[ROSAPAT 02]

TELL ES-SULTAN/JERICHO IN THE CONTEXT OF THE JORDAN VALLEY

Site Management, Conservation and Sustainable Development

Edited by LORENZO NIGRO - HAMDAN TAHA

ROME 2006
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SEZIONE VICINO ORIENTE
EXPEDITION TO PALESTINE & JORDAN
TELL ES-SULTAN/JERICHO
IN THE CONTEXT
OF THE JORDAN VALLEY
Site Management, Conservation,
and Sustainable Development

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Heritage - Ministry of Tourism and Antiquities
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Rome “La Sapienza” University

Edited by
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FOREWORD

Paolo Matthiae & Lorenzo Nigro

Jericho at the core of the flourishing ecological niche of the homonymous Oasis was a favourite area for human life in fruitful symbiosis with natural resources from the earliest times. The site witnessed a precocious integration between humans and nature, and the gradual affirmation of the distinctive Palestinian civilisation from the Natufian and Neolithic Periods onwards. The continuous occupation of the Oasis left extraordinary remains both sparse from the shore of the Dead Sea to the foot of the Mount of Temptations (Jebel Quruntul), and concentrated in several sites, the utmost of which is Tell es-Sultan, a long-living town grown by the abundant 'Ain es-Sultan, the main stream of the very river of water, which springs out at the edge of the Judean Desert and the Lower Jordan Valley. Ten thousands years of stratified human culture have produced a huge tell, unique from the point of view of its historical complexity and environmental setting. A century of archaeological investigations has only partially revealed how intriguing and appealing is the early history of Jericho.

The awareness that such a site deserves a special protection motivated the Department of Antiquities and Cultural Heritage of the Palestinian National Authority to start a Pilot Project of Excavations in collaboration with Rome "La Sapienza” University in year 1997. After four years such an experience came to a sudden interruption; however, the concern for Tell es-Sultan remained vivid and, in recent years, became more urging. Hence, the same Institutions, in order to enhance the process of protection and rehabilitation of the site, under the aegis of the UNESCO Office in Ramallah, organized the Workshop “Tell es-Sultan/Jericho in the Context of the Jordan Valley: Site Management, Conservation and sustainable Development”, as a first step towards the starting of a holistic project of valorization of this invaluable historical and cultural Heritage.

The conceptual framework and the detailed organization of the Workshop are illustrated by Hamdan Taha in the Introduction; here, we want only to stress the wide participation of local scholars, institutions and social bodies, which contributed to a large and multidisciplinary debate, and to a collection of information and proposals, each representing a relevant contribution to a theoretically firmly based project of development. As stated above, Jericho deserves such a wide and deep involvement, being a masterpiece of the World cultural and natural Heritage.
In the first section of the Workshop, the results of most recent archaeological activities in the Jericho Oasis and in the Lower Jordan Valley are illustrated, mainly focusing on Tell es-Sultan, where the joint Italian-Palestinian Expedition carried out four seasons of excavations in 1997-2000, contributing to a general re-evaluation and resetting in a non “politically oriented perspective” also of finds of previous expeditions1. The Palestinian-Norwegian Expedition to Tell el-Mafjar has added a new important piece of evidence in the history of the Jericho Oasis, with the identification of a major Chalcolithic site, while results of the Jordanian-Dutch Expedition to Deir ’Alla have presented a perspicuous case of study of ancient social dynamics in the Lower Jordan Valley. A basic outcome of this initial section was that the management and valorization of an archaeological site is strongly enhanced if an archaeological Expedition is active on it, thus taking care of the restoration and tourist availability of the site itself. Systematic archaeological activities in the Palestinian Territories should, thus, be encouraged.

The second section developed several issues connected with archaeological heritage protection and management at Jericho and in Palestine. G. Fontana Antonelli has resumed requirements for the inscription of Tell es-Sultan in the World Heritage List, within the wider horizon of the interventions he has coordinated for UNESCO for the protection and valorization of the Palestinian Cultural Heritage; Rome “La Sapienza” University contribution to the cultural and tourist valorization of the site and of the overall archaeological Heritage of Palestine, through several ongoing projects, has been illustrated by L. Nigro; a holistic approach to the Jericho Oasis Park Project, with a great deal of theoretical issues descending from the worldwide experience of the University College of London, has been put forward by S. van der Linde and T. Williams, also dealing with the complex dynamics of culture management. Interesting data on current Tell es-Sultan tourist exploitation have been provided by A. Rjoob (MOTA-DACH), demonstrating that the site is a major attraction in Palestine2, and that the presence of an active archaeological Expedition during years 1997-1999

2 Tell es-Sultan was ranked number two in the “Inventory of Palestinian cultural and natural sites of potential outstanding universal value”, presented to the World Heritage Committee at its 29th session in Durban (South Africa) by Dr H. Taha (Bethlehem - Birthplace of Jesus was ranked number one).
encouraged tourist frequentation, especially of local people. General principles to be taken into account in the setting of the Jericho Archaeological Park have been discussed by G. Solera, with special attention to the environmental, social and economic sustainability of such a project. A series of examples of rehabilitation and valorization enterprises have been, then, illustrated by the contributions of K. Qawasme, N. Riyad and H. Salem. The first, by K. Qawasme, is dedicated to the achievements of the Hebron Rehabilitation Committee, which, in a very difficult socio-political situation, succeeded in recovering, restoring and revitalizing the Old City of Hebron. The second, by N. Riyad, is a very complete review of a series of exemplary restoration and rehabilitation endeavours carried out by the MOTA-DACH in many archaeological and historical sites and landscapes in the Palestinian Territories. Such sites, restored and made available to the general public (and handed back to Palestinian society), should be made known all over the World, since they still represent quite unique cultural and environmental landscapes of Palestine. The third essay, by H. Salem, is a comprehensive historical and archaeological study of the landscape of the Birzeit district, which should be the basis upon which to build up a cultural valorization plan of this area, now under the strong pressure of modern building activities. This study also underscores the issue of landscape and site protection, which in Palestine remains the first priority of the archaeological agenda.

The third section of the volume is devoted to the preliminary studies for the creation of the Jericho Oasis Archaeological Park. The contribution of F. Nigro, equipped with very informative plates, shows the results of the interpretive discussion developed during the work on the field of the Italian-Palestinian Expedition at Tell es-Sultan, according to which some practical interventions were already made on the site (such as the realization of a tourist path with viewpoints, interpretive panels, etc.). It has to be considered a preliminary study, which, however, puts forward some basic planning tools, such as adequate and updated plans, aerial photos and satellite images. B. Hijazj of the Ariha Municipality has given a general introduction to the issues to be included in the Jericho Master Plan, within which the Project of the Archaeological Park should be coherently implemented.

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3 The month of October was the period of excavations and restorations; it corresponds to a peak of visitors, growing year after year, due to the increasing interest of local population raised by ongoing research activities.
The fourth section of this Proceedings gathers contributions introductive to restoration and rehabilitation at Tell es-Sultan and in the Jericho Archaeological Park area. In the first contribution, S. Ferrari has offered a survey of updated techniques of first-aid restoration of material culture items, to be recovered and protected on the field, developed during the Italian-Palestinian Expedition in the perspective of the creation of a local archaeological museum. The important experience on mud-brick restoration and conservation accumulated during the Italian-Palestinian Expedition has been summarized by M. Diab. The third paper illustrates the project developed for the rehabilitation of Hisham’s Palace by R. Sabelli, under the scientific coordination of Michele Piccirillo (Studium Biblicum Franciscanum, Jerusalem) and Hamdan Taha (MOTA-DACH, Director General). The latter is, in fact, with binding conservative problems, one of the most outstanding monuments, which will be part of the Jericho Oasis Archaeological Park. The final two papers by Rome “La Sapienza” PhD Students, A. Polcaro and M. Sala, are aimed at stressing the archaeological and tourist potential of two neglected Tell es-Sultan areas, the huge Jericho necropolis, and Garstang’s North-Eastern Trench, which need urgent restorations and protection, and which will constitute as many as pinpoints of the future Archaeological Park, as well as Kenyon’s Trench I, the restoration of which is a high priority for the Jericho Oasis Archaeological Park.

Several authorities, scholars and local experts actively participated in the Workshop, developing an intense discussion, of which, for reason of time and space, it is impossible to give full account in this volume; however, it represented an opportunity for increasing self-awareness and social involvement and participation, which is at the basis of each socially shared project of rehabilitation and valorization, as the one the Palestinian Department of Antiquities and Cultural Heritage, the UNESCO Office in Ramallah and Rome “La Sapienza” University, as well as the scholars and the other participants in the Workshop, envisage for Tell es-Sultan.

A first important outcome of the Workshop was the establishment of a Task Force for the implementation of the project of the Archaeological Park of the Jericho Oasis and the monitoring of the recommendations of the Workshop itself, basically including Palestinian institutional representatives and scholars, and some international experts, with the organisational support of Arch. Maha Mansour.

The prompt publication of the Proceedings of the Workshop has been a priority goal of Rome “La Sapienza” Expedition to Palestine & Transjordan. We wish to deeply thank Dr. Hamdan Taha, Director General of the Department of Antiquities and Cultural Heritage, and Dr. Giovanni Fontana.
Antonelli, Programme Specialist of the UNESCO Office in Ramallah, for having accepted the proposal of including this volume in the series ROSAPAT (Rome "La Sapienza" Studies on the Archaeology of Palestine & Transjordan), which was specifically established as a forum for the study and scientific valorization of the cultural heritage of the region.

Acknowledgements

The first and foremost appreciation is due to local organizers of the Workshop, the Director General, Dr. Hamdan Taha, and all the staff of the Palestinian Department of Antiquities and Culture Heritage, Ministry of Tourism and Antiquities, and the UNESCO Office in Ramallah, especially in the persons of the Programme Specialist for Culture, Arch. G. Fontana Antonelli, and the Representative, Msr. C. Farina, who made possible the realization of this experience. A grateful thanks is especially due to Dr. Hamdan Taha for his constant engagement in the safeguarding and valorization of the Palestinian Cultural Heritage.

We would like to deeply thank all the local Authorities, who supported this enterprise, H.E. Mitri Abu Aita, the former Minister of Tourism and Antiquities, and H.E. Ziad Al-Bandak, the present Minister of Tourism and Antiquities, the Mayor of Jericho, Mr. Hasan Saleh, and all the Palestinian specialists and consultants.

We wish to acknowledge our gratefulness to the Rector of Rome "La Sapienza" University, Prof. Renato Guarini, to the Dean of the Faculty of Humanistic Sciences, Prof. Roberto Antonelli, and to the Director of the Department of Historical, Archaeological and Anthropological Sciences of Antiquity, Prof. Clementina Panella, who strongly sustained the research activities of the Archaeological Expedition to Palestine of our University.

The Ambassador in Italy of the Palestinian National Authority, H.E. Nemer Hammad, and the personnel of the Rome Delegation, deserve a particular mention for their continual encouragements and recommendations.

The Ministry of Foreign Affairs of the Italian Republic has supported the Italian-Palestinian Expedition to Tell es-Sultan since its beginning in 1997, thanks to the generous contribution of the General Directorate for the Cultural Promotion and Cooperation, and to the active participation of the Consulate in Jerusalem; our deepest gratitude is due to personal of theV Office, the Counselor Francesco Saverio De Luigi, Dr. Paola Cordone, as well as the Consul General of Italy in Jerusalem, Dr. Nicola Manduzio.

Finally, we wish to thank all the experts and participants in the Workshop, especially our Palestinian colleagues, for their enduring support, expertise, friendship and hospitality.
The publication of the Proceedings within a year from the Workshop has been as always a very hard task, accomplished thanks to the efforts of Dr. Maura Sala, who deserves our heartfelt appreciation.

We dedicate this volume to the people of Ariha, with the wish that the future will give them the opportunities and the outcomes which they deserve, at least equal to the historical and cultural wealth that since a very long time has distinguished their ancient city.

Paolo Matthiae & Lorenzo Nigro
The workshop on “Tell es-Sultan/Jericho in the Context of the Jordan Valley: Site Management, Conservation and Sustainable Development” was held in Jericho between 7th - 11th February 2005. It was jointly organized by the Palestinian Department of Antiquities and Cultural Heritage, UNESCO Office in Ramallah, and Rome “La Sapienza” University. The organization of the workshop was possible through a financial aid from the World Heritage Centre.

The main focus of the workshop was on Tell es-Sultan, in its wider ecological, cultural and socio-economic context. Tell es-Sultan as a prime archaeological site in the Near East is universally important. It is the oldest known town on the Earth, of more than 10 thousand years of history. The site represents the earliest Neolithic settlement in Palestine, housing the first fortification system evidence within its physical attributes, which still obviously stand out, such as the Neolithic tower, and the domestic houses of the urban period. The site of Tell es-Sultan has a special importance in the history of archaeological research in Palestine. From the first soundings in 1868, four major excavations were carried out at Tell es-Sultan. However, in spite of its significance, the site was not properly managed and preserved. Following the transfer of authorities in Jericho, a project for the re-evaluation of Tell es-Sultan was developed within the framework of the joint cooperation between the Palestinian Department of Antiquities and Rome “La Sapienza” University. The main objectives of the project were to carry out an archaeological assessment of the site in order to determine the state of conservation and its future needs. The work carried out between 1997-2000 provided some basic information on the site and has contributed significantly in developing a proper management plan. The joint work managed to raise national and international attention. The site has been recently listed in the Inventory of Cultural and Natural Heritage Sites of Potential Outstanding Universal Value in Palestine.

The Jericho international workshop managed to gather a group of scholars and researchers, along with different stakeholders, to discuss the main

* Director General of the Department of Antiquities and Cultural Heritage - Ministry of Tourism and Antiquities, Palestinian National Authority.
issues of site management, conservation and sustainable development, trying to delineate the crucial axis of a comprehensive management and conservation plan for Tell es-Sultan.

Fig. 1 - Opening of the workshop with the arrival of H.E. Mitri Abu Aita, former Minister of Tourism and Antiquities.

Fig. 2 - H.E. Mitri Abu Aita, former Minister of Tourism and Antiquities (right), and Mr. Hasan Saleh, Mayor of Jericho (left).

Fig. 3 - Opening session of the workshop (from left to right: Arch. Ali Ziadah, Mr. Hasan Saleh, H.E. Mitri Abu Aita, Mrs. Costanza Farina and Dr. Hamdan Taha).
1. Purposes and Objectives
The main purposes and objectives of the workshop can be summarized as following:

- to discuss issues of the site management, conservation and sustainable development in the Jericho area, focusing on Tell es-Sultan as one of the most important and vulnerable archaeological site in this area and worldwide;
- to discuss a planning methodology for the management of cultural Heritage resources in the area;
- to reinforce the capacity building of interested Palestinian institutions working in this section, especially the DACH;
- to exchange concepts, ideas and expertise regarding site management and conservation;
- to attract the attention of donors and decision makers to the significance of Tell es-Sultan.

2. Attendants and Participants
The conference was opened by H.E. Mitri Abu Aita, the Minister of Tourism and Antiquities, with attendance of Mrs. Costanza Farina, the Head of the UNESCO Office in Ramallah, Mr. Hasan Saleh, Mayor of Jericho Municipality, Dr. Hamdan Taha, Director General of the Palestinian Department of Antiquities and Cultural Heritage (figs. 1-3), and multidisciplinary participants from different key international and national institutions dealing with archaeology, site management and conservation issues including experts from Department of Antiquities and Cultural Heritage, Rome “La Sapienza” University, University College of London, Leiden University, Bergen University, Birzeit University, UNESCO and others. However, the Palestinian participants from Gaza and the two Jordanian participants didn’t manage to attend the workshop due to movement difficulties from the Israeli side.

3. Main Themes of the Conference
These were the main four themes of the workshop:
1) Research history of the Rift Valley and Tell es-Sultan;
2) Management of archaeological sites, including planning, presentation, promotion, protection;
3) Case studies on conservation of archaeological sites (stone and mud-brick);
4) Sustainable development.
4. The Methodology of the Workshop

The workshop was structured in such a way, by addressing the general issues of methodology of management planning to specific issues pertaining to Tell es-Sultan, its conservation and its management, including:

- key note-lectures;
- short presentations;
- case studies from Palestine;
- sites visits;
- round table;
- working groups.

4.1. Key-Note Lectures

The aim of these lectures was to provide participants with basic methodological issues and general concepts and frames of main themes of the workshop. Several key lectures were given in the conference, covering main themes of the archaeological sites in Jericho area, Tell es-Sultan, the management and conservation issues.

In this context, a series of key note-lectures were presented, including Prof. Lorenzo Nigro, Rome “La Sapienza” University, on “Results of the Italian-Palestinian Expedition to Tell es-Sultan: at the Dawn of Urbanization in Palestine”; Prof. Gerrit van der Kooij, University of Leiden, on “The Jordan Valley and the Vicissitudes of Life at Deir ‘Alla During the Bronze and Iron Ages”; Dr. Tim Williams, University College of London, on “Archaeological Site Management: Theory, Strategies and Implementation”; and Dr. Shadia Touqan, Technical Office Old City of Jerusalem, on “Revitalization Programme: Approach to Urban Conservation in Historic Cities as Living Cities. Case-Study: the Old City of Jerusalem”.

