

Saving Our Global Heritage

**Scientific Conservation and Master Planning
for Sustainable World Heritage Preservation
in Developing Economies**

**A Model for Integrated Community-Based
Conservation and Development**

GHF Technical White Paper

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Global Heritage Fund

Scientific Conservation and Master Planning for Sustainable World Heritage Preservation in Developing Economies

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I. Executive Summary

This paper sets out the methods and techniques that Global Heritage Fund has adopted in respect of the international charters and guidelines that have been adopted for the administration, technical conservation and on-going care of inscribed, tentative and potential World Heritage Sites. “Sustainable preservation” requires a long-term view of projects, with due consideration of proper conservation techniques, appropriate consideration of the economic concerns, and the need to build the social awareness for management and care.

The hallmark of Global Heritage Fund’s approach is a deliberate application of sustainable preservation, termed the “*Preservation by Design*™” method. This approach represents an integrated process of master-planning, scientific conservation, community involvement, and the building of effective partnerships to provide enduring protection, while being flexible enough to answer the wide range of challenges that are demanded by different sites in diverse cultures.

To provide the appropriate context, this paper begins with [1] a very brief overview of the history of international architectural and archaeological conservation. Next, [2] the role of GHF and the significance and influence of international ethics on its “Preservation by Design” approach provides the springboard for a discussion of the various treatments being pursued, with examples drawn from projects recently completed or underway. [3] Considerable attention is paid to the manner in which any site will likely require more than one treatment, and [4] the way in which conservation planning and master planning take place simultaneously and iteratively. Finally, [5] drawing on the site selection criteria, review process, and monitoring and evaluation procedures, the sustainability of GHF’s approach is demonstrated, leading to more successful management plans and better understanding and interpretation.

A second paper written by Stefaan Poortman and titled, “Sustainable World Heritage Preservation in Developing Countries: A Model for Integrated Community based on Conservation and Development,” explains the relationships between conservation and development, demonstrating the role of partnerships in GHF projects.

Appendices are included that provide the GHF principles and mission of site selection and monitoring, including notes on the roles of various committees within the GHF process. The listing of a number of the accepted conventions, charters and accords that inform and detail the World Heritage Convention, followed by series of excerpts, verbatim, from the World Heritage Convention and its operational guidelines, especially those dealing with the built and archaeological environments of monuments and sites.

A Brief History of International Cultural Heritage Preservation

Until the end of the 19th century, architectural and archaeological heritage had been a matter of regional and national concern only, as most of the laws regarding the protection of historic buildings in Europe date back to that period. Countless private associations existed in many countries, but their scope did not often extend beyond national borders. Cultural internationalism, as we know it today, was an outcome of the First World War, with the creation of the League of Nations, and most of all, of the Second World War, with the creation of the United Nations Organization and the establishment of the United Nations Educational, Scientific and Cultural Organization, UNESCO.

The Athens Conference (1931) on the restoration of historic buildings was organized by the International Museums Office resulting in The Athens Charter drafted by Le Corbusier at the Fourth Assembly of the International Congress on Modern Architecture (1933), published anonymously in Paris in 1941. Both represent a major step in the evolution of ideas because they reflect a growing consciousness among specialists all over the world and introduced for the first time the concept of transnational values or international heritage.

In 1957, in Paris, the First Congress of Architects and Specialists of Historic Buildings recommended that the countries which still lacked a central organization for the protection of historic buildings and sites provide for the establishment of such an authority and, in the name of UNESCO, that all member states of UNESCO join the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), based in Rome.

The Second Congress of Architects and Specialists of Historic Buildings, in Venice in 1964, adopted 13 resolutions, the first one being the International Restoration Charter, better known as the Venice Charter, and the second one, put forward by UNESCO, provided for the creation of the International Council on Monuments and Sites (ICOMOS).

Today, UNESCO has three principal advisory bodies with respect to matters relating to World Heritage Sites: ICCROM, ICOMOS and IUCN (International Union for the Conservation of Nature and Natural Resources). After the adoption of the Venice Charter, many doctrinal texts have emerged, especially through the activities of UNESCO and its advisory bodies.

Although considerable discussion about the nature of the international conservation, the key concept that arose in UNESCO circles is that the “world heritage site” had to be deemed of outstanding universal value, a concept that included both the natural and built heritage around the world. The 1972 “Convention concerning the Protection of the World’s Cultural and Natural Heritage” came into full force in 1976 when it was ratified by twenty countries. While the explanation of the means by which this process takes place, involving the “States Party” of a particular country to initiate the nominations, lies outside of this paper, a key aspect is that, once designated, those who have initiated the recognition accept responsibility for its effective management.

The Role and Activities of the Global Heritage Fund

GHF's Method: Preservation by Design™



The four major components of GHF's *Preservation by Design™*.

Through the Preservation by Design method, Global Heritage implements a holistic approach to conservation that integrates (1) long-term planning, including mapping and documentation (2) ethical conservation with scientific training (3) community involvement, and (4) Partnerships. Central to all this is a continual process of evaluation and monitoring.

GHF's mission is to provide projects with physical and intellectual resources, and to assist with the advancement of conservation thereby providing an economic basis for sustainable development. The combination of these factors catalyzes the participation of other organizations as partners in a scalable model. GHF's strategic early stage investment and mitigation of risk to cultural heritage assets prepares communities for the next stage of significant growth.

GHF's engagement in a project typically lasts for 4-6 years and during that time aims to build a solid local foundation for sustainable preservation.

Our experience has confirmed that cultural heritage and economic development are the two topics around which people of different social cultures, ethnicities, and religious beliefs can work together. GHF's practical and tangible conservation and development projects supply a lasting social and economic legacy for some of the world's most underprivileged societies.

With the designation of hundreds of World Heritage Sites and hundreds more waiting full recognition, the need for guidance became acute. Recognizing the implications, the Global Heritage Fund was established in 2002, envisaging an organization that would specifically target the important properties in the countries of South and Central America, East and South Asia, the Middle East and Africa. GHF intended to combine sites conservation with community development, through cultural engagement with the site, training and the raising of local and national capacity to appreciate and benefits that may be gained from the values of heritage places.

This combination of conservation and development marked a change from traditional models and offers a responsible approach to sustainability by taking steps to join monuments and sites together with the populations that live in and around them. These connections between stakeholders and places are an obvious contribution to long term success.

Master Planning

A master plan is prepared for each project, establishing the identity, history, authenticity and outstanding value of the place, defining the objectives of the project, focusing on both project range, projected costs and expected outputs. Value can be added to a project master-plan by establishing a program that states parties and local authorities can agree and endorse. If a Global Heritage Fund master-plan, or a master-plan prepared by a GHF partner, becomes official policy for the monument or site concerned, then the GHF project will be considerably strengthened.

Technical Approach

Defining a scientific and ethical approach to activities on the site, including good archiving and documentation, is essential to a complete understanding of the needs of any site. Upon the start of preservation work, urgent priorities for temporary support and intervention must be further deterioration during the planning stage. Other factors such as looting must also be noted and in so far as possible brought under control in close co-operation with local authorities.

