Strengthening conservation and management of Lumbini, the birthplace of Lord Buddha, World Heritage Property

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Final report

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Responsible Sector	Culture
Name of Person completing Report	Nabha Basnyat Thapa

Table of Content

I. Summary and background

Lumbini, the birthplace of Lord Buddha, a World Heritage Property is located in the Rupandehi district of the Lumbini Zone, which is situated in the plains of Southern Nepal. Lumbini was inscribed on the World Heritage List in 1997 as the birthplace of the Lord Buddha. This is evident from the inscription on the Ashoka Pillar. The UNESCO World Heritage Property, as inscribed in 1997, is limited to an area of 130 by 150 metres around the main archaeological remains that testify to the location of the birthplace of Lord Buddha. The surrounding Buffer Zone, which is contained within a levee, has an area of approximately a quarter of a sq-km. This area is known as the Sacred Garden of Lumbini.

The Sacred Garden in Lumbini is one of the most holy and significant places for one of the world's great religions and its nomination was founded on the importance of the archaeological remains of the Buddhist viharas and stupas from the third century BCE to the fifteenth century CE, which provide important evidence about the nature of Buddhist pilgrimage centres from a very early period.

The inscribed World Heritage Property area and the buffer zone are imbedded in the larger area of the master plan (five by five mile area) created by a Japanese Architect Kenzo Tange in 1978, including a one by three mile area on a north-south axis, conceived as a processional approach to the Asoka Pillar, contained within the World Heritage Property. The Government of Nepal entrusted the implementation of the Kenzo Tange Master Plan to the Lumbini Development Trust (LDT).

The project was designed based on the outcomes of a preparatory mission undertaken from 18 to 21 June 2009 under JFIT funding and the activities were prioritized during the ongoing process of preparing the Integrated Management Plan (IMP). The project activities were designed to ensure that, within the limits of the budget available, decisive steps are taken towards the protection of the site. The project took into account the most urgent and critical works focusing on conserving the Outstanding Universal Value of the site and protecting it from any irreversible negative impacts.

The five components of the three-year project include:

1. Conservation of the archaeological remains and architectural optimization of the shelter including mitigation of the micro-climate and hydrological effects inside the Mayadevi Temple;
2. Archaeological identification, evaluation and interpretation of Lumbini;
3. Review of the Kenzo Tange Master Plan for the Sacred Garden;
4. Establishment of the Integrated Management Plan (IMP). Finalization and adoption of management frameworks and processes and support to their implementation;
5. Improvement of the knowledge and skills of material conservation personnel and archaeological staff of the LDT and the DoA.

II. Description of project activities

Activity 1: Conservation of the archaeological remains and architectural optimization of the shelter including mitigation of the micro-climate and hydrological effects inside the Mayadevi Temple

A conservation team led by an international conservation expert Costantino Meucci from Rome, Italy was established to carry out the conservation activities.

The team was composed of:

- Costantino Meucci, an international expert chemist who is a leading exponent of stone material conservation and monitoring
- Domizia Colonnello, an international expert restorer in stone material conservation
- Basanta Bidari (LDT), Himal Kumar Uperti (LDT), Parsu ram Rai (LDT), Kamalesh Prasad Verma (LDT), Hari Dhoj Rai (LDT) and Devendra Bhattarai (DoA).

Conservation activities were performed through practical workshops including restoration of the three most emblematic monuments, the Ashoka Pillar, the Nativity Sculpture, and the Marker Stone. This also included restoration of a section of archaeological remains (brick masonry structure of the Mauryan period) inside the Mayadevi Temple, restoration of two ancient pots discovered during the archaeological excavations and micro-climate monitoring inside the Mayadevi Temple.

Four missions were undertaken in order to perform the conservation activities: 2 to 20 February 2011, 2 April to 9 May 2011, 4 to 26 February 2012 and 6 to 20 January 2013.

Activity 1.1: Restoration of Mauryan structures inside the Mayadevi Temple

The numerous layers of brick structures dating from as early as the Mauryan period (third century BCE), through Sunga (second to first century BCE), Kushana (first to second century CE), Gupta Periods (third to ninth century CE) up to the present day have been identified within the Mayadevi Temple. The archaeological remains within the Mayadevi Temple were threatened by degradation due to the fluctuating water levels and biological attack. The biological growth denoted both the presence of water and the incident light from the open doors and windows. As the chemical and mineralogical composition of the bricks was unknown, it was not possible to interpret and explain the degradation mechanism.

The conservation team with support from University of Rome carried out the restoration of the archaeological remains (brick masonry structure dating back to the Mauryan period) inside the Mayadevi Temple. The research was carried out by the following experts:

Coordinator:	Costantino Meucci
Researchers:	Daniela Ferro
	Maria Pia Sammartino, University of Rome 'La Sapienza'
	Giovanni Visco, University of Rome 'La Sapienza'
	Anna Candida Felici, University of Rome 'La Sapienza'
	Loredana Carratoni, University of Rome 'La Sapienza'
Restorers:	Domizia Colonnello
	Serena Finocchio
International PHD students:	
	Ilaria Marzocchini
	Gaia Quattrociocchi
	Ilaria Serafini

Brick masonry structures inside the Mayadevi Temple were studied both in situ and in the laboratory in Rome. The bricks were studied for their composition, colour, salt concentration, water content and degradation mechanism. Several samples of bricks were taken and analyzed both on site and in the laboratory to characterize the materials and their degradation mechanisms. Mortar samples were taken as well to investigate the composition of the differing mud mortars.

Salt content in the masonry confirmed that some soluble salts originated from the aquifer underground, while some others, such as sulphates and nitrates, are attributed to environmental pollution and to the organic materials degradation.

Based on the above analysis, a general restoration plan of the brick masonry structures was established. Three sections of the masonry inside the Mayadevi Temple were cleaned, strengthened and protected by applying water proofing materials and protection measures.

Output

- Restoration plan of the Mauryan structures inside the Mayadevi Temple and three sections of the structures restored.

Activity 1.2: Restoration of the Marker Stone and its surrounding

The Marker Stone was set by Emperor Ashoka to mark the exact location of the birth of Lord Buddha.

The Marker Stone appeared wet and brown-greenish in colour due to the patina that homogeneously covered the surface when the existing protective box was removed for restoration in February 2011.

The brown-green patina on the Marker Stone was cleaned with a chemical solution (ammonium carbonate solution) then washed with fresh water and dried with a soft synthetic sponge to remove the potentially dangerous residual chemical products. The final cleaning of the Marker Stone was performed with a chemical mixture (hydrogen peroxide and ammonia liquor) in order to remove organic remains and to eliminate further biological growth.

The powder on the surrounding area was removed and collected for analysis. Then, measurement of the area was taken for the design of the new protective box.

A new larger protective glass box placed over the Marker Stone to control the biological growth on the stone was installed in February 2012. The new box was ordered from Italy with financial contribution from the LDT. It consists of three compartments made of a metallic frame and covered by a bulletproof glass connected by iron pins. The box is supported by a flat perimeter ring of new bricks and was sealed with lime mortar to prevent offerings placed by pilgrims entering the protected area.

Output

- The Marker Stone restored and new protective box installed.

Activity 1.3: Restoration of the Nativity Sculpture

The sandstone Nativity Sculpture depicts Lord Buddha's mother Queen Mayadevi giving birth.

A scaffolding structure was built to enable the conservation team to access the Nativity Sculpture for restoration. Firstly, powder deposits on the sculpture were removed using dry soft brushes and collected for lab analysis. Several red coloured layers, presumably made of epoxy resin, were identified on the stone surface. The chemical cleaning (ammonium carbonate) was successful except for the epoxy plaster applied to glue the separated part of the statue. The lower part of the sculpture had purple colour paint. Sugar thrown as an offering by the pilgrims stained the surface with white spots. Thus, the sculpture needed extra cleaning to remove the adhering sugar stains. After cleaning, a final water proofing layer was applied as a protective treatment. The main degradation pattern observed was the chipping of the surface. This was strengthened by the polymers, applied during the restoration.

Output

- The Nativity Sculpture restored.

Activity 1.4: Restoration of the Ashoka Pillar and the capital

In 249 BC, Emperor Ashoka visited Lumbini, which had already become an important pilgrimage site, and erected the sandstone Ashoka Pillar with *Pali* language inscriptions in the *Brahmi* script identifying Lumbini as the birthplace of Lord Buddha.

The Ashoka Pillar, and especially the inscription, was being threatened by natural and human impact. Pilgrim's offerings such as milk, vermillion, water, honey, perfume, oil, hair, flowers and coins had been deposited directly onto the surface of the stone which over time has changed the chemical composition, thereby becoming insoluble and causing damage to the surface of the stone.

Restoration of the Ashoka Pillar

Wooden scaffolding was erected in order to facilitate restoration. The restoration work of the Ashoka Pillar started with the mechanical removal of the plaster that connected the cap with the top of the column. The plaster was coarse grained and appeared as a pre-mixed mortar containing gypsum and cement. This mortar was substituted with a traditional hydraulic mortar made by mixing lime, sand and brick powder and in order to get the colour of the stone, yellow ochre was added.

Then the external surface of the pillar was cleaned using acetone and an alcohol solution with cotton. Most of the organic deposits adhering to the surface were removed by chemical cleaning.

The vertical fissure, from the top to bottom in the west and east sides of the pillar, which were previously filled with a yellow epoxy resin was removed and filled with an epoxy plaster made of epoxy and sand. The plaster was then covered with a traditional hydraulic mortar made of lime, sand, brick powder and yellow colour, whose function was to protect the epoxy from the UV rays.

The area where the inscription was scratched was carefully cleaned. The metallic belts were also removed, cleaned, painted and a thin layer of silicon rubber was inserted between the belt and the pillar.

Restoration of the Capital

The existing cement mortar and the brick base were removed. This area was cleaned and the two sections were glued by using an epoxy plaster made of epoxy and sand. It

was then covered by a traditional hydraulic mortar made of lime, sand and brick powder. Finally, a water proofing layer was applied to protect the Capital and this was placed on a new brick base.

Casting of the inscription

As requested by the LDT, a replica of the inscription was made. The surface of the pillar was treated with a vegetable soap solution. The cast was then produced by applying two layers of silicon rubber and a tissue was applied to the silicon rubber. The mould was detached after 24 hours and the surface was cleaned with acetone to remove the residues of the silicon oil contained in the rubber. The cast was then transferred to the work area and a flat copy of the inscription was made.

Monitoring stability of the Ashoka Pillar

The presence of the vertical fissure and inclination of the pillar are great risks for the stability of the Ashoka Pillar, therefore, preliminary monitoring of the pillar was carried out. The two methodologies applied were: monitoring of the movement of the fissure by strain gauge and data logger; and thermal infra-red analysis. The monitoring process confirmed that the fissure contracted and enlarged according to the direction and intensity of the sun's radiation.

An extensive monitoring process is recommended in the next phase of the project in order to understand the stability of the pillar and to ensure the best conservation methods of the pillar.

