Schatzalp hotel ([www.schatzalp.ch](http://www.schatzalp.ch))

**09.00 – 10.00**

Session 1: Opening Session

Chair: Mr Bernhard Furrer (Switzerland)

Welcome

Mr. Johann Mürner (Switzerland)

Mr. Michael Turner (Israel)

Welcome and briefing on the meeting:

World Heritage Committee Decision 30 COM 9 and  
background paper of the World Heritage Centre

Mr. Francesco Bandarin,

Director of the World Heritage Centre

**10.00 – 10.30 Coffee break****10.30 – 13.00**

Session 2: Position papers by the Advisory Bodies

Presentations

Natural and mixed properties

Cultural properties (with cultural landscape)

Brief statements by RAMSAR Convention

Brief statements by Man and Biosphere Programme (MAB)

Discussion in Plenary

Announcement of working groups A and B; sessions 3 and 5

IUCN

ICOMOS/ICCROM

**13.00 – 14.30 Lunch Break****14.30 – 17.30**

Session 3: Working groups (both natural and cultural heritage experts)

(A) Working group

Chair: Mr Bruno Walder (Switzerland)

Rapporteur: Mr Tim Badman (IUCN)

(B) Working group

Chair: Mr Elias Mujica (Peru)

Rapporteur: Mr Joe King (ICCROM)

Brief (3 min) presentation of case studies during the working group (based on written submission prior to the meeting). The order of the presentations is indicative:

- General contribution on cultural World Heritage sites (*Mr Eliahu Stern*)
- Natural World Heritage sites in Peru (*Mr Gustavo Suárez de Freitas*)
- L'Anse aux Meadows National Historic Site (Canada) (*Mr Gordon Fulton*)
- Archeological site of Volubilis (Morocco) (*Mr Abdellah Salih*)
- Belize Barrier Reef Reserve System (Belize) (*Mr Noel Jacobs*)
- Belovezhskaya Pushcha / Bialowieza Forest (Poland/Belarus) (*Ms Renata Krzysciak-Kosinska*)
- Butrint (Albania) (*Mr Ylli Cerova*)
- Cape Flora (South Africa) (*Mr Guy Palmer*)
- Ichkeul National Park (Tunisia) (*Ms Marie-José Elloumi*)
- Jesuit Missions of the Guarani (Argentina / Brazil) (*Mr Elias Mujica*)
- Jungfrau-Aletsch-Bietschorn (Switzerland) (*Mr Bruno Stephan Walder*)
- Mammoth Cave National Park (United States of America) (*Mr Jonathan Putnam*)
- Memphis and its Necropolis – the Pyramid Field from Giza to Dahshur (Egypt) (*Mr Naguib Amin*)
- Mount Nimba Strict Nature Reserve (Guinea/Côte d'Ivoire) (*Mr Mohamed Alhassane Bangoura*)
- Mount Huangshan (China) (*Mr Rui Yang*)
- Old City of Bern (Switzerland) (*Mr Bernhard Furrer*)
- Ruins of Kilwa Kisiwani and Ruins of Dongo Mnara (United Republic of Tanzania) (*Ms Eliwasa E. Maro*)

— Royal Chitwan National Park (Nepal) (*Mr Prabhu Budhathoki*)

— Palais royaux d'Abomey (Bénin) (*Mr Aimé P. Goncalves*)

— Wet Tropics of Queensland (Australia) (*Mr Greg Terrill*)

— White City of Tel-Aviv – the Modern Movement (Israel) (*Mr Shammai Assif*)

**17.30 – 17.45 Coffee Break****17.45 – 18.45**

Session 4: Plenary meeting of the working groups (A+B)

Discussion of preliminary results

Chair: Mr Greg Terrill (Australia)

**19.00 – 21.30 Dinner****Wednesday, 12 March 2008****09.00 – 10.30**

Session 5: Working groups (A + B)

(A) Working group

Chair: Mr Bruno Walder

Rapporteur: Mr Tim Badman

(B) Working group

Chair: Mr Elias Mujica

Rapporteur: Mr Joseph King

Preparation of recommendations

**10.30 – 11.00 Coffee Break****11.00 – 13.00**

Session 6: Plenary meeting of the working groups (A+B)