Evaluation of damage must be completed, including techniques of analysis and an assessment of materials science, both in respect to the existing monument as well as all conservation intervention proposals and materials.

To promote sustainability, the technical approach includes adaptive management, advocacy, risk assessment, progress and quality monitoring and maintenance planning to extend beyond the life of the project.

Community Engagement

Project development, in concert with development of local and national communities, should provide cultural sensitivity, learning from the host community, addressing close community engagement with the project, good environmental objectives and education in the range of values and opportunities for local advancement and raising the local capacity to benefit from the sustainable impact of visitors to the heritage places.

Building Partnerships

Seeking and establishing partnerships at local, regional, national and international levels is essential, and with the assistance of these partners to achieve ethical, practical and statutory activity for the long term wellbeing of the site.

Both the “Preservation by design” method and the site selection criteria together with the monitoring guidelines of GHF closely follow current thinking on international principles and ethics. The author aims to draw the connection between these standards to assist in defining the directions that GHF must consider as it develops, and an analysis of the degree to which GHF must provide training and guidance on the fundamental directions of conservation philosophy and the ethical use of ancient and modern technologies to its staff and management around the world.

This paper concentrates on the ethical and technical aspects of GHF's "*Preservation by Design*".

All conservation staff including project directors and specifying consultants must familiarize themselves with the GHF site selection criteria and monitoring guidelines, together with a broad understanding of heritage charters in general, together with the World Heritage Convention, and especially of the important notes of the WHC operational guidelines. GHF site managers must also have a general understanding of guidelines and accords that have influence on specific activities within GHF sites and goals.

II. Significance and Influence of International Ethics on the Operation of Global Heritage Fund in the Developing World

There has, of course, been constant and sometimes fair criticism of the World Heritage Convention, perhaps especially on the topic of ethics. The convention and its declared charters have sometimes been condemned as being Eurocentric and culturally insensitive. GHF must be aware of the existing conventions but during the planning process may find that local tradition is at variance with the rules and ethics within which the established preservation community works.

A good illustration of the problem is the tradition in the trans-Himalaya region of India. In some places, when a building is severely damaged, it is destroyed whatever its antiquity, and a faithful replica is built, thereby conserving skills, forestry management and traditional craft forms. The text that most directly engages this problem is the “Nara Document on Authenticity” (1994: see Appendix 2).

On the whole, it is clear that cultural tradition should receive due respect within the conservation process. When deviations arise due to cultural responses, then GHF must dialogue with responsible authorities and with the World Heritage Centre at UNESCO. It therefore follows that it is impossible to entirely copy or template a project that while successful in one location may fail in another region. Fortunately, the World Heritage Convention and its operational guidelines are under a process of continual review and reassessment.

The differences in cultural requirements in conservation are widespread and relevant to the work of GHF, representing as they do an aspect of intangible heritage within cultural diversity. GHF must evaluate projects case by case, and where differences of interest occur in the principles and ethics of conservation, then the transparent advice of the Senior Advisory Board and other international views must be sought.

There are many issues that continue to inform and modify the activities of GHF and other international bodies. These include at this time:

- The challenges presented by the impact of global climate change on communities and heritage properties
- The need to respect human rights within the examination and action to preserve cultural assets
- The challenge of the protection of heritage places threatened by conflict and iconoclasm
- The need to consider the well-being and protection of the natural environmental and the impact that development of heritage places necessitates
- The need to respond to heritage sites within the cultural contexts of their cultural landscapes, historic urban landscapes, routes and corridors

It must be a desirable target to debate these matters in the widest possible context and through such debate arrive at an international consensus which is flexible enough to answer specific cultural questions and satisfy broad differences within cultural conditions.

III. The Principles, Methods and Ethics of Monuments and Sites Conservation

All activities undertaken in the preservation of monuments and sites must be described as conservation activity or be work under the jurisdiction of conservators, architects and archaeologists. Documentation and active intervention, archaeological cleaning, backfilling and other more passive techniques are all part of the conservation process.

Documentation, which occurs as a regular theme throughout conservation activities, is, in itself, a vital part of the conservation process. It begins with a topographical survey of the site and this survey has many functions.

It is, first and foremost, a three-dimensional record of the found state of the site, recording exactly the location of the site in the greater world plan. It remains the principal reference point in both date and detail for all the other activities that take place on the site. It should act as the reference point for the smallest activities, and even, if required, the location of objects and finds.

Macro Survey

The topographical survey will, along with detailed techniques such as aerial photography, scanning and geophysical survey, give a whole picture of the layout and functional form of the site as well as provide legibility to the many archaeological activities that may have been carried out on the site over long periods together with future archaeological and conservation activities.

Standing Structures

The next and equally vital aspect of documentation is the recording of structures that remain excavated or standing and visible upon and within the topography. Such standing remains can be clearly legible, stone, brick or masonry, “lumpy” melted remains of adobe or monolithic earth. Excavated structures have often deteriorated since excavation. Where structures are tangible and will receive active conservation attention, documentation must be in more detail. First, the structures must be accurately located within the topographical plan and then they must be recorded in more detail to facilitate the active conservation survey. This requires accurate drawings to be made of each elevation and plan view, and these in turn will become the basis for damage survey reports and eventually for the recording of the precise locations of each of the active conservation processes.

The sum total of the documentation process will define for all future generations what was found, what condition it was in and what was done to stabilize and protect it from further denaturing through the action of wind, heat and rain, animal and plant activity and, of course, by the activities of man.

An important aspect of conservation documentation is the need for the documentation to be indexed within a logical and useable framework. This will cross-reference to all aspects of site documentation and may have reference to original or historical archaeological reference systems. Furthermore, the nature and permanence of the saved records together with their safe storage and accessibility are important conservation questions.

Techniques of Survey and Archiving

Depending on the technology available, the detail of documentation of structures can be very high, such as the results from point cloud scanning or Photogrammetry, highly accurate but less closely detailed results, such as laser or analog theodolite surveys or scaled photographic surveys or they may be accurately general, such as a hand-measured survey or drawing.

Structure surveys can be introduced into the topographical map directly or as a layer within a geographic information system (GIS). GIS is a system within which multilayered and cross-referenced data can be established on many aspects of monuments and sites.

At the simplest levels, structures within sites can be documented by photography, shooting each elevation and other details. A useful photograph will include a reference number, date, a clear meter stick or scale and a north pointer arrow. Further additions to photographs may include a universal color reference card and in ideal situations a geographical reference and a datum line or reference to identify the level of any photographed feature or object within the map.

Storage and Care of Archives

These data, digital or analog, must be carefully stored in paper form and contained within a fireproof cabinet. Photographic negatives must be carefully stored and individually wrapped for storage at a cool temperature. Electronic data can be stored in many forms and must be backed up as safely as possible. CD storage should be regularly monitored and copied onto new CDs at regular intervals.

From time to time, due to natural or manmade disaster, sites or parts of sites can be damaged or destroyed. In these events, which are regrettably frequent, the archive of documentation becomes the only reference to the site to pass down through history. This makes the archive a very important series of documents, which require care and sometimes conservation.