4.2. Short Presentations

There was high diversity of the short presentations, covering different aspects of research history of the Jordan Valley and Tell es-Sultan, management, conservation and sustainable development of archaeological sites, such as “Management of Archaeological Resources in Palestine”, presented by Dr. Hamdan Taha, Director General of the Palestinian Department of Antiquities and Cultural Heritage (fig. 4). The main bulk of presentations was focused on Tell es-Sultan and its environment; worth mentioning are the presentations on “The Archaeological Site of Tell es-Sultan as a Potential World Heritage Site: Nomination Dossier, Management

### 4.3. Case Studies from Palestine

A series of case studies from a wide range of sites in Palestine were presented by some key institutions in the workshop. The presentations were followed by discussions (figs. 6-7). These include an intervention on “Management of Cultural Resources in Hebron”, presented by Dr. Khaled Qawasme, Hebron Rehabilitation Committee, and an intervention on “Space Utilization and Dynamic Stability in a Palestinian Cultural Landscape: Towards a Management Plan for the Birzeit Region”, presented by Dr. Hamid Salem, Birzeit University. Mr. Imad Atrash, Director of the Palestinian Wildlife Society, presented an intervention on “Biodiversity of the Jericho Area in the Ecosystem of the Jordan Valley”.

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4.4. Sites Visits

Daily visits to sites were undertaken after lunch break. They contained main archeological sites in the Jericho area, important to clarify the themes of the conference, including Tell es-Sultan (fig. 8), Hisham’s Palace, Tawahin es-Sukkar, ‘Ain ed-Deuk Synagogue, Tulul Abu al-‘Alayiq and the Botanic Garden in Jericho.
Fig. 8 - Visit to the site of Tell es-Sultan during the workshop (the group is overlooking from the parapet on top of Kenyon’s Trench I).

4.5. Round Table

Before the final conclusion of the workshop, a meeting with donor countries was organized to present the scope of the project, in order to secure fundraising for preparing a holistic management plan for Tell es-Sultan and implementing all its components, including site development, conservation, protection, presentation and promotion of the site (fig. 9).

Fig. 9 - Final presentation meeting with donor countries (from left to right: Dr. T. Williams, Dr. H. Taha, Mrs. C. Farina and Arch. G. Fontana Antonelli).
4.6. **Working Groups**

The last day of the conference was focused totally on the working groups to discuss four main themes crucial to prepare a holistic management plan for Tell es-Sultan through their recommendations (fig. 10), as following:

- research and excavations;
- presentation, interpretation and education;
- conservation and preservation;
- management and planning.

![Fig. 10 - Moment of discussion during the last day of the workshop.](image)

5. **Following up**

A Task Force composed of a small group of experts has been established to follow up the results and recommendations of the conference. The aim of the Task Force was to consolidate the results of the workshop and to prepare a proposal document for the purpose of fundraising. The document was prepared by Arch. Maha Mansour under the supervision of the Task Force.

6. **Task Force**

The Task Force consists of the followings: Dr. Hamdan Taha, coordinator, DACH; Arch. Giovanni Fontana Antonelli, coordinator, UNESCO Office in Ramallah; Prof. Lorenzo Nigro, Rome “La Sapienza” University, Italy; Arch. Ali Ziadah, DACH consultant; Arch. Nadia Habash, ICOMOS Palestine; Dr. Tim Williams, University College of London, United Kingdom; Dr. Nils Anfinset, University of Bergen, Norway; Mr. Ahmed Rjoob, DACH; Mr. Jehad Yasin, DACH; Arch. Maha Mansour, Task Force coordinator assistant.
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Mr. Hasan Saleh - Mayor of Jericho
Mrs. Costanza Farina - Representative, UNESCO Office in Ramallah

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Arch. G. Fontana Antonelli - UNESCO Office in Ramallah
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Palestinian Experts
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Mr. Jehad Yasin - Department of Antiquities and Cultural Heritage - Ministry of Tourism and Antiquities
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Arch. Ali Ziadah - Department of Antiquities and Cultural Heritage Consultant
Dr. Khaled Qawasme - Hebron Rehabilitation Committee
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Dr. Hamid Salem - Birzeit University
Mr. Imad Atrash - Palestinian Wildlife Society
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Arch. Maha Samman Mansour - UNESCO consultant
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Dr. Tim Williams - University College of London
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Arch. Roberto Sabelli - Florence University
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Arch. Gianluca Solera - The Green European Parliament

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Dr. A.R. Lisella - Rome “La Sapienza” University
Dr. Andrea Polcaro - Rome “La Sapienza” University
Dr. Maura Sala - Rome “La Sapienza” University
RESULTS OF THE ITALIAN-PALESTINIAN EXPEDITION TO TELL ES-SULTAN:
AT THE DAWN OF URBANIZATION IN PALESTINE

Lorenzo Nigro∗

The archaeologists and technicians of Rome “La Sapienza” University spent four unforgettable seasons at Tell es-Sultan (fig. 1) together with the Palestinian friends of the Department of Antiquities and Cultural Heritage1, and the scientific results of such excavations – which were announced at the International Congresses of Near Eastern Archaeology held in Rome, Copenhagen and Paris – changed several interpretations concerning the Bronze Age city, which flourished on the limestone bank nearby ‘Ain es-Sultan for more than one millennium2. The Expedition updated the chronology of the constructive phases of the Early Bronze Age city-walls and of the Middle Bronze Age ramparts, consistently demonstrated the existence of a Lower City, unfortunately destroyed by modern building activities, and discovered huge buildings on top of the site and at its southern foot.

Fig. 1 - General view of Tell es-Sultan from west.

∗ Department of Historical, Archaeological and Anthropological Sciences of Antiquity, Rome “La Sapienza” University; director of Rome “La Sapienza” Expedition to Palestine & Jordan.
1 The joint Italian-Palestinian Expedition was directed by the present Author, Nicolò Marchetti and Hamdan Taha, under the scientific coordination of Paolo Matthiae.
A brief summary of the discoveries is offered hereby, which is aimed at giving an idea of the monumental evidence available from a site which deserves, through the UNESCO nomination, not only the worldwide fame (which, actually, it already has), but also the world help to become the core of the first Palestinian National Archaeological Park.

1. Introduction

In 1997, the main goals of the Italian-Palestinian Expedition at Tell es-Sultan/ancient Jericho were, of course, resuming archaeological excavations at such an important site, at the crossroads of many cultural areas and different environments, which has provided one of the most complete chronological sequence in pre-classical Palestine, but also starting a pilot project of cooperation between the Palestinian Department of Antiquities and Cultural Heritage, and Rome “La Sapienza” University, which foresaw the training of young Italian and Palestinian archaeologists. The main focus of the Expedition during the four campaigns (1997-2000) was the investigation of the urban plan, stratigraphy and culture of the Bronze Age city (Sultan III-I V), also re-evaluating data collected by previous Austro-German and British Expeditions. This task was accomplished opening nine excavation areas, with interesting results concerning the site topography and extension, the development of its fortification system, and the stratigraphic sequence, which has also allowed a reappraisal of finds of previous expeditions (fig. 2).

The fourth and last season of excavations of the Italian-Palestinian Expedition at Tell es-Sultan/Jericho took place in September-October 2000; unfortunately, it was interrupted due to the severe political situation. Nevertheless, since then, the study of the results, stratigraphy and finds, produced by the Italian-Palestinian Expedition has continued, updating the archaeological knowledge of the history of the site (tab. 1).

The following summary presents the excavations results in stratigraphic and chronological order, following the most recent periodization, where the Early Bronze Age is represented by the four phases of Sultan IIIa-IV, covering a period which lasted from the last third of the IV millennium BC till the end of the III millennium BC, and the Middle Bronze Age is represented by the three phases of Sultan IVa-c, from the beginning to the middle of the II millennium BC.

3 The scientific endeavour on previous expeditions results is exemplified by the recent work on Tell es-Sultan in the Early Bronze I (Nigro 2005), as well as by many other studies (Marchetti 2003a; Nigro in press a).
Fig. 2 - Tell es-Sultan with the areas excavated by the Italian-Palestinian Expedition (1997-2000) and the Austro-German and British Expeditions.
Tab 1 - Correlation between Kenyon's periodization and the stratigraphic phases of the Italian-Palestinian Expedition.

2. Sultan IIIb - Early Bronze II (3000-2700/2650 BC)

The earliest data collected by the Italian-Palestinian Expedition so far concern period Sultan IIIb, corresponding to the Early Bronze II⁴. At the

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<td>Sultan IIa</td>
<td>PNA</td>
<td>6000-5000</td>
</tr>
<tr>
<td>Pottery Neolithic B</td>
<td>Sultan IIb</td>
<td>PNB</td>
<td>5000-4300</td>
</tr>
<tr>
<td>Gap?</td>
<td>(Sultan IIc)</td>
<td>Chalcolithic</td>
<td>4300-3400</td>
</tr>
<tr>
<td>PU</td>
<td>Sultan IIIa1</td>
<td>EB I A</td>
<td>3300-3200</td>
</tr>
<tr>
<td>PU</td>
<td>Sultan IIIa2</td>
<td>EB I B</td>
<td>3200-3000</td>
</tr>
<tr>
<td>EB I</td>
<td>Sultan IIIb1</td>
<td>EB IIA</td>
<td>3000-2850</td>
</tr>
<tr>
<td>EB II</td>
<td>Sultan IIIb2</td>
<td>EB IIB</td>
<td>2850-2700/2650</td>
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<tr>
<td>EB III</td>
<td>Sultan IIIc1</td>
<td>EB IIIA</td>
<td>2700/2650-2450</td>
</tr>
<tr>
<td>EB III</td>
<td>Sultan IIIc2</td>
<td>EB IIIB</td>
<td>2450-2300</td>
</tr>
<tr>
<td>EB-MB</td>
<td>Sultan IIId1</td>
<td>EB IV A</td>
<td>2300-2200</td>
</tr>
<tr>
<td>EB-MB</td>
<td>Sultan IIId2</td>
<td>EB IVB</td>
<td>2200-2000</td>
</tr>
<tr>
<td>MB I</td>
<td>Sultan IVa</td>
<td>MB I IIA</td>
<td>2000-1800</td>
</tr>
<tr>
<td>MB II</td>
<td>Sultan IVb</td>
<td>MB II IIB</td>
<td>1800-1650</td>
</tr>
<tr>
<td>MB II</td>
<td>Sultan IVc</td>
<td>MB II IIC</td>
<td>1650-1550</td>
</tr>
<tr>
<td>LB</td>
<td>Sultan V</td>
<td>LB</td>
<td>1550-1200</td>
</tr>
<tr>
<td>Iron</td>
<td>Sultan VI</td>
<td>Iron</td>
<td>1200-535</td>
</tr>
<tr>
<td>(Sultan VIIa)</td>
<td></td>
<td>Persia</td>
<td>535-333</td>
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<tr>
<td>(Sultan VIIa)</td>
<td></td>
<td>Hellenistic</td>
<td>333-30</td>
</tr>
<tr>
<td>(Sultan VIII)</td>
<td></td>
<td>Roman</td>
<td>I-III AD</td>
</tr>
<tr>
<td>(Sultan IX)</td>
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<td>Byzantine</td>
<td>IV-VII AD</td>
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<td>(Sultan X)</td>
<td></td>
<td>Islamic</td>
<td>VII-XVI AD</td>
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<tr>
<td>(Sultan XI)</td>
<td></td>
<td>Ottoman</td>
<td>XVI-XIX AD</td>
</tr>
</tbody>
</table>

⁴ Neolithic materials, of course, found in many spots of the site (see the bone tools TS.97.B.15, TS.97.B.17, TS.97.B.47 and TS.97.B.51 – Marchetti - Nigro eds. 1998, 29-30, fig. 1:6; 87, fig. 1:39 – the obsidian blade TS.97.B.56 – Marchetti - Nigro eds. 1998, 87-88 – and the limestone mortar – Marchetti - Nigro eds. 1998, 88, figs. 1:38-39 – from the Pre-Pottery Neolithic B retrieved in Area B), but no structural layers of this important period in the history of the site were reached (a general cleaning of structures in Kenyon's Trench I was carried out in the second
beginning of the period, the erection of the first Early Bronze Age fortifications marks the definitive establishment of a city, which spread off as a physiological development from the previous proto-urban village of Sultan IIIa2 (Early Bronze IB)\(^5\). This earliest urban phase has been detected on the northern side of the site, where excavations in Area L allowed to identify the remains of a massive mud-brick city-wall, already excavated by Sellin and Watzinger, and plotted in purple colour on their plan\(^6\), which is apparently the earliest urban fortification system, dating from period Sultan IIIb, Early Bronze II\(^7\). The identification of the EB II city-wall represents one of the most prominent results of the latest seasons in the larger perspective of studying the earliest urban development in the Southern Levant, in which the ancient walled town of Jericho represents an utmost example of an articulated architectural work realized by a complex society. The EB II city-wall is made of very distinguished dune-yellowish mud-bricks, already noticed by previous excavators, and characterized by their large size\(^8\). The contemporary layers in the nearby dwelling quarter were reached in Area F, where the main feature was a street running south-west/north-east (L.437; figs. 3, 5), that was in use during the entire EB urban period (Sultan IIIb-IIIc) with roughly the same outline\(^9\). On both season: Marchetti - Nigro eds. 1998, 219-223). As regards the surmised Late Chalcolithic occupation, a cornet base and a churn from Trench I (Holland 1987, 22) and a flint hammer and a fan scraper retrieved from Area F testify it in at least part of the tell (Nigro 2005, 198, note 1).

\(^6\) This structure was called “Massiv” in the report of the Austro-German archaeologists (Sellin - Watzinger 1913, pl. I).
\(^7\) Further studies demonstrated that major terrace and partition walls existed already in the huge village of Sultan IIIa, such as the north-east/south-west terrace wall first excavated in the ’30ies by J. Garstang in the North-Eastern Trench, and then southwards by K.M. Kenyon (Nigro 2005, 23-41, 120-126).
\(^8\) The distinctive color of such bricks was first observed by Sellin and Watzinger (1913, 17, pl. 3.a); J. Garstang identified another stretch of the same fortification wall in the North-Eastern Trench (Garstang et al. 1935, pl. L.c); at last, K.M. Kenyon reached the same wall in several spots: in her Trench I (“Wall A”), site M and site A, where the dune yellowish mud-bricks were visible fallen down in the tremendous collapse which brought to a sudden end the life of the city of Sultan IIIb (Kenyon 1981, 373, pls. 200-201; Nigro in press a, § 4).
\(^9\) Marchetti - Nigro eds. 2000, 22-23, figs. 1:2, 1:15. The northern prosecution of this street was outlined by J. Garstang in Square E7 in the westerner sector of the EB II-III dwelling quarter excavated in the north-eastern trench (Garstang et al. 1935, 152-154, pl. XXIII). The street, first turned slightly to north-east and then,
sides of the street, several units were brought to light\textsuperscript{10}, as completion of the houses already excavated by the Austro-German and the British Expeditions. In one of the rooms, Light Faced Painted Ware (\textit{Abydos Ware}) jar fragments were found (fig. 4).

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\textbf{Fig. 3 - Area F, street L.437 from south.}

\textbf{Fig. 4 - Light Faced Painted Ware jar fragments found in L.443c.}

\textbf{Fig. 5 - General view of Area F with street L.437, from north.}

cause of the erection of the city-wall to the north, sharply bended to north-west and ran westwards, where it was first unearthed by Sellin and Watzinger in the south-eastern corner of Square E6 (1913, 36-38, fig. 17, pl. II).

\textsuperscript{10} East of the street, Wall W.458 of the Italian-Palestinian Expedition, which subdivided two contiguous domestic units, was the western prosecution of Kenyon’s wall ZBT, then ZCP (Kenyon 1981, pls. 318-319).
On the basis of these new data, and the renewed interpretation of previous expeditions results, the general urban layout of Tell es-Sultan in the Early Bronze II can be described as follows: the city was protected by massive walls, made of dune yellowish mud-bricks; its main gate was on the south-eastern side, in front of the Spring, and a main street crossed it south-north, climbing the Spring Hill from south-east and descending it towards north-east (fig. 6).

Fig. 6 - Reconstruction of the general urban layout of Tell es-Sultan in the Early Bronze II (Sultan IIIb).
3. Sultan IIIc1 - Early Bronze IIIA (2700/2650-2450 BC)

In the following period of Sultan IIIc1 (Early Bronze IIIA), the city was rebuilt with several important transformations affecting the fortification system, and consequently the general urban layout, and the outline of the dwelling quarters (fig. 7).

Fig. 7 - Reconstruction of the general urban layout of Tell es-Sultan in the Early Bronze III (Sultan IIIc).
A completely new composite double city-wall was built – with separated juxtaposed blocks\textsuperscript{11} – all around the site, overlapping the previous solid wall only on the western and part of the northern side. It was made of an inner main wall up to 4.0 m thick, protected on the outer side by a filling sustained by an outer wall (1.5-1.6 m thick). The gap between the inner and outer walls was either filled up with crushed limestone (\textit{hawwara}), or with soil resulting from razing activities on the previous city collapsed strata, or hosted blind rooms (a kind of “casemates”) related to the main wall and used as storerooms or pathways\textsuperscript{12}. This articulated system, which at several spots also foresaw a ditch at the bottom of the outer wall, and reached an overall thickness of 12 m, was a major achievement of the Jericho ruling institution in the Early Bronze IIIA, and was at last investigated by the Italian-Palestinian Expedition in Area B West\textsuperscript{13}, at the south-west corner of the site, where the nature of the filling in between the inner and outer walls was clarified (fig. 8)\textsuperscript{14}, and the stratigraphy of the two superimposed main fortification systems (previously interpreted by K.M. Kenyon as a sequence of at least 17 different phases), belonging respectively to Sultan IIIc\textsuperscript{1} and IIIc\textsuperscript{2}, was definitively established\textsuperscript{15}.