Discussion of recommendations

Chair: Mr Greg Terrill

Announcement of working groups (1) and (2); session 7

Announcement of working groups (3) and (4); session 8

**13.00 – 14.30 Lunch Break****14.30 – 16.15**

Session 7: Working groups on integrity (both natural and cultural heritage experts)

(1) Working group: Integrity issues

Chair: Mr Eliahu Stern (Israel)

Rapporteur: Mr Jonathan Putnam (USA)

(2) Working group: Integrity issues

Chair: Mr Giora Solar (ICOMOS)

Rapporteur: Mr Guy Palmer (South Africa)

**16.15 – 16.30 Coffee Break****16.30 – 19.00**

Session 8: Plenary meeting of the working groups on integrity (1+2)

Discussion of recommendations

Chair: Mr Francesco Bandarin (WHC)

**19.00 – 21.00 Dinner**

**Thursday 13 March 2008****09.00 – 10.30**

Session 9: Working groups on legislation (both cultural and natural experts together)

(3) Working group: Legal issues

Chair: Mr Naguib Amin (Egypt)

Rapporteur: Mr Jonathan Putnam (United States of America)

(4) Working group: Legal issues

Chair: Mr Noel Jacobs (Belize)

Rapporteur: Mr Prabhu Budhathoki (Nepal)

Preparation of recommendations

**10.30 – 11.00 Coffee Break****11.00 – 13.00**

Session 10: Plenary meeting of the working groups (3-4)

Discussion of recommendations

Outcomes of the working groups and discussions for the synthesis report

Chair: Mr Michael Turner (Israel)

Rapporteur: Mr Greg Terrill (Australia)

**14.30 – 17.30**

Presentation of Recommendations

Agreement on results and preparation of synthesis report

Chair: Mr Michael Turner (Israel)

Rapporteur: Mr Greg Terrill (Australia)

**17.30 – 18.30**

Concluding remarks

WHC

Israel

Switzerland

**20.00 – 22.00 Official Dinner with the Swiss authorities****Friday, 14 March 2008****09.00 – 23.15**

Field visit

Rhaetian Railway Albula line,

Bergün,

Benedictine Convent of St John at Müstair.

**Lexicon of buffer zone terms**

**World Heritage property.** A property inscribed on the World Heritage List which has outstanding universal value and meets the conditions of authenticity and integrity. The World Heritage property includes within its borders all of the attributes that are recognized as being of outstanding universal value.

**Protective measures** (refer II.F of the *Operational Guidelines*) are measures that protect the outstanding universal value of the property by spatial measures such as boundaries and zones as well as other non-spatial measures such as legislative, regulatory, contractual, planning, institutional and/or traditional measures. Both spatial and non-spatial measures should be integrated into the management system and process to ensure the sustainability of the World Heritage property.

**Buffer zones** are clearly delineated area(s) outside a World Heritage property and adjacent to its boundaries which contribute to the protection, management, integrity, authenticity and sustainability of the outstanding universal value of the property. Although any World Heritage buffer zones are not regarded as part of the inscribed World Heritage property, their boundaries and relevant management approaches should be evaluated, approved and formally recorded at the time they are proposed by a State Party. Where buffer zones are defined, they should be seen as an integral component of the State Party's commitment to the protection and management of the World Heritage property. The functions of the buffer zone should reflect the different types and levels of protection needed to protect the outstanding universal value of the World Heritage property.

**An area protected under the Convention:** Paragraph 172 of the *Operational Guidelines* clearly includes the property, and can be interpreted as also referring to a buffer zone. Buffer zones are areas protected under the *Convention* that provide additional protection for the outstanding universal value and integrity of a property. They are monitored by the Committee in relation to their contribution to the effective protection and management of the outstanding universal value of the property.

The meeting recognised that actions may take place well beyond the boundaries of a property and any buffer zone that might nonetheless have a significant influence upon the outstanding universal value and integrity of a property. The concept of an **area of influence** may also be useful to describe a wider zone, in which activities may take place that could have an impact upon the outstanding universal value and integrity of a property.