Micro Documentation

Beyond the macro documentation, the archive of a monument and site will also find a place for micro information on finds of every type, size and age. Micro documentation will also contain all results of technical evaluation and scientific analysis.

Historical Archaeological Research and Conservation on Monuments and Sites

We have seen that documentation is a part of the conservation process, and this is accompanied by the active interventions required to protect the monument. First, we must examine the difference between conservation, restoration and reconstruction; these activities are distinct and separate from each other. Restoration and reconstruction imply activity, which may be appropriate at rare times, but on an archaeological site are almost always inappropriate.

At many sites there will be evidence of past interventions and archaeological investigations into the site and this may include conservation interventions. Evidence of interventions at historic monuments and sites must be carefully researched and documented. Maintenance and repair is, of course, common, with fortifications being commonly repaired during battle and war, post-earthquake rehabilitation, general repair, stylistic alteration of form and so on. Before any intervention work starts on a monument or site, the history of repair, archaeological research conservation and maintenance must be researched and archived. The history established should

be studied, noted and understood by the conservator as a part of the program of activities that the conservator must complete.

Conservation Planning and Intervention

Many sites across the world have received such intensive excavation attention that they become cluttered with archaeological structures and none of these has been conserved or backfilled. Indeed, the majority of these revealed structures will deteriorate so badly that they will melt back into the landscape. In their melted state they will have achieved a sort of equilibrium and stability, and leaving them alone for re-excavation by future generations is arguably an appropriate form of conservation.

There are some types of intrusion in this stability: deep pits excavated following the contents of old rubbish pits and deep investigative trenches. These must be filled and stabilized, as they may lead water deep into the substrate, and especially when close to historic walls such interventions can be insecure and destabilizing. Backfilling is a highly technical procedure and must be provided with separation layers for identification purposes and address questions of porosity, salts mobilization and stability together with a program of maintenance.

The first aim of conservation is to achieve minimal and often hidden interventions to achieve the stability of the site or individual monument and this is always protected through maintenance and guardianship. It could even be said that the highest aim of the conservator is to stabilize the object or site without any of the work being visible!

Some of the basic principles of conservation, especially of archaeological and standing structures, are common to all sites.

The process prior to intervention has been described and it can be simplified into a list of activities that precede and then govern intervention assessment.

1. Assembly of historic archive
2. Documentation of monument
3. Material research
4. Damage assessment
5. Intervention proposal
6. Intervention report

Materials Research

All materials, naturally occurring or manmade, will behave within different parameters depending on their qualities. Rather like the periodic table of elements, we can say that depending on these conditions, any material will sacrifice itself to other materials which may be described as harder, less porous or more tangible than the sacrificing material.

Mud brick is an excellent example of a “soft” material. It will sacrifice to any material of less porosity, greater strength, a lower hydrophilic nature or indeed any hydrophobic qualities. For instance, if we repoint or cap a mud wall with a cementitious material, the mud brick will sacrifice, or dissolve, in favor of the repair medium. This occurs for a very simple reason. The mud masonry will absorb more water than the cement medium and all the reactions of freezing, wetness, drying,

efflorescence and so on will occur within the mud brick element. The same can be said for a wall of porous fired brick, when pointed or capped with cement. Once again, all the water present in the environment will be led into the porous brick, which will sacrifice to the cement. Pointing and capping must always be achieved in a material softer, more porous and more hydrophilic than the original. Water reactions will then occur in the new interventionary material, and it is this material that will sacrifice for the protection of the historic elements.

Former generations understood this problem very well, but since the arrival of cement in the 19th century and synthetic resins in the mid 20th century, the principles of construction have entirely changed. Where ancient structures managed and lived within the natural ambient environment through routines of regular maintenance, modern cementitious construction seeks to fight the natural environment and keep the water out. The two approaches to the materiality of construction are rarely compatible.

Repairing “Like with Like”

A phrase, and a useful one, has emerged to describe the ideal direction for the conservation of structures: repairing “like with like.” It is useful because it exactly describes the need to balance the sacrificiality of historic materials and those used for conservation interventions. Like with like means using mud with mud, porous brick with porous brick, lime mortars with lime mortars and so on. This must be the safest course for the conservator. There is, however, a note of caution here. Even if the contents of a historic sample are reproduced as a conservation medium, the material may have variable performance characteristics. An ancient material may have suffered interstitial degradation and decline over years of weathering. Various mechanisms of decay, oxidization, hydrolysis, efflorescence and so on may have occurred and an exactly reproduced material, but newly made, can still be “harder” than the original. Analysis must be carried out and this should be followed by field testing.

Since the 1950s, we have looked for modern and developing materials to provide “magic” solutions to the problems of materiality. Concrete and cementitious products, soluble nylon and a whole range of organic polymers, silanes and the possibility of inorganic materials, but one by one these have shown weaknesses of performance and compatibility. Now we are returning to the more cautious position of analysis and understanding of traditional materials and their application. We no longer arrogantly believe that modern materials can necessarily improve upon the traditional. Here at last are evolving techniques which work, but not without a cost. Traditional methods are based on a high-maintenance tradition, and we have become both concerned about sustainability and we have become lazy and learned to look for low-maintenance routes. It could now be said that high maintenance means long life and that maintenance free means short life. This is not an unreasonable thesis. If we seek low-maintenance solutions to conservation problems, we run the risk of incompatibility, short life and poor results. What is required is a balance; our introduced materials must sacrifice, and at the same time, be as durable as possible, a fine science to perform.

In the world of restoration and reconstruction, modern materials have found favor, often because construction companies that have no skill or expertise in conservation principles, aims or even science, carry out the work. It is regrettable that untold damage is probably being done to the heritage monuments of those places where these simple material facts are ignored or unknown.

Repairing “like with like,” therefore, becomes a basic principle of the conservation of archaeological and architectural structures.

Reversibility

Closely related to this principle is the ethic of reversibility. Where possible, all conservation interventions should be reversible. Conservation professionals don’t always get it right, and when a conservation activity fails, it is important that the intervention can be reversed without damage to the historic material and indeed to return the condition of the object to its found state. Of course, when an object or element of a structure is so denatured that it cannot any longer support itself or perform its function within the whole, we are faced with two possible routes. We can replace the element with a facsimile or replacement of the original, or we can reinforce the original element by adding mechanical structural support or by chemically consolidating the element, both of which are much harder to reverse. Imagine consolidating a mud brick using a chemical addition, be it lime water, wax or a sophisticated modern polymer, reversibility, though theoretically possible, cannot in any practical sense be achieved.

In order to achieve this fundamental aim, we need a sophisticated understanding of the materiality of the object or structure to be conserved, its mechanical and chemical performance, its porosity and ability to deal with wetness and drying and above all its chemical and physical interaction with conservation intervention materials.