It was recommended that the base of the underground section of the pillar be excavated and studied. However, due to the reluctance of the Nepali authorities to undertake this action it was decided to postpone this activity to the next phase of the project. This is to be undertaken in the presence of archaeology and conservation experts.

Output

- The Ashoka Pillar and the Capital were restored.

Activity 1.5: Establish regular maintenance and monitoring of the restored archaeological vestiges

The restored monuments and archaeological remains were regularly monitored by the conservation team during the period of the project.

Maintenance procedures were established to be performed by the national conservation team, which consists of simple actions that do not affect the state of the surface, and that are easy to perform.

Ashoka Pillar and the Capital

The Ashoka Pillar is at the highest risk of damage because of the continuous flux of pilgrims and their offerings. The lower section of the pillar and the inscription suffer the highest risks of damage because of both the proximity to the external protective fence and the nature of the offerings that consist of organic materials that adhere to the stone's surface. Furthermore, since the bottom of the pillar is usually wet because of the water capillary from the ground, the risk of degradation increases.

The following maintenance procedures were recommended:

- Removing the surface powder with a soft dry brush;

- Washing the dirty surfaces with a neutral soap solution and water using a soft sponge;
- Drying the surfaces softly with cotton;
- Avoiding the use of organic solvents such as acetone and alcohol that will remove the protective layer.

Nativity Sculpture

The lower part of the Nativity Sculpture is at the highest risk of damage because of the impact of the visitors' activities and of the micro-climate. The light impacting the surface of the top of the sculpture is prone to damage as well.

The following maintenance procedures were recommended:

- Removing the not adhering powder with a soft dry brush;
- If necessary, wash the dirty surfaces with a vegetable green soap solution and water using a soft sponge;
- Drying the surfaces softly with soft cotton material;
- Avoiding the use of organic solvents such as acetone and alcohol that will remove the protective layer.

Marker Stone

The risk of damage to the Marker Stone is high because of its location and the necessity of it to be protected against the impact of the pilgrims.

The following maintenance procedures were recommended:

- Offerings to be cleared regularly in the area surrounding the Marker Stone;
- To be lit to a minimum level;
- Regularly clean the surroundings from organic materials and dust;
- Switch-on the UV lamp every two days during the night;
- If necessary, spray biocide solution on the Marker Stone and its surroundings and wait for two weeks to assess the effectiveness of the treatment;
- Avoid cleaning with water, mechanical tools and the use of organic solvents and chemicals.

Outputs

- Regular maintenance procedures established to be performed by the national conservation team from the LDT.

Activity 1.6: Installation of an automatic micro-climatic unit to monitor the Mayadevi Temple followed by one-year of continuous monitoring, the evaluation of the acquired data and architectural optimization of the shelter

The present Mayadevi Temple, with a heavy steel structure, was constructed in 2002 to protect the historical monuments and ancient remains, including the Marker Stone and the Nativity Sculpture. The structure has been criticized by various experts and the World Heritage Committee has also expressed its concern. The structure has added to the risks related to the conservation of the historical monuments and ancient remains and the increasing number of visitors. Therefore, a monitoring system was put into place for the Mayadevi Temple in order to be able to ascertain corrective measures to the temple itself, as well as to determine the future of the structure on the basis of its impact on the archaeological vestiges that it contains.

Microclimate monitoring inside the Mayadevi Temple commenced in February 2011 until January 2013. This process recorded the parameters that affect the conservation of all archaeological remains within the temple. The microclimate data was monitored, which recorded relative humidity, temperature, dew point and impacting light every thirty minutes.

Eight microclimate monitoring units were installed in the following locations:

1. Marker stone
2. Nativity sculpture (bottom)
3. Nativity sculpture (top)
4. South door
5. Walk way
6. North door
7. Stupa, North window, external
8. North door external reference

In addition, sixteen monitoring units were placed within the Mayadevi Temple, which recorded temperature, relative humidity and light intensity each thirty minutes from 8 to 16 January 2013.

Analysing all data collected in the monitoring time confirmed that the indoor microclimate is strictly related to the external climate changes. However, the Marker Stone location is the most stable, owing to its location. The average temperature values greatly vary in the three cross sections of the temple. The central North-South horizontal section shows that the Marker Stone location is warmer than the two door locations, while the East and West sections recorded more homogeneous temperature values.

The relative humidity was recorded at a maximum in the Marker Stone location. This depends on the weather conditions as the open doors allow fog to freely diffuse within the Mayadevi Temple.

In order to assess the efficiency of the new protective box in the conservation of the Marker Stone, monitoring was carried out from 9 to 16 January 2013. This process measured temperature and the relative humidity inside the box and the temperature on the surface of glass of the box. During the cold season, water condenses on the glass inside the box. Monitoring the temperature both of the glass and inside the box confirmed that the glass temperature is lower than the average temperature inside and that the dew point is higher. Therefore, water condenses on the glass, which can be avoided by increasing the exchange of air inside the box. Exchange of air will also reduce the relative humidity value, which is the additional cause of the condensation.

The aquifer that extends below the Mayadevi Temple directly influences the relative humidity values inside the box, since its level varies according to rain. The archaeological remains inside the temple are also affected by these variations because water saturates by capillary in the bricks and the mud mortars.

Monitoring units recorded the intensity of the light impacting the masonry in the different hours from the early morning to the night. Data collected clearly showed that the south-east corner of the temple is strongly lit, while the north-east corner receives about one tenth of the value. The south and west sides are the most influenced by the sun radiation because of the direct impact of the sun rays entering from the windows of the shelter. However, the intensity of light varies during the day according to the general climate conditions. Varying intensity of light as per time and season directly influence the temperature of the masonry and the evaporation rate. Degradation processes in the masonry related to the salt and water diffusion is also accelerated by light.

Recommended modifications of the shelter to improve conservation of the archaeological remains

On the basis of the microclimate data and of the aquifer displacement inside the Mayadevi Temple, the following modification of the shelter is recommended in order to minimize the impact of the microclimate on the degradation process of the remains.

The first interventions activities should consider:

- Removing the false ceiling which will reduce the air exchange rate;
- Darkening the windows of the stupa to avoid sunlight entering;
- Closing the entrance doors to reduce the exchange of air and the evaporation rate of the water absorbed by capillary;
- Lowering and stabilizing the level of the aquifer below the archaeological remains;
- Initiating research of a new shelter that can stabilize the indoor microclimate and reduce thermal shock to the masonry**.**

Output

- Evaluation of microclimate within the Mayadevi Temple.

Results not achieved

- The Ashoka Pillar and the Capital were impacted again after cleaning and restoration because of pilgrims leaving offerings that are detrimental to the two structures. Therefore, both monuments require new cleaning.

- Evaluation of the underground base of the Ashoka Pillar in order to study the underground water condition and methods to improve conservation of the pillar could not take place due to the stakeholders' reluctance to excavate and examine the stability of the pillar during the excavation phase.

- The lighting system inside the new protective box for the Marker Stone did not work due to the unsuitability of the electrical system. The lamps emitted violet light instead of warm-white light.

Activity 2: Archaeological Identification, Evaluation and Interpretation of Lumbini

Lumbini was identified as the birthplace of Lord Buddha during an investigation by Anton Führer of the Archaeological Survey of India and General Khadga Shamsher Rana in 1895 due to the presence of an inscription on the Ashoka Pillar. This observation was supported by records from the fourth century CE Chinese pilgrim Faxian. Despite over a century of archaeological research at Lumbini, including recent Japanese-led excavations in 1996, no material from the pre-Ashoka (third century BCE) layers has been recovered. This was the objective of the archaeological investigation. A similar situation also prevails at the other key sites associated with the life of Lord Buddha, namely Bodhgaya, Sarnath and Kushinagara in India.

The World Heritage Committee's decisions of 2006, 2008 and 2009 requested Nepal to develop non-destructive archaeological strategies to ensure the long-term conservation of the vast excavated and unexcavated areas of archaeological significance in and around the property through adequate documentation and monitoring.

There was little knowledge of the original extent and definition of the Sacred Area, or of its sequence of development. There was also little understanding of the function of the isolated archaeological structures within the Sacred Garden or of its palaeo-environment and palaeo-topography. There was also very little knowledge as to the development and nature of the Lumbini Village – the earliest named settlement in the region and of its relationship with the monasteries, stupas and temples within the Sacred Area.

As the numbers of pilgrims, tourists and visitors visiting Lumbini increases, there is greater pressure on the surviving surface and subsurface archaeological remains. It was therefore imperative that the physical signature of Lumbini is identified, mapped, evaluated and interpreted so that significant areas may be presented, managed and given long-term protection.

Many areas at Lumbini still needed to be excavated, both within the World Heritage Property and in the Buffer Zone. In particular archaeological surveys needed to be carried out at the following potential places:

- South of the Mayadevi Temple in order to ascertain the consistency of the Pre-Ashokan deposits;

- West of the Ashoka Pillar in order to evaluate the extension of the site in this direction;

- North of the Mayadevi Temple in order to ascertain the extension of the monastic complexes to the east and west of those already exposed;

- The Village Mound under the existing police station in the southwest of the Buffer Zone, which might have relevant information regarding the chrono-typological sequence at the site and the first phase of the settlement;

- Kenzo Tange also indicated the possible existence of two roads, one of them leading from the village to the monasteries within the World Heritage Property;

- The area towards the southeast corner of the Buffer Zone.

An Implementation Partnership Agreement was established with Durham University, UK, to undertake archaeological investigation in Lumbini.

An international team of archaeologists from Durham University together with experts from Nepal's DoA and the LDT, co-directed by Robin Coningham, Pro-Vice-Chancellor and Professor of Archaeology at Durham University and Kosh Prasad Archarya, one of Nepal's top archaeologists carried out three seasons of archaeological investigation in Lumbini (1 to 30 January 2011, 4 to 28 January 2012 and 3 January to 2 February 2013).

The team established for the archaeological investigation included:

- One international expert in South Asian archaeology
- One national expert in Nepali archaeology
- One GIS mapping expert
- Two geophysics experts
- Two geo-archaeology expert
- One OSL (Optically Stimulated Luminescence) dating expert
- Four international PhD students
- Seven national archaeologists from DOA and LDT
- 40 Students from Tribhuvan University, Nepal

- A team of labourers

The team carried out three seasons of field operations and the work of the archaeologists focused on identification, evaluation and interpretation of archaeological sequences within the Mayadevi Temple and the Sacred Garden and areas surrounding it, including the Village Mound and Nursery Well.

In order to date the archaeological sequences, two methods of scientific dating techniques were utilised - radiocarbon dating, and optically stimulated luminescence dating (OSL) of both sedimentary units and fired brick.

In addition, the use of balloon kite aerial photography provided accurate photographic records of the Sacred Garden and Village Mound and this helped in the mapping, preservation and management of Lumbini.

These investigations revealed a series of earlier Buddhist structures which predate the Ashokan period, and provided archaeological evidence for a more secure chronology of the life of the Buddha and for the founding of one of the world's great religions. The team has since published the findings in a peer-reviewed, scientific journal, Antiquity, and the finds have been publicized worldwide.