The term **setting** is mainly used in the cultural heritage field and may have broader relevance that requires

further discussion. The meeting considered that where setting is a part of, or integral to, the outstanding universal value of a property, then it should be part of the inscribed property. Where setting may assist in the appreciation of the outstanding universal value, but is not itself of outstanding universal value, then it is desirable that it be incorporated in any buffer zone or otherwise protected.

**Principles for World Heritage Buffer Zones and case study examples**

**1. for what** purposes do we want to create buffer zones

- One of the primary goals of the inscription of sites on the World Heritage List is to protect their outstanding universal value.
- Threats to the outstanding universal value can come both from inside the site and outside the site (near and far) and tools must be developed to address these issues and threats.
- Among the tools at the disposition of States Parties to protect the outstanding universal value and integrity of a World Heritage site from threats from outside the site are zones which offer certain kinds of protections. These are commonly referred to as buffer zones (terminology still needs to be dealt with separately).
- There are also other tools and mechanisms to help States Parties to protect the outstanding universal value and the integrity of World Heritage property. It is important that these various tools and mechanisms be developed within the larger framework of a management system for the World Heritage site. This management system will cover protection issues both inside and outside the site, including linkages between the two.
- A decision as to whether or not to include a buffer zone within the management system will depend on the type and characteristics of the external threats.
- Buffer zones may not just be restrictive in nature, but can also be used to enhance the values of the site and the wellbeing of the community.
- Buffer zones may also take the form of multiple zones of protection around a site to deal with different kinds of external threats.

**2. how** do we create buffer zones (process)

- The process for creating a buffer zone should not be seen as separate from the overall development of the management system for the site.
- Stakeholders, including the public, needs to be involved throughout the process.
- Information needs to be collected related to the threats and issues to the outstanding universal value and integrity of the site including information on developments, plans, etc. in the immediate and long term future. Opportunities should also be identified as part of this process.

## World Heritage and Buffer Zones

- While the basic concept of buffer zones is similar across sites, its application will vary in terms of size, components, characteristics of the given World Heritage site.
- Restrictions, regulations, acceptable activities need to be set up as part of the buffer zone (not just a line on the map).
- It is important to recognize, however, that each site will have a different situation and different needs for buffer zones and other protection mechanisms.
- There is a need for stakeholder agreement as part of the process along and appropriate mechanisms for enforcement depending on the specific situation.

### 3. when within the process do we create buffer zones

- A buffer zone should be done at the time of the nomination and the development of the management plan. It becomes part and parcel of the give and take of determining all the management and protection measures. This should be based on a statement of outstanding universal value.
- In cases where sites are already on the World Heritage List and do not have buffer zones, the question becomes whether they have a management plan or other management system. If not, the need to develop a management plan/management system, and the buffer zone should be developed within that process.
- In cases where there is a management system, there may be a need to institute an ad hoc process (similar to the management plan process) to develop a buffer zone if it is determined that it is needed to deal with external threats.
- It may also be necessary, in emergency situations, to create a buffer zone more quickly to deal with specific identified threats.

### 4. what other mechanisms do we need

- The meeting felt that this was, in general, outside the scope of this meeting.
- But, it was emphasized that buffer zones are one of many tools that can be used. Some were outlined in previous sessions of the expert meeting such as links to other conventions, legislative tools, etc.

### 5. how do we manage buffer zones and who manages them

- As already stated, the World Heritage property and its buffer zone should be managed through the implementation of the management system. Following the experts' opinion, it should not be setting up separate management mechanisms outside the management system to deal only with the buffer zones.
- It was stressed, however, there should be an identification of who has the responsibility for implementing the management system and the protections within the buffer zone. The lack of

identification of responsibility will often lead to non-implementation. This responsibility will need to be appropriate for the specificities of the World Heritage property.

- It was recalled, however, that the management must be done through the lens of the protection of the outstanding universal value and integrity of the World Heritage property.