As regards the general urban layout, the investigation in Area D, though not reaching Early Bronze III layers\textsuperscript{16}, supported the hypothesis that the main city-gate during this period was located at the south-eastern foot of the Spring Hill in front of the ‘Ain es-Sultan. On the other hand, excavations in Area G, on the preserved top of the Spring Hill, have shown that a main retaining wall supported the central area of the site, where public buildings were located (see below)\textsuperscript{17}.

\textsuperscript{11} Such a device was aimed at minimizing earthquake effects (Kenyon 1957, 174).
\textsuperscript{12} Such blind rooms were detected by Sellin and Watzinger on the northern side of the fortification system (Sellin - Watzinger 1913, pls. 4b, 7).
\textsuperscript{13} Marchetti - Nigro eds. 1998, 81-94. The Inner Wall was here identified with Wall W.2 (prosecution of Kenyon’s wall NFB; Kenyon 1981, 209-210, pl. 269b) and the Outer Wall with Wall W.56 (prosecution of Kenyon’s wall NFD; Kenyon 1981, 210-211, pl. 269b, c).
\textsuperscript{14} In Kenyon’s Trench III a thick whitish layer was noticed between wall NFB and NFD, and interpreted as ashes from the destruction of the earliest phase of Sultan IIIc\textsuperscript{1} city-wall (Kenyon 1981, 211, pl. 122a-b). However, this filling has proved to be made of an intentional filling of \textit{hawwara} (Nigro in press a, § 5.4).
\textsuperscript{15} Marchetti - Nigro eds. 1998, 36-39, 90-91.
\textsuperscript{16} Marchetti - Nigro eds. 2000, 165-179.
\textsuperscript{17} Two major structures were also excavated by Sellin and Watzinger on the south-western flank of the Spring Hill (Sellin - Watzinger 1913, figs. 18-20).
Fig. 8 - The filling of crushed limestone (hawwara) in between the inner and outer walls of Sultan IIIc fortifications at Kenyon’s Trench III.

The main street crossing the city south-west/north-east was one of the Sultan IIIb features kept in this period, as the excavations in Area F, on the northern plateau of the tell, demonstrated. Here, a huge portion of the dwelling quarter extending to the west and to the east of the street running north-east, at this stage named L.307\textsuperscript{18}, was brought to light. Eight domestic units (from south to north, L.450, L.323, L.319, L.305+L.327, L.303, L.403+L.405, L.445, L.904) in a fairly good state of preservation were exposed on the eastern side of the street (figs. 9-11, 13, 24), and one more unit (L.444) was uncovered on its western side. Only L.904 opened directly towards the street, through a doorway (L.902) with a raised threshold paved with three stone slabs (fig. 12). Further to the north, the street was brought to light up to the edge of denudation of previous excavations\textsuperscript{19}, thus showing that the it turned slightly towards north-east. Architecture shows the use of mud-bricks on field-stones foundations only at the moment of the first erection of buildings. In the following reconstructions, walls were raised horizontally, and new mud-brick structures were built directly upon them without stone foundations. This made obviously quite complicated to investigate the constructional history

\textsuperscript{18} Around 1 m above the underlying street L.437 of Sultan IIIb2.

\textsuperscript{19} Up to the southern edge of Garstang’s trench (1935-1936). Actually, the street turned to north-east in the vicinity of a crossing excavated by J. Garstang around 10 m north of the limit of the Italian-Palestinian excavations (see note 9).
of each house, also because the same houses were repaired many times and continuously used with varying layouts. Each domestic unit was provided with a hearth and various working installations, such as benches, cutting and grinding slabs, pulping holes. Another common architectural feature is the use of timber as pillars, often inserted within walls, or freestanding on stone bases, as known in many other Palestinian sites.

Fig. 9 - Detailed plan of Area F (EB IIIA, Sultan IIIa1) at the end of the 2000 season.
Fig. 10 - Area F: units L.450 and L.323 in the foreground, L.319 and L.305+L.327 in the background, from south-east (EB IIIA, Sultan IIIc1).

Fig. 11 - Area F: House L.303 with the post-hole P.325 in the upper right, and L.303d in the lower left, from north (EB IIIA, Sultan IIIc1).

Fig. 12 - The wall flanking street L.437 (right): in the foreground doorway L.902 (EB IIIB, Sultan IIIb2).
Findings belong to the ordinary domestic assemblage, mainly illustrating food production and preparation: flint blades and sickles, stone pestles and grinding stones. Faunal remains, among which several bones belonging to butchered animals, show an integrated diet of tamed animals (sheep and goats, but also bovines), and wild species, such as gazelle and wild boar. A hippopotamus bone, found in the 1998 campaign, deserves a particular interest; cutting marks indicate that it was butchered in the house. The presence of such an animal in the Jericho Oasis not only is the latest attestation in inland Palestine, but also testifies to the abundance of water sources in the Lower Jordan Valley, especially by the ‘Ain es-Sultan and the nearby ‘Ain el-Lodja. The bull’s head found by John Garstang and made of hippopotamus tusk ivory may be, thus, locally manufactured, as well as another similar specimen from an unknown spot of the site.

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20 Alhaique 2000, 297-301; in press.
21 Garstang 1932, 18, tav. XX,a. Another stone bull’s head was found at Jericho by K.M. Kenyon in Tomb D 12 (Kenyon 1960, 125, fig. 40:2, pl. 7:2).
Other domestic activities are testified to by items such as worked bones, bone and copper pins, and loom weights and spindle whorls related to household textile production (fig. 15). Clay disks may be interpreted as counterweights used in weaving activities, as they were found together with spindle whorls and loom weights\(^\text{22}\); sea-shells and mother-of-pearl fragments hint at commercial links with the Red Sea and the Mediterranean Sea. Especially, sea-shells have a large attestation, being often pierced at their hinge, presumably in order to be hung in laces (figs. 16-17). Due to their high number in EB III contexts, anyway, it has been also suggested that they were used as counters or represented some sort of tallying system in a kind of pre-administrative procedures\(^\text{23}\). Actually, the existence of a productive system coordinated by a central administration is perhaps more consistently demonstrated by findings such as balance weights\(^\text{24}\) (of 2 shekels and 1 mine), which are possibly related to metal and other precious stuff (sulphur, salt, ointments, drugs, bitumen, etc.) exchange (fig. 18).

![Fig. 15 - Weights, spindle whorls, sea-shell pendants, flint débitage and tools from House L.303, in Area F.](image)

\(^{22}\) Peyronel 2004, 129-130.

\(^{23}\) This hypothesis was put forward by J. Tubb on the basis of the evidence of Tell es-Sa‘idiyeh, where groups of pierced shells (192 in total) were found on the floor of a sunken room used for the storage of olive oil in the olive oil processing area inside the Early Bronze “palace” (Tubb - Dorrell 1994, 63; Tubb 1998, 45).

\(^{24}\) A dozen of such weights have been retrieved: see Ascalone in press.
More rare finds are metals, such as an arsenical copper pivot (fig. 19) and an enrolled foil, possibly belonged to wooden furniture (fig. 14), as well as a worked bone cylinder (fig. 20), decorated with a hatched motive, which is fairly typical of the period. The pottery assemblage of this phase (fig. 21) included Simple Ware vessels decorated with a reddish painting or wash, Red-Polished Ware (a globular juglet with a couple of knobs is a distinguished type; fig. 22), and various shapes of Khirbet Kerak Ware.

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25 A similar specimen with crosshatched decoration was retrieved by K.M. Kenyon in Tomb A 127 (Reg. no. 56; Kenyon 1960, 91, fig. 27:4), and another one has been recently found at Tell Abu al-Kharaz (Fischer 2002, fig. 21.3:1).

26 Carinated bowls with thin profile and the distinct red/black change of the lustrous slip below the rim; carinated bowls with upright sides, inner and outer red lustrous slip and ridge decoration; carinated bowls with sinuous-side profile; little jars with sinuous-side profile; large carinated crater with black lustrous slip and ridge decoration; jugs with black lustrous slip (Marchetti - Nigro eds. 2000, 30, fig. 1:39; see also Garstang et al. 1935, 155, pls. XXVII:7, XXVIII:10, 12-12b, 15-20, 23, XXIX:21-22, and Kenyon - Holland 1983, fig. 147:12-13 for other Khirbet Kerak specimens retrieved on the tell).
The latter specialised production seems to have a relatively wide attestation in the inventory of Sulatn IIIc1\textsuperscript{27}. It is noteworthy that together with specimens clearly imported from the North, mainly retrieved in contemporary tombs\textsuperscript{28}, KKW fragments from the site suggest the existence of a local manufacture of such ware, which is distinguished by the firing (at a slightly less high temperature, which results in a dark grey or orange colour of surface, instead of black and red), and by a prevalence of small open shapes such as slightly carinated bowls (fig. 23).

\begin{figure}[h]
\centering
\includegraphics[width=0.4\textwidth]{fig19.png}
\caption{Artenical copper pivot retrieved in House L.319.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.4\textwidth]{fig20.png}
\caption{Worked bone cylinder retrieved in House L.323.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{fig21.png}
\caption{Pottery assemblage from House L.303c, in Area F (EB IIIA, Sulatn IIIc1).}
\end{figure}

\textsuperscript{27} New calibrated radiocarbon dates, and thermoluminescence analyses on selected pottery sherds, allow to attribute this phase to the time span 2650-2450 BC.

\textsuperscript{28} From the contemporary tombs have been retrieved hemispherical bowls and carinated bowls with sinuous-side profile (Kenyon 1960, figs. 38:28-35, 44:10-11, 57:41-43), and an example of a little jars with sinuous-side profile and flat base (Kenyon 1960, fig. 38:27).
Fig. 22 - Globular juglet with a couple of knobs from House L.403, in Area F.

Fig. 23 - Examples of KKW bowls from House L.303, in Area F (EB IIIA, Sultan IIIc1).

Fig. 24 - Area F, House L.403+L.405 with in situ collapsed materials, from south-east (EB IIIA, Sultan IIIc1).
4. Sultan IIIc2 - Early Bronze IIB (2450-2300 BC)

The general layout of the city was preserved in Sultan IIIc2, when, following a violent destruction, Jericho was fully rebuilt. The double city-walls were investigated in Area B and B West, at the south-western corner of the city. The Inner Wall (W.1)\textsuperscript{29}, both in Area B and B West, resulted to have been repaired in various spots\textsuperscript{30}, while the Outer Wall (W.51)\textsuperscript{31} had been moved inwards and rebuilt with a thickness of 3.0 m (fig. 25).

![Fig. 25 - Area B West, general view from south-west of the Wall W.56 (Sultan IIIc1, EB IIA) and the later Wall W.51 (Sultan IIIc2, EB IIB).]

On the southern side of the fortifications, excavations in Area B exposed Building B1, a structure erected against the Inner City-Wall (figs. 26-27).

\textsuperscript{29} Prosecution of Kenyon’s wall NFG (Kenyon 1981, 211-212; Nigro - Marchetti eds. 1998, 36, 91).

\textsuperscript{30} One major feature of the latest reparation of the city-wall was the addition of wooden beams and posts in it, presumably with the aim of creating chains to oppose mud-brick disconnection in case of earthquake (Nigro - Marchetti eds. 1998, 37).

\textsuperscript{31} Prosecution of Kenyon’s wall NFJ (Kenyon 1981, 212-213; Marchetti - Nigro eds. 1998, 91).
The building included a row of rectangular rooms (L.38, L.39, L.539), parallel to the city-wall, and a main east-west wall (W.34+W.534), delimitating a courtyard. Even if, due to erosion and previous excavations, these rooms were only partially preserved, finds suggest that they was devoted to food production: three limestone mortars where found in L.39, while L.38 was characterized by the presence of a hearth in a corner, paved with basalt stones and reemployed grinders.

32 In front of the fireplace a shallow circular depression was perhaps the spot were cooking pots stood in charcoal.
The plan, the number of rooms, the thickness of walls and their building technique, suggest that Building B1 had a public function, hosting extra-familiar food production. Building B1 was destroyed by a violent earthquake, as it is shown by its main wall ruinously collapsed, and it is also visible in cracks and subsided sections of the nearby city-walls (fig. 28). Calibrated radiocarbon dates allow to fix this event around 2350 BC. Successively, the area was re-occupied by the same inhabitants for some decades. Then, the site was definitively abandoned.

Further insights within public architecture and history of Tell es-Sultan during Period IIC2 (EB IIB) were provided by excavations in Area G, on the preserved top of the Spring Hill. Here, a major building (Building G1) was discovered, after the removal of extensive pits (F.601 and F.603) from the Byzantine period, with 1.0 m thick plastered walls, showing a size and a plan markedly different from that of contemporary domestic architecture (fig. 29). Three rooms of Building G1 were fully exposed (L.620, L.644 and L.961), with thick mud-brick walls, showing a fine lime revetment, and a series of modelled installations. In the smallest room (L.620) a plastered bin was present along the north wall (B.618), probably for working with liquid substances. The main room to the east (L.644) was destroyed by a fierce fire and the roof collapsed all together, as testified to by the carbonized wooden beams, fallen over the floor and found still parallel one to the other (fig. 30).

This kind of food processing installation is found in several non-domestic structures in Syria-Palestine: an interesting comparison is offered by Building P South at Ebla (Marchetti - Nigro 1995-1996).
Fig. 29 - General view of Building G1, from west.

Fig. 30 - Building B1, Room L.644; in the section, traces of the fierce fire that destroyed Building G1 at the end of Sultan IIIc2 (EB IIIb), from south-east.
Six large storage jars were found in this room proving that it was also devoted to storage, being at the same time employed for transformation of food, as attested to by flint blades, flat stones used as working surfaces, benches (B.640 and B.645), and series of clay bins (figs. 31-32).

A third room to the east (L.961), aligned with the previous ones, was identified only in its southern wall (W.616), which confirms a certain degree of monumentality for the building: its scale, its location and the wealth of archaeological finds suggest that it had a public function.

After its destruction, due to the earthquake already noticed in Area B, which occurred towards the end of Period IIIc2 (around 2350 BC), Building G1 was rebuilt in a less monumental way, and then definitely abandoned around 2300 BC.

Fig. 31 - General view of room L.644 with in situ storage jars and flat stones used as working surfaces, from south.

Fig. 32 - General view of room L.644 with in situ collapsed materials, from east.
5. Sultan III\textsuperscript{d} - Early Bronze IV (2300-2000 BC)

Early Bronze IV marks a distinct change in the life of Tell es-Sultan, which was first deserted for a certain while, and then reoccupied by a new rural community. This pattern of development of the site, which has been reconstructed re-evaluating finds of the Austro-German and British Expeditions\textsuperscript{34}, in the light of the Italian-Palestinian updated stratigraphy, has been fruitful compared with that of the huge necropolis excavated by K.M. Kenyon, establishing an early phase (Sultan III\textsuperscript{d1}), when, after a certain gap in occupation, sparse dwellings occupied the summit of the Spring Hill, and a second phase (Sultan III\textsuperscript{d2}), when the settlement became a huge rural village, and also the slopes of the tell were inhabited after having been appropriately terraced\textsuperscript{35}. The Italian-Palestinian Expedition identified remains of Period III\textsuperscript{d} on top of the Spring Hill\textsuperscript{36}, and in the northern plateau of the tell; namely, dwellings, including ovens, silos, floors, and flimsy mud-brick walls, often made of reemployed bricks from Period III\textsuperscript{c2} collapsed structures (figs. 33-36).

\textsuperscript{34} Sellin - Watzinger 1913, 46-47, 108-112, figs. 93-103, pl. 22 (Nr.1, 2a, 2b); Garstang 1930, 130, pls. IX-X; 1931, 190, pls. III-IV; 1932, 13; Garstang et al. 1935, 147, 155-156; Kenyon 1981, 16, 105-108, 120, 166-167, 213-215, 339.

\textsuperscript{35} Nigro 2003. The stratigraphic development of the site also enlightens the uniform horizon of the contemporary necropolis. Comparison of pottery types between tomb assemblages and stratified materials on the tell allows to attribute tomb groups to the two phases of Sultan III\textsuperscript{d1-2}. The subdivision of the Early Bronze IV into two phases, an earlier formative one (EB IVA, 2300-2200 BC), during which the Northern Palestine is under the influx of the coeval Painted Caliciform Culture of Syria, and a second longer flourishing phase (EB IVB, 2200-2000 BC), in which several local horizons co-existed, provide a precious tool for further study and comparisons with coeval sites in Syria-Palestine.

\textsuperscript{36} Nigro 2003, 130-133; Marchetti 2003a, 303-304, fig. 6.
Fig. 34 - Area G, oven T.606 from north.

Fig. 35 - Area B West, pit P.543, cut into the collapsed Sultan IIIc2 city-wall in Period IIId1.

Fig. 36 - General plan of Tell es-Sultan with the areas of Period IIId1-2 village/town.
6. Sultan IVa - Middle Bronze I (2000-1800 BC)
Still partially unknown socio-political changes, occurring at the eve of the 2nd millennium BC, are perhaps reflected in the rebirth of a fortified city at Tell es-Sultan, which designates the beginning of the Middle Bronze Age (Sultan IVa). The formative phase of the new city is a very complex and still under investigation topic, and the Italian-Palestinian Expedition tried to select spots suitable for its reconstruction. One is the Spring Hill37, on the top of which, in Area G, a major sustaining wall (W.633) was identified, presumably terracing the acropolis with public buildings, and at the bottom of which, in Area D, cleaning works brought to light a huge mud-brick wall (W.7; fig. 37), just in front of the Spring, cut by the modern road.