Activity 2.1: Evaluating and interpreting pre-Ashokan levels in the Mayadevi Temple

The following activities were carried in order to evaluate and interpret the Pre-Ashokan levels within the Mayadevi Temple.

- Samples of modern protective fills of the Mauryan structure in parallel with the conservation process, emptied and exposed and cleaned back the existing sequences of pre-Ashokan occupation.
- Modern protective fills of chambers within the Mauryan structure emptied and excavated back the existing sequences of pre-Ashokan occupation.
- Kubiena tins were utilised, which enables the removal of undisturbed samples from a section, and pollen cores were extracted for thin-section analysis to microscopically study the deposits and interpret their characteristics, e.g., internal floors, old land surfaces etc., and also the nature of the palaeo-environment, e.g., wood charcoals, pollens, etc.
- Optically Stimulated Luminescence (OSL) samples extracted from the best preserved section within the temple enabled the team to measure background radiation levels in order to chronometrically date the sequences.

Output

- The presence of the pre-Ashokan levels within the Mayadevi Temple was confirmed, their nature and status of preservation assessed, and (Geographic Information System (GIS) maps were prepared.

Activity 2.2: Evaluating and interpreting the Sacred Garden area

The following activities were carried out in order to evaluate and interpret the Sacred Garden area.

- The existing structures within the Sacred Garden area were cleaned and mapped on a GIS.

- A geophysical survey was undertaken in order to map additional areas of subsurface archaeological remains both within the fenced area and in its immediate vicinity.
- Aerial photographs of the site were taken with the use of a kite camera.

Output

- The presence of early natural and cultural levels in the Sacred Garden area was confirmed and GIS maps were prepared.

Activity 2.3: Evaluating and interpreting the southwest 'Village Mound'

The following activities were carried out in order to evaluate and interpret the southwest Village Mound.

- Archaeological and natural features of the 'Village Mound' were cleaned and GIS maps prepared.
- A geophysical survey was undertaken in order to map additional areas of subsurface archaeological remains on the mound and in its vicinity.
- Evaluation trenches within the police station compound on the highest part of the mound were excavated in order to expose the sequences and take C14 samples and kubiena tins to chronometrically date the constructions and microscopically study the deposit. Thermoluminescence (TL) samples were taken to chronometrically date the period of construction.
- Auger coring was conducted to ascertain the profile of the natural mound.
- The levee section was cleaned to expose its cultural fills. Kubiena tins were extracted from sections for thin-sections in order to microscopically study the deposits and interpret their characteristics e.g. the speed of silting and the movement of water and other factors, including the nature of the palaeoenvironment, e.g. wood charcoals, pollens, etc. OSL samples extracted from each section measuring the background radiations levels in order to chronometrically date the sequences.
- Aerial photographs were taken of the site with the use of a kite camera.

Output

- The presence of early natural and cultural levels in the Southwest 'Village Mound' was confirmed, their nature and status of preservation assessed and GIS maps were prepared.

Activity 2.4: Evaluating and interpreting the Southeast area of the Sacred Garden

The following activities were carried out in order to evaluate and interpret the Southeast area of the Sacred Garden.

- Existing features within the 'southeast' site were cleaned and mapped on GIS.
- A geophysical survey was undertaken in order to map additional areas of subsurface archaeological remains on the cluster and in the vicinity.

- Evaluation trenches (three trenches adjacent to the brick structures – monasteries and stupas and one trench adjacent to the brick structures to the East of the Mayadevi Temple) were excavated in order to expose the sequence and take C14 and TL samples to chronometrically date the construction.
- Optically Stimulated Luminescense (OSL) samples were extracted measuring the background radiation levels in order to chronometrically date the sequences.
- Auger coring was conducted to ascertain the profile of the spread of cultural material.
- Aerial photographs were taken of the site with the use of a kite camera.

Output

- The presence of early cultural levels in the Southeast area of the Sacred Garden was confirmed, their nature and status of preservation assessed, and GIS maps were prepared.

Activity 2.5: Evaluating and interpreting the un-surveyed areas of the Sacred Garden, road system and Nursery Well

The following activities were carried out in order to evaluate and interpret the un-surveyed areas of the Sacred Garden, road system and Nursery Well.

- Archaeological and natural features within the un-surveyed areas of the Sacred Garden, road system and Nursery Well were cleaned and mapped on GIS.
- A geophysical survey was undertaken in order to map additional areas of sub-surface archaeological remains.
- Evaluation trenches were excavated adjacent to any resultant road signatures and other areas of archaeological remains were identified.
- Auger coring sampling was conducted ascertain the profile of the spread of cultural material across the Sacred Garden.
- Auger coring was conducted on the Northwest area of the Sacred Garden in order to ascertain the course of the palaeochannel and one evaluative trench was excavated across its section in order to expose its fills. Kubiena tins were used to collect samples across a sequence of thin-sections in order to microscopically study the deposits and interpret their characteristics e.g. the speed of silting and the movement of water and also the nature of the palaeo-environment, e.g. wood charcoals, pollens, etc.
- OSL samples were extracted from each section measuring the background radiations levels in order to chronometrically date the sequences.
- Aerial photographs were taken of the site with the use of a kite camera.

Output

- The presence of early cultural and natural levels in a sample of the un-surveyed areas of the Sacred Garden, road system and Nursery Well was confirmed, their nature and status of preservation assessed, and GIS maps were prepared.

Additional activity: Visitor and pilgrim survey

The following activities were carried out in order to survey visitor and pilgrim activities in January 2013:

- The changes in the activities of the pilgrims over time was evaluated. This intervention also looked at how religious activities have changed on a short-term basis by comparing data collected during the 2001-2002 Cultural Monitoring Mission with results obtained from this more recent survey.

- Modern practices and the archaeological data available for Lumbini and other pilgrimage sites was compared in order to evaluate whether some of the modern trends could also be reflected in the archaeological records.

Output

- Analysis of the visitor and pilgrim survey data and comparison of the 2001-2002 survey were completed to identify similarities and changes in perception/behaviour regarding the site over the last decade.

Activity 3: Review of the Kenzo Tange Master Plan for the Sacred Garden

The Ancient Monument Preservation Act was prepared in 1956. This gave Nepal's Department of Archaeology the authority to 'preserve ancient monuments, control the trade in archaeological objects, excavate ancient monuments sites and acquire and preserve ancient monuments and archaeological, historical or artistic objects'.

However, a separate institution for the administration of Lumbini was only established after former UN Secretary-General U Thant visited Lumbini in 1967. In 1970, the International Committee for the Development of Lumbini (ICDL) was set up comprising initially of 13 members. This was later expanded to 16 Member States. At the national level, the Lumbini Development Committee was formed. ICDL initiated the preparation of the development master plan for Lumbini, which was conceptualized by Japanese architect Kenzo Tange.

The master plan was approved in 1978. The most important concept of the Kenzo Tange Master Plan for the Sacred Garden was to create an atmosphere of tranquillity, universality and clarity. The Sacred Garden is the focal point of the master plan to symbolize the birth space of Lord Buddha. The master plan proposed to provide a very minimum of service facilities in the Sacred Garden for the pilgrims and tourists to preserve its archaeological value. The unearthed ancient urban structure and a system grid for archaeological surveys are incorporated in the master plan. Its implementation was initially scheduled to be completed by 1985. However, many components of the master plan still remain to be implemented.

In 1985, the Lumbini Development Trust Act was passed and the Lumbini Development Trust (LDT) was thereby created. LDT was given the legal mandate to manage the Lumbini Development Area (which also includes other Buddhist sites in the region) and implement the master plan.

The very slow implementation of the master plan and the uncertain approach to the management of the World Heritage Property have generated a number of problems over the years, including those related to the knowledge and preservation of the archaeological sites, their presentation to pilgrims and visitors and poor maintenance.

Therefore, a review of the present state of the Sacred Garden with respect to the concept formulated by Kenzo Tange in the master plan and a review of the current abstract grid pattern as well as the concept of drainage and water levels of water bodies around the Sacred Garden was proposed.

A contract for services was established with the University of Tokyo, Japan to carry out this activity. The team from University of Tokyo was led by Yukio Nishimura, project team leader and chairperson of the International Scientific Steering Committee of the project. The team carried out three missions to Lumbini to undertake their activities: 28 December 2010 to 11 January 2011, 28 December 2011 to 7 January 2012 and 4 to 12 January 2013.

Activity 3.1: Review Kenzo Tange Master Plan for the Sacred Garden

- Collected information in Japan and in Nepal on the Kenzo Tange Master Plan, with a special focus on the Sacred Garden.
- Reviewed the present state of the Sacred Garden with respect to the concept formulated by Kenzo Tange, and in conjunction with an investigation of the Sacred Garden carried out in parallel with other activities under the project.
- Reviewed the current abstract grid pattern with archaeological information supplied by the archaeological team employed within the project.

Output

- Clear understanding of the implications of the Kenzo Tange Master Plan on the physical planning of the Sacred Garden.

Activity 3.2: Development of a vision for the Sacred Garden

This activity was carried out with additional contribution from the Paris-based NGO: the Oriental Cultural Heritage Sites Protection Alliance. A study of the Sacred Garden site was carried out by a team of experts who reviewed the following eight components: Kenzo Tange Master Plan; the World Heritage inscription; the environment; impact on the archaeological zone; historical texts; religious texts; activities and expectations.

On the basis of this latter study, guidelines for a physical plan of the Sacred Gardens was prepared, which is included in the integrated management framework of Lumbini.

Output

- Appropriate site interpretation of the Sacred Garden that protects the values for which the site was inscribed onto the World Heritage List and that intensifies the site's spiritual experience.
- A guideline for a physical plan of the Sacred Garden was prepared.

Activity 3.3: Preparation of an Interim Plan for the Sacred Garden

A conceptual design and phasing was prepared based on the Kenzo Tange Master Plan for the Sacred Garden. This plan incorporates pedestrian traffic flow, visitor facilities such as toilets and water supplies and evaluation of existing structures and their possible relocation.

Output

- A conceptual design and phasing based on the Kenzo Tange Master Plan for the Sacred Garden.

Activity 4: Establishment of an Integrated Management Plan (IMP): Finalization and adoption of necessary management frameworks and processes and support for its implementation

According to the Operational Guidelines for the Implementation of the World Heritage Convention, it is mandatory for each World Heritage Property to have a clear defined management system to ensure its safeguarding.

The World Heritage Committee specifically requested Nepal to prepare an Integrated Management Plan (IMP) for Lumbini in 2002 which ensures the protection of the World Heritage values of the site.

Consequently, work has proceeded on the IMP over the last five years, involving cooperation between the Department of Archaeology (DoA), the Lumbini Development Trust (LDT) and other stakeholders, including Lumbini monastic communities.

IMP provides the framework for the long-term safeguarding of the archaeological vestiges of the Lumbini World Heritage Property while allowing for the property to continue being visited by pilgrims and tourists from around the world.

A team to prepare the IMP for Lumbini was established, which composed of: representatives of the Ministry of Culture, Tourism and Civil Aviation (MoCTCA); the Department of Archaeology; the Lumbini Development Trust; a national expert as facilitator for technical input and the UNESCO Kathmandu Office.