# Presentation of the Results of the Meeting

at the 32nd Session of the World Heritage Committee  
02 - 10 July 2008, Quebec City, Canada  
WHC-08/32.COM/7.1

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## Report of the International Meeting and Draft Decision

### I. Introduction

1. The participants of the International Expert Meeting on World Heritage and Buffer Zones which took place from 11 to 14 March 2008 in Davos, Switzerland, appreciated the support of the Swiss authorities, in particular the Swiss Federal Office of Culture, the Swiss Federal Office for the Environment and the Canton of Graubünden and the sponsoring Israeli authorities for the financial support for organizing and hosting this important event in collaboration with the UNESCO World Heritage Centre.

2. The meeting was attended by 35 participants and experts from 16 countries, as well as by Representatives of IUCN, ICOMOS, ICCROM, the Ramsar Convention, and the UNESCO World Heritage Centre.

3. The meeting provided a venue for rich debate, strengthened by the reflection of a significant range of case studies from World Heritage properties, the inputs of the World Heritage Centre and the Advisory Bodies, the Ramsar Convention Secretariat and written contributions by the MAB programme. The World Heritage Centre, IUCN, ICCROM and ICOMOS presented position statements that will be included in the proceedings of the Expert Meeting. The meeting agreed on a series of conclusions and recommendations provided in this document which will be included in the proceedings, and are summarised below.

#### A. Summary of key points arising from the meeting

1. The meeting identified a need for greater clarity on the relationship between World Heritage properties and their buffer zones. The expert meeting agreed that a World Heritage property is the area that contains

outstanding universal value (OUV), and buffer zones provide additional protection for the outstanding universal value and integrity of a property, but that buffer zones do not themselves include outstanding universal value;

2. Further, although a buffer zone should not be regarded as part of the inscribed World Heritage property, **their boundaries are formally registered at the time of inscription** (or at the time of modifications noted by the World Heritage Committee) as an integral component of the State Party commitment to the protection and management of the property;

3. The meeting also found that while every World Heritage property needed protection and management arrangements, not every property would have a buffer zone, as buffer zones are only one means to achieve protection and management. As outlined in the *Operational Guidelines*, there are also legal, regulatory and other methods available. Buffer zones should be integrated with any other such methods;

4. Buffer zone boundaries, and activities within buffer zones, may be considered as part of evaluation, state of conservation and reporting processes;

5. The meeting found that the basic characteristics of buffer zones were common to natural, cultural and mixed properties. How buffer zones might be implemented for any particular property would vary. Capacity building and guidance should be enhanced to assist States Parties to establish and implement buffer zones. A priority in this regard should be given to properties on the List of World Heritage in Danger;

6. The meeting recognised that buffer zones provide an important mechanism to share the benefits

of World Heritage designation with local communities and stakeholders and enhance sustainable use, and that this should attract greater emphasis;

7. The meeting recommended a number of follow-up actions be taken, including:

a) Further definition of concepts and terms, including:

i) An *area protected under the Convention*. Paragraph 172 of the *Operational Guidelines* clearly includes the property, but the paragraph is unclear about whether an 'area protected under the Convention' includes any buffer zone;

ii) The meeting recognised that actions may take place well beyond the boundaries of a property and any buffer zone that might nonetheless have a significant influence upon the outstanding universal value and integrity of a World Heritage property. The meeting considered that **in addition** to the property and any buffer zone, the concept of an *area of influence* may also be useful to describe a wider zone, in which activities may take place that could have an impact upon the outstanding universal value and integrity of a property. This is a concept useful for management purposes, rather than an area recorded under the Convention;

iii) The term *setting* is used in the cultural field and may have broader relevance that requires further discussion. The meeting considered that where setting is a part of, or integral to, the outstanding universal value of a property, then it should be part of the inscribed property. Where setting may assist in the appreciation of outstanding universal value, but is not itself of outstanding universal value, then it is desirable that it be incorporated in any buffer zone or otherwise protected;

b) Capacity building. States Parties should be provided with adequate assistance to establish and implement buffer zones, with priority given to properties on the List of World Heritage in Danger. Guidance currently exists, and there may be potential for this to be further developed or supplemented.

c) Revisions to the text of the *Operational Guidelines* are included in Section E of this report.

