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### LRF-6 Final REPORT

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| **Reporting UN Organization** | **:** | United  Nations  Educational  Scientific  and  Cultural  Organization (UNESCO) |
| **Country** | **:** | **Lebanon** |
| **Project No.** | : | 222LEB4000LRF - 6 |
| **Project Title** | : | Capacity Building of human resources for digital documentation of World Heritage Sites affected by 2006 war in Lebanon |
| **LRF Signature date** | : |  22 August 2007 |
| **Project Start date**  | : |  December 2007 |
| **Project end date** | : | 31 December 2010 |
| **Reporting Period** | **:** |  December 2007 -December 2010 |
| **Submitted by** | **:** | Joseph Kreidi-Programme Officer for Culture (j.kreidi@unesco.org) |

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| I. PURPOSE |

**Project Summary:**

UNESCO  assessment  mission  for  (July-August  2006)  war  damages  on  World  Heritage  Sites  of Lebanon  expressed  concern  regarding  the  routine  maintenance  of  those  sites  and recommended  to  prioritize  the  establishment  of  an  integrate  action  plan  for  tangible  cultural heritage  conservation  all  over  the  country.  This  Action  Plan  should  be  considered  as  an umbrella  for  few  most  important  components  such  are:

 • Establishment  of  risks’  map  for  World  Heritage  Site;

 • Establishment  of  digital  exhaustive  technical  documentation  for  World  Heritage  Site;

 • Capacity  building  of  human  resources  able  to  address  above  components;

**Project Objective:**

To  build  capacities  of  Human  Resources  in  charge,  or  potentially  linked  with,  the conservation,  the  development  and  the  enhancement  of  tangible  cultural  heritage  in Lebanon.  The  main  target  group  will  be  the  DGA  staff,  but  also  Lebanese  University  (UL) students,  while  the  main  subject  of  the  action  is  to  establish  accurate  high  definition  3D digital  data  and  documentation  for  World  Heritage  Sites  through  pilot  on-site  operation  for Baalbek   World  Heritage  Site.

**Project Outcomes:**

• To  contribute  to  the  risk  mapping  of  the  affected  World  Heritage  Sites  in  Lebanon

• To  ensure  the  state  of  conservation  of  the  affected  World  Heritage  Sites  in  Lebanon

• To  build  capacities  of  human  resources  for  conservation  and  enhancement  of  cultural heritage  sites  in  Lebanon

• To  establish  a  model  of  full  survey  of  one  of  the  affected  World  Heritage  Sites in Lebanon

**Project Linkages to National Priorities and Reconstruction Goals:**

• To  ensure  the  state  of  conservation  of  the  affected  World  Heritage  Sites  in  Lebanon

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| II. RESOURCES |

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| **Total budget approved**  |  **:** USD  | **767,226** |
| **Total disbursements as for 31 December 2010**  |  **:** USD  | **755,193.89** |
| **Commitments for next quarter**  | **:**  USD | Project ended by 31/12/2010 |
| **Available Balance**  | **:** USD  | **12,032.11** |

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| **CATEGORY** | **TOTAL BUDGET****(USD)** | **TOTAL EXP****(USD) to Date**  |
| **10 Project Personnel** | 7967.36 | **5,419.3** |
| **20 Sub-Contracts**  | 360,779.80  | **360,779.80** |
| **30 Training and Seminars** | 9940.38 | **9,880.38** |
| **40 Equipment and maintenance** | 335,345.46 | **330,906.35** |
| **50 Miscellaneous** | 3,000 | **2,999.46** |
| **80 Support Costs** | 50,193 | **45,208.60** |

**III. Implementation and monitoring arrangements**

**Project Implementation Partners:**

**UNESCO**

* Overall coordination and supervision of the activity
* Administrative and financial management of the activity
* Regular reporting to the donor

**Directorate  General  of  Antiquities  -  Ministry  of  Culture**

* Manager of the World Heritage Site of Baalbek pilot site chosen for the implementation of the activity;
* Main beneficiary of the training component of the activity as well of the acquisition of new 3D tools and equipments as well as the of the digital documentation, procedure of updating and virtual reconstruction;
* DGA selects monuments for operations;
* DGA dispatch its staff for the training;
* DGA provides all existing reference documentation for Baalbek, deliver authorizations and facilitates the execution of the activity;
* DGA elaborates the necessary procedures of the continuous data gathering process for the diachronic monitoring purposes.

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| IV. RESULTS |

The project “Capacity building of human resources for digital documentation of World Heritage Sites affected by the 2006 war in Lebanon” has achieved the development of guidelines and a solid methodology for the preparation of a “Risk Preparedness Strategy” of Baalbek, based on the results of Phase I, in which a group of experts captured a complete physical 3D surface configuration of the property using a 3D laser scanner.

It is important that the acquisition of a 3D mapping device and the “Risk Preparedness Strategy” methodology - compiling results from the definition of a “damage atlas”, surface condition maps and a structural surface integrity study - are not put aside for the future conservation of this important heritage place.