Fig. 37 - Area D, general view of Wall W.7, from east. In the bottom foreground, the stone foundation (W.230) of Wall W.7.

37 Here, the former main results consisted in the excavation of a complete MBA sequence in Kenyon's Squares HII-III-VI, large MB III residential quarters and LBA buildings (the so-called Middle Building and a house to the north-east) excavated by Garstang, and an Iron II public building (the so-called Hilani) brought to light by the Austro-German Expedition. However, several important stratigraphic issues remained unclear. For this reason Area D was opened on the fringe of such previous excavations.
This wall, at its southern end, may be identified with the structure already excavated by J. Garstang protruding from the East Tower (a massive defensive building possibly connected to a gate; fig. 38)\textsuperscript{38}, while, at its northern end, was excavated by K.M. Kenyon (HCJ+HCP)\textsuperscript{39}, who also identified a rectangular tower (HBL+HBJ+H8K) connected with it\textsuperscript{40}. A sounding below the foundations of Wall W.7 proved that it and the related tower can be attributed to Sultan IVa\textsuperscript{41}. Excavations in Area A, on the southern flank of the tell, brought about the discovery of Building A1, a huge building with a rectangular tower, which was erected during Sultan IVa, and kept in use during Sultan IVb (see below)\textsuperscript{42}. The building technique of Tower A1, its orientation and its function are very similar to those of Garstang’s East Tower, suggesting that both monuments belonged to the same early Middle Bronze Age fortification system of Tell es-Sultan, consisting of a solid mud-brick wall 2 m thick, as like as in many other Palestinian sites\textsuperscript{43}, with various buttresses and towers\textsuperscript{44}.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{garstang_east_tower.png}
\caption{Garstang’s East Tower.}
\end{figure}

\textsuperscript{38} Garstang 1932, 15-17; Garstang - Garstang 1948, 85-86, fig. 4.
\textsuperscript{39} Kenyon 1981, 357-358, pls. 331, 339-340.
\textsuperscript{40} Kenyon 1981, pl. 329a.
\textsuperscript{41} Marchetti - Nigro eds. 2000, 167-171. An earliest stage of wall HCJ+HCP (wall HAJ+H8A+H8L) was also recognized by Kenyon (1981, pl. 328a), ascribable to the same period Sultan IVa.
\textsuperscript{42} The tower was destroyed during Sultan IVb by a fierce fire, but its foundation during Sultan IVa is demonstrated by the stratigraphy of its main wall (W.19: Marchetti - Nigro eds. 2000, fig. 5:7), and its relationship with other early Middle Bronze Age defensive structures discovered in the nearby Area E.
\textsuperscript{43} Other mud-brick fortification walls dating to the Middle Bronze I have been detected in Palestine at Tell Qemun, Tell el-Mutesellim, Tell Faliq, Ras el-'Ain and Tell Beit Mirsim. Some of such fortification systems also included rectangular towers, such as at Tell el-Mutesellim, Tell Faliq and Tell edh-Dhurur.
\textsuperscript{44} A mud-brick structure discovered by Sellin and Watzinger, and erroneously attributed to the Byzantine period (Sellin - Watzinger 1913, 82-84, figs. 35.3, 49-50), might be considered another tower of the same kind, belonging to the Sultan IVa solid-wall fortification system, successively (Sultan IVb) included in the new rampart fortification (see below § 7).
On the top of the hill, in Area G, terrace-wall W.633, made of big fieldstones, sustained a public building (the north-western counterpart of this terrace wall was identified with W.420 in Area F), largely disappeared due to intense disturbing activities in the Byzantine period. Underneath this building, the southern wing of which was identified by Sellin, there was a group of built-up tombs with relatively wealthy funerary assemblages, which, for their location and general characteristics may be interpreted as princely burials beneath the palace. One of these tombs (D.641) was discovered by the Italian-Palestinian Expedition. In the tomb two flexed bodies were buried, apparently an adult and a female about 12-14 years old, with two sacrificed kid animals (a gazelle and a goat) and six vessels of which at least one contained food offerings (figs. 39-41).

Fig. 39 - Steatite scarabs from Tomb D.641.

Fig. 40 - Flexed bodies in mud-brick lined Tomb D.641.

45 A foundation wall of the building, W.634, was identified in 1999 by the Italian-Palestinian Expedition (Marchetti 2003a, 306, fig. 8).
46 Sellin - Watzinger 1913, figs. 40-41.
47 Nigro in press b. Marchetti interpreted them as part of an intra-moenia necropolis (2003a, 310).
48 These vessels have been attributed to the late MB I horizon (c. 1850-1800 BC), on a pottery typological basis (Marchetti 2003a, 306; see also ibid., note 27). The dating of the tomb may be more consistently established through its stratigraphy, which allows to ascribe it to the end of Sultan IVa2 (1820-1800 BC).
The young lady wore a pair of bronze double earrings, a necklace of carnelian and rock crystal beads, a bronze pin for closing the tunic on the left shoulder, some chains of frit beads and a digital bronze ring with a steatite scarab of local manufacture, while another scarab was found under the left side of the head (fig. 39)\textsuperscript{49}.

In Area F, terrace-wall W.420 (fig. 42), made of big fieldstones and oriented as W.633, was identified supporting the uppermost area of the site, where a major building was erected, a wall of which was excavated in 1999 (W.431; fig. 43)\textsuperscript{50}.

In respect of the Early Bronze Age city, that of the beginning of Middle Bronze Age was characterized by the enucleation of a major dominant urban area on top of the Spring Hill, extending towards north with a rectangular plan around 100 x 50 m, where the palace (and perhaps also the main city-temple) was located\textsuperscript{51}, and by a completely new fortification system built at the bottom of the tell, and consisting of a solid mud-brick wall with towers at regular intervals (see below).

\textsuperscript{49} Marchetti 2003b.

\textsuperscript{50} The latter structure may be correlated with some walls excavated by Sellin and Watzinger, also including tombs (Sellin - Watzinger 1913, 71, figs. 40-41).

\textsuperscript{51} The location of the Middle Bronze Age temple is unknown, even if some hypothesis may be put forward (Nigro in press c).
7. Sultan IVb - Middle Bronze II (1800-1650 BC)

After a major destruction, occurred towards the end of Sultan IVa (Sesostris III’s campaign?), the city of Jericho was again rebuilt and a new fortification system was erected all around the tell, consisting of a rampart made up by a massive stone wall at its outer bottom (partly reusing, partly reconstructing the previous mud-brick city-wall)\(^{52}\), supporting a series of earthen fillings with a crushed limestone or clay revetment, and of an upper wall with subsidiary buildings over it.

A long stretch of the stone wall at the base of the rampart has been brought to light in Area E, at the south-western corner of the site (fig. 44). At the middle of this wall a rectangular structure protrudes out of the line of the city fortification, possibly the foundation of a defensive tower (fig. 45). Inside the Tower, in a layer of destruction apparently belonging to MB II, a clay figurine of a lioness was found (fig. 46)\(^{53}\).

\(^{52}\) This also explains why the Sultan IVa fortification wall was preserved especially on the eastern side of the tell, since, in the following period, the line of fortifications on this side was moved eastwards with the aim of fully including the spring into the urban protected area.

\(^{53}\) In a very schematic way this figurine resemble a renown Mesopotamian terracotta from Dur-Kurigalzu (Lloyd 1978, fig. 124; Matthiae 1997b, 105).
The upper part of the rampart was examined during the first two seasons in Area C, at Kenyon’s Trench I (figs. 47-48), where a series of supporting walls were identified just below its top. At different sites around the tell the rampart was made with different techniques, so that it is yet complicated to identify the exact phase of utilization of each stretch.

54 A major mud-brick structure was excavated on top of the Sultan IVb rampart in Area C, possibly related to a building erected on top of the fortification (Marchetti - Nigro 1998, 104), an issue now well known also in other major centers of Middle Bronze Age Syria-Palestine, such as Ebla (Matthiae 2000, 175-178).
Fig. 47 - The upper part of Sultan IVb rampart in Area C (MB II), at Kenyon’s Trench I; notice in the middle the stone supporting wall, undetected by previous excavations.

Fig. 48 - The lower part of Sultan IVb rampart in Area C with the crushed limestone and clay revetment.
Fig. 49, a-b - Area A, Tower A1 from south-east and from west (Sultan IVb, MB II).

Fig. 50 - Area A, houses built outside Building A1 against the eastern side of the Tower (Sultan IVb, MB II), from north-east.
A major result of the Italian-Palestinian Expedition was the discovery of a Middle Bronze II lower city, encompassing the tell on the eastern and southern sides, and including the spring within the fortified urban area. In Area A, just south of Kenyon’s Trench III, the defensive building (A1) continued to be in use, and its abutting tower (fig. 49) was now encircled by houses, as the city was enlarged towards the Oasis. While on the eastern side private houses abutted over the Tower (fig. 50), on the western side, a wide area interpreted as an inner courtyard of a fortress, was paved with pebbles and clear from buildings; moreover, the western wall of the Tower (W.19), stretched north-west and south-east, thus indicating that the Fortress was a huge one. The group of houses built outside Building A1 and against the Tower, had three main reconstructions during Sultan IVb. These houses gave a large inventory of domestic items and pottery, as well as some interesting finds, such as a calcite alabastron (fig. 51)\textsuperscript{55}, and a bronze adze. Sultan IVb was perhaps the most flourishing phase in the history of the Middle Bronze Age city of Jericho, as it is also shown by the rich necropolis, and it ended in the second half of the 17th century, due to an unknown cause\textsuperscript{56}.

\textsuperscript{55} The calcite vessel (Marchetti 1999), as well as a typical Jerichoan bowl with trumpet pedestal (fig. 52), were probably part of the funerary assemblage of a disturbed burial, to which some sparse fragmentary human bones belonged.

\textsuperscript{56} It is noteworthy the numerous attestations of Hyksos scarabs in this period, which perhaps testify to the strong link of Jericho with Egypt during the XIII-XV Dynasties (Garstang 1932, 43-54, pls. XXXVII-XXXVIII).
8. Sultan IVc - Middle Bronze III (1650-1550 BC)

A major transformation of the city marked an overall urban reorganization at Tell es-Sultan and the last stratigraphic phase of development of the Middle Bronze Age, Sultan IVc. The latter phase was investigated by the Italian-Palestinian Expedition mainly in Area A, where the building technique of the third and last rampart was definitely clarified.

At the beginning of Sultan IVc (Middle Bronze III), the city of Jericho was again reduced in size, and part of the southern Lower Town was razed for the construction of a rampart sustained by a massive stone retaining wall set within a foundation trench and covered by a sloping embankment with a superficial revetment of crushed limestone. The Cyclopean wall (fig. 53), already excavated especially by the Austro-German Expedition, was not to be seen in the intentions of its builders. This datum is even mostly significant since similar defensive structure were excavated in many other Palestinian sites, such as Khirbet Seilun, Tell Balatah and Tell el-Mutesellim (northern Lower Town).

Fig. 53 - Area A, the Cyclopean Wall W.4 of Sultan IVc (1650-1550 BC).

57 Marchetti - Nigro eds. 1998, fig. 4:12.
A violent destruction brought to a sudden end the city of Period IVc, around 1550 BC or some years later. There is no available evidence for attributing this event to some enemy, even though one has to stress the strategic importance of the site, the southern gate of the Jordan Valley. The intervention of a strong foreign power seems, thus, historically possible, since the city was so badly shattered that it was abandoned for various centuries and the inhabitants probably moved to another area in the Jericho Oasis.

9. Sultan V-VI - Late Bronze and Iron Ages (1550-535 BC)
A few materials and some tombs are known from period V, the Late Bronze Age, even though not a single pottery fragment from this period was found on the tell by the Italian-Palestinian Expedition. Iron Age materials were found in Area B\textsuperscript{58}, while in Areas G and F on the summit of the Spring Hill and on the northern plateau intensive razing of later periods had removed all strata down to the Middle or even to the Early Bronze Age.

10. Area H: Byzantine Occupation of the Summit of the Tell
In Area H, on the summit of the tell, to the north of the tourist shelter, on a saddle between Areas G and F, burnt remains of a collapsed building were clearly visible on the surface suffering erosion.

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\textsuperscript{58} Marchetti - Nigro eds. 1998, 30-31, fig. 1:3.
The sounding was limited to a single square (Bel119), where a Byzantine mid-6th century AD house (L.707) was discovered (fig. 54). An interesting set of materials (pottery, glasses and objects), including many fragmentary “Gaza Ware” amphoras, was retrieved. In year 2000, the exploration was extended surveying several stone structures visible on the surface, clearly contemporary with the house previously discovered. Six houses were identified, bordered by open spaces and refuse pits. A bronze lock of a wooden box was found on the surface. The Byzantine settlement thus seems to have been a small rural village resting upon the ruins of the preceding cities, in an area roughly corresponding to the northern and eastern parts of the tell.\(^{59}\)

11. Restoration and Site Valorization Works

The valorization of the site was sustained through restorations and realization of tourist facilities on the tell. In Area B, a viewpoint was realized to the east of the EB III city-wall, which is here visible for a length of more than 50 m, while ancient mud-brick structures have been restored and protected by means of a cap of new mud-bricks, plastering the faces of the walls with a special mortar (fig. 55). In Area A, Buildings A1 and A2 have been respectively consolidated by means of ethyl-silicate and protected and restored (fig. 56).

![Fig. 55 - View from south-east of Building B1 after restorations (1999).](image-url)

\(^{59}\) Marchetti - Nigro eds. 2000, 355-381.
During the year 2000 campaign, a complete exposure of the fortifications of Area E has been accomplished, enhancing the visibility of Tower E1, now part of the tourist path for the visit of Middle Bronze Age fortifications at the southern foot of the *tell*. New illustrative panels of the excavation areas were set on the ground, thus ensuring a rich and correct information for tourists (c. 250,000 every year, before the crisis).

The joint Italian-Palestinian Expedition at Tell es-Sultan has provided new insights into the urban structure of the Bronze Age city, focusing not only on the fortification systems, but also on the detailed urban history throughout the III and II millennia BC, and on the changes in material culture, in order to get a closer historical understanding of the archaeology of Jericho and the southern Jordan Valley. In the years which followed the forced stop of activities on the field (2001-2005), the Expedition continued to study materials, publishing a series of studies and articles. Moreover, the team of Rome “La Sapienza” University started a series of study programs with a group of PhD students, focused on the archaeology of Jericho and Palestine⁶⁰. The same team is, of course, eager of resuming restoration and excavation activities at Tell es-Sultan, however, with the awareness that such activities are conceivable only within the overall project of the Archaeological Park of the Jericho Oasis under the supervision of the Department of Antiquities and Cultural Heritage of the Palestinian National Authority.

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⁶⁰ See Nigro in this volume, pp. 95-110.
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The Jordan Valley and the Vicissitudes of Life at Deir ‘Alla During the Bronze and Iron Ages

Gerrit van der Kooij*

1. Introduction

The Jordan Valley is part of the Levant, that has been labeled as a "land bridge" between Africa and Eur-Asia and as a north-south "corridor" between the Mediterranean Sea and the Syrian Desert. This characteristic has strongly determined its social development, until today. In fact, it has been claimed that the Jordan Valley is the longest inhabited region of the world outside Africa, because the earliest remains of early humans, dating 1.4 million years ago, have been found there. It has also been claimed that the Jordan Valley is "one of the most intensively settled and utilized regions in the Southern Levant". Here we have to put a comment: this picture changes with the advent of the agricultural societies and the current bioclimatic conditions. For this later periods we also have to differentiate between the Upper and Lower Jordan Valley, with Lake Tiberias as the dividing entity. Then, the Lower Jordan Valley may be seen as a "Reversed Valley", because it is not – like the Nile Valley or the Euphrates Valley – attracting and concentrating agricultural people, with steppe and desert conditions outside the valleys. The Jordan Valley, with its deep position below sea level, is in fact largely a steppe and desert zone, with Mediterranean bio-climatic zones to both sides in the uplands. These Mediterranean zones allow rain-fed agriculture, while the Jordan Valley generally needs irrigated fields for a reliable harvest – on the other hand, the Jordan Valley is attractive for pastoralism in wintertime. Accordingly agricultural societies would prefer the Mediterranean zones and go to the Ghor only if necessary for some reasons. This may be less so for the Upper Jordan Valley and the northern part of the Lower Jordan Valley, but it clearly appears to be like that in the middle and southern parts of the Lower Jordan Valley – except perhaps where a high ground water level exists, such as in the Zor and at the spring area of ‘Ain al-Sultan, resulting in an oasis-condition. In the context of this workshop, it appears useful to concentrate on this issue, because, if the Jordan Valley is less attractive to an agricultural life (needing irrigation works), other reasons exist to settle there. Those reasons would

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1 Maeir 2002.
2 Schattner 1962.
be partly reflected in the way people settle, which would be archaeologically visible. My presentation will concentrate on these issues: when and how did people settle (again and again) in the Jordan Valley; why did they settle there, and why did they leave again, or change to a nomadic pastoralism. The study of these issues could be relevant to all archaeological periods, but in connection with the Leiden University & Yarmouk University ongoing project in the middle part of the Lower Jordan Valley - the Deir ‘Alla Region – focus will be on the Bronze and Iron Ages as well as the Ayubid-Mamluk and sub-recent periods in this region. Since studies of this kind have a value for the current society, we will also consider some heritage aspects of this archaeological project. Let us start with this current or sub-recent society, and take an ethnographic and ethno-historic case: the developments in the Jordan Valley during the last century, for which it can be described how people settled and what they did to maintain themselves, and for which also information about the reason of the settling is available. This may help us - within the discipline of ethno-archaeology – to understand also the archaeological periods.