## B. Recommendations

The participants addressed the following recommendations to the World Heritage Committee, States Parties to the *World Heritage Convention*, the Advisory Bodies and the UNESCO World Heritage Centre, as appropriate:

1. The meeting recommended that States Parties prepare nominations that include both the World Heritage property and any necessary World Heritage

buffer zone(s) for consideration by the World Heritage Committee at the time of inscription;

2. The meeting agreed the following key points of principle:

a) That the inscribed World Heritage property possesses the outstanding universal value;

b) Any World Heritage buffer zone does not include outstanding universal value but provides additional protection for the outstanding universal value and integrity of the property;

c) Only values within the boundaries of the nominated World Heritage property should be assessed in relation to whether a World Heritage nomination meets the relevant criteria within the *Operational Guidelines*. The features and values of the buffer zones are therefore not included in this assessment, but may be relevant to the assessment of whether a nomination meets requirements for integrity, authenticity, protection and management in the *Operational Guidelines*;

d) World Heritage Buffer Zones are established, where required, in relation to paragraphs 103-106 of the *Operational Guidelines* and are not regarded as part of the inscribed World Heritage property. However their effectiveness in protecting the outstanding universal value is assessed as part of the evaluation of a nomination and their boundaries are formally registered at the time of inscription (or at the time of modifications noted by the World Heritage Committee) as an integral component of the State Party commitment to the protection and management of the property (*Operational Guidelines* Paragraph 155);

e) Major modifications to a World Heritage buffer zone subsequent to acceptance and recording should be approved by the World Heritage Committee (*Operational Guidelines* Paragraph 107);

f) Many World Heritage properties have internal management zones within their boundaries. For clarity, such internal management zones are not, and to prevent confusion should not be referred to as, World Heritage buffer zones;

g) There is a range of potential threats to the outstanding universal value and integrity of World Heritage properties which require mechanisms other than buffer zones to be addressed.

3. The meeting noted that buffer zones were able to be more effective in countries that already recognize this concept in legislation. Recalling Article 5 of the *World Heritage Convention*, the meeting recommended that World Heritage properties and buffer zones be taken into account, as appropriate, in the legal systems of States Parties;

4. The meeting **recommended** the following steps be noted in relation to the tasks required in establishing a buffer zone, although the order of them could vary:

- Analysis of the characteristics and outstanding universal value of the property and integrity define the external issues;
- Delineation of buffer zone(s), as appropriate;
- Analysis of the potential positive opportunities of the zone;
- Consideration of national law and local legislation/regulations relevant to the implementation of the buffer zone;
- Ensuring effective implementation and mechanisms in relation to the functions of the buffer zones.

5. The meeting recommended that the following standards be considered by the World Heritage Committee in relation to the establishment and amendment of World Heritage buffer zones by States Parties:

a) The relationship between the function, extent, protection, and management of any World Heritage buffer zone and the World Heritage property needs to be made clear by the State Party when it requests inscription (or extension/modification) of a property;

b) The State Party should demonstrate that there is an effective integrated approach to protection of the outstanding universal value and integrity/authenticity of the World Heritage property, within its boundaries and through measures in any buffer zone;

c) Management responsibility will vary depending on the specific situation of the site. The State Party should demonstrate adequate institutional commitment and coordination arrangements between the management authority for the World Heritage property and those responsible for implementing measures to protect and/or realize benefits from sustainable use within any World Heritage buffer zone.

6. In line with paragraph 123 of the *Operational Guidelines* and the new "fifth C" of Community within the Budapest Declaration on World Heritage (2002/2007), the meeting recommended that the function of World Heritage buffer zones in supporting communities required a much greater emphasis and a change in mindset within the World Heritage system. The role of buffer zones in supporting cultural and natural heritage through encouraging positive measures which enhance the value and provide benefits for local communities requires greater emphasis by States Parties in nominations, the Advisory Bodies in their evaluations, and the World Heritage Committee in its decisions. In particular it was noted that World Heritage buffer zones had an important role in delivering the requirements set out in *Operational Guidelines* Paragraph 119 concerning sustainable use. The governance of buffer zones provides an important opportunity to give appropriate recognition of local people;