A series of meeting and workshops for the preparation of an IMP were held in Lumbini and Kathmandu. The Integrated Management Framework (IMF) document for Lumbini was prepared by the team. The IMF document in English was finalised in the presence of the Joint Secretary of MoCTCA; Vice-Chair, Member Secretary and Project Chief of LDT and the IMP team in Lumbini on 30 May 2013. The IMF document in English was submitted to MoCTCA for adoption by the Government of Nepal. The original document in English was translated into Nepali and a summary in Nepali was also prepared.

Activity 4.1: Preparation of the statement of Outstanding Universal Value (SOUV) for the Lumbini World Heritage Property

The World Heritage Committee decisions of 2006, 2008 and 2009 requested Nepal to continue preparation of the Integrated Management Plan (IMP) and to prepare a Statement of Outstanding Universal Value for the property.

- The process involved re-evaluation of the specific attributes and elements, including integrity and authenticity of these attributes and elements that give the property its Outstanding Universal Value (a review of the draft of the SOUV prepared for the UNESCO/JFIT Project Preparation Mission in June 2009), based on accurate and adequate knowledge of the site and archaeological resources as made available by archaeological investigations.
- Reviewed, updated and clarified the information provided in the Nomination Document.
- Set out reasons for the importance of Lumbini under each of the criteria used for the inscription and defined an agreed vision for the practical conservation and management of the site.

Output

- The retrospective Statement of Outstanding Universal Value was prepared and submitted to the World Heritage Committee, which was adopted by the World Heritage Committee at its 36th session (Saint Petersburg, 2012).

Activity 4.2: Establishment of appropriate frameworks

- Reviewed the existing management structures of Lumbini (including the objectives and authority, responsibility and limitation of the LDT with respect to its legal status as a 'Trust' and its responsibility in juxtaposition to the government authorities, internal structure as per the scope of work).
- Reviewed existing coordination and communication mechanisms as well as the processes and linkages in planning and execution.
- Defined authority and responsibilities of the LDT, DoA, local government and the international community.
- Prepared the document 'Integrated Management Framework for Lumbini'.

Output

- The Integrated Management Framework (IMF) document in English was prepared, which is comprised of three sections. The first section provides a clear definition of Lumbini as a World Heritage Property with a clarification of its OUV, authenticity, integrity and the boundaries. The second section explains the management system that has been put in place to ensure that the OUV of Lumbini is safeguarded. This includes the guidelines for the physical plan of the Sacred Garden of Lumbini. The third section provides the frameworks for implementation which includes sector-wise coordination, monitoring and reporting. The IMF document in English has been submitted to MoCTCA for adoption by the Government of Nepal.

Activity 4.3: Establishment of processes

- Discussed preparation of a plan of action based on compilation of site-specific categorized issues to address key objectives that allow the management plan to respond to the issues.
- Discussed about the preparation of an annual action plan as a planning tool.
- Discussed about improving management processes linked to the management of the World Heritage Property and the associated Buffer Zone. Establishment of a process to deal with regular activities, the implementation of guidelines and by-laws and action to deal with emergencies.
- Discussed about monitoring, reporting and periodic assessment to ascertain that the on-going processes are in line with the specified frameworks and management objectives

Output

- The above points were discussed during the preparation of the IMF document, however without the official adoption of the document it was not possible to detail the management processes.

Activity 4.4: Trial implementation through a full one year cycle to verify the effectiveness of the management framework and action plans

Conducted meetings to make the Integrated Management Framework documents familiar to stakeholders and associated authorities.

However, without the official adoption of the IMF document it was not possible to carry out any trial implementation.

Activity 4.5: Long-term management for sustainability of the IMP

The IMF document clearly defines the system for the long-term sustainable conservation and protection of the Lumbini World Heritage Property and the surrounding areas that potentially might have an impact on the property. The management system has taken into account the management of the World Heritage Property and the Buffer Zone with clearly formulated guidelines. This area lies within one by one mile Sacred Garden area, which is the central area of the five by five mile Kenzo Tange Master Plan area. The management system has also taken into account the close link of Lumbini to the other Buddhist sites in the Greater Lumbini Area which spans three districts, namely, Kapilvastu, Rupandehi and Nawalparasi, and covers an area of approximately 75 x 25 km.

Additional activity: Heritage impact assessment of tourism in Lumbini

The World Heritage Committee in 2012 requested Nepal to continue its work on the finalisation of the Integrated Management Plan (IMP), and to continue its commitment to non-approval of any development project within the property or in the adjacent areas identified as having potential archaeological significance before the completion of the IMP and before conducting Heritage Impact Assessments, in conformity with the ICOMOS Guidelines on Heritage Impact Assessments for World Heritage cultural properties.

A Heritage Impact Assessment (HIA) of tourism in Lumbini was conducted by ICOMOS Nepal in 2013 in accordance with the ICOMOS 'Guidance on Heritage Impact Assessment for Cultural World Heritage Properties' (2011). The HIA of tourism in Lumbini examined the impact of visitors on the significant values of the Lumbini World Heritage Property within the context of tourism management and development issues. The assessment report outlines tourism/visitor-related impacts at the Lumbini World Heritage Property and at the Kenzo Tange Master Plan area. It discusses how on-going and future projects may impact the site and suggested mitigation measures for current and potential impacts. It also includes recommendations for HIA guidelines for future projects and initiatives in Lumbini, as well as at other heritage sites in Nepal.

Results not achieved

- Trial implementation through a full one-year cycle to verify the effectiveness of the management framework and establishment of management processes could not be undertaken due to a delay in the adoption of the document by the Government of Nepal. The Integrated Management Framework document was not adopted and underwent numerous reviews by newly appointed personnel in the national authorities as there were many changes in the government. The final review was carried out on 30 May 2013 in the presence of representatives of all the relevant authorities and presided over by the vice-chair of the LDT. The entire document was reviewed word for word in English and a final text was agreed upon. The document has also been adopted by the Board of LDT and has been forwarded to the Ministry of Culture, Tourism and Civil Aviation for further adoption procedures.

Activity 5: Improvement of the knowledge and skills of material conservation personnel and archaeological staff of the LDT and DoA

Various capacity building activities were organised in view of strengthening capacity for the conservation and management of Lumbini within the framework of the project. This was carried out in anticipation of the next phase of collaborative field activities within the Greater Lumbini Area.

The knowledge and skills of materials conservation personnel and the archaeological staff of both the DOA and the LDT were improved through training that focused on conservation and archaeological investigation during field operations.

The first phase of conservation training of six staff from the DoA and the LDT was carried out before the beginning of field operations by an international chemist-conservator and restorer from Italy. The training consisted of several theory classes regarding the nature and the degradation mechanisms of stone and on conservation materials and methodology. At the same time, practical training was also provided on the basic practice of restoration.

The second phase of conservation training was carried out in the form of a practical training workshop on the restoration of the three monuments, namely, the Ashoka Pillar and its Capital, the Nativity Sculpture and the Marker Stone. At the end of the training sessions, technical documentation on restoration procedures, restoration materials and ordinary maintenance instruction was provided to the national team. This approach will help preserve the state of conservation of the restored monuments.

A team of four archaeologists from the DoA and three from the LDT were provided with practical training on the archaeological investigation within the Mayadevi Temple, the Sacred Garden and areas surrounding it, including the Village Mound. This training involved mapping, auger-coring, geophysical surveys, excavation of evaluation trenches and post-excavation analysis. With additional support from Durham University and the Paris-based NGO Oriental Cultural Heritage Sites Protection Alliance, two archaeologists also participated in the archaeological field training programme at Durham University in the UK.

A total of forty students from Nepal's Tribhuvan University also participated in the three archaeological field surveys and they also observed conservation work in the field.

A five member delegation including the vice-chair of the LDT, the director-general of the DoA and archaeological officers from the LDT and the DoA participated in a week-long study tour on World Heritage management at Durham University including a one-day workshop on World Heritage management. The delegation visited the UNESCO World Heritage Property at Durham University and other World Heritage Properties and protected monuments within North East England. The study tour provided participants with the opportunity to interact with heritage practitioners and managers, exchange best practices and discuss opportunities and challenges in managing World Heritage Properties, particularly those with a religious element.

International Scientific Steering Committee (ISSC)

An international Scientific Steering Committee was established under the chair of team leader, Yukio Nishimura to supervise the overall implementation of the project. The other committee members included representatives of the Ministry of Culture, Tourism and

Civil Aviation, the DoA, the LDT, donor, UNESCO, and Costantino Muecci and Robin Coningham - the international experts technically leading the project.

The International Scientific Steering Committee arried out the following activities:

- Advised the Government of Nepal and UNESCO on the technical progress of operations carried out under the project;
- Reviewed the preceding year's work and set forth and agreed on the entire programme for the coming year;
- Assisted in other points, that arose in connection with the implementation of the project.

Other specialists were also invited as observers to annual meetings of the ISSC.

First ISSC meeting

The first meeting of the ISSC, under the chair of team leader Yukio Nishimura was held on 5 August 2010 following the official project launch in Lumbini on 3 August 2010. It reviewed the terms of reference of its work, project coordination arrangements, main project activities and outputs and the implementation plan and project coordination arrangements for August 2010 to July 2011.

Second ISSC meeting

The second meeting of the ISSC under the chair of team leader Yukio Nishimura was held on 12 and 13 July 2011. The meeting reviewed activities undertaken during the project's first year of implementation and discussed the next year of implementation.

The meeting was preceded on 11 July 2011 by the round table discussion for the vision of developing the entire greater Lumbini area, by representatives of the Government of Nepal, diplomatic corps in Nepal, intergovernmental organizations and Buddhist institutions.

On 13 July 2011 the preliminary findings of a UNESCO commissioned study on the environmental impact of industrial development around Lumbini was presented by the Nepal chapter of the International Union for Conservation of Nature (IUCN).

Third ISSC meeting

The third meeting of the ISSC under the chair of team leader Yukio Nishimura was held from 17 to 19 July 2012. The meeting reviewed activities undertaken during the project's second year of implementation and discussed the implementation plan for the third year.

Other initiatives discussed at this third meeting centred on the World Heritage Property and beyond the World Heritage Property such as a comprehensive archaeological survey of the Greater Lumbini Area; a proposal for an international architectural competition for the Sacred Garden; and the establishment of an International Documentation Centre for Lumbini.

The meeting included discussions on activities of Phase II of the UNESCO/JFIT project. UNESCO office in Kathmandu prepared a draft outline of a Phase II project based on the outcome of this discussion.

Meeting participants included representatives from Nepal's Ministry of Culture, Tourism and Civil Aviation, the DoA, the LDT, the Embassy of Japan in Nepal, experts on archaeology, conservation and planning, the Asian Development Bank's South Asia Tourism Infrastructure Development Project and the Korea International Cooperation Agency, as well as UNESCO staff (UNESCO Kathmandu office and the World Heritage Centre). Participation by other development agencies and partners enhanced the significance of the meeting and its impact went beyond the scope of the present project.