2. The Last 100 Years

During the 20th century many changes of use of the (Lower) Jordan Valley took place, which can be described in four stages:

- before 1950: the situation is shown by H. Guthe in map n. 20 (map made by H. Fischer and H. Guthe; fig. 1), indicating the few areas of fixed settlements in the Jordan Valley, with Jericho in the south, the first one further north being Abu Obeidah, just north of Deir ‘Alla, and than again at Masharah, Besan, and close to Lake Tiberias. Pastoral nomads are all around. A gradually growing agricultural activity and subsequent settling of pastoralists occurred after that;
- 1950-1972: refugees were settled in the Valley for agricultural development, and the main means for this, the East Ghor Canal, was realized in 1960 down to Deir ‘Alla; this development became arrested in 1967, but got a restart around 1972;
- 1972-1994: in Transjordan a continuing development occurred, including the southern extension of the East Ghor canal and the establishment of large irrigation systems;

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3 Guthe 1911.
4 Khouri 1981, 104.
5 Elmusa 1994.
since 1994: in Transjordan the peace treaty between Israel and Jordan includes measures in the Jordan Valley and effected expectation and partial realization of intensification of land-use, including infrastructures. Why did these changes occur? We see local forces, resulting in settlement of nomadic pastoralists in order to increase agricultural produce - for whatever reason; or the preceding establishment of a shrine for an Islamic hero - like Abu Obeidah - which attracts some housing as well. And we see regional forces in a number of social or economic reasons to go there; and supra-regional or international forces (refugee migrations, a peace treaty)\(^6\). We like to use this model of the “Reversed Valley” also for the archaeological and historical periods, namely the later parts of the Bronze Age and the Iron Age, with some additions about later periods, and thus return to 100 years ago - in accordance with the studies within the Deir ‘Alla project.

### 3. The Archaeological Records

Focusing on the settlement site of Tell Deir ‘Alla and its surrounding landscape, the archaeological record is largely revealed by fieldwork by Leiden University - since 1980 jointly with Yarmouk University, and always in cooperation with the Department of Antiquities. This fieldwork concerns two elements:
- site excavation, especially Tell Deir ‘Alla;
- off-site surface survey in order to study the use of the landscape apart from the use for settlements, such as agricultural activities, irrigation works, mill installations, graveyards/tombs, etc.

#### 3.1. Excavations

The excavations were started by Henk Franken (Leiden University) in 1960 (till 1967), with a specific goal and the Wheeler-Kenyon method of detailed stratigraphic digging and analysis\(^7\). They were restarted in 1976 with the Department of Antiquities and Moawiyeh Ibrahim with new goals, gradually growing into a settlement study. The cooperation with Yarmouk University resulted in the jointly financed Deir ‘Alla Station for Archaeological Studies (1982). Currently Yarmouk University is represented by Prof. Zeidan Kafafi as a co-director\(^8\) (see fig. 2 for the characters of the phases and represented periods at the site).

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\(^6\) Elmusa 1994.  
\(^8\) Van der Kooij - Ibrahim 1989; van der Kooij - Kafafi in press.
Fig. 1 - Map n. 20 made by H. Fischer and H. Guthe.
### Tell Dayr ‘Alla time table

<table>
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<th>Year</th>
<th>Event Description</th>
<th>Notes</th>
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<td>- 400</td>
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<td>Middle Bronze Age</td>
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**Fig. 2 - Deir ‘Alla phases.**
3.2. Survey

Quite some survey works were done in the Eastern Jordan Valley, especially by Nelson Glueck\(^9\) and - in the 1975-1976 - by the Department of Antiquities (Moawiyeh Ibrahim), University of Jordan (Khair Yassine) and ACOR (James Sauer), in order to prepare a protective policy for this heritage (adding 52 to sites to Glueck's 54)\(^10\). In connection with the Deir 'Alla Project some survey works were done by Henk Franken in 1960 and 1961, and occasionally by others during later excavation seasons.

As a branch of the Deir 'Alla Project a detailed survey with the purpose of identifying (also indirectly) all sorts of uses of the landscape in the Deir 'Alla Region (Wadi Rajib till Wadi Zerqa/Damiyah) started in 2004\(^11\). This survey project is connected with a parallel project in the Syrian Jezireh under the title “Settling the Steppe, the archaeology of changing societies in Syro/Palestinian drylands in the Bronze and Iron Ages”, largely funded by the Netherlands Organization for scientific Research NWO. It includes both a detailed statistical surface survey (by Eva Kaptijn) and some probe trenching in Iron Age levels of damaged *tell* sites (by Lucas Petit). It is focusing on the question of contemporary use of settlement sites and the fields - firstly for the Iron Age -, partly because of the expected effect of a irrigation system. Yarmouk University is represented in the survey activities by Omar Ghul as a co-director. Looking at the combined results now we concentrate on the later parts of the Bronze Age and the Iron Age, and a bit on the Ayyubid-Mameluke period, as well as sub-recent times.

4. Middle and Late Bronze Ages

Like a number of other sites in the Jordan Valley\(^12\), Tell Deir 'Alla became inhabited (for the first time) during the final part of the Middle Bronze Period (MB IIC or MB III) – as a fully grown town – on a low natural hill.

4.1. Excavation Results

Only small parts (at the edges of the *tell*) are excavated, but some of the diachronic characteristics are clear.

The first settlement during MB IIC had heavily walled buildings with some courtyards. The buildings show partly a domestic character, but also a public one, possibly religious. The population (or the élite part only) used

\(^9\) Glueck 1951.
\(^11\) Kaptijn et al. in press.
\(^12\) Najjar 1992.
not only the local pottery, but also a number of exquisite bronze objects, bringing this settlement in contact with the cosmopolitan world of that time: trident, special spearhead, and a shaft hole axe. Earthworks are to be considered as part of the defence system: a glacis. After a probably general destruction the site was resettled, but now with less solid buildings with a slightly different orientation. The built up area extended over the earthworks, especially for a temple, thus positioned on a higher level. This concerns the beginning of the LB period, which is little known, although this settlement clearly shrinks in size, with occasional destructions, until the final stage. The final phase of the LB Age shows an expansion of the settled area again, especially to the south, for an industrial quarter. The phase was severely destroyed by an earthquake and fire, and has been excavated over a large area: to the north in the 1960ies and south during the last decade. The temple is still an important feature in the community, showing a strongly international interest (from Egypt, a cartouche of pharaoh Tausert, 1188-1186 BC; from northern Syria, cylinder seals, some faience objects; and from the Aegean world, Mycenaean pottery), but also the industrial and trade part (as far as excavated) had international connections. Surprisingly an unknown writing on clay tablets was in use in both quarters around 1200 BC. All these characteristics are indications of some independence and international attention.

4.2. The Regional Survey Results

The surveys and excavations show (fig. 3):
- sites that started to be inhabited at about the same time;
- others that started during the later part of the Late Bronze Age.
During this period no settlement sites were used in the alluvial plain south of the river Zerqa\textsuperscript{13}, except for Tell Nimrin (at the Wadi Shueib) during the MB Age only\textsuperscript{14}. To the north there were: Tell es-Saidiyeh, with its Egyptian influence, and further north Tell Abu al-Kharaz, as a major town; Tell al-Hayyat, during the MB Age, and again further north Pella. All these Eastern Jordan settlement sites, together with the tomb site of Kataret al-Samra (south-west of Deir ‘Alla) share the use of “Chocolate-on-White Ware”, that appears to be a characteristic of the Jordan Valley in this MB IIC/LB I period, and apparently locally produced in the middle part of the Jordan Valley\textsuperscript{15} – probably with a background in Lebanon\textsuperscript{16}.

\textsuperscript{13} Prag 1992.
\textsuperscript{14} Flanagan et al. 1996, 281-287.
\textsuperscript{15} McGovern 2004, 290ff.
4.3. Summarizing the Features

It appears that the inhabitation of Deir ‘Alla continued from ca. 1600 BC till the destruction rather short after 1188, although it is suggested that LB I may not be represented. The inhabitants form part of the rather complex urban society prevalent in the Levant at that time. According to historical (Amarna correspondence) and archaeological deductions (e.g. rank size analysis) the region was politically balkanised in a number of separate polities (including three in the Jordan Valley, connected with western upland ones), but all under Egyptian supremacy. However Savage and Falconer didn’t include information from the Transjordanian uplands.

How did all this come?

For the different periods the following answers are proposed. The new settling of the middle part of the Jordan Valley during the MB IIC period should be taken as a colonisation from elsewhere, where large groups arrived and settled on large and fixed scale. It is suggested that pushing the Hyksos out of Egypt into the southern parts of the Southern Levant, did force local groups to move to space further east. It is also thought that some local urban centres further north, like Pella, expanded their space. It is not thought that local nomadic pastoralists would settle – this is indeed unexpected because of the sudden appearance of the full grown settlements.

The gradual decrease of settlements may be connected with political struggles as we know this from the historical record, with military campaigns by Egypt.

The increase of settled surface of the Deir ‘Alla site and the appearance of new settlements in the region by the later LB period, is also explained from a colonizing or immigrating group of people, but this is less clear. It could also be a matter of internally expanding the economic activities (as soon as the possibility was given) – attracting people from elsewhere, thus leading to the expansion of agricultural activities and satellite villages.

5. Iron Age

After these first 500 years of the site, we now come to the Iron Age period: another 800 years of living at Deir ‘Alla.

17 Savage - Falconer 2003, 38ff., figs.4-5.
18 McGovern 2004, 291-294
19 Fischer in press, 177ff.
5.1. Excavation Results

At this site the period should be divided into two main parts:
- ca. 1150-950/900 BC: about the Iron Age I and IIA periods;
- ca. 950/900 -350 BC: about the Iron Age IIB, IIC and III periods.

The first period (ca. 1150-950/900 BC) was a period of some 200 years, starting gradually, but soon with quite intensive inhabitation – using most of the surface of the ruined LB town for building. The tell was at a level of about 10-15 m above the plain when this settlement started, and ended 10 m higher after these 200 years. Many phases are distinguished (A-L)\textsuperscript{20}, but the habitation was probably continuous.

The situation is different during the second period (ca. 950/900-350 BC). From the 9th century onward the settlement was limited to the eastern part of the tell, and unstable, because it was not at all continuous. Its variety of character and of size was enormous\textsuperscript{21}: from a densely built village, using the surrounding lands with irrigation agriculture, and some herds (including much cattle), partly at a greater distance; to a few compounds with large courtyards for herding animals and some dry farming in the surrounding winter/spring fields; and to no use at all, or just a quiet place for cattle to rest and leaving the annoying flies down below in the valley plain.

5.1.1. Phase IX

The Phase IX people built themselves a village, consisting of complexes of lightly built mud-brick houses, with a remarkable amount of roofed space and little open space of streets and courtyards. The settlement was intensively used for domestic purposes, including food preparation, as well as for weaving and other activities. Most remarkably a long literary text, the “Balaam text”, in a language “about to become Aramaic”\textsuperscript{22}, was found written with ink on wall plaster, using a northern Transjordanian script connected with Aramaic writing\textsuperscript{23}. The material remains show crafts’ connections (such as pottery) with Iron Age II culture in Cisjordan, but also with some specific items from the uplands of Transjordan. Also connections with the Mediterranean coast are clear, because shells from its shores were used for decoration, and some Phoenician pottery for storage of kitchen herbs or curries; as well as connections with the Aramaean world through a number of short Aramaic inscriptions. It is easily deduced from the not gradually, but directly built complex settlement that the people were not

\textsuperscript{20} Franken 1969.
\textsuperscript{21} van der Kooij - Ibrahim 1989; van der Kooij 2001.
\textsuperscript{22} Weippert 1991, 163.
\textsuperscript{23} van der Kooij 1991, 250-255.
settling nomads, but rather a group coming from elsewhere and with a need to settle in this less suitable steppe region. What the need caused is another question and cannot yet be answered. We don’t know the people, but taking the date around 800 BC (for the destruction), it is (politically) possible that the Aramaeans under King Hazael (842-800), and successors, or the Israelites under Jeroboam II (787-747) were governing this part of Transjordan. Specific connections with an Ammonite kingdom seem also possible. The village was quickly destroyed, due to an earthquake, and only partially rebuilt (Phase VIII), which collapsed soon after that.

5.1.2. Several Small Villages after Phases IX and VIII
The first new village is represented by Phase VII. Again quickly established, densely built, and quickly destroyed by fire, and probably again by an earthquake. This village seems to have been transplanted from elsewhere: it shows many cultural differences compared to the preceding phases – although some pottery traditions, e.g. some of the cooking pots, do continue, while others are new, using the fast wheel. There are remarkable stone tools, bone tools, plaster objects, metal weapons, etc. The chronological position in the early time of Assyrian domination, around 700 BC24, makes clear that we probably have to do here with a widespread Near Eastern culture, but possibly also with a group of people deported from elsewhere in the Assyrian Empire. Phase VI – with several distinctions – represents a small village with a few large houses and a free wall to the north, bordering also a wide courtyard. It shows again aspects of a general Near Eastern culture, connected with the Babylonian Period of the Empire, but including elements that are quite well known from the Ammonite world. We even know some names of the inhabitants, because a name list, written in Ammonite script, was found. Phase V represents a small village with large courtyards again and belongs, together with Phase IV, to the Persian period, again with a cosmopolitan culture. The gradual appearance and the gradual disappearance may indicate a group of settling nomads, returning to pastoral nomadism again. Little is known about Phase III, with only some stone foundations and pits left from erosion, but the pottery shows a 4th century BC situation, characterized by some Attic pottery.

5.2. The Regional Survey Results
The surrounding region (fig. 4) shows the beginning of many sites in the Iron I period (Tell al-Mazar)25 and some in the Iron II period, and it is

currently being tested in the newly started survey project in the Deir ‘Alla Region (see above) whether the settlements were contemporaneously or alternatingly used. Contemporaneous use is expected because of the hypothesis of one integrated irrigation system that would serve all villages’ land (see below). In Transjordan, some 15 Iron Age settlement sites appear to the north of the Deir ‘Alla Region, and only about 10 settlements are attested south of Damiyah – positioned at the Wadi Shueib (Tell Nimrin), Wadi Kafrein and Wadi Rama/Hesban, at their eastern part near the foot-hills26.

6. Later Periods

In later periods a strongly varying intensity of use of the landscape is indicated, with high intensity during the Byzantine period and the Ayyubid-Mamluk period. Let us have a closer look at this last period.

6.1. Ayyubid-Mamluk Period

At this time, probably extending well into the Ottoman period, material remains are found from many activities going on in the middle part of the Jordan Valley: settlements and many features dealing with the agricultural cane sugar production, such as specific pottery and water mills for sugar. Apart from the cemetery on top of Tell Deir ‘Alla, some of this period was studied already by Henk Franken within the Deir ‘Alla project (Tell Abu Gourdan just north-east of Tell Deir ‘Alla)27, and by Lagro, Steiner and De Haas at Tell Abu Sarbut (1.5 km west-north-west of Tell Deir ‘Alla) in the late 1980ies28. The inhabitation and exploitation is – at least partly – to be understood as a colonization of the area for the purpose of sugar production, for larger economic structures. This could be local but also Mamluk-Egyptian influenced. This brings us to the irrigation system, a vital aspect of this economy in the Jordan Valley.

27 Franken - Kalsbeek 1975.
Fig. 3 - Deir ‘Alla Region: Middle Bronze - Late Bronze sites.
Fig. 4 - Deir ‘Alla Region: Iron Age sites.
6.1.1. The Irrigation System.
Before the new system of the East Ghor Canal was introduced, another local system existed, organized by local authorities, namely some local tribes, and used by the “ploughmen”, the *harrath*, for basically a subsistence economy\(^{29}\). Presumably the population was very small; tax demanded parts of the surplus, as did nomadic raids. The British Mandate counted that a family needed 130 dunams of rain-fed fields or 40 dunams of irrigated fields to feed itself.

The structure of the system has not been studied or accessibly published, although the British topographic map of the 1940ies - as well as some other maps - give some of the main canals. For details some information could be collected from RAF photographs of that same time, published by Nelson Glueck in his Explorations in Eastern Palestine\(^{30}\), and parts of the system appear to be still in use in the Zarqa-triangle, east of Deir ‘Ala, but it is still to be studied. A Map of the system, mainly based upon the RAF-photographs, shows that three main canals going to north-north-west (following the contour lines of the valley floor), were taking water from the Zarqa at a point quite far to the east. Each of them had a name, and fed a large number of secondary canals to the fields. Because of the source and the slight slope of the valley floor, it had to be a “gravitation system”, with all the elements of side canals and temporary out-lets for drainage\(^{31}\). On the photographs the system is only partly in use, and shows signs of neglect. The end (or near end) of use of the system is known, but the beginning is not known. However, some information may be gleaned from old photographs, maps and travellers' accounts.