A set of recommendations have been provided that build upon the success of the developed approach, while the information acquired, assessed and presented here should be aimed at ensuring timely, sufficient and relevant actions, such as:

* Prepare an integral approach for monitoring those “changes” - rate of change, other risk factors and hazards to visitors/staff - on the property,
which have been identified in Phase II;
* Re-evaluate ‘significance’ and its relation with integrity, based on these changes;
* Develop a preventive maintenance plan to ensure that issues identified in the RPS are tackled;

The current administration of the DGA has hired specialized staff on GIS who has finished the design, development of an information system for cataloguing and storing all information about heritage places in Lebanon. Additionally the DGA GIS
staff is in the process of finalizing the proper GIS database that was initiated during the project implementation phase in collaboration with the international experts, in order to integrate the structural and surface condition survey results. It should provide the opportunity to share information among cultural heritage stakeholders.

In addition, the DGA is in the process of updating its current “heritage information strategy”, in order to fully identify essential documentation on heritage places.

On the other hand, the close coordination between the DGA and the UNESCO office in Beirut along with the international experts allowed the project to reach its aims and to respond to the needs of the local heritage management administration. The methodologies and strategies developed during the implementation of the different
phases of the project have set the needed basis and standards for the application
of RPS to cover the entire site of Baalbek and consequently other heritage sites in Lebanon in the future.

Furthermore, this experience can be of great help to other WH sites management authorities. It could be taken as a model in the integrated approach using the latest technologies along with well known research techniques for the implementation of Risk Preparedness Strategies for their sites in the Future.

Moreover, this project contributed to the experience of both national and international experts; which will help both parties to further improve their methods and applications in their respective future projects.

As a conclusion:

A risk map was prepared for the pilot area of the project and a procedure was laid out that can be applied to the rest of the Baalbek site as well as other World Heritage Sites in Lebanon.

The risk map will help identify areas that need urgent attention that should be addressed with proper conservation measures.

DGA staff was trained on the use of laser scanning to document World Heritage Sites. The staff was also trained on the identification of surface degradations in order to define the type of risks affecting or that will eventually affect the monument.

A booklet was published detailing the methods used throughout the project along with recommendations for future projects. This booklet will serve as a guide for site managers who want to carry out similar project for documenting and mapping the risk for other sites.

**Implementation Constraints and Lessons Learned:**

Important  delays  occurred  due  to administrative procedures as well as due to  the  resignation  of  the  Director  General  of  Antiquities  our main  partner  ,  in  addition  to  the  obstruction  by  the  set  up  of  Baalbek   International  festival which  delayed  the  laser  scanning  survey   for  several  months over a the year

**Key Partnerships & Collaboration**

All these activities were undertaken in close coordination with Leuven University and the Directorate General of Antiquities

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| V. FUTURE WORK PLAN |

Project  ended  on  31/12/2010.  The  Ministry  of  Culture/Directorate  General  of  Antiquities who  is the  main  beneficiary  of  that  project  will  use  the  provided  techniques/equipments for the management of other World Heritage Sites.

**Adjustments to strategies, outcomes or outputs:**

Although  we  had  several  delays  and  administrative  constraints  during  the  implementation period,  we  have  managed  to  successfully  complete  all  the  phases  of  the  project.
The  project  concept,  implementation  and  outcomes  were  a  great  success  and  the  project  is the  first  of  its  kind  in  the  Arab  Region.

**VI. Indicator Based Performance Assessment:**

**Outcome 1**

• To contribute to the risk mapping of the affected World Heritage Sites in Lebanon:

* **Output 1:** A risk map was prepared for the pilot area of the project and a procedure was laid out that can be applied to the rest of the Baalbek site as well as other World Heritage Sites in Lebanon.
* Target Achieved
* Source of verification: Report submitted by consultant and validated by the DGA/Ministry of Culture and UNESCO

**Outcome 2**

• To ensure the state of conservation of the affected World Heritage Sites in Lebanon:

* **Output 2 :**To The risk map will help identify areas that need urgent attention that should be addressed with proper conservation measures.
* Target Achieved
* Source of verification: Report submitted by consultant and validated by the DGA/Ministry of Culture and UNESCO

**Outcome 3**

• To build capacities of human resources for conservation and enhancement of cultural heritage sites in Lebanon:

* **Output 3:** DGA staff was trained on the use of laser scanning to document World Heritage Sites. The staff was also trained on the identification of surface degradations in order to define the type of risks affecting or that will eventually affect the monument.
* Target Achieved
* Source of verification: Report submitted by consultant and validated by the DGA/Ministry of Culture and UNESCO

**Outcome 4**

• To establish a model of full survey of one of the affected World Heritage Sites in Lebanon:

* **Output 4** A booklet was published detailing the methods used throughout the project along with recommendations for future projects. This booklet will serve as a guide for site managers who want to carry out similar project for documenting and mapping the risk for other sites.
* Target Achieved
* Source of verification: Report submitted by consultant and validated by the DGA/Ministry of Culture and UNESCO