7. The meeting noted that World Heritage buffer zones need to respond to new and emerging threats or opportunities. Reporting on these issues is already able to be covered under the existing procedures of the World Heritage Committee including state of conservation reporting, boundary modifications and Periodic Reporting and its follow-up;

8. The meeting also noted that major modifications to World Heritage buffer zones subsequent to inscription (as defined in Paragraph 107 of the *Operational Guidelines*) should continue to be approved by the World Heritage Committee;

9. The meeting recommended in relation to modifications to World Heritage buffer zones:

a) That the process that exists for considering changes to boundaries to World Heritage buffer zones as minor modifications (paragraph 163 – 164 of the *Operational Guidelines*) should be used for extensions and enhancements of the effectiveness of buffer zones. Revisions which have a potential significant impact on the outstanding universal value and integrity of the World Heritage property fall outside the scope of the minor modification process;

b) Noting that recommendations for creation of or changes to buffer zones often stem from Reactive Monitoring processes, States Parties should be requested to fully implement decisions of the World Heritage Committee in relation to the creation or modification of buffer zones. The World Heritage Centre, with input from the Advisory Bodies, should strengthen its monitoring of the implementing of such decisions;

10. The meeting recommended that there should be a greater consideration of the potential for synergy between World Heritage buffer zones and other conservation instruments that provide alternative and complementary protection for heritage, consistent with paragraph 102 of the *Operational Guidelines*. This could include the relationships with UNESCO and other Conventions, programmes and initiatives;

11. The meeting recommended that the World Heritage Committee prioritize support for creation and monitoring of effective World Heritage buffer zone measures for properties included in the List of World Heritage in Danger where this would provide better protection to those properties; any buffer zones should be appropriately recognised in the state of conservation processes for properties on the List of World Heritage in Danger;

12. The meeting recommended that capacity building on the management of World Heritage properties and World Heritage buffer zones be strengthened. There is a lack of awareness of provisions and requirements

for buffer zones as well as many aspects of nomination, protection, management and monitoring within the *World Heritage Convention*. Guidance on World Heritage buffer zones should be integrated into resource manuals prepared by the Advisory Bodies (e.g. for nominations and management), the training curricula for the World Heritage and related courses and workshops, supplemented by material prepared by the States Parties and others. Capacity building on buffer zones should be targeted at a range of audiences including local communities;

**13.** The meeting recommended that IUCN and ICOMOS reflect on the incorporation of evaluation of buffer zone (and other wider provisions) as a consistent factor in their evaluation reports to the World Heritage Committee on nominations to the World Heritage List. The meeting considered that this could be part of a more harmonized approach to the preparation of evaluation reports, which could be based on the subheadings on Protection and Management set out in section II.F of the *Operational Guidelines*;

**14.** The meeting welcomed the proposal to prepare a report on buffer zones (and other external measures to protect the outstanding universal value and integrity of the World Heritage properties) in the World Heritage Papers series based on the proposals of the meeting, and recommended effective dissemination of the findings.

### C. Lexicon

**World Heritage property.** A property inscribed on the World Heritage List which has outstanding universal value and meets the conditions of authenticity and integrity. The World Heritage property includes within its borders all of the attributes that are recognized as being of outstanding universal value.

**Protective measures** (refer II.F of the *Operational Guidelines*) are measures that protect the outstanding universal value of the property by spatial measures such as boundaries and zones as well as other non-spatial measures such as legislative, regulatory, contractual, planning, institutional and/or traditional measures. Both spatial and non-spatial measures should be integrated into the management system and process to ensure the sustainability of the World Heritage property.

**Buffer zones** are clearly delineated area(s) outside a World Heritage property and adjacent to its boundaries which contribute to the protection, management, integrity, authenticity and sustainability of the outstanding universal value of the property. Although any World Heritage buffer zones are not regarded as part of the inscribed World Heritage property, their boundaries and relevant management approaches should be evaluated, approved and formally recorded

at the time they are proposed by a State Party. Where buffer zones are defined, they should be seen as an integral component of the State Party's commitment to the protection and management of the World Heritage property. The functions of the buffer zone should reflect the different types and levels of protection needed to protect the outstanding universal value of the World Heritage property.