In fact, the same system appears already very clearly in (limited) use on a German air-photo from 1917/18 (published by Dalman in 1925, and Kedar in 1999)\(^{32}\), which is surprisingly early, considering the largely pastoral and nomadic way of life of the local population. There are also clear indications on British topographic maps (“Survey of Egypt”) of that same time. The system is, however, not shown (probably) on the earlier maps (Schumacher based) and on the Ordnance survey map of 1867. On the other hand, travellers' accounts refer to a system (e.g. Selah Merrill’s from 1881), mentioning the existence of canals at his time, but not being made by his local informants. It is quite possible to conclude that we are dealing

\(^{29}\) Tarawneh 1989.
\(^{30}\) Glueck 1951, figs. 96, 100-102.
\(^{31}\) van der Kooij in press.
\(^{32}\) Kedar 1999, 164.
with the same system. Considering the dominant pastoralist and nomadic
way of life in the Jordan Valley in the 19th century and also in the 18th and
17th centuries, without a need for an irrigation system, it appears
defendable that main parts of the system date back to the 15th ca. AD, a
period of attested intensive agriculture in this region for sugar production.
It may have been used well into the Ottoman period, but not at all – or
hardly – for some time up to the 1850ies.
It should be added here that the mapped and described sub-recent system
may also be used as a model for projecting an irrigation system in the
more remote past in that same region – as a consequence generating
suggestions about the preconditioned character of this society and the
impact of the system on it. Some plant remains, such as flax seeds, have
indicated the use of irrigated fields during the Bronze Age and parts of the
Iron Age. Indeed, the use of an ethno-archaeologically based model of an
irrigation system with its economic and social implications has a very strong
impact on the interpretations of the material remains of this society.33

7. Generalisation for the Lower Jordan Valley and Jericho
Position
The described understanding of human use of and settling in the Deir ‘Alla
Region, based upon the concept of “reversed valley”, is easily taken as
applicable to the Lower Jordan Valley as a whole. We prefer to keep – at
least partly – the Upper Jordan Valley out of this concept.34 Indeed
settlement-site oriented surveys in the Lower Jordan Valley show that most
settlements were located near a perennial water stream – indicating the
need for nearby irrigated fields. Anomalies, however, exist:
• settlements in the open plain, especially in the Deir ‘Alla Region: they
  are to be explained by extended irrigation systems, as projected above for
  the Deir ‘Alla Region, which possibly was additionally attractive by its good
  position for east-west connections and trade;
• settlements in the Zor, or at the katar-edge of the Valley floor: they
  may be explained by agricultural access to the high ground water lands of
  the Zor areas (examples are Tell es-Saidiyeh and Damiyah);
• in the dry steppe and desert regions of the southern part of the Lower
  Jordan Valley, Jericho forms a major third exception: the spring of ‘Ain al-

33 See already Downing - Gibson 1974, and for a local application van der Kooij in
press.
34 But see Greenberg 2002 for a successful separate regional approach for this
northern part.
Sultan, creating the natural oasis of Jericho in a wide barren Valley floor, makes it possible to continuously use natural vegetation and produce cultivated crops. But, of course, for a reliable crop also here a technical irrigation system had to be realized – with all its conditions and consequences. From this follows, indeed, that Jericho has a unique position within this unique landscape of the Jordan Valley. Since people made use of this facility from the Epipaleolithic onwards, and almost continuously, Jericho was also exceptional for the societies in the region.

8. The Heritage

With this review of what the archaeological remains tell us about what happened in this middle part of the Lower Jordan Valley, we have to be aware of the scholarly, but also of the social value of this information. Scholarly the value is to reach a better understanding and knowledge of what happened in the past. If the concept of “reversed valley” – as described – is correctly applicable, than knowledge about what happened in the Jordan Valley is related to other parts of the Southern Levant to such an extend that the Jordan Valley may be seen as a barometer for social developments in the Southern Levant. Socially speaking, knowledge about what happened in the past has to be democratised, and will then bring our own existence in a relative position, which is generally bringing modesty in our mind and social thinking. And it triggers responsibility for the remains and heritage in general. In any case, the obligation exists towards the predecessors, that lived in the Jordan Valley, to take them and their legacy seriously, and with respect. This demands two actions:

a. preserve and/or fully record/document the tangible heritage;

b. make this heritage understood, or alive, so as to grasp what the predecessors thought and knew: which is part of the intangible heritage.

To make this known the results of research should be brought in reach of the (local and external) public. One way to do so are museum activities. For that reason we are planning a museum for the Jordan Valley (focusing this middle part); the first comprehensive proposal dates from almost 10 years ago. This museum (and research centre, to provide the knowledge), should be holistic in approach, combining the geographical aspects (including flora and fauna) of the Valley with the human use of it, developing through time, be it through internal changes, or external forces. This approach makes it easier for local people to understand what happened in the past and connect it with their own way of life.

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35 Dorell 1978.
Compared with the situation in Jericho, two points should be stressed:
1. the conservation methods used for Tell Deir ‘Alla are based upon the two factors: fast deterioration of the “mud-brick site” at its excavated parts, and the realisation that the remains have no very interesting character for a wide public. Basically, we backfill squares where excavation does not continue. In large opened areas we protect the long trench sides by adding a sloping protective layer of mud-bricks, that are protected by a layer of mud plaster (fig. 5; all done by local people with experience in mud-brick constructions). This method is very effective, but needs a little bit of maintenance. A small part of the original section was kept visible. The architectural remains (often meagre and interrupted) of the lowest excavated phases were not specially protected. If they have to be shown to a public they should be “rebuilt” anyway – or by using scale models in a museum context;
2. the type of visitors coming to Tell Deir ‘Alla consists of general public and archaeologically interested ones, but largely people from the western world that have a religious interest in the site because of two reasons: Tell Deir ‘Alla is often identified with Old Testament Succoth (in connection with others; Jacob, Genesis 33); and because the Old Testament figure of Balaam, the son of Beor (Numbers 22-24), is connected with the site, since he is the main figure of the “Balaam Text” (see above, Phase IX) – the prophet’s story and vision described in the long inscription (written on wall-plaster, dating to ca. 800 BC) found on the site.
All the interesting tangible data from the site should be made available for the public in exhibitions, including reconstructions and scale models of plans, even of rooms/houses with the scholarly interpretations connected with it. Yet many people will continue to visit the site because of its historical connotations.

Tell as-Sultan on the other hand, has much more to show on the site itself, that is of great value for a wider public (partly as indicators of the important steps of mankind) and should be kept visible for visitors. The main item would be the Neolithic tower and wall. Also the awareness of the value of the Spring and irrigated agriculture for the development of mankind in this region should be made “tangible” for the public.

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ASPECTS OF EXCAVATION, COOPERATION AND MANAGEMENT:  
THE JOINT PALESTINIAN-NORWEGIAN EXCAVATION AT  
TELL EL-MAFJAR, JERICHO

Nils Anfinset*

1. Introduction

This article aims to emphasize some of the results of the first joint Palestinian-Norwegian excavation at Tell el-Mafjar from the 2002 season. First a brief background of the current project is given, before the history of the site is described. From here we take a brief look at some of the results from 2002, before placing Tell el-Mafjar in a larger regional setting in the Jordan Valley. Lastly, some reflections are being made on the scientific results, as well as the issues of cooperation and management of the sites in Jericho area are considered.

2. The Joint Palestinian-Norwegian Excavation

The excavation project at Tell el-Mafjar is part of larger multi-disciplinary research project focusing on competence building as well as major research themes connected to the cultural history and the ecology of the Jordan River Basin of Palestine and Jordan. In particular, the project focuses on soil and water management, as well as a reconstruction of the changes over several millennia to the management of spring water, harvesting, storing, distribution and agricultural techniques. This has included major studies both in the highlands and in the lowlands of Palestine from archaeological, anthropological and historical perspectives. A further addition and the culture-historical depth is given by the joint Palestinian-Norwegian excavation of Tell el-Mafjar, a collaboration between the Palestinian Department of Antiquities and the University of Bergen.

2.1. Major Goals of the Excavation at Tell el-Mafjar

As Tell el-Mafjar (fig. 1) is located in the Jericho oasis only a few kilometers far from Tell el-Sultan, it is a perfect setting for a number of the major research goals.

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The oasis itself gives an extremely good possibility to study changes over time and within periods, although remnants from older periods may be partly destroyed by more recent activities. Further, the oasis is a meeting point, where there are good possibilities of tracing early exchange and trade. The area is particularly fertile and attractive, due to its location below sea level, with good freshwater access from several major springs. The desert environment surrounding the oasis creates a small, almost tropical climate in the middle of the desert. Water is as elsewhere an essential and critical factor for survival.

The current political situation must also be taken into consideration, which has in fact also affected the research to a certain extent, though this will not be dealt with here ¹.

![Fig. 1 - The site of Tell el-Mafjar in 2003 looking ENE with Wadi Nueima in front (photo by Nils Anfinset).](image)

The major goals of the excavations have been: to contribute to the local and regional understanding of the Chalcolithic period, especially focusing on the possible relations to Tell es-Sultan and Tuleilat el-Ghassul; to understand the nature of the site, its extent and its successive phases; to understand the economy and subsistence of the site; to better understand the relation between Wadi Nueima, water management and the site; to contribute to practical training in field archaeology, methodologies and other aspects of archaeological excavations for both Palestinians and Norwegians.

¹ Anfinset 2003.
3. The Site: Location, Discovery and Initial Dating

3.1. Location

Today, Tell el-Mafjar is located on the West Bank within the autonomous area of Jericho, with Palestinian administration and laws based on the Oslo agreement from 1993. The site must be regarded as an integrated part of Jericho. Jericho is situated 250 m below sea level, 10 km north of the Dead Sea in an environment that only receives 150 mm of annual rainfall. It may well be defined as an oasis, or in other words, a lush, or green patch in a rather arid and brown environment. The oasis consists of one major spring, ‘Ain Sultan, where Tell es-Sultan is located, in addition to several other smaller springs such as ‘Ain Duik, ‘Ain Nueima and ‘Ain Quelt. Today, the organization of the water is significantly connected to the practice of farming, but both water and land are extremely limited. At the present, the majority of water is used for cultivation and orchards, as well as drinking water, where water rights may be bought and sold. Although most of today springs are connected to closed pipes, much of the water is also distributed by open canals and collected in water pools for further distribution. The practice of water pools can be dated at least back to the Roman period, as there are several larger pools for water collection, in addition to aqueducts and channels. However, when considering the time span from the prehistoric to historical periods, it must be expected that all the springs have had a more or less continuous flow of water in every major wadi. This may, in fact, have been beneficial not only for cultivation and pastureland, but this may have also attracted a number of wild species. Due to its rich water resources, Jericho has played an important role, from the establishment of the very first Natufian settlement at Tell es-Sultan, up until the present. Still, it is worthwhile noting that the Late Neolithic and Chalcolithic evidence at Tell es-Sultan is disputed, and there is no clear evidence of habitation at the tell during these periods. Within the oasis, these periods must be considered to be poorly understood. Consequently, there are a number of smaller and larger sites, mainly surveyed within Jericho, that are dated to this period. Several well-excavated sites, such as Tuleilat el-Ghassul, Pella, Tell esh-Shunah North and Abu Hamid on the Jordanian side of the Jordan River are at least partly contemporary with Tell el-Mafjar. We will come back to the larger setting of Tell el-Mafjar within the Jordan Valley towards the end.

3.2. **The Site**

The site was first discovered by James Mellaart and his team in the early months of 1953, while they conducted an archaeological impact study for the Point Four Irrigation Scheme in the Yarmouk and Jordan Valley. The results of the survey weren’t published until several years later, and then only in a preliminary report of the work undertaken. Part of this survey and their soundings were published by de Contenson in 1960, though this publication covered only three soundings: at Tell es-Sa’idiyeh el-Tahta, Tell Abu Habil and Tell esh-Shunah. Still, much of the material from the survey was never published, and later destroyed, but recently, the soundings performed by Mellaart were published by Leonard jr.

At that time, Mellaart saw the great potential and value of Tell el-Mafjar, describing it as an important Chalcolithic site that should be watched. The site would then not be directly affected by the planned irrigation scheme of the valley, which, consequently, was never realized. Mellaart depicted the site as an “almost flat site on North Bank of a wadi – partly overlaid by ruins of Arabic Umayyad palace – south of road Jericho – Kh. el Mefjar”, with good arable land nearby.

The site is located only a few hundred meters south of Khirbet al-Mafjar (fig. 2), which is an important Umayyad building excavated by Hamilton in the 1950ies. According to Leonard, the site stretches for about 150 meters east to west along Wadi Nueima. In the south towards the wadi, the site has been heavily eroded. In the west, it is probably partially cut by the road to Khirbet al-Mafjar. Today, in the east there is a recently made water reservoir and in the north, there is a house and intensive agriculture is practiced. With this as a basis, the site has probably undergone severe destruction since Mellaart visited it in 1953. However, according to Mellaart’s sketch, there were silos visible that probably dated to the late Medieval Period, which were still visible by the end of 1999, while only one remained in 2002.

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3 Mellaart 1962.
4 De Contenson 1960.
7 Mellaart 1962, 156-157.
Fig. 2 - Plan of the excavated area of the site (drawing from the joint Palestinian-Norwegian excavation at Tell el-Mafjar, by Ibrahim Iqtait).

3.3. Mellaart’s Work

Mellaart conducted a single sounding in the assumed centre of the site, which measured about 4.5 x 5.0 m, and reached virgin soil at the depth of 2 meter below the surface\textsuperscript{10}.

The trench revealed a sequence of three pits and parts of a possible wall on the western edge of the sounding. According to Leonard\textsuperscript{11}, Mellaart suggested that the pits had the character of rubbish pits, but he proposed that their original use may had been as seasonal shelters, when he compared the “stepped entryways” formed by the pits, which were similar to those he found at Tell Abu Habil during the same survey\textsuperscript{12}.

\textsuperscript{10} Leonard 1992, 9.
\textsuperscript{11} Leonard 1992, 9.
\textsuperscript{12} Leonard 1992, 9, 64-68.
Based on the sounding in the above mentioned pits, Mellaart divided the stratigraphy into six different layers (1-6). Layers 1-3 were all part of the top soil of both the northern and the central pits. The southern pit was only partially excavated according to Mellaart’s plan of Trench I, representing “1 surface”, “2 soft grey ash” and “3 hard brown” (soil?). According to Leonard and Mellaart’s drawing of the section of the trench, there were pebbles separating layer 2 and layer 4, the latter containing grey buff with charcoal. Layer 5 consisted of layers of clay in an ash matrix, possibly intentionally deposited. Below layer 5, layer 6 consisted of buff clay with charcoal, and was described by Mellaart as hard, clayish soil, which in addition to charcoal contained mud-bricks with straw impressions. Underneath layer 6 was virgin soil.

During the excavations in 2002 and 2003, the site was surveyed in an attempt to locate Mellaart’s pit. This has, however, been extremely difficult as there are no exact measurements or distances connected to his pit and only a brief sketch, which has later been redrawn. Due to the heavy erosion of the site, it is highly possible that the area where the square was made is totally eroded away.

3.4. Objects Excavated in 1953

The pottery consisted of slightly more than 100 sherds; the main corpus is handmade and less than 10% is wheel-made according to Leonard. A small number of the sherds are decorated with red slip, on either the entire surface or just on a band on the rim. Others have a line of incisions or slashes, impressed cordon applied at or just below the rim, or a combination of these elements (fig. 3).

The bowls are straight-sided or V-shaped, either plain or with red wash, and are common at both Tuleilat el-Ghassul and Beersheba. Bowls with rounded or curved profiles were also found, and although they are less frequent at Tell el-Mafjar, they are common in assemblages from both Tuleilat el-Ghassul and Beersheba, and in Proto-Urban/EB I contexts, like Jericho Tomb A94 and Arad Stratum IV.

In addition, two bowls have beveled exterior profiles, similar to Ein el-Jarba and contemporary contexts at Tell el-Jazari XXVI and ‘Affula. “This form continues to represent a type-fossil for much of the later part of the Early Bronze Age”\textsuperscript{19}.

\textsuperscript{19} Leonard 1992, 10.
Cups are few at Tell el-Mafjar, but those present are rounded and varying in profile, with a diameter of 5-10 cm. They are either plain, or covered with a red-brown slip on the exterior and sometimes on the rim. Two of the cups are made from sandy red ware, as opposed to the majority of buff slip fabric. No bases were preserved at Tell el-Mafjar20.

The large bowls are both open and closed, as they are angular in the upper body which makes them closed, although they have rather wide mouths which make them open. However, all are classified as large open bowls. The rims are either scored with a band of incisions or modeled in a pie-crust formation. All are in buff fabric, either plain or with red slip on the exterior surface21.

The most common type of pottery at Tell el-Mafjar is the hole-mouth jar, found in many sizes and in a variety of shapes. The simple type is that with a straight or slightly convex upper profile which is undecorated. This type is well documented in occupational contexts of the Chalcolithic period. Yet, there are sherds that display even greater convexity in the upper body and may be of the remains of vessels of globular or piriform shape. This form is found at Ghrubba and in Proto-Urban/EB I periods, though it flourishes in the Chalcolithic period. Four fragments have bands of impressed plastic ornamentation, and two sherds have lugs on the upper part of the body, appearing to come from vessels of biconical form22.

There are several sherds of jars with outsplayed rims or everted rims in the pottery assemblage, though they consist of a wide range of sizes and variety of vessels. This swelling is known in Beersheba assemblages, but not at Tuleilat el-Ghassul. The more sharply outsplayed rims may come from large pithoi. One of the sherds comes from an elongated, bag-shaped vessel with sides tapering to an outsplayed rim and two large handles attached just above the point of carination. This type of vessel has its closest parallels at Wadi Ghazzeh23.

The sherds found at Tell el-Mafjar also consist of a variety of necked jars. Some of the sherds belonging to this group are relatively small in diameter and have slightly outsplayed rims. Two fragments with short, but marked necks are similar to Kenyon’s PNB at Jericho and to phase 2 of Moore’s Late Neolithic period24.