On 19 July 2012, a stakeholder meeting was organized to present the overall summary of project activities carried out in the first two years and the implementation plan for the final year of the project.

Fourth ISSC meeting

The fourth meeting of the ISSC chaired by Robin Coningham, Adviser on Archaeology, was held in Lumbini on 4 and 5 July 2013. The meeting reviewed activities undertaken during the project's third year of implementation.

The UNESCO Office in Kathmandu presented the objectives, expected results and activities of the new phase of the project and its proposed coordination, monitoring, reporting and evaluation. The second phase of the project consolidates past conservation efforts in view of the importance for the safeguarding of the World Heritage Property itself, as well as of Tilaurakot and Ramagrama. The national authorities, MoCTCA, DoA and LDT agreed upon the proposed objectives and activities of the UNESCO/Japan FIT Lumbini phase II project. The project proposal will be forwarded to MoCTCA by LDT for official approval.

Other initiatives such as a comprehensive archaeological survey of the Greater Lumbini Area, the UNESCO/UNDP Lumbini Support Project, the Heritage Impact Assessment of Tourism in Lumbini, the proposed Lumbini Clean Public Transport Scheme under the Asian Clean Energy Fund (ASEC) by the ADB and Lumbini and Tilaurakot museums were also discussed in the meeting.

This was followed by a stakeholder meeting on 6 July 2013 to present project activities carried out and the proposed new phase of the project.

Project missions

Various missions were undertaken by UNESCO staff, national authorities and national and international experts in order to implement the project activities.

SN	Date	Personnel	Purpose
1	2 to 6 July 2013	Robin Coningham, Adviser on Archaeology; Costantino Meucci, Adviser on Conservation; Takefumi Kurose of University of Tokyo; Kosh Prasad Acharya, Consultant; Kai Weise, Consultant.	Lumbini - To participate in the fourth ISSC meeting.
2	2 to 6 July 2013	Axel Plathe, Head of UNESCO office in Kathmandu; Roland Lin,	Lumbini and Tilaurakot - Site visits to Lumbini and Tilaurakot organized by UNESCO KAT (3 July);

		Programme Specialist, World Heritage Centre; UNESCO; and Nabha Basnyat Thapa, Project Coordinator.	Fourth meeting of the ISSC organized by UNESCO KAT (4 & 5 July); Stakeholder consultation organized by UNESCO KAT and LDT (6 July); Press conference on the completion of the project in Kathmandu (7 July).
3	29 May to 1 June 2013	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To participate in a meeting with national authorities on the Integrated Management Plan for Lumbini and local stakeholders consultation meeting and brainstorming session on integrating culture into non-formal education in the Greater Lumbini Area organized by the UNESCO/UNDP Lumbini Support Project.
4	30 April to 3 May 2013	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To coordinate and participate in a meeting with national authorities on the Integrated Management Plan for Lumbini
5	6 to 14 April 2013	Nabha Basnyat Thapa, Project Coordinator; and four member delegation from DOA and LDT.	Durham, UK - To visit UNESCO World Heritage Property in Durham, UK and to participate in a study tour of related museums, World Heritage Sites, protected monuments and resource focal points in North East England.
6	12 to 14 January 2013	Axel Plathe, Head of UNESCO office in Kathmandu; and Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To participate and contribute to the Technical Working Meeting.
7	6 to 20 January 2013	Team from Rome, Italy led by Costantino Meucci, Adviser on Conservation.	Lumbini – To implement the activity: Conservation of archaeological remains in Lumbini including a study of the micro-climate and hydrological effects in the Maya Devi Temple.
8	4 to 12 January 2013	Team from University of Tokyo, Japan led by Yukio Nishimura.	Lumbini – To implement the activity: Review of Kenzo Tange Master Plan for Sacred Garden.
9	5 to 8 January 2013	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To participate in a meeting with international experts and the LDT and to facilitate missions of international experts from the UK and Italy
10	3 January to 2 February 2013	Team from Durham University led by Robin Coningham, Adviser on Archaeology.	Lumbini - To implement the activity: Archaeological identification, Evaluation and Interpretation of Lumbini.

11	16 to 19 July 2012	Yukio Nishimura, Team Leader; Robin Coningham, Adviser on Archaeology; Kosh Prasad Acharya, Consultant; Kai Weise, Consultant.	Lumbini - To participate in the third International Scientific Steering Committee annual meeting.
12	16 to 19 July 2012	Axel Plathe, Head of UNESCO office in Kathmandu; Roland Lin, Programme Specialist, World Heritage Centre; UNESCO and Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To participate and coordinate the third International Scientific Steering Committee annual meeting.
13	22 to 23 February 2012	Axel Plathe, Head of UNESCO office in Kathmandu.	Lumbin - To attend the ceremony to unveil the new protective box for the Marker Stone in Lumbini and to observe the end of the conservation works
14	13 and 15 February 2012	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To observe and facilitate the conservation activity.
15	4 to 26 February 2012	International expert team from Italy led by Costantino Meucci, Adviser on Conservation.	Lumbini - To implement the activity: Conservation of archaeological remains.
16	24 and 29 January 2012	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To observe the end of the second season of archaeological work in Lumbini; debriefing meeting with the Lumbini Development Trust; and to participate in the archaeological investigation
17	16 to 18 January 2012	Axel Plathe, Head of UNESCO office in Kathmandu.	Lumbini - To contribute to the finalization of the Integrated Management Plan for Lumbini and to participate in the presentation of the archaeological survey.
18	14 to 17 January 2012	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To participate in a workshop to finalize the Integrated Management Plan for Lumbini; debriefing meeting of the activity: Archaeological Identification, Evaluation and Interpretation of Lumbini; and to observe the implementation of archaeological activity in Lumbini
19	4 to 28 January 2012	Archaeologists from Durham University led by Robin Coningham, Adviser of	Lumbini - To implement the activity: Archaeological identification, evaluation and interpretation of

		Archaeology.	Lumbini.
20	28 December 2011 to 7 January 2012	Team from Tokyo University led by Yukio Nishimura.	Lumbini - To implement the activity: Review of the Kenzo Tange Master Plan for the Sacred Garden.
21	1 December 2011	Axel Plathe, Head of UNESCO office in Kathmandu.	Lumbini - To participate in the event organized by the Lumbini Development Trust.
22	20 to 22 November 2011	Feng Jing, DIR/WHC/APA.	Lumbini - Visit to the Lumbini World Heritage Property, Tilaurakot and Ramagram.
23	4 to 9 September 2011	Nabha Basnyat Thapa, Project Coordinator.	Lumbini – To participate in South Asia Sub-regional Tourism in-Country forum and learning event organized by the Asian Development Bank (ADB) – 5 to 7 September 2011; Workshop on the preparation of the Integrated Management Plan for Lumbini.
24	10 to 14 July 2011	Roland Lin from WHC/APA; the three international experts; Axel Plathe, Head of UNESCO office in Kathmandu; Nabha Basnyat Thapa, Project Coordinator; Nipuna Shrestha, programme staff; and Yogendra Chhetri, AO.	Lumbini - A round table discussion on 'Advancing the vision for Lumbini's development', which was organized jointly by the Ministry of Federal Affairs, Constituent Assembly, Parliamentary Affairs and Culture and UNESCO (11 July); Presentation and discussion on 'Guidelines for the Physical Planning of the Sacred Garden' organized by UNESCO (11 July) Second meeting of the International Scientific Steering Committee organized by UNESCO (12 and 13 July); Stakeholder consultation organized by UNESCO (13 July).
25	5 to 8 April 2011	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To facilitate the conservation mission of international conservation experts from Rome, Italy and national experts from the DoA and LDT.
26	2 April to 9 May 2011	Team from Rome, Italy led by Costantino Meucci, Adviser on Conservation.	Lumbini – To implement the activity: Conservation of archaeological remains in Lumbini including study of micro-climate and hydrological effects in the Maya Devi Temple.
27	5 to 7 February 2011	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To facilitate the first field mission of the international conservation team from Rome, Italy.

28	February 2011	Axel Plathe, head of UNESCO in Kathmandu Nepal.	Lumbini - To participate in a press conference for the launch of the conservation work.
29	2 to 20 February 2011	Team from Rome, Italy led by Costantino Meucci, Adviser on Conservation.	Lumbini – To implement the activity: Conservation of archaeological remains in Lumbini including study of micro-climate and hydrological effects in the Maya Devi Temple.
30	24 and 25 January 2011	Nabha Basnyat Thapa, Project Coordinator.	Lumbini - To observe the end of the first field season of archaeological survey and handover of the antiquities recovered during excavation to the Lumbini Development Trust.
31	1 to 30 January 2011	Team from Durham University, UK, led by Robin Coningham, Adviser on Archaeology.	Lumbini - To implement the activity: Archaeological identification, evaluation and interpretation of Lumbini.
32	3 to 7 January 2011	Axel Plathe, head of UNESCO office in Kathmandu; Nabha Basnyat Thapa, Project Coordinator; and Gomba Sherpa, Programme Assistant.	Lumbini -To participate in a symposium on the Sacred Garden and to participate in a technical workshop on progress in the implementation of the three main elements of the project.
33	28 December 2010 to 11 January 2011	Team from University of Tokyo led by Yukio Nishimura.	Lumbin – To implement the activity: Review of Kenzo Tange Master Plan for Sacred Garden.
34	10 October 2010	Axel Plathe, head of UNESCO Office in Kathmandu and Nabha Basnyat Thapa, Project Coordinator.	Lumbini – To discuss with representatives of the LDT on preparation of the work of the conservation and archaeological teams and to introduce the new coordinator of the project to project partners in Lumbini.
35	3-5 August 2010	Roland Lin from WHC/APA; the three international experts; Axel Plathe; Nipuna Shrestha and Gomba Sherpa from UNESCO Kathmandu Office.	Lumbini - Project Launching Ceremony (3 August); Expert group meetings (3 and 4 August); Stakeholder consultation (5 August); First meeting of the ISSC (5 August).

Reports and documents

The following reports and documents were produced:

Coningham, R.A.E., and Acharya, K.P. 2013. Identifying, evaluating and interpreting the physical signature of Lumbini for presentation, management and long-term protection. Strengthening the Conservation and Management of Lumbini, the birthplace of the Lord Buddha. Report of the third season of field operations, UNESCO, Kathmandu.

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III. Difficulties and problems encountered and measures taken – and any changes in implementation

Difficulties and problems	Measures taken
Confusion and speculation regarding restoration method encountered during implementation.	Meetings were organized with stakeholders and local press organized to share information.
Constant personnel changes in national authorities including the ministry, the DoA and the LDT. Therefore, the contents of the integrated management framework document underwent numerous reviews by new personnel.	A series of workshops and meetings were organized for the preparation of this document and this strategy helped overcome this challenge. The document is now ready for adoption by the Government of Nepal.
Delay in adoption of the Integrated Management Framework document by the Government of Nepal to allow its implementation.	Continuous reminder to finalize the Integrated Management Framework document. It was only possible on 30 May 2013 at a meeting held in Lumbini, in the presence of Vice-Chair of the LDT, Joint Secretary of the MoCTCA and representative of the DoA. The document was reviewed word by word and finalised.
Lack of timely and adequate support from LDT for undertaking conservation and archaeological work.	Briefing meetings were organized and subsistence was provided to the participants from the LDT.
Frequent disturbance of the work of the archaeological and conservation teams by constant visitor flows.	Signage and information board installed at the site to reduce interference.
Lack of timely identification of trainees from DoA, LDT and other national entities.	Letters send to the ministry, DoA and LDT informing them of the field missions and requesting participation.