To Conserve and Consolidate a Ruin, Not to Undertake Reconstruction

The principle of avoidance of reconstruction is another important ethical consideration. If we are tempted to reconstruct a fallen or missing part of a structure, unless we have documentary evidence in detail of the original form, any reconstruction scheme must by its nature be at best an inspired guess and at worst a fantasy. It is easy to say that a noted art historian has carefully designed a reconstruction, but if ten notable art historians made the design, without any cooperation, we would be offered ten different schemes, which even if they were broadly similar would certainly differ in detail. It is for this reason that in conservation, reconstruction is almost always considered unethical, however logical it may seem.

Anastylosis

There are cases, especially in archaeological conservation, where a pillar, for instance, is excavated in a fallen state, where it is obvious and logical to conclude that the object was a standing pillar and that for a number of reasons, the progress of the collapse can reveal the original position of each element. Reconstruction in this case may be acceptable, and such work is described as anastylosis. Anastylosis, while it should be approached with caution, can be an appropriate conservation method.

Anastylosis is now supported by numerous techniques to assist the conservator in such rational reconstruction.

Following the example of a pillar made up of a series of structural elements, weathering, the presence of organics such as Lichens and mosses, deformation, sun bleaching, even the patterns of graffiti and so on, can supply very precise details of original position and relation to other structural elements. Anastylosis is practiced at several GHF projects and in an interesting variety of contexts, all requiring accurate documentation and careful treatment of the ancient material.



Banteay Chhmar, Cambodia: Here a fallen narrative bas relief (left) is being rescued from its fragile fallen state and then being temporarily reassembled (right). Anastylosis is easier in the presence of the bas relief and the objectives of Anastylosis are clear and simple to advocate. Photographs: John Hurd.



Cyrene, Libya: The amphitheatre of the Sanctuary of Apollo suffered damage from an earthquake in 4th Century AD. Many seating stones in the cavea of this theatre have fallen and are displaced in a fragile condition to the Western end of the structure. In order to evaluate the need for consolidation of cracks in the rocks upon which the structure is built, stones must be carefully moved and registered. Anastylosis will be used to reconstruct that part of the Cavea damaged by the earthquake. Photograph: S Ensoli.



Hampi India: Here two protective embankments built historically to protect the Chandramauleshwar temple from the impact of monsoon flooding are being consolidated to respond to the displacement of many stones through the activity of floods and indeed robbing out for later building purposes. Again anastylosis plays an important part of the reconstruction of these historic defenses. Photographs: A. N. Lambah.

Together with reconstruction, other questions, such as redecoration and so on, must also be considered. If a decorative scheme is revealed with lacunae within the design, even the most logical redecoration may be considered unethical. Likewise, if only small patches of a decorative scheme remain, it must be regarded as unethical to remove these traces and replace them with an entirely new scheme, however well researched.

The use of recycled materials is also worth philosophical consideration. It must be entirely unethical to replace a structural element with a recycled material identical in appearance to the historical material. In effect, this is faking, and it is important that any introduced material remains authentic and clearly legible as a modern intervention.

On occasion, historical material, especially fallen material, can be the most sympathetic and best performance choice; however, if recycled material is to be used, it should be clearly marked physically on the material, it may require a separation layer of geotextile or other clearly legible material and it should be recorded in the documentation of conservation intervention. Only then can such a substitution be regarded as ethical.

Sacrificial Shelter Coating

A useful technique in conservation is intended to protect vulnerable historic surfaces without building shelters or screens to reduce erosion. As with all analysis, the conservator can design a plaster or capping that will do no harm to the structure or object being conserved and serve as a sacrificial layer to protect fragile historic surfaces, including sculpture and bas relief. The shelter coat or cap should be as durable as possible within the confines of sacrificiality and reversibility. Indicator rods can be introduced into shelter coats to act as erosion monitors and provide dates for maintenance programs (see below).

Shelter Structures

In many archaeological and other contexts, tangible structures will be very vulnerable to deterioration; this is especially true within the risks engendered in global climate change. Covering

remains with a shelter structure may be the best means to provide a satisfactory result. Shelter structures require great caution both in design and in function and maintenance. It is very tempting to design and engineer a shelter structure which is more interesting than the archaeology that it protects. A structure that dominates the historic material departs from the general principles of conservation ethics. Simple, even minimal, structures are usually the most effective. The use of natural light and ventilation, air moisture and other environmental conditions must be modified from the natural state as little as possible. Design should be initiated by defining the damaging influences of the environment and preventing these while allowing more benign influences to continue. In terms of the function of shelter structures, only protection to the archaeology is important and this has to be viewed from a very holistic place, especially during the early design phase. The archaeology will have become buffered to surviving in natural wet and dry conditions and the shelter structure, if it seeks to change these conditions, must allow the environment of the archaeology to change at a very slow pace. Clearly, if an earth monument is placed within an unventilated oven or glasshouse, it will be endangered rather than protected. Sadly, this is often the case.

A useful list of factors to be considered during the design stage include:

- Natural ventilation and light
- Impact on ground moisture environment
- Low-impact footprint: shallow footings, approved and dug by archaeologists
- Control of attractive environmental change on flora and fauna
- Technology of construction
- Didactic function
- Access
- Security
- Budget

Çatalhöyük, Turkey: In the GHF site at Çatalhöyük, two shelter structures have been built to protect the vulnerable prehistoric structures that have been revealed. One shelter is entirely functional and rather brutal in appearance. A newer structure has been erected nearby and this has been built in a more aesthetic form. Comparison is interesting.



An exterior view of the recently constructed shelter over the 4040 excavations (top) and an interior view of the older shelter covering the South excavations (bottom). Photographs: Jason Quinlan.

Historic Archaeological Spoils

Heavy earthmoving machinery is inappropriate for removal of archaeological spoils and indeed as an excavation tool, except in very exceptional circumstances, due to the danger of such machinery damaging the delicate and vulnerable archaeological strata that lie beneath the surface. There is, furthermore, the problem of defining where the spoils end and the virgin archaeology starts. Historically, no separation layers have been used to define this interface.

A good technique for defining spoils includes the excavation of a trench crossing the dump to establish a good cross-section down to virgin archaeology and then removing the remaining wings informed by the analysis gained from the trenching. In earth sites, even this gentle activity may be layered in small-depth increments to prevent trench collapse within the soft spoil material.

A decision must be made over the activity of sieving of the spoils before final removal or reuse as a backfilling medium. Where new excavation material or redeposited dump material is disposed on or off-site, it should be stored and indicated by the use of a geotextile separation layer between the virgin ground and the spoils.

GHF Project Directors and workers must have access to analytical techniques and develop empirical understanding to judge the condition and responses of the materials they are using. GHF technical staff can assist and the GHF Senior Advisory Board should include good materials scientists. On-site training is encouraged on materials evaluation and analysis, documentation and sheltering.

Damage Assessment

When a target object for conservation is properly analyzed, the conservator must observe and define any damage that the object or structure has suffered. An assessment must be made and this may be documented on a drawing or photograph of the object. If the object is large, a wall for instance, then a good method is to take plan parallel photographs; these images may be joined and rectified. It is helpful to have a scale, a compass point and a datum line included in the picture. Damage reporting can be achieved on a transparent gel screen over the photograph. A convention of symbols must be agreed upon and then cracks, detached paint or glaze, outbreaks of efflorescence and any other factor contributing to damage and pertinent to intervention should be noted.