There is only one single fragment of spouted vessel or jar, though the fragment is too small to say anything about its original size or shape\textsuperscript{25}. There are two fragments of stands, though it is not possible to determine their function (chalices, pedestal bowls, incense burners, or stands). However these are probably imitations of stone stands\textsuperscript{26}. In terms of handles, there are three categories found in the pottery assemblage at Tell el-Mafjar: lug, ledge and loop handles, all with variations. There are lug handles on two straight-sided vessels, one lug handle on an undecorated sherd, six single lugs and one sherd with double lugs. Furthermore, there are three examples of ledge handles, two plain and one impressed type, all of which are made of buff fabric and are undecorated. In addition, there are eight plain looped handles\textsuperscript{27}. Only one sherd of a semi-closed form was found, and it had a vertically-pierced lug handle in the shoulders. Four bases of buff fabric, one with a mat impression, one with a thumb impression on the exterior base, and one covered with brown wash. One sherd is determined to be the pierced body of a small straining vessel and another sherd is “dimpled”. Of the small finds and lithic material included, three fragments of terra cotta animal figurines with four feet, four stone vessels, two spindle whorls, and eight chipped tools were recorded by Mellaart (fig. 3). The lithic material included three sickle blades with blunted backs, two polished axes, two chisels and a side scraper. Unfortunately, all of these eight finds have been lost, and there is no further documentation\textsuperscript{28}. Additionally, the bone tools recovered included eight polished objects, which were probably awls, borers or gravers.

3.5. Provisional Dating

Leonard\textsuperscript{29} seems to press the dating of the site to the very end of the Chalcolithic period or the beginning of the Early Bronze Age, although there are several indications from pottery and other objects that the site may in fact be earlier. However, one must take into account the extremely limited material at hand from a brief survey completed almost 40 years earlier.

\textsuperscript{25} Leonard 1992, 16.
\textsuperscript{26} Leonard 1992, 16.
\textsuperscript{27} Leonard 1992, 16-17.
\textsuperscript{28} Leonard 1992, 17.
\textsuperscript{29} Leonard 1992.
More recently, Garfinkel\textsuperscript{30}, in a comprehensive and detailed study of the pottery in the 5th and 4th millennia BC, has suggested that the pottery from Tell el-Mafjar should be regarded as Middle Chalcolithic, according to his chronology and terminology. This implies a dating between 5300-4500 BC.

4. Some Results from the 2002 Excavation

Here, only some brief results of the 2002 excavation will be presented, as a complete publication of both the 2002 and 2003 results is under preparation. A brief preliminary report of the 2002 season has also been published by H. Taha\textsuperscript{31}.

Fig. 4 - Excavation of the western slope of the tell towards the road (photo by Nils Anfinset).

The 2002 excavation aimed at getting a better understanding of the site and whether the site was cut by the road heading towards Khirbet el-Mafjar (Hisham’s Palace).

\textsuperscript{30} Garfinkel 1999a, 156.
\textsuperscript{31} Taha \textit{et al.} 2004.
A number of squares were therefore opened on the western slope of the tell towards the road (fig. 4). The material can be divided into several categories such as pottery, lithic material, clay figurines, bone tools, miscellaneous finds, as well as bone and macro-botanical material. The pottery is mainly hand-made and a number of sherds do have a variety of mat impressions on the base. The repertoire includes bowls, cups, pithoi, basins and stands. However, there are a number of features highlighted by Garfinkel, which seems to be present in the pottery material from the first season of excavation. This is especially noteworthy for the painted pottery, which seems to have parallels to what he defines as “Beth Shan Ware”, and to other finds with thumb impressions and rope-decorated pottery. The pottery from Tell el-Mafjar has plain similarities to el-Jemain (Tel Tsaf), further to the north in the Jordan Valley. By Garfinkel's periodization, this would indicate Middle Chalcolithic (i.e. 5300-4500 BC), contradicting Leonard who, based on the survey material, dates the site to the “Ghassulian Chalcolithic” (i.e. Late Chalcolithic) or Early Bronze Age. More recently, Blackham, who essentially follows Leonard, has suggested there is a large degree of mixing of the pottery. This remains to be tested as Blackham only relied on the material excavated by Mellaart, though there are relatively clear indications that the pottery excavated in 2002 is dated to the period between 5300 and 4500 BC.

The lithic material is also quite varied in terms of artifacts types; though, at least so far, there are relatively few indications of extensive tool production at the site as there are low frequencies of flakes, debris and cores. Further, very few hammering stones have been found, which may further support this view. On the other hand, this does not leave out the possibility that tool production occurred elsewhere on the site or only as a secondary production of tools. The majority of the tools are made of local flint, though both basalt and limestone also have been used. Of the flint material, the tools represented are retouched flakes and pieces, celts (fig. 5), borers, tabular scrapers, scrapers, sickle blades and segments, hammerstones and spindle whorls. This assemblage fits fairly well with other contemporary sites in the region, which is further discussed below.

33 Gophna - Sadeh 1989, 9-32, figs. 6-8.
34 Garfinkel 1999a.
During Mellaart’s survey in 1953, he also discovered several bone awls and clay animal figurines, which were found during the 2002 excavation too. The majority of the animal figurines are fragments only, though several clearly have the shape of head, body and/or legs (fig. 6). The awls have all been polished and have a sharpened point, which often has the shape of a pencil point. None have any indication of having been used as needles for sewing using a thread. Several of the awl fragments are tips only, while the rest of the polished handle is missing. Though, it is tempting to suggest that the tool has been used for some kind of piercing.

Of the miscellaneous finds we may mention pestles, mortars, grinding and polishing stones, spindle whorls (fig. 7), “door-sockets”, bowls, chalices and dishes, which may all be connected to a sedentary agricultural society. This is further supported by the preliminary analysis of the animal bones and the botanical material. This material and a number of structural features such as pits, circular silos, pebble surfaces and mud-brick walls do point in direction of a Late Neolithic-Chalcolithic presence in Jericho. Further, two radiocarbon dates from the first season place the site in the first half of the 5th millennium
What is significant here is that this is the first time Late Neolithic and Chalcolithic presence have clearly been identified at an excavated site within the Jericho oasis and in a stratigraphic manner. In addition, the material clearly points in direction of a sedentary agro-pastoral economy with the utilization of secondary products, as well as wide regional and interregional contacts.

Fig. 7 - Spindle whorls excavated in 2002 (photo by the joint Palestinian-Norwegian excavation at Tell el-Mafjar).

5. The 5th and 4th Millennia in the Jordan Valley

As mentioned in the beginning, the Late Neolithic and Chalcolithic of Jericho is poorly understood, especially in comparison to other sites and regions, like Tuleilat el-Ghassul and Beersheba, as well as the substantial excavation undertaken at Tell es-Sultan. Nevertheless, there is a number of sites in the Lower Jordan Valley and adjacent regions, which are more or less contemporary.

Jericho, and principally Tell es-Sultan, has for centuries been important for archaeology, often within the research schemes of biblical or imperialistic focuses, though more recently new approaches have been applied. The excavations have revealed a more or less continuous settlement at Tell es-Sultan from the early Natufian period up to very recent historical periods. It is important in this context due to the relatively scarce material known from the Late Neolithic and Chalcolithic periods, although Garfinkel has

37 Taha et al. 2004.
38 Sellin - Watzinger 1913; Garstang 1927; 1930; 1931; 1932a; 1932b; 1933; 1934; 1935a; 1935b; 1935c; 1936a; 1936b; Kenyon 1960; 1965; 1979; 1981; Kenyon - Holland 1982; 1983.
40 Kenyon 1993.
41 Garfinkel 1999b.
recently suggested a Chalcolithic Ghassulian presence at Tell es-Sultan, based on pottery. North\textsuperscript{42}, on the other hand, has stressed the lacuna at Jericho, which is again a question of terminology and chronology. From the first preliminary reports originating from Garstang’s excavation, the term Chalcolithic was initially used, though later excluded. Under any circumstances, the present knowledge of the late 5\textsuperscript{th} and 4\textsuperscript{th} millennia BC at Tell es-Sultan is rather scarce. Why is this so when the tell has been quite extensively excavated and surveyed? Further more, a number of surveys have indicated Late Neolithic and Chalcolithic sites and presence in the vicinity\textsuperscript{43}, in addition to sites like Tuleilat el-Ghassul\textsuperscript{44}. This may indicate that there is a different settlement pattern, possibly dispersal, which is evident in the Late Neolithic and the Chalcolithic periods and connected to changes in adaptation and new economic strategies. On the eastern bank of the Jordan River, more than 100 sites from the Chalcolithic period are known, where the largest settlements are located along the major uadiat\textsuperscript{45}. This suggests that the seasonal floodwater must have been important in order to practice irrigated agriculture, as suggested for Tell el-Mafjar earlier. However, on the West Bank of the Jordan River, there are noticeably few sites dated to this period.

Another site from the same period, with a number of similarities to Tell el-Mafjar, is found further to the north in the Jordan Valley. El-Jemain (Tel Tsaf) is located about 11 km south-east of Beth Shan, with striking similarities in location to Tell el-Mafjar, though closer to the Jordan River. The site was discovered in the late 1950ies\textsuperscript{46} and excavated in the late 1970ies\textsuperscript{47}. The excavations revealed walls of mud-bricks with stone foundations and smaller installations made of mud-bricks and mud, filled with ash and small stones and interpreted as hearths or ovens. In addition, scattered mud-bricks were found. One radiocarbon date of the site has given the date 4770 ± 460 BC, and should at least be partially contemporary with Tell el-Mafjar. The excavators interpreted the site as a permanent agricultural settlement, consisting of a number of household groups scattered over the region, with open areas between them\textsuperscript{48}. The

\textsuperscript{42} North 1981.
\textsuperscript{43} Glueck 1951; Porée - Lehmann 1995; Wexler 2002.
\textsuperscript{44} Scham 1999.
\textsuperscript{45} Joffe 1993, 32-35.
\textsuperscript{46} Tzori 1958.
\textsuperscript{47} Gophna - Sadeh 1989.
\textsuperscript{48} Gophna - Sadeh 1989, 33.
botanical material from the site included a number of domesticated species cultivated by the inhabitants, such as naked wheat, emmer, naked barley, six-row barley, lentils, peas, figs and olive. Further, the lithic material is again strikingly similar to Tell el-Mafjar, both in relative quantity and the tools represented. The bone material from el-Jemain (Tel Tsaf) also has many similarities to Tell el-Mafjar. Although the bone samples from el-Jemain (Tel Tsaf) were relatively small, domesticated sheep, goat, cattle, equids and pig were discovered, besides gazelle, birds and mollusks. The domesticated animals dominated the sample by 96.6%. Of this, sheep and goats accounted for 44.1%, cattle accounted for 33.3%. Pig counted for 16.6%, while equids only counted for 0.8%. Although the numbers and percentages for Tell el-Mafjar are not complete yet, the composition of the bone assemblage seems to be fairly similar, though equids haven’t been found at Tell el-Mafjar at all. At el-Jemain (Tel Tsaf), only one such bone fragment was recovered. In total, there are many similarities in terms of adaptation and economy, not only to Tell el-Mafjar, but also to Tuleilat el-Ghassul (see also below). Further, all the sites seem to be part of what may be regarded as “pig settlements” in the Jordan Valley, with good water availability and an abundant vegetation. Nevertheless, it is striking that there is a relative lack of material connected to long-distance exchange and interregional contacts at el-Jemain (Tel Tsaf).

Another noteworthy site, which also is partly contemporary to Tell el-Mafjar, is Tell Abu Hamid, located on the Eastern Bank of the Jordan River with equal distances to both the Dead Sea and Lake Tiberias. Large scale excavations were conducted for five seasons between 1986 and 1992. The lowermost levels revealed depressions, basins, hearths and pits, relatively similar to the lowest levels at most tell sites in the region. The middle levels consisted of buildings with several rooms, which had been rearranged several times during occupation. In general, there were rectangular rooms with stone foundations and mud-brick walls, similar to those of el-Jemain (Tel Tsaf). The upper levels revealed large rectangular rooms, some with enclosed courtyards, with either entire walls of mud-bricks or with stone foundations. Several of these rooms had hearths, fire pits and small depressions for jars. Dollfus and Kafafi argue that from the
beginning of its occupations, the site was based more or less entirely on agriculture and herding products, because wild animals count for less than 10% of the bone material and fish remains are completely absent. Similar to both Tell el-Mafjar and el-Jemain (Tel Tsaf), Tell Abu Hamid occupations exploited domesticated animals, such as sheep, goats, pigs, cattle, dogs and a small equids - possibly the ass\textsuperscript{54}. They add that pastoral animals may have been taken up to Golan, practicing already in the beginning of the 4\textsuperscript{th} millennium BC part of a transhumance pattern in the summer months. This indicates strong connections between the Middle Jordan Valley and the Golan\textsuperscript{55}. Although they argue for both wool and milk productions, it is unclear what this argument is based on. The flint material from Tell Abu Hamid is relatively large compared to what has been collected from other contemporary sites in the region. Although still in the process of being published, the composition of the tool assemblage seems to be similar to that of Tell el-Mafjar, el-Jemain (Tel Tsaf) and Tuleilat el-Ghassul. At Tell Abu Hamid, tabular scrapers and notably fan scrapers become increasingly common towards the bottom layers. The flint assemblage consists of denticulated sickle blades, three small transverse arrowheads, in addition to axes, adzes, picks and chisels\textsuperscript{56}. Similar to Tell el-Mafjar, there are mortars and door sockets of limestone, as well as grinding tools of basalt and sandstone. Likewise, the bone tools at Tell Abu Hamid are also represented by bone awls and spatulas/polishers, some with perforated ends\textsuperscript{57}. Both pendants and beads are present at Tell Abu Hamid, the latter consisting mainly of irregular shapes and perforations similar to those from Tell el-Mafjar. As mentioned, animal figurines have also been found at Tell Abu Hamid. The majority are broken, but have been interpreted as birds and “quadrupeds”, the latter possibly sheep or goats\textsuperscript{58}. The fragments of a wall painting, similar to those recovered at Tuleilat el-Ghassul\textsuperscript{59}, is the last important feature found at Tell Abu Hamid. There are clear similarities to other sites like Tell el-Mafjar in the Jordan Valley, although the pottery also has many similarities to the sites in the Golan. As the site is not fully published, it is difficult to evaluate it on a more general

\textsuperscript{54} Dollfus - Kafafi 1993, 246.
\textsuperscript{55} Dollfus - Kafafi 1993, 246.
\textsuperscript{56} Dollfus - Kafafi 1993, 248.
\textsuperscript{57} Dollfus - Kafafi 1993, 246.
\textsuperscript{58} Dollfus - Kafafi 1993, 250, fig. 4.
\textsuperscript{59} Dollfus - Kafafi 1993, 250, fig. 6.
level, both with reference to radiocarbon dates and material from distant places.
In this connection, Tuleilat el-Ghassul is of particular interest because it has been excavated over a long period of time and quite recently. Tuleilat el-Ghassul was first excavated in the late 1920ies until 1938, and again in 1959-60, by the Pontifical Biblical Institute. Both excavation periods revealed the well-known wall paintings and extensive architectural remains. Renewed excavations, led by J.B. Hennessy, were undertaken between 1967 and 1977, revealing a continuous sequence from the Late Neolithic to the Late Chalcolithic. Later, he also discovered, among other things, the main sanctuary area. More recently, excavations during the late 1990ies led by S. Bourke from the University of Sidney, have hinted at a much more varied picture of Tuleilat el-Ghassul. The recent focus has been on contextualizing the multiple sequences, as well as the development of social complexity at the site. This growing social complexity is both important to economic issues and interregional contacts. Bourke has suggested a development towards milk production, as there is an increase of aged cattle, as well as a gradual reduction of neonate and aged ovicapries, indicative of improved animal husbandry and off-site pasturing. Further, Bourke suggests that the increasing numbers of tabular scrapers may indicate an intensified wool production significantly earlier than otherwise acknowledged. Moreover, Bourke suggests that several economic changes gave to Tuleilat el-Ghassul an increase in productivity, which had an impact on the level of social organization, the storage of agricultural surplus, trade and growing social inequalities. Here, the site must be seen in connection with the development of both a cultic and an economic centre, serving much of its rural hinterland. In considering interregional contact, Bourke argues that trade was a minor component in the early Chalcolithic, but that it increased during the late Chalcolithic, particularly with exchanges in hard stones such as basalt, alabaster and hematite, and personal adornments, such as shells, faience, ivory and

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60 Mallon et. al. 1934; Koeppel 1940; North 1961.
61 Hennessy 1969.
63 Scham 1999; Lovell 2001; Blackham 2002; Bourke 2002.
64 Bourke 2002, 9, fig. 5.
66 Bourke 2002.
semi-precious stones. All this seems to be evidence of a growing demand for objects utilized for personal display. Yet, this is not witnessed in the burials, which still seem to focus on the collective themes, but do point in direction of interregional and regional contacts.

In the greater Jordan Valley, Tell el-Mafjar also has a number of similarities to sites like Wadi Ziqlab\textsuperscript{68}, considering aspects such as wool production, fauna composition, dating, lithic material and subsistence. This illustrates that the changes detected at Tell el-Mafjar are indeed related to other sites in the region, giving greater understanding of this so-called “dark age” of the Southern Levant.

In terms of chronology, Tell el-Mafjar and related sites in the Jordan Valley should be regarded as dated later than the Wadi Rabha complex, though partly contemporary with the later part of Wadi Rabha, el-Jemain (Tel Tsaf) and the earliest phases of the sites in the Beersheba region. Tell el-Mafjar is also partly contemporary with the Merimda, el-Omari and Badarian sites in the Nile Valley\textsuperscript{69}.