IV. Project results achieved and indicators in accordance with the log frame (attached matrix table)

- Related to Expected Result N 1: Conservation work completed and monitoring system established within the framework of the project.
- Related to Expected Result N 2: Evaluation of the archaeological areas following non-intrusive archaeological research completed within the framework of the project.
- Expected Result N 3: Interim plan to protect the Sacred Garden prepared.
- Related to Expected Result N 4: The Integrated Management Framework document prepared and approved by the national authorities, which has been submitted for adoption by the Government of Nepal.
- Related to Expected Result N 5: Capacity of national staff from the Department of Archaeology (DoA), the Lumbini Development Trust (LDT) and students from the National University of Nepal on restoration and archaeological investigation enhanced. Capacity of national staff from DoA and LDT on World Heritage management enhanced.

V. Lessons learned and sustainability

- The regularity of expert missions, plus the stability of the composition of the international teams are both factors that have contributed to building trust and confidence within national stakeholders.
- The role of the ISSC and its chairperson is essential to sustainably guiding the work of the project.
- Regular information meetings with stakeholders, particularly those from the communities surrounding the World Heritage Property, are crucial for the sustainability of the project.
- Explanations of on-going activities provided to pilgrims and visitors on site by members of the conservation and archaeological teams proved useful for increasing the understanding and visibility of the project.
- Regular communication and technical support to the national project partners are strategies that are crucial to smooth implementation of the project.
- The establishment of a central documentation centre gathering all project related documentation and data would be an important element of sustainability.

VI. Evaluation recommendations when applicable

n/a

VII. Visibility

National Geographic

A team from the National Geographic (UK) went to Lumbini in January 2012 to prepare a 50-minute documentary on archaeological field activities in Lumbini and contemporary Buddhist pilgrim practice in Lumbini. This was produced for the National Geography Channel. The crew also produced a five-minute promotion film to promote Lumbini. This film will be provided to the Lumbini Development Trust so that it can be screened at the visitors' centre. Additionally, a two-page photo story on archaeological field activities was created for the National Geography magazine.

Media Coverage

- National and international media covered news on the project activities, for example: Sixth edition of *Ancient India and Iran Trust's Newsletter*, Spring 2012 http://www.indiran.org/INDIRAN_6.pdf, *Hindustan Times*, 7 July 2013, http://www.hindustantimes.com/StoryPage/Print/1088604.aspx

UNESCO Communications

- The following news articles (21 in total) were published on the UNESCO website.

  7 July 2013 - Earliest Buddhist shrines in South Asia discovered in Lumbini, Buddha's birthplace in Nepal;

  28 May 2013 - A management plan to safeguard Lumbini's heritage;

  31 January 2013 - Archaeological survey continues in Lumbini;

  31 January 2013 - Conservation of historical monuments in Lumbini continues;

  30 July 2012 - International experts review UNESCO/Japan Lumbini project;

  6 March 2012 - Conservation of Lumbini monuments continues;

  28 February 2012 - National Geographic activities in Lumbini;

  16 February 2012 - Second phase of conservation of Lumbini monuments starts;

  9 February 2012 - Archaeology to shed brighter light on history of Buddha's birthplace;

  22 December 2011 - Management plan to conserve the outstanding universal value of Lumbini;

  17 November 2011 - Roadmap to conserve the birthplace of Buddha;

  2 September 2011 - UNESCO workshop to strengthen management of birthplace of Lord Buddha;

  22 July 2011 - Series of UNESCO events highlight potential and challenges of Lumbini's development;

  8 July 2011 - High-level meeting to discuss long-term vision for development of Lumbini;

  13 May 2011 - Lord Buddha's birthplace undergoes successful preservation programme;

  4 March 2011 - Conservation of Lumbini's three most endangered monuments to start in situ in April;

8 February 2011 - Conservation of archaeological remains in Lumbini begins with support from UNESCO and the Government of Japan;

12 January 2011 - Workshops share knowledge to preserve the birthplace of Lord Buddha;

10 January 2011 - Archaeological survey begins in Lumbini, the birthplace of Lord Buddha, with funding from Japan;

28 October 2010 - Nepal PM highlights importance of UNESCO's Lumbini preservation project on UN Day;

9 September 2010 - UNESCO study to address multiple aspects of Lumbini, Buddha's birthplace.

- The following meetings with national authorities and related stakeholders (26 in total) were organized in Kathmandu and Lumbini.

  4 and 5 July 2013 - Fourth meeting of the ISSC in Lumbini;

  6 July 2013 – Stakeholder consultation meeting on the successful completion of the project activities in Lumbini;

  30 May 2013 – Meeting on the preparation of IMP with national authorities in Lumbini;

  5 May 2013 – Meeting on the preparation of IMP with national authorities at LDT office in Kathmandu;

  5 April 2013 – Meeting on the preparation of IMP with national authorities at UNESCO Office in Kathmandu;

  30 January 2013 – Presentation by Robin Coningham and Ian Simpson on archaeological investigation at DoA office in Kathmandu;

  13 and 14 January 2013 – Technical working meeting of the project in Lumbini;

  7 January 2013 – Debriefing meeting on archaeological field operations with national authorities and stakeholders in Lumbini;

  19 July 2012 – Stakeholder consultation meeting on project implementation in Lumbini;

  17 and 18 July 2012 - Third meeting of the ISSC in Lumbini;

  15 January 2012 - Debriefing meeting on conservation of archaeological remains with national authorities and other stakeholders in Lumbini;

  28 January 2012 - Debriefing meeting on archaeological field operations with national authorities and stakeholders in Lumbini;

  5 December 2012 – Meeting on the preparation of IMP with national authorities at LDT office in Kathmandu;

  5 February 2012 - Debriefing meeting on conservation of archaeological remains with national authorities and stakeholders in Lumbini;

  8 and 9 September 2011 - Workshop on the preparation of IMP in Lumbini;

  13 July 2011 – Stakeholder consultation meeting on project implementation in Lumbini;

  12 and 13 July 2011 - Second meeting of the ISSC in Lumbini;

  11 July 2011 - Presentation and discussion on 'Guidelines for the Physical Planning of the Sacred Garden' in Lumbini;

11 July 2011 - Round table discussion on 'Advancing the vision for Lumbini's development' in Lumbini;

4 April 2011 – Stakeholder consultation meeting on conservation of archaeological remains in Kathmandu;

25 January 2011 - Debriefing meeting archaeological field operations with national authorities and stakeholders in Lumbini;

5 January 2011 - Workshop on progress in the implementation of the project in Lumbini

4 January 2011 - Symposium on the Sacred Garden study in Lumbini;

5 August 2010 – Stakeholder consultation meeting on project activities in Lumbini;

3 to 5 August 2010 – First meeting of the ISSC in Lumbini;

3 August 2010 – Launch ceremony of the project in Lumbini.

- Four press conferences were organized:

  7 July 2013 - Press conference on the completion of the project in Kathmandu;

  5 April 2011 - Press conference on conservation of archaeological remains in Kathmandu;

  2 February 2011 - Press conference on the launch of the conservation of archaeological remains in Lumbini;

  6 August 2010 - Press conference on the launch of the project in Kathmandu.

Donor visibility

- Banner/Signage at the project site;
- T-shirts and jackets with the donor logo for the archaeological team and conservation team;
- Donor logo on all UNESCO communications;
- Donor mentioned in all UNESCO media releases and communications to stakeholders.

VIII. Other activities related to Lumbini, but not within the project

Several activities related to the World Heritage Property of Lumbini, which are not covered by the present project, were carried out by UNESCO together with the relevant Nepali authorities and institutions. As these activities have strong links with the project and complement some of the latest activities, they are described below.

- A book *The Sacred Garden of Lumbini. Perceptions of Buddha's birthplace* was prepared, which was based on the study of the Sacred Garden. This reviewed eight components: Kenzo Tange Master Plan; World Heritage inscription; the environment; impact on the archaeological zone; historical texts; religious texts; activities and expectations. This was carried out by a team of experts in 2011 and was funded by the Paris-based NGO the Oriental Cultural Heritage Sites Protection Alliance.

- A photography book entitled *Lumbini. Birthplace of Buddha* was prepared with a co-publishing arrangement with the Paris-based NGO the Oriental Cultural Heritage Sites Protection Alliance. The book interprets the uniqueness of Lumbini and its surroundings through 199 photographs taken by eight photographers. The photos are presented under the following seven themes: heritage, knowledge, beliefs, people, nature, spaces and dangers.
- The above two mentioned publications were launched in Kathmandu on 31 October 2013.
- Following a strong request during the Lumbini stakeholders' consultation meetings in 2010, an environmental impact assessment of industrial development around Lumbini with funding from the Paris-based NGO the Oriental Cultural Heritage Sites Protection Alliance was conducted by the Nepal chapter of the International Union for Conservation of Nature (IUCN).
- A UNDP/UNESCO Lumbini Support Project was established in May 2012 with funding from UNDP to assist national government counterparts in the preparation of strategies to garner international support for the development of Lumbini and its surrounding areas.
- UNESCO has been also involved in developing various project proposals in relation to Lumbini, such as: conducting archaeological investigation through the LIDAR technique of remote sensing in the Greater Lumbini Area; activities related to the conservation of Ramagrama; an international architectural competition for the Mayadevi Temple in Lumbini; and establishing an International Documentation Centre for Lumbini.
- UNESCO has proposed to the national authorities the establishment of an International Expert Committee for the Safeguarding of Lumbini to complement the work of the International Committee for the Development of Lumbini (established in 1970 at the United Nations with 16 Member States). Its two main functions would be to: (1) provide advice and coordinate on going and planned efforts for the preservation of sites, reconciling legitimate development projects and heritage safeguarding requirements; and (2) building on the unique values and high symbolic significance of Lumbini, and other cultural assets (intangible heritage and oral traditions, potential cultural industries, cultural tourism etc.,) to promote culture as a component of sustainable economic development, social stability and environmental protection.
- The UNESCO Office in Kathmandu and the World Heritage Centre (WHC) are currently working closely with the UN Country Team in Nepal to engage in discussions with the Nepali authorities and other stakeholders in Nepal on the ways in which the UN Country Team can garner greater support for the development of Lumbini as a place of dialogue and a vector for the development for the entire region.
- The UNESCO Office in Kathmandu has proposed an event "Lumbini Day" at UN headquarters. The purpose of "Lumbini Day" would be to take the three-pronged fundraising campaign for the full completion of the Kenzo Tange Master Plan for Lumbini to the international level, with involvement from Member States of the International Committee for the Development of Lumbini (ICDL) and with support from the UNESCO Director-General and the UN Secretary-General.
- A preliminary step for the fundraising campaign to complete the Kenzo Tange Master Plan for Lumbini was taken by the UNESCO Office in Kathmandu, which in cooperation with the Government of Nepal, organized an ambassadors' dinner in Kathmandu on 17 July 2013 to share information on the need to complete the master plan.