An **area protected under the Convention**. Paragraph 172 of the *Operational Guidelines* clearly includes the property, and can be interpreted as also referring to a buffer zone. Buffer zones are areas protected under the *Convention* that provide additional protection for the outstanding universal value and integrity of a property. They are monitored by the World Heritage Committee in relation to their contribution to the effective protection and management of the outstanding universal value of the property.

The meeting recognised that actions may take place well beyond the boundaries of a property and any buffer zone that might nonetheless have a significant influence upon the outstanding universal value and integrity of a property. The concept of an **area of influence** may also be useful to describe a wider zone, in which activities may take place that could have an impact upon the outstanding universal value and integrity of a property.

The term **setting** is mainly used in the cultural heritage field and may have broader relevance that requires further discussion. The meeting considered that where setting is a part of, or integral to, the outstanding universal value of a property, then it should be part of the inscribed property. Where setting may assist in the appreciation of the outstanding universal value, but is not itself of outstanding universal value, then it is desirable that it be incorporated in any buffer zone or otherwise protected.

### D. Possible revisions to the text of the *Operational Guidelines*

The meeting noted key points, and recommendations, highlight areas for possible change to the *Operational Guidelines*. The following additional points were made in relation to either possible amendments to the *Operational Guidelines* in relation to buffer zones, or the provision of further guidance to complement the *Operational Guidelines*. These revisions to the *Operational Guidelines* should be elaborated into text so that they can be made at the next available opportunity:

a) The *Operational Guidelines* should be amended to incorporate the above **summary** of key points (section B), and **recommendations** (section D);

b) The introductory paragraphs to Subsection II.F of the *Operational Guidelines* on Protection and Management (Paragraphs 96 and 97) should make clear the importance of **integration** between the different protection and management requirements for World Heritage properties outlined in the subsequent subsections (legislative, regulatory and contractual measures for protection, boundaries for effective protection, buffer zones, management systems, sustainable use);

c) An explanation of the different **attributes of authenticity** listed in paragraph 82 should be developed, and could become an addition to the existing Annex 4 of the *Operational Guidelines* on authenticity;

d) **Supplementary guidance** should be provided, in the *Operational Guidelines* and elsewhere, to explain the expectations for the integrity of natural properties as set out in paragraphs 92-95. Complementary examples should be provided for the six cultural criteria;

e) The words "of the outstanding universal value and authenticity and integrity" should be added after "proper conservation" in paragraph 103 of the *Operational Guidelines*;

f) A cross-reference or footnote should be added to paragraph 107 of the *Operational Guidelines* to refer to paragraphs 163-165 (which set out the procedures for minor and major boundary modifications). Suggested wording: "Modifications to boundaries of buffer zones are considered through the processes set out in paragraphs 163-165";

g) In paragraph 148, a point (g) should be added to request the Advisory Bodies to consider the effectiveness of buffer zone arrangements including their legal status as part of the evaluation of nominations. There should also be further consideration of amendments to the guidance provided in Annex 5 and Annex 6 of the *Operational Guidelines* to ensure that buffer zones are considered in nomination and evaluation processes;

h) In paragraph 173 on monitoring, a point (d) should be added to note that reactive monitoring reports should consider specifically the effectiveness of buffer zones and/or other protective measures outside the boundaries of the World Heritage property;

i) In paragraph 201 related to Periodic Reporting, a point (d) should be added to request States Parties carry out assessments of buffer zones and other protective measures as appropriate;

j) The World Heritage Centre and Advisory Bodies were requested to reflect on other issues raised by the meeting that could also be given effect through a screening process of the *Operational Guidelines* to ensure **consistent** references to buffer zones, and

recommend amendments as appropriate to the World Heritage Committee. In incorporating references to buffer zones, care is needed to not narrow down protective options, and consideration should also be given to other measures that provide wider protection to World Heritage properties.