Intervention Proposal

Having carried out tests for materials that seem appropriate for a conservation intervention and given an understanding of the mechanics of the process, the conservator should design a proposal toward a successful intervention. This proposal must be material specific but remain flexible enough to allow for anomalies and unexpected activity within the object.

Intervention Reporting

Once again, the whole operation of intervention should be documented, both in terms of the physical changes to the object and also in the form of the conservator's notes. This part of the archive supplies vital information for the future maintenance of the object.

Maintenance Programs and Scheduling

All conservation interventions will require an inspection and maintenance program. The conservator must describe the purpose of the inspection and list diagnostic signs and contraindications that need to be noted. In many sites, caretakers are issued with diaries or notebooks and good communication between caretakers and those responsible for conservation maintenance is essential. The conservator must also provide site caretakers with a schedule of maintenance, which rather than adhering strictly to a calendar, may depend on certain conditions evaluated by indicators. Shelter coats and shelter plasters may have colored plastic rods buried within their fabric. When these indicators are revealed through the action of erosion, for whatever cause, the shelter coat will need to be serviced or replaced.

All of these aspects of conservation require careful planning and execution; they represent the bulk of a good conservation plan. A general conservation master plan and work plan should evolve, and although this should be flexible enough to allow for local modification, the master plan will inform all decisions made for conservation on-site (see below).

Higher level site trainees should be trained in the disciplines and conventions of conservation approaches and documentation.

Discussed here then are some of the fundamental ethical and philosophical principles of conservation, especially in the archaeological and built environment within which conservation falls in the portfolio of GHF. They are not arbitrary rules and have evolved out of years of the general experience of conservators and archaeologists and other preservation professionals. They are constantly under a process of scrutiny, redefinition and refinement.

IV. Global Heritage Fund Master Planning, Recognizing and Developing Values—Management Planning, Conservation Planning and Interpretation and Site Presentation Planning

Master Planning

GHF offers comprehensive Master-planning guidelines for all of its sites, including potential sites and nominations. Master conservation planning provides a comprehensive view of the threats, opportunities and best ideas for design and implementation of long-term conservation, while integrating the political and human realities of the region, especially in developing countries.

GHF Master Planning seeks to:

- Prioritize conservation activities so that the universal value of the place is preserved and improved.
- Increase local community and public awareness and interest in the place, and to promote the educational and cultural values of the sites archaeological landscape.
- Create a sustainable plan to the future management of the site and the landscape, which balances the archaeological and natural conservation, visitor access and development interests.
- Identify economic, social and cultural values of the Site and work with partners in the local community to maximize these benefits without damaging the archaeological resource.

A project master plan cannot cover all aspects of a GHF site before a conservation program starts. There are elements that must be added to the master plan as the project develops, and original master plans must be able to adapt to new elements. A conservation intervention can be planned in broad terms, but the detail will evolve over the project life and form the conservation planning element of the master plan. Community development will also evolve over time as the capacity of local people is increased with the “vision” improving as understanding of ownership develops.

All planning must be realistic, widely discussed both locally and nationally and be a strategic tool that responsible authorities can sign on to. It is always best to start from a series of modest goals and to increase complexity and scope as experience develops. This represents a difficult dichotomy for GHF, as the master planning goals need to be exciting enough to convince donors to contribute to the program. In the particular position of a not-for-profit organization, GHF must find a middle path to approach this dilemma. The areas of planning available as the project develops include conservation and development planning.

Management Plans

Management planning is largely a matter for the state party and local interests responsible for the long-term management of the site. Staff and consultants to GHF can assist the state party in preparation of such a plan, but unless the plan produces results that can be statutorily established to give full protection to the site through management planning and implemented by the state party, the document will be of little use (see model template for typical management plan: Appendix 4).

Interpretation and Visitor Presentation Planning

The planning of site interpretation, didactic signage, visitor flow and so on is an important part of enhancing the visitor experience and a tool to supply visit control within the cultural place.

Interpretation has always been an opportunity for the expression of current political ideas, propaganda and often not entirely appropriate national pride of place that can unfortunately decline to nationalism and irrelevancy.

Global Heritage Fund has a substantial responsibility to ensure that didactic and general displays fully explore the many values of a site, history, form and style, Cultural significance, natural environment, modern significance and so on.

GHF will be unable to dictate translations of sites into presentation materials, but it should always seek to encourage the dissemination of engaging, educational and practical information, through signage, publications and pamphlets and through the encouragement of formalized guide and guard training.

V. The Role of the GHF Senior Advisory Board

The Senior Advisory Board comprises leaders in the field of archaeological investigation and conservation, structural and objects conservation, museologists, and community development experts. Several members of the Senior Advisory board are heritage consultants specialising in World Heritage Sites. Additional advisors with specific skills will be consulted from time to time.

Senior Advisory Board members are volunteers who support GHF sites conservation work through their ideas, contacts, experience and recommendations.

Primary areas of Senior Advisory Board collaboration are:

- GHF project selection
- Review of project nominations
- Site conservation strategy
- Master conservation planning
- Conservation science
- Museology
- Quality assessment progress and periodic reviews
- Community development and responsible tourism

The Senior Advisory Board must recognize the need for evaluations made within the different cultural contexts in which GHF work.

VI. The Role of GHN: A collaborative approach to heritage site preservation

The purpose of the Global Heritage Network (GHN) is to raise awareness, facilitate debate and collaboratively seek solutions to the increasing threats facing cultural heritage sites in developing countries by bringing together concerned citizens around the world with experts and students working in cultural heritage site conservation and development in a dynamic and information-rich environment.

GHN especially seeks to promote exchange between international experts and local conservation leaders in developing countries in critical need of expertise and conservation resources. As part of this effort, GHN also works to train conservation students and professionals to international standards through onsite mentorship, regional training workshops and the Global Heritage Preservation Fellowship Program.

To achieve these goals, GHN has created a scalable public website built around Google Earth that provides information on all of the UNESCO World Heritage Inscribed and Tentative List cultural and mixed sites in the developing world and supplemented by photographs, videos, Google Earth map layers (to show, for example, site plans), discussion forums and a library of conservation-related electronic documents. Users can contribute their own content to all of these categories of data as well as add their own sites to the database.

With these resources and the ability to network with other users of the website, GHN allows members of the cultural heritage preservation community to rapidly and efficiently locate needed information and expertise for their own projects while also sharing their own experiences and knowledge with their colleagues and the general public.

Ultimately this approach will lead to a greater awareness of the threats facing cultural heritage sites around the world and provide the knowledge base and expertise to identify the most appropriate and ethical solutions to mitigate those threats through conservation science, planning, partnerships and collaboration at the local, regional, national and international levels.