In addition, several activities related to Lumbini and surrounding areas, were initiated by other development partners and institutions. As they have strong linkages with the project, they are described below.

- A high-level Greater Lumbini Development National Steering Committee chaired by the former Prime Minister Pushpa Kamal Dahal was established by the Government of Nepal on 17 October 2011 to prepare the Greater Lumbini Development Master Plan across an area spanning three districts (Rupandehi, Kapilavastu and Nawalparashi), and to facilitate its implementation.
- The Asian Development Bank, within the framework of the sub-regional project "South Asian Tourism Infrastructure Development Project" for Nepal, is investing USD $46.5 million in Nepal to enhance air connectivity to Lumbini (through an upgrade of the existing airport), Lumbini site improvements and capacity development, including construction of an information centre.
- KOICA has provided a USD $2 million fund for the preparation of a "Master Plan for Lumbini World Peace City Preservation and Development". This is being prepared by Korean Professor Kwaak Young Hoon's company. The initial report was presented by Professor Kwaak in Kathmandu and in Lumbini early July 2012.
- WHO and the Indian Institute of Tropical Meteorology launched the "Air Quality Sampling and Monitoring Project in Lumbini" in July 2012 to assess air quality within the 15 km Lumbini Protected Zone, after UNESCO study found that 57 factories in the region and 15 major industries are hazardous to the environment in terms of their production processes and pollutant emissions. The first round of the project to assess air quality within the 15 km Lumbini Protected Zone was conducted during the monsoon season from 16 July, until 20 August, 2012 and the second round during the winter season, from 20 December, 2012 to 24 January, 2013. The first round of WHO air quality monitoring at Lumbini found that the level of air pollutants that severely affects health was high.
- The World Bank initiated a project "Tourism cluster analysis for Nepal" in 2013 in order to assess the key drivers, economic performance and areas of improvement. The work to date involved desk top analysis of Nepal's tourism sector, identification of the main clusters of tourism activity in Nepal and detailed field investigation of selected areas. The Greater Lumbini Area and Palpa Cluster was identified as one of the main cluster of tourism activities, therefore a detailed analysis of the potential impact of tourism was undertaken. The project aims to enable decisions to be made by the Government of Nepal and the World Bank on public and private sector investment, infrastructure and policy to further stimulate growth in the tourism sector.
- The World Wildlife Fund (WWF) Nepal signed a Memorandum of Understanding with the Lumbini Development Trust to promote environmental, cultural and religious values of Lumbini in September 2011. A key project under the partnership is the plantation of one million trees within the Lumbini Master Plan and surrounding areas over a period of ten years. The project commenced in March 2011 with the declaration of the planting 108,000 trees within 2011. Trees which were considered to have existed in Lord Buddha's era such as the Ashoka, Sal and Pipal were planted in an effort to conserve the original ambience of the site.

IX. Annexes

Results Matrix	*Annex-1*
Photos	*Annex-2*

Result Matrix

SUMMARY of OBJECTIVES (intended)	ACHIEVEMENTS (results)	INDICATORS	MEANS OF VERIFICATION
Development Goal 1. Protection, enhancement and sustainable development of the World Heritage Site. The project is part of the ongoing process of simultaneously developing and implementing the IMP.	1. Complete conservation works in the Mayadevi Temple and establishment of a monitoring system and its integration into the IMP. 2. Complete archaeological investigations in Buffer Zone with the results integrated into the IMP with respect to planning for the Sacred Garden. 3. Guidelines for conservation within the Sacred Garden prepared. 4. IMP prepared	1. Completion of material conservation works at the Mayadevi Temple and establishment of a monitoring system for the Temple and its integration into the IMP. 2. Completed archaeological investigations in the Buffer Zone with results integrated into the IMP with respect to planning for the Sacred Garden. 3. Moratorium on actions that should not be taken within the Sacred Garden. 4. Completion of the IMP preparation	Final report, Final reports of activities, IMF document.

Project Purpose/Objectives			
1. Resolving the conservation problems affecting the Ashoka Pillar, the Marker Stone, and the Nativity Sculpture as well as to put in place rapidly a monitoring system for the Maya Devi Temple in order to be able to identify short-term corrective measures for the temple itself, as well as to determine the future of the structure on the basis of its impact on the archaeological vestiges that it contains.	1. Intervention on the affected objects; Establishment of the monitoring system.	1. Completion of conservation work; Establishment of the monitoring system.	1. Monitoring of the objects; data recordings of the monitoring system.
2. Acquiring better knowledge of archaeological vestiges that are contained within the Buffer Zone in order to proceed with the planning of the Sacred Garden.	2. Enhanced knowledge of the archaeological sites in the Buffer Zone of the World Heritage Site.	2. Completion of archeological investigation.	2. Report on archaeological investigations.
3. Reviewing the present state of the Sacred Garden in respect to the concept formulated by Kenzo Tange Master Plan and reviewing the current abstract grid pattern as well as the concept of drainage and water levels of water bodies around the Sacred Garden; On the basis of the project activities, particularly archaeological research, it will be necessary to prepare an interim plan, including a moratorium on certain activities, for the Sacred Garden.	3. Better protection of the Sacred Garden area through an interim plan.	3. Interim plan of the Sacred Garden area.	3. Reports on interim plan within the Sacred Garden.
4. Establishing the Integrated Management Plan (IMP) in order to preserve the Outstanding Universal Value in the long term i.e. finalize and adopt necessary frameworks as well as support its implementation for improving the management processes.	4. Establishment of the Integrated Management Framework (IMF) and management processes for the Lumbini World Heritage Property.	4. Integrated Management Framework (IMF) document.	4. IMF document
5. Strengthening institutional capacity through improvement of the knowledge and skills of conservation personnel and archaeological staff of the LDT and the DOA. Building capacity of Nepalese experts and establishing a scientific documentation for all four components.	5. Enhanced capacities of local personnel in conservation of materials and non-intrusive archaeological research.	5. Local personnel trained in conservation of materials and non-intrusive archaeological research.	5. Reports of international experts on participation of local experts.

Outputs			
1. Restoration of the Marker Stone and its surroundings; restoration of the Nativity Sculpture; restoration of the Ashoka Pillar and the Capital; establish regular maintenance and monitoring of the restored archaeological vestiges; activation of an automatic microclimatic unit to monitor the Maya Devi Temple followed by one year continuous monitoring and the evaluation of the acquired data.	1. Conservation works completed; establishment and continuous operation of the monitoring system	1. Conservation works completed; establishment and continuous operation of the monitoring system	1. Final project report; Conservation report
2. Evaluation and interpretation of a) Pre-Ashokan levels in the Maya Devi Temple; b) The Sacred Garden; c) The Southwest "Village" mound; d) The Southeast zone of the Sacred Garden; e) The un-surveyed areas of the Sacred Garden.	2. Evaluation of the archaeological zones following non-intrusive archaeological research	2. Archaeological research complete	2. Final project report
3. Interim plan to protect the Sacred Garden.	3. Interim plan	3. Interim plan	3. Final project report
4. Integrated Management Plan to protect the SOUV of Lumbini World Heritage Property	4. Completion of IMP following establishment and adoption of IMF	4. IMF document prepared	4. Final project report; IMF document
5. Training of relevant personnel within the framework of activities	5. Enhanced capacities of local personnel	5. Local personnel trained	5. Final project report

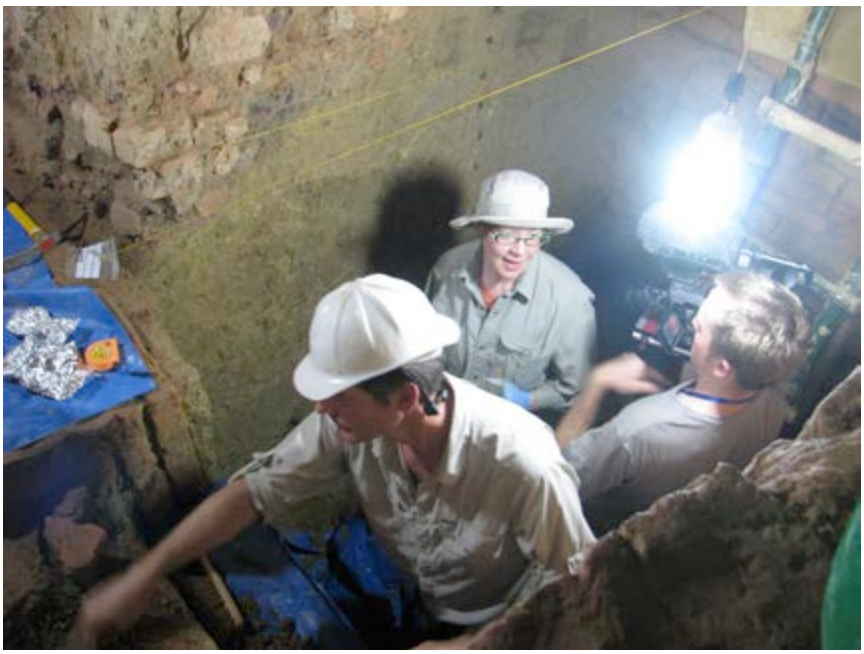
Activities			
Activity 1.1 Restoration of Mauryan Structures and of the archaeological stratigraphic cross-sections	1.1 Restoration of Mauryan structures and of the archaeological stratigraphic cross-sections	1.1 Mauryan structures and of the archaeological stratigraphic cross-sections restored	Final project report; Conservation report
Activity 1.2 Restoration of the Marker Stone and its surroundings	1.2 Restoration of the Marker Stone and its surroundings	1.2 The Marker Stone and its surroundings restored	
Activity 1.3 Restoration of the Nativity Sculpture	1.3 Restoration of the Nativity Sculpture	1.3 The Nativity Sculpture restored	
Activity 1.4 Restoration of the Ashoka Pillar and its capital	1.4 Restoration of the Asoka Pillar and the Capital	1.4 The Ashoka Pillar and the Capital restored	
Activity 1.5 Establish regular maintenance and monitoring of the restored archeological vestiges	1.5 Regular maintenance and monitoring of the restored archeological vestiges	1.5 The restored archeological vestiges maintained and monitored	
Activity 1.6 Activation of an automatic microclimatic unit to monitor the Maya Devi Temple followed by one year continuous monitoring, the evaluation of the acquired data and architectural optimization of the Shelter	1.6 Activation of an automatic microclimatic unit	1.6 Automatic microclimatic unit activated	
Activity 2.1 Evaluating and interpreting Pre-Asokan levels in the Maya Devi Temple	2.1 Evaluation and interpretation of the archaeological zones in the Mayadevi Temple	2.1 Archaeological research of the archaeological zones in the Mayadevi Temple complete	Final project report; Archaeological investigation report (three seasons of field activities)
Activity 2.2 Evaluating and interpreting the Sacred Area	2.2 Evaluation and interpretation of the Sacred Garden	2.2 Archaeological research of the Sacred Garden complete	
Activity 2.3 Evaluating and interpreting the Southwest “Village” Mound	2.3 Evaluation and interpretation of the Southwest “Village” Mound	2.3 Archaeological research of the Southwest “Village” Mound complete	
Activity 2.4 Evaluating and interpreting the Southeast Zone of the Sacred Garden	2.4 Evaluation and interpretation of the Southeast Zone of the Sacred Garden	2.4 Archaeological research of the Southeast Zone of the Sacred Garden complete	
Activity 2.5 Evaluating and interpreting the un-surveyed Areas of the Sacred Garden	2.5 Evaluation and interpretation of the un-surveyed areas of the Sacred Garden	2.5 Archaeological research of the un-surveyed areas of the Sacred Garden complete	
Activity 3.1 Review Kenzo Tange Master Plan for the Sacred Garden	3.1 Review of Kenzo Tange Master Plan for the Sacred Garden	3.1 Kenzo Tange Master Plan for the Sacred Garden reviewed	Final project report; Activity report, Study report of the Sacred Garden
Activity 3.2 Appropriate site interpretation of the Sacred Garden	3.2 Site interpretation of the Sacred Garden	3.2 The Sacred Garden interpreted	
Activity 3.3 Consolidation of JFIT Project and Interim Plan for the Sacred Garden	3.3 Interim Plan for the Sacred Garden	3.3 Interim Plan for the Sacred Garden	