### II Draft Decision 32 COM 7.1

The World Heritage Committee,

**1. Having examined** Document WHC-08/32.COM/7.1

**2. Recalling** Decision 30 COM 9 adopted at its 30th session (Vilnius, 2006) and thanking the States Parties of Israel and Switzerland for jointly hosting the International Expert Meeting on World Heritage and Buffer Zones (Davos, Switzerland, 11-14 March 2008) in cooperation with the World Heritage Centre;

**3. Notes** the detailed report provided by the expert meeting which reflects on a wide range of issues relevant to World Heritage and buffer zones and further notes the publication under preparation for the World Heritage paper series;

**4. Adopts** the conclusions and recommendations aimed at enhancing the protection of outstanding universal value and integrity of World Heritage properties;

**5. Requests** the World Heritage Centre and the Advisory Bodies to integrate the relevant paragraphs for revisions to the *Operational Guidelines* for consideration by the World Heritage Committee at its 33rd session in 2009;

**6. Further requests** States Parties, Advisory Bodies and the World Heritage Centre, to take into account all the other conclusions and recommendations contained in the detailed report of the Meeting.

## Decision 32 COM 7.1

adopted by the World Heritage Committee at its 32nd session, 02 - 10 July 2008, Quebec City, Canada

## Decision 32 COM 7.1

The World Heritage Committee,

1. **Having examined** Document *WHC-08/32.COM/7.1*,
2. **Recalling** Decision **30 COM 9**, adopted at its 30th session (Vilnius, 2006) and **thanking** the States Parties of Israel and Switzerland for jointly hosting the International Expert Meeting on World Heritage and Buffer Zones (Davos, Switzerland, 11-14 March 2008) in cooperation with the World Heritage Centre;
3. **Notes** the detailed report provided by the expert meeting which reflects on a wide range of issues relevant to World Heritage and buffer zones and **also notes** the publication under preparation for the World Heritage paper series;
4. **Requests** the World Heritage Centre and the Advisory Bodies to use the terms “property” and “buffer zone” in all documents, and to stop using the term “core zone”;
5. **Also requests** the World Heritage Centre and the Advisory Bodies to prepare draft revisions to the *Operational Guidelines*, taking account of the Committee’s debate on the results of the International Expert Meeting on World Heritage and Buffer Zones by **1 December 2008**, with particular emphasis on developing a lexicon of terms;
6. **Further requests** the World Heritage Centre to circulate these draft revisions to States Parties for comment, so that the proposed revisions can be submitted for consideration by the World Heritage Committee at its 33rd session in 2009.

## Décision 32 COM 7.1

Le Comité du patrimoine mondial,

1. **Ayant examiné** le document *WHC-08/32.COM/7.1*,
2. **Rappelant** la décision **30 COM 9** adoptée à sa 30<sup>e</sup> session (Vilnius, 2006) et **remerciant** les États parties d'Israël et de Suisse d'avoir accueilli conjointement la Réunion internationale d'experts sur le patrimoine mondial et les zones tampons (Davos, Suisse, 11-14 mars 2008), en coopération avec le Centre du patrimoine mondial;
3. **Note** le rapport détaillé fourni par la réunion d'experts qui aborde un grand nombre de questions liées au patrimoine mondial et aux zones tampons, et **note également** sa publication, en cours de préparation, dans les Séries du patrimoine mondial;
4. **Demande** au Centre du patrimoine mondial et aux Organisations consultatives d'utiliser les termes «bien» et «zone tampon» dans tous les documents et de ne plus utiliser le terme «zone centrale»;
5. **Demande également** au Centre du patrimoine mondial et aux Organisations consultatives de préparer des projets de révision des *Orientations* tenant compte du débat du Comité sur les résultats de la réunion internationale d'experts sur le patrimoine mondial et les zones tampons, avant le 1<sup>er</sup> décembre 2008, en s'attachant particulièrement à établir un lexique de termes;
6. **Demande en outre** au Centre du patrimoine mondial de communiquer ces projets de révision aux États parties pour commentaires, de façon à pouvoir soumettre les révisions proposées au Comité du patrimoine mondial pour étude à sa 33<sup>e</sup> session, en 2009.

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