VII. Future directions for World Heritage Conservation

There are today 878 properties inscribed on the World Heritage list, 679 cultural, 174 natural and 25 mixed. These World Heritage Sites are in the ownership and administration of 145 States parties. There are a total of 186 national signatories to the World Heritage Convention.

The list can, and will, continue to grow.

It may be said that patterns of fashion exist from time to time within the World Heritage System and that different site values become recognized and therefore highlighted.

Intangible Heritage, Historic Urban Landscapes, Cultural landscapes, cultural routes and multinational joint nominations are all developing at this time along with other challenges.

Global Heritage fund must stay on top of or even ahead of developing concerns and make wide and accurate estimates of the values offered by all of its sites and the cultural context within which that site exists.

Newly inscribed World Heritage Sites must be considered and understood, especially in respect of the criteria under which they were inscribed. GHF needs to learn from the patterns and developments within the application and inscription process. These developments will have an impact on site selection and monitoring over the years ahead.

One important attribute of GHF is that the fund places equal importance on development as well as conservation. The inclusion of development requires detailed cultural examination and at its very best can develop and nurture the sense of ownership by local and regional populations and help communities to benefit from all aspects of the site.

VIII. Conclusion

It is clear that in order to honor, “Preservation by Design” as a good working foundation for Global Heritage Fund, that each of the four pillars of “master-planning”, “scientific conservation”, “community Involvement” and the “building of effective partnerships”, need to be pursued rigorously.

In respect of the technical planning and all activities contributing to conservation practice on site, the ethics and principles recognized by the greater part of conservation scholars and experts are the backbone of best practice and responsive activity.

Global Heritage Fund needs to ensure that in each of its sites, training and capacity building in skills and ethics, to local workers and scholars, at the appropriate level, including the higher education levels, is widely and responsibly made available.

For project directors, GHF staff, GHF managers, local authorities, national authorities and all agencies involved in onsite activities on GHF sites, skills development should be continual, embracing contemporary materials and techniques in the applications that they are best suited to, while, at the same time respecting traditional materials, technology and cultural views.

Maintaining high standards and achieving effective conservation, means,

Good, accurate but flexible planning,

First class conservation technology and a rigorous scientific approach.

Close and receptive community involvement, at many levels.

Working to achieve partnerships across the range of all interested stakeholders.

The GHF “Preservation by design” method when well done can substantially further the capability of sustaining sites and monuments protection, evolving from the care of the local community.

Appendix 1:

Global Heritage Fund (GHF) Mission, Site Selection Criteria and Monitoring

In the period 2006–2008, GHF board members, members of the Programs and Planning Committee, staff and Senior Advisory Board went through a process of assembling and confirming a document to describe the site selection criteria which would be adopted for GHF sites globally. This document extended to the description of the GHF monitoring process with due regard to the principles and ethics of conservation together with a need for transparency and openness to the GHF board, staff and donors. These principles require occasional review and refinement.

GHF Site Selection Procedures (Summary):

- Landmark of civilization bearing a unique testimony to cultural tradition
- Inscribed, tentative or potential UNESCO World Heritage Site
- Archaeological, architectural and cultural authenticity and integrity
- Master Conservation Plan, approved or in preparation
- Strong GHF partnerships with leading local conservation/development teams
- “At risk” site with high potential for sustained preservation by engaging the surrounding community; GHF engagement is critical to future preservation and well-being
- Regional stability; sites in developing countries with regional and governmental support, having a strong need for cultural support and economic development

GHF Site Selection Criteria and Process

In selecting sites for GHF support, the management and board will consider these criteria:

Principal Site Selection Criteria

- The site is a center or landmark of civilization that bears a unique or exceptional testimony to a cultural tradition or to a civilization which is living or has disappeared.
- The site is inscribed on the World Heritage List or on the tentative lists or, by recommendation of the GHF Senior Advisory Board, has the potential to be listed on the tentative list of any qualifying state party.
- The site has a long history commensurate with its specific cultural setting.
- The site meets accepted conditions of archaeological, architectural and cultural (tangible and intangible) integrity and authenticity.
- The site is “at risk” or “in danger” (either through being listed as such on the UNESCO/ ICOMOS “at risk” register or by recommendation of the GHF Senior Advisory Board or in the case of natural or manmade disaster) but has the potential for adequate protection and management systems to ensure its safeguarding.
- The site has the potential for sustained preservation by engaging and supporting the surrounding community.
- GHF or other institutional engagement is critical for site preservation.
- The host nation is a developing country.

Additional Key Site Selection Criteria

A strong project team leader is in place or has been identified by GHF.

A plan for site preservation and development activity exists (not necessarily a full master plan), including assessment of likely risks of human displacement and environmental dislocation and their possible mitigation.

Cooperation of relevant state parties and governmental entities, private business partners and nonprofit organizations is sought and assured.

Financial support from local and international sources is assured or a fundraising plan is in place.

Adequate political and social stability prevails to allow the site to be developed and maintained.

GHF Site Selection Process

GHF management and board will adhere to the following site selection process:

- Board approves a set of basic site selection criteria.
- Executive Director has the authority to investigate potential sites which come to his attention.
- Board preauthorizes up to \$15,000 of initial expenditure for emergency responses or for exploratory work on up to three new site opportunities at any given time before any one of them is submitted to the board for approval; in exceptional situations the PPC may approve expenditures up to \$50,000.
- There is a standard set of questions that the Executive Director will ask and, with the support of the Senior Advisory Board, answer before a new site is submitted to the board for approval and inclusion in the GHF portfolio for future investment (see Annex).
- The GHF Senior Advisory Board will:
 - o Assist and advise GHF staff in the assembly of site selection proposals
 - o Review and report to the Executive Board on all aspects of site and project applications
- On behalf of the board, the Program and Planning Committee (PPC) will:
 - o Quickly review any new sites management wishes to fund beyond initial exploratory work
 - o Review management's project proposals (including multiyear project budgets) to assess eligibility of sites for selection by GHF, and
 - o Liaise with the Senior Advisory Committee to assess the merits for inclusion in GHF's portfolio

Project Monitoring and Evaluation (M&E) Procedures

The rationale for project monitoring and evaluation:

1. During the implementation of an approved project at the selected site, the GHF board and management need to monitor progress and to assure that the project is implemented effectively and efficiently in line with its objectives as approved. They also need to assure that changes in design, necessitated by evolving conditions on the ground, are vetted and approved and brought to the attention of donors, partners and the community at the site in a timely manner.

2. Upon project completion, a retrospective evaluation needs to be carried out. It reports on the results of the project and draws lessons for future projects. This is important for due diligence and for accountability of the project team to the Executive Director, of the Executive Director to the board and of the board to the donors, partners and local communities. It also serves to improve and adapt the GHF strategy and its implementation and to establish a track record which future donors can look to in judging the performance of GHF.

3. There are two levels of reporting on the monitoring and evaluation activities:

- A technical level, for learning by project management and its accountability to GHF management, and in turn for accountability by GHF management to the board. This will be detailed, scientific and designed to facilitate due diligence and learning and may be treated as confidential. This report will establish and define the contents of a “project-archive,” made available by GHF to students, learned bodies and others on the GHN website.
- A public outreach level, for informing actual and potential donors, for the general public and as relevant for partners in project implementation. This will be summary in nature, professionally presented in a visually attractive and readily accessible manner but always accurate in its reflection of the project and its progress.