Activity 4.1 Preparation of the Statement of Outstanding Universal Value (SOUV) for the World Heritage Property in Lumbini Activity 4.2 Establishment of Appropriate Frameworks Activity 4.3 Establishment of Processes Activity 4.4 Trial Implementation through a full one year cycle to verify the effectiveness of the management framework and action plans Activity 4.5 Long-term management for sustainability of the IMP	4.1 Preparation of the SOUV 4.2 Establishment of IMF 4.3 Discussion on the establishment of processes 4.4 Discussion on the establishment of action plans 4.5 Definition of the system for the long-term sustainable conservation and protection of Lumbini in the IMF document	4.1 SOUV prepared 4.2 IMF document prepared 4.3 Establishment of processes discussed 4.4 Establishment of action plans discussed 4.5 System for the long-term sustainable conservation and protection of Lumbini defined	Final project report; IMF document, SOUV

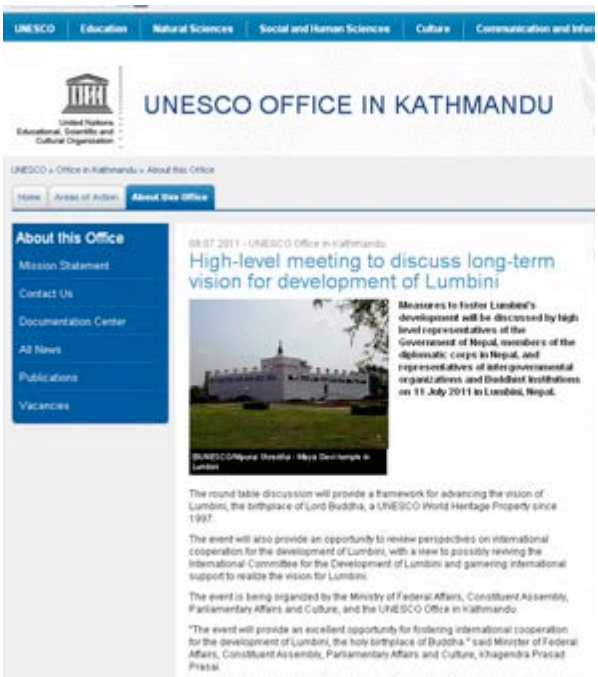
Photos

Annex-2

Visibility



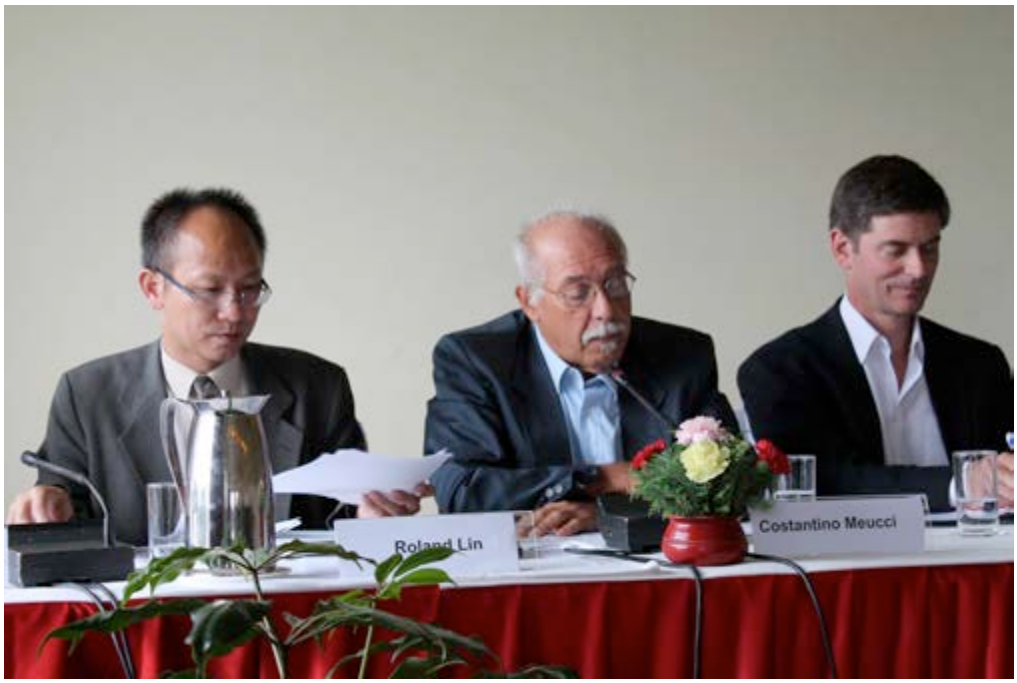
National Geographic in Lumbini



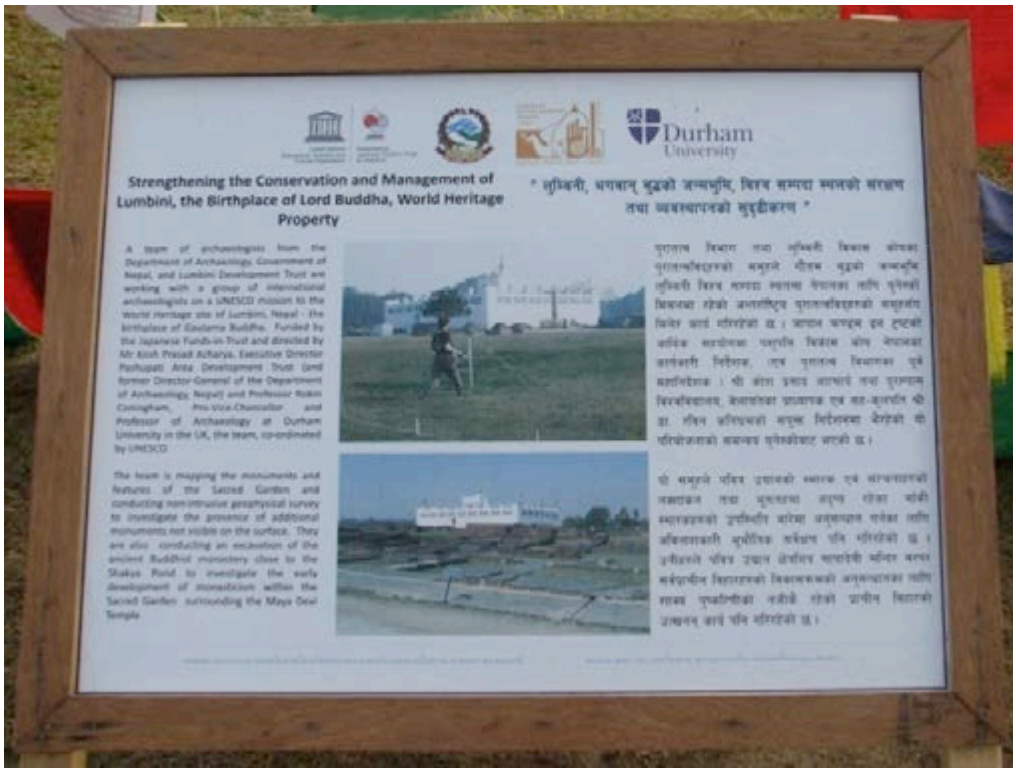
News articles on the UNESCO website

National media covering project activities

Visibility



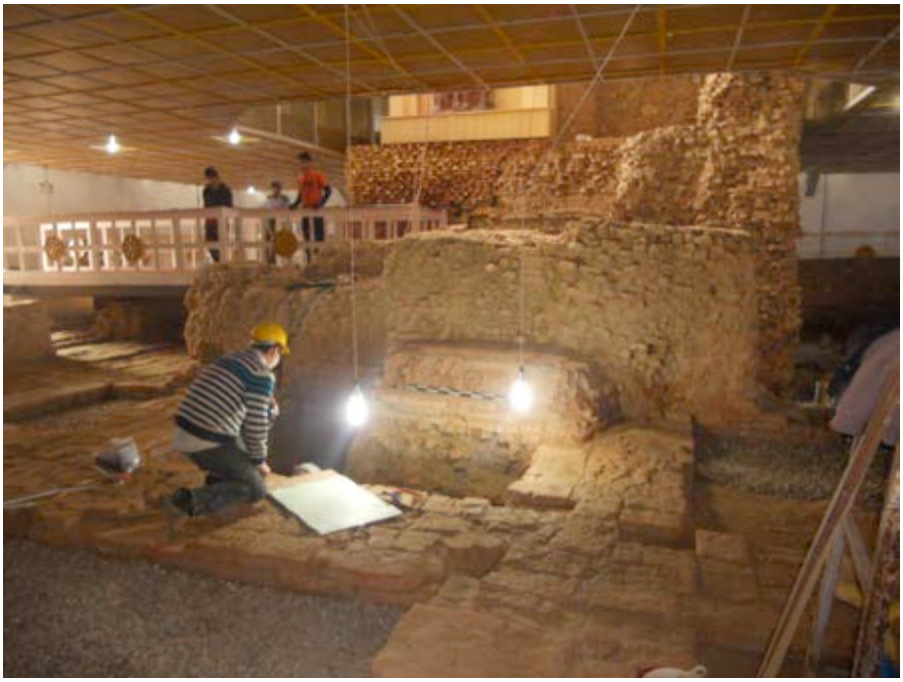
Press conference in Kathmandu



Signage on project site

Project activities in Lumbini

Conservation of the Marker Stone



Archaeologists in the Mayadevi Temple

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