4. Monitoring and evaluation (M&E) is distinct and separate from financial and management audits, as well as from accurate, scientific recordkeeping and archiving of project preparation and implementation activities. The effectiveness of recordkeeping and archiving is one of the aspects of the project subject to monitoring and evaluation.

Key Elements of Project Monitoring

5. Project monitoring will generally include the following elements:

- Regular (annual) progress reports by the project manager to management, site visits by the GHF staff, reviews of progress by selected experts from the Senior Advisory Committee and mid-term implementation reports
- Clear timetables and implementation benchmarks that are established up front and revised by mutual agreement between the project director and the management during implementation
- Submission to and review by the board of annual project reports and mid-term implementation reports. When project design is substantially altered during implementation it needs to be brought to the attention of the board

Key Elements of Project Evaluation

6. Project evaluation will generally have the following key features:

Evaluation of the project results takes place upon project completion and includes an assessment of achievement of project objectives, risk assessment and mitigation reporting, timeliness, cost-effectiveness and adequacy of funding.

The evaluation also assesses the sustainability of project results after the GHF engagement ceases. In most cases, this will include an assessment of whether or not local political, institutional and financial engagement is such that the site can be effectively maintained and, if needed, further developed to achieve the long-term goals of the original project design.

If a significant project extension or a follow-up project is planned at the same site, the evaluation should be initiated before the completion of the project so it is available to the Executive Director, board, funders and partners in time for the review and approval of the decision to extend or follow up.

The evaluation will be carried out by an expert not directly associated with project implementation and not a GHF staff member. Experts from the Senior Advisory Committee would be well suited for this task.

The expert's evaluation report will be submitted directly to the board. The Executive Director would be expected to submit in parallel his comments on the evaluation's findings and on the implications for GHF's strategy and implementation.

The GHF annual reports will summarize briefly the key findings of evaluation reports completed during the year.

The costs of monitoring and evaluation will be budgeted explicitly in a separate line item as part of the project's administrative expenses.

The Role of the GHF Board in Project Monitoring and Evaluation

1. The board's role is to assure that the Executive Director has put into place a suitable monitoring procedure and that it is effectively applied. This can be done during project visits by board members, by formal or informal reports from experts from the Senior Advisory Board who visit the project site and by review of progress and mid-term implementation reports submitted to the board by the Executive Director.
2. The board will also assure that the Executive Director commissions the independent evaluation of completed projects in a timely manner and will review the evaluation reports and the comments submitted by the Executive Director. They will also assure that appropriate summaries are included in the GHF annual report. The board will assure that the key lessons from the evaluations are reflected in any extensions or follow-up projects, in the GHF's operational policies and in the long-term strategic directions of the GHF.
3. The board will generally delegate these functions to the PPC, which will report to the board on its activities relating to monitoring and evaluation on a regular basis.

Appendix 2:

International Conventions, Charters and Guidelines

- Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted by the 17th session of General Conference of UNESCO in Paris (France) 1972.
- The Burra Charter. The Australia ICOMOS Charter for Places of Cultural Significance, 1979, adopted by Australia ICOMOS Burra (South Australia) 1979, with revisions in 1981, 1988 and 1999.
- “The Florence Charter,” Historic Gardens, registered by ICOMOS 1982 as an addendum to the Venice Charter covering a specific field.
- The Washington Charter, Charter for the Conservation of Historic Towns and Urban Areas, adopted in 1987 at the meeting of the 8th General Assembly of ICOMOS in Washington, DC.
- Charter for the Protection and Management of the Archeological Heritage, approved by the 9th General Assembly of ICOMOS in Lausanne (Switzerland) 1990.
- Guidelines of Education and Training in the Conservation of Monuments, Ensembles and Sites, adopted by the 10th General Assembly of ICOMOS in Colombo (Sri Lanka) 1993.
- The Nara Document on Authenticity, drafted by the participants at the Nara Conference on Authenticity in Relation to the WHC, Nara (Japan) 1994; organizers: UNESCO, ICCROM, ICOMOS.
- Charter on the Protection and Management of Underwater Cultural Heritage, ratified by the 11th General Assembly of ICOMOS in Sofia (Bulgaria) 1996.
- Principles for the Recording of Monuments, Groups of Buildings and Sites, ratified by the 11th General Assembly of ICOMOS in Sofia (Bulgaria) 1996.
- International Cultural Tourism Charter. Managing Tourism at Places of Heritage Significance, adopted by the 12th General Assembly of ICOMOS in Mexico City (Mexico) 1999.
- Charter on the Built Vernacular Architecture, ratified by the 12th General Assembly of ICOMOS in Mexico City (Mexico) 1999.
- Principles for the Preservation of Historic Timber Structures, adopted by the 12th General Assembly of ICOMOS in Mexico City (Mexico) 1999.
- Principles for the Preservation and Conservation-Restoration of Wall Paintings, adopted by the 14th General Assembly of ICOMOS in Victoria Falls (Zimbabwe) 2003.
- Principles for the Analysis, Conservation and Structural Restoration of Architectural Heritage, adopted by the 14th General Assembly of ICOMOS in Victoria Falls (Zimbabwe) 2003.
- Xi’an Declaration on the Conservation of Setting of Heritage Structures, Sites and Areas, adopted by the 15th General Assembly of ICOMOS in Xi’an (China) 2005.

The most recent additions to the list are charters on Cultural Landscapes and on Monuments Sites Interpretation, which were presented and adopted at the 2008 ICOMOS General Assembly at Quebec (Canada).

Appendix 3:

Conservation Ethics Evolving from Doctrinal Texts

A). The UNESCO, ICCROM and ICOMOS values of statutory techniques for evaluation of monuments and sites.

UNESCO, advisory bodies and the World Heritage Convention. Cultural and natural heritage are defined in Articles 1 and 2 of the World Heritage Convention.

Article 1—Cultural Heritage

For the purposes of this Convention, the following shall be considered as “cultural heritage”:

- monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;
- groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;
- sites: works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view.

Article 2—Natural Heritage

For the purposes of this Convention, the following shall be considered as “natural heritage”:

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

Mixed Cultural and Natural Heritage

Properties shall be considered as “mixed cultural and natural heritage” if they satisfy a part or the whole of the definitions of the Operational Guidelines for the Implementation of the World Heritage Convention of both cultural and natural heritage laid out in Articles 1 and 2 of the Convention.

Cultural Landscapes

Cultural landscapes are cultural properties and represent the “combined works of nature and of man” designated in Article 1 of the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.

Movable Heritage

Nominations of immovable heritage which are likely to become movable will not be considered.

Outstanding Universal Value—Cultural Heritage

Outstanding universal value means cultural and/or natural significance that is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole. The Committee defines the criteria for the inscription of properties on the World Heritage List.

The Committee considers a property as having outstanding universal value if the property meets one or more of the following criteria. Nominated properties shall therefore:

- (i) represent a masterpiece of human creative genius;
- (ii) exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- (iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- (iv) be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- (v) be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures) or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- (vi) be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria.)

Integrity and/or Authenticity

To be deemed of outstanding universal value, a property must also meet the conditions of integrity and/or authenticity and must have an adequate protection and management system to ensure its safeguarding.

Properties nominated under criteria (i) to (vi) must meet the conditions of authenticity, which includes the Nara Document on Authenticity, which provides a practical basis for examining the authenticity of such properties.

The ability to understand the value attributed to the heritage depends on the degree to which information sources about this value may be understood as credible or truthful. Knowledge and understanding of these sources of information, in relation to original and subsequent characteristics of the cultural heritage and their meaning, are the requisite bases for assessing all aspects of authenticity.

Judgments about value attributed to cultural heritage, as well as the credibility of related information sources, may differ from culture to culture and even within the same culture.

The respect due to all cultures requires that cultural heritage must be considered and judged primarily within the cultural contexts to which it belongs. Depending on the type of cultural heritage, and its cultural context, properties may be understood to meet the conditions of authenticity if their cultural value (as recognized in the nomination criteria proposed) are truthfully and credibly expressed through a variety of attributes including:

- form and design
- materials and substance
- use and function
- traditions, techniques and management systems
- location and setting
- language and other forms of intangible heritage
- spirit and feeling, and
- other internal and external factors

Attributes such as spirit and feeling do not lend themselves easily to practical applications of the conditions of authenticity but nevertheless are important indicators of character and sense of place, for example, in communities maintaining tradition and cultural continuity.

The use of all these sources permits elaboration of the specific artistic, historic, social and scientific dimensions of the cultural heritage being examined. “Information sources” are defined as all physical, written, oral and figurative sources, which make it possible to know the nature, specificities, meaning and history of the cultural heritage.

When the conditions of authenticity are considered in preparing a nomination for a property, the state party should first identify all of the applicable significant attributes of authenticity. The statement of authenticity should assess the degree to which authenticity is present in, or expressed by, each of these significant attributes.

In relation to authenticity, the reconstruction of archaeological remains or historic buildings or districts is justifiable only in exceptional circumstances. Reconstruction is acceptable only on the basis of complete and detailed documentation and to no extent on conjecture.

Integrity

All properties nominated for inscription on the World Heritage List shall satisfy the conditions of integrity. Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity, therefore, requires assessing the extent to which the property:

- a) includes all elements necessary to express its outstanding universal value
- b) is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance
- c) suffers from adverse effects of development and/or neglect

This should be presented in a statement of integrity

Appendix 4:

Proposed format for Cyrene World Heritage site management plan

1. Background

- 1.1 The historical context
- 1.2 General description of the property
 - 1.2.1 Individual sites
 - 1.2.2 Individual monuments
 - 1.2.3 Landscape and setting

2. Statement of significance

Historical, archaeological, and artistic values of the property

3. The 1972 UNESCO World Heritage Convention

- 3.1 The 1972 Convention
- 3.2 UNESCO requirements

4. The legal protection of monuments and their integration into regional and municipal development plans

- 4.1 Legislative protection
 - 4.1.1 State legislation
 - 4.1.2 State programmes and guidelines for the protection of cultural heritage sites and monuments
- 4.2 Land-use planning
- 4.3 Tourism management programmes

5. Objectives

- 5.1 Overall objectives and tasks of the management plan
- 5.2 Specific aspects
- 5.2 Monitoring and maintenance
 - 5.2.1 Identification of threats and problems
 - 5.2.2 Programme for survey and monitoring of:
 - 5.2.2.1 Immovable cultural heritage sites
 - 5.2.2.2 Collections
 - 5.2.3 Staffing
 - 5.2.4 Training and outreach
- 5.3 Conservation, restoration, and historic reconstruction
 - 5.3.1 Identification of actual and potential threats, leading to the preparation of programmes for the preservation and conservation of:
 - 5.3.1.1 Exposed archaeological structures
 - 5.3.1.2 Historic structures and buildings
 - 5.3.1.3 Archaeological artifacts

- 5.3.1.4 Archival material, digital data, and museum records
- 5.3.2 Creation of an overarching digital database
- 5.3.3 Preparation and implementation of a conservation plan, based on a condition survey (including risk evaluation)
- 5.3.4 Development of a risk-preparedness plan
- 5.3.5 Training requirements of managers and technicians
- 5.4 Research
 - 5.4.1 Preparation and implementation of an overall research plan, covering:
 - 5.4.1.1 Non-intrusive archaeological research
 - 5.4.1.2 Excavation
 - 5.4.1.3 Site survey
 - 5.1.1.4 Archaeological study of standing buildings and other structures
 - 5.1.1.5 Historical research and documentation
 - 5.4.2 Preparation and application of a basic contract for foreign missions
 - 5.4.3 Provision of access for researchers and students to restricted areas, archives, and museum collections
 - 5.4.4 Development of a publications policy (all levels)
 - 5.4.5 Training requirements of staff researchers and technicians
- 5.5 Interpretation and presentation
 - 5.5.1 Preparation of a coordinated presentation policy and plan for the sites and the museum
 - 5.5.2 Redesign and renewal of on-site signage
 - 5.5.3 Development of facilities for general visitors and specialized groups (local community, students, teachers, schoolchildren, etc)
 - 5.5.4 Training of guides
- 5.6 Visitor management
 - 5.6.1 On-site facilities
 - 5.6.1.1 Toilets
 - 5.6.1.2 Rest and picnic areas
 - 5.6.2 Off-site facilities
 - 5.6.2.1 Shops and stalls
 - 5.6.2.2 Refreshments
 - 5.6.3 Establishment of links with tourist and travel companies
 - 5.6.3.1 Development of guided and specialist tours
 - 5.6.3.2 Advanced warning of large tourist groups
 - 5.6.4 On-site safety provisions for visitors
 - 5.6.5 Provision of facilities for handicapped visitors
- 5.7 Site security
 - 5.7.1 Definition of duties of guards
 - 5.7.2 Recruitment policy

- 5.7.3 Training of guards (including basic language instruction)
- 5.7.4 Creation of communication system (radio, telephone) system linking guards with management centre
- 5.7.5 Clarification of relationship with tourist police
- 5.7.6 Strengthening links with local communities and landowners
- 5.7.6 Improving protection against vandalism
- 5.7.7 Establishment of procedure for reporting and preventing encroachments of the protected site

6. Financial planning and management

- 6.1 Establishment of budget structure
- 6.2 Creation and application of an effective financial control system
- 6.3 Improvement of procurement and tendering procedures
- 6.4 Creation of a structure for external fund-raising

7. Management structure

- 7.1 Executive structure
- 7.2 Advisory structure
- 7.3 Identification and involvement of actual and potential stakeholders (including local community, international bodies, etc)

8. Procedure for periodic review and updating of the management plan

9. Action plan for implementation and timetable