6. Excavation, Cooperation and Heritage Management

Now, what we have seen here is that a joint excavation and cooperation may both focus on scientific aims and issues of competence building at the same time. The joint Palestinian-Norwegian Expedition have for the first time identified a Late Neolithic-Chalcolithic presence in Jericho, though not at Tell es-Sultan. However, this may point in direction of a shift in both settlement pattern and economic adaptation in the form of dispersal. This is not only seen in Jericho, but at several major sites in the Lower Jordan Valley. Further, the economic shift is probably connected to changes in the agricultural technology and the utilization of secondary products of animals\textsuperscript{70}.

The project has also created through cooperation mutual understanding and cultural meetings, which are important not only in contexts of conflict, but in an increasing globalized world. Training, education and identity are here key issues that need to be considered, and should be incorporated in all types of archaeological excavations. Further, in order to preserve this site and other sites within the oasis it is necessary to involve to a greater extent the public in the region; as for now not only this site, but a number

\textsuperscript{68} Banning et al. 1994.
\textsuperscript{69} Hassan 1985.
\textsuperscript{70} Sherratt 1981.
of sites are threatened by increased urbanization and a greater need for agricultural land within Jericho. It is therefore necessary to consider Jericho in a wide perspective not only focusing on the most recent phases and most spectacular sites, but consider a wider range of different sites and periods in order to get a full picture of Jericho. Tell el-Mafjar is a small, but important piece in a very large puzzle of the culture heritage of Jericho.

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THE ARCHAEOLOGICAL SITE OF TELL ES-SULTAN AS A POTENTIAL WORLD HERITAGE SITE: NOMINATION DOSSIER, MANAGEMENT PLANNING AND OTHER REQUIREMENTS FOR INSCRIPTION IN THE WORLD HERITAGE LIST

Giovanni Fontana Antonelli

1. Introduction

1.1. Background Information

The World Heritage Committee, having recognized the potential outstanding universal value of the Palestinian cultural and natural heritage at its 26th session held in Budapest in June 2002, decided to provide technical assistance to support the relevant Palestinian institutions for the protection of the cultural and natural heritage. In particular, after the events of April-May 2002, the Committee expressed its concern over the destruction and damage caused to the Palestinian heritage and requested UNESCO to assist the Palestinian Authority in:

a. establishing an inventory of such outstanding cultural and natural heritage;

b. evaluating its state of conservation and the measures for its safeguarding;

c. building a capacity within the Palestinian responsible institutions in view of the future implementation of the World Heritage Convention1.

Therefore, the decision taken in Budapest was reiterated in Paris (2003), Suzhou (2004) and Durban (2005): more financial resources were secured by these decisions, in addition to funds donated by the Government of Italy through the “Joint Declaration on Cooperation concerning Cultural and Natural Heritage Protection between the Italian Government and UNESCO” and decentralised to the UNESCO Office in Ramallah2.

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1 Programme Specialist for Culture, UNESCO Office in Ramallah.
2 Decision 26 COM 6.1 on the protection of the Cultural Heritage in the Palestinian Territories (see Annex 1).
3 The International Training Workshop “Tell es-Sultan/Jericho in the Context of the Jordan Valley: Site Management, Conservation and sustainable Development”, held in Jericho from 7th to 11th February 2005, was organised through this funds. The workshop was designed by the UNESCO Office in Ramallah in cooperation with the Department of Antiquities and Cultural Heritage of the Ministry of Tourism and
The implementation of the work plans drawn up for the execution of the activities relating to the World Heritage in the Palestinian Territories, in accordance with the Budapest Decision and with the “UNESCO Programme of Assistance for Rehabilitation and Development in the Occupied Palestinian Territory 2004-2007”, initially slowed down by the volatile situation in the region (including the war in Iraq), made considerable progress thanks in particular to the partnership established between the UNESCO Office in Ramallah and the Department of Antiquities and Cultural Heritage of the Palestinian Ministry of Tourism and Antiquities. This partnership allowed the Palestinian institutions to benefit of a wide programme for the protection of the cultural and natural assets focusing on capacity building and institutional development, enhancement of the preventive protective measures for archaeological, historical and natural sites, monitoring of the state of conservation and assessing specific needs. First tangible outcome of this cooperation is the “Inventory of Palestinian cultural and natural sites of potential outstanding universal value”, presented to the World Heritage Committee at its 29th session in Durban, as a result of a broad consultation process that involved several institutions and professionals from various Palestinian districts. The “ancient Jericho/Tell es-Sultan” site, ranked number two in the above-mentioned inventory, represents a major stage in the history of humanity as one of the first seats of civilizations, known as the oldest city in the world. The “Inventory” represents the first step towards the development of a framework programme that is currently being implemented in the Palestinian Territories under the auspices of the World Heritage Convention.

1.2. The World Heritage Convention

The “Convention concerning the Protection of the World Cultural and Natural Heritage” (UNESCO, Paris, 16 November 1972) developed from the idea to preserve the heritage of humanity as the result of the interaction of the human culture with nature. Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage is both irreplaceable sources of life and inspiration. Places as unique and diverse as...
the wilds of East Africa Serengeti, the Pyramids of Egypt, the Great Barrier Reef in Australia and the Baroque cathedrals of Latin America make up our world’s heritage.

What makes the concept of World Heritage exceptional is its universal application. World Heritage sites belong to all the peoples of the world, irrespective of the territory on which they are located.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.

This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.

The most significant feature of the World Heritage Convention is that it links together in a single document the concepts of nature conservation and the preservation of cultural properties. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two. The idea of combining conservation of cultural sites with those of nature comes from the United States of America. A White House Conference in Washington D.C. in 1965 called for a “World Heritage Trust” that would stimulate international cooperation to protect “the world’s superb natural and scenic areas and historic sites for the present and the future of the entire world citizenry”. In 1968, the International Union for Conservation of Nature (IUCN) developed similar proposals for its members. These proposals were presented to the 1972 United Nations conference on Human Environment in Stockholm.

The Convention is therefore the result of the merging of two separate movements: the first focusing on the preservation of cultural sites, and the other dealing with the conservation of nature, bearing in mind that the idea of creating an international movement for protecting heritage emerged after World War I.

The event that aroused particular international concern was the decision to build the Aswan High Dam in Egypt, which would have flooded the valley containing the Abu Simbel temples, a treasure of ancient Egyptian civilization. In 1959, after an appeal from the governments of Egypt and Sudan, UNESCO launched an international safeguarding campaign. Archaeological research in the areas to be flooded was accelerated. Above all, the Abu Simbel and Philae temples were dismantled, moved to dry ground and reassembled.
The campaign cost about US$ 80 million, half of which was donated by some 50 countries, showing the importance of solidarity and nations’ shared responsibility in conserving outstanding cultural sites. Its success led to other safeguarding campaigns, such as saving Venice and its Lagoon (Italy) and the archaeological Ruins at Moenjodaro (Pakistan), and restoring the Borobodur Temple Compounds (Indonesia).

Consequently, UNESCO initiated, with the help of the International Council on Monuments and Sites (ICOMOS), the preparation of a draft convention on the protection of cultural heritage. The Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List, a selection of sites of excellence displaying cultural and natural diversity, sometimes combined in mixed sites, around the world. The List has nowadays more than 800 properties inscribed during more than 30 years of cooperation between UNESCO and its partners, including International NGOs and the signatories’ governments, called States Parties.

The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. The States Parties are encouraged to integrate the protection of the cultural and natural heritage into regional planning programmes, set up staff and services at their sites, undertake scientific and technical conservation research and adopt measures which give this heritage a function in the day-to-day life of the community. It explains how the World Heritage Fund, created through an additional fee of 1% to the contribution to UNESCO by Member States, is to be used and managed and under what conditions international financial assistance may be provided.

The Convention stipulates the obligation of States Parties to report regularly to the World Heritage Committee, the 21-member governing body of the Convention elected by the General Assembly of the States Parties, on the state of conservation of their World Heritage properties. These reports are crucial to the work of the Committee as they enable it to assess the conditions of the sites, decide on specific programme needs and resolve recurrent problems.

It also encourages States Parties to strengthen the appreciation of the public for World Heritage properties and to enhance their protection through educational and information programmes.

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4 Excerpts from the web site http://whc.unesco.org.
1.3. Implementing the World Heritage Convention in the Palestinian Territories

According to the various decisions taken during the sessions of the World Heritage Committee from 2002 to 2004 (2005), a number of actions are currently being implemented in the Palestinian Territories, in accordance with the related work plans, drafted by UNESCO in cooperation with the Palestinian Department of Antiquities and Cultural Heritage, which defined the following activities:

1. training on the implementation of the World Heritage Convention;
2. collection of documents and material;
3. assessment of state of conservation and identification of safeguarding measures;
4. inventory of cultural and natural heritage sites of potential outstanding universal value in Palestine;
5. consultative and awareness-raising workshops;
6. establishment of Palestinian WH Secretariat and Committee;
7. training workshop on nominations of sites for inscription on WH List;
8. training workshop on site management for WH sites;
9. preparatory assistance for the compilation of two nomination files;
10. cultural landscape project.

1.3.1. Inventory of Cultural and Natural Heritage Sites of Potential Outstanding Universal Value in Palestine

The “Inventory of cultural and natural heritage sites of potential outstanding universal value in Palestine” has been published by the Palestinian Ministry of Tourism and Antiquities in July 2005 (fig. 1) and distributed during the 29th session of the Committee held in Durban (South Africa). The Inventory, which contains 20 properties (17 cultural and 3 natural sites), has been the result of a wide consultative process involving dozens of Palestinian specialists and various concerned institutions, and notably the Ministry of Tourism and Antiquities, through a series of Consultative and Awareness-Raising Workshops, concluded in December 2004. Consultations took place among all the concerned parties, including the Gaza Strip, despite the extreme difficulties posed by the current situation to logistics and movement of people.

The completion of this inventory constitutes a first and very important step towards the development of awareness and conservation policies inspired by the principles and standards of the World Heritage Convention. The Inventory has been assessed by Mr. Koïchiro Matsuura, Director General of UNESCO, as one of the major achievements of UNESCO in the Palestinian
Territories and evaluated by Mr. Francesco Bandarin, Director of the World Heritage Centre, as one of the best Inventories/Tentative Lists in the world.

1.3.2. Capacity-Building for the Relevant Palestinian Institutions
A large programme of capacity-building for the conservation and management of potential World Heritage sites is currently being carried out: further to the Training Workshop on the implementation of the World Heritage Convention, which took place at ICCROM in Rome in September 2003, and was attended by 16 Palestinian specialists in cultural and natural heritage, a second Training Workshop, specifically focused on the methodology and process of the nomination of a property for inscription on the World Heritage List, including management planning, has been carried out in July 2004 in Bethlehem, also in collaboration with ICCROM. The course, successfully attended by 20 specialists, gave an important contribution to the development of the capacities in the Palestinian Territories (fig. 2).
In December 2004, a programme of computer literacy has been implemented for the more than 30 officials of the Department of Antiquities and Cultural Heritage, including training in Geographic Information Systems (GIS).
In February 2005, the UNESCO Office in Ramallah, in cooperation with the Department of Antiquities and Cultural Heritage, and the Department of Historical, Archaeological and Anthropological Sciences of Antiquity of Rome “La Sapienza” University, organized an International Training Workshop, “Tell es-Sultan/Jericho in the Context of the Jordan Valley: Site Management, Conservation and sustainable Development”. The workshop focused on site management and strategic planning, using the archaeological site of the ancient Jericho as a case study. More than 30 speakers intervened from 6 different countries and about 60 participants attended the seminar. The present contribution is part of the proceedings of this workshop.

![Fig. 2 - The participants of the Training Workshop on the Nominations of sites held in Bethlehem in July 2004.](image)

1.3.3. Awareness-Raising Programme on the Importance of the Preservation of Cultural Assets and Monitoring of State of Conservation for Selected Sites

In accordance with the work plan mentioned above, drafted in the framework of the cooperation between UNESCO and the Palestinian Department of Antiquities and Cultural Heritage, a number of awareness-raising workshops has been organized in seven different locations of the Palestinian Territories, namely in Jenin, Nablus, Ramallah, Bethlehem, Hebron, Khan Yunis and Gaza City between January and October 2004. The initiative was supported by the publication of *ad hoc* information material, which was distributed during the workshops. The various events were attended by key stakeholders such as representatives of municipal councils, religious authorities, universities, governmental bodies, NGOs, as well as by the concerned communities. This activity represents a crucial issue towards
the conservation of the cultural and natural assets, especially in the so-called post-conflict areas, where other issues concern people and governmental priorities are oriented to the emergency measures to ensure the liveability of towns and territories instead of planning in a long-term perspective.

For this purpose, the UNESCO Office in Ramallah has organized a series of monitoring missions in cooperation with the relevant Palestinian institutions, in order to assess the state of conservation of key sites within the undergoing inventory. Reactive monitoring reports have been prepared for the three most important historic cities (Hebron, Nablus and Bethlehem) and for the archaeological sites in Jericho.

2. The Site. Ancient Jericho: Tell es-Sultan

2.1. Introduction Remarks

The archaeological site of Tell es-Sultan has a great potential as a World Heritage Site due to its unquestionable archaeological and historical value. Despite the fact that the site cannot currently be nominated for inscription in the World Heritage List, it has been included in the above-mentioned Inventory, which paves the way to the future formal submission of the nomination dossier to the World Heritage Centre by the Palestinian Authority.

Tell es-Sultan (ancient Jericho) is ranked number two in the Inventory since it represents undisputedly the oldest known city in the world (Bethlehem - Birthplace of Jesus is ranked number one).

2.2. Requirements for Incription on the World Heritage List

Precondition for the inscription in the World Heritage List is the ratification of the World Heritage Convention. The Palestinian Authority having the status of permanent observer to UNESCO but not being a Member State is not entitled to ratify any international convention. Nevertheless, as recalled in the introduction of this paper, the World Heritage Committee, at its 26th session in Budapest in 2002, decided to give access to the Palestinian Authority through the establishment of an exceptional programme of technical assistance, which foresees a preliminary preparation of documents related to the convention. In this framework, a nomination dossier, accompanied by the site management plan, is currently under preparation to fulfil the requirements for the inscription in the World Heritage List, pending the ratification of the convention by the Palestinian Authorities.
2.3. The Technical Fiche as Reported in the Inventory of Cultural and Natural Heritage Sites of Potential Outstanding Universal Value in Palestine

Fig. 3 - View of ‘Ain el-Lodja near the Mount of Temptations.

The information that follows is contained in the above-mentioned Inventory in the fiche concerning Jericho and Tell es-Sultan. The fiche has been drawn up according with the “Operational Guidelines for the Implementation of the World Heritage Convention”.

2.3.1. Geographic Location
The site is situated in the plain of the Jordan Valley, ca. 10 km north of the Dead Sea and 2 km northwest of the present centre of Jericho city (fig. 3). It is a large artificial mound, rising 21 m high and covering an area of about one acre.

2.3.2. Justification of Outstanding Universal Value
Tell es-Sultan is universally important because it is considered to be the oldest town in the world, housing the earliest fortification system, supported with a tower and an internal staircase. These well preserved Neolithic monuments point to the early development of a sophisticated social and political system. The method used to make these discoveries is also regionally significant. It involved the use at Tell es-Sultan of techniques associated with the English archaeologist, Mortimer Wheeler, developed by him in the 1930ies and passed on to his associates and students such as Kathleen M. Kenyon. She followed his precepts at Tell es-Sultan with large, deep, horizontal trenches designed to expose
stratigraphy rather than merely find remains or objects. Thus the wall and the tower, and indeed the evidence of domestication, were found in a secure cultural and chronological context. The well-preserved trenches remain as witnesses to the development of archaeological research methods in Palestine and its region, and in their sides visitors can still see some of the layers in which lies the history of the tell.

Fig. 4 - The Neolithic tower within Kenyon's Trench I.

2.3.3. Criteria
Cultural Criterion (I)
The Neolithic town of Tell es-Sultan, and its fortification system including the tower (fig. 4), represent a unique example of a farming and urban development some 10,000 years ago, the earliest such structure known in the world and, as such, a work of creative genius. These features also indicate the early development of a strong communal and political system.
**Cultural Criterion (II)**
Tell es-Sultan shows an important interchange of human values during the Neolithic period on the development of architecture, particularly urban architecture and planning, and construction technology.

**Cultural Criterion (III)**
Being better-excavated than other tells, Tell es-Sultan provides a unique, and will always provide an exceptional, testimony to now disappeared cultural traditions and civilizations up to the 6th century BC. An outstanding example of this is its famous plastered skulls with inlaid shell eyes, one of the earliest instances of ancestor worship in the world.

**Cultural Criterion (IV)**
The site provides valuable information about architectural and craft development, especially during the Neolithic period, including the development of the house layout from round to rectangular, and the development of various handicrafts such as masonry, pottery, basketry, using natural field stones and unbaked mud-bricks for construction, all, because of their early date, illustrating significant stages in human history.

2.3.4. Assurances of Authenticity or Integrity
Four major excavations were carried out at Tell es-Sultan. These foreign excavations were undertaken during 19th and 20th centuries: major ones were the Austro-German excavation 1907-1909 and the excavation by the British School of Archaeology between 1952 and 1958, under the direction of Kathleen M. Kenyon. Currently, a joint Palestinian-Italian assessment work is carried out on the site, aiming at protecting and preserving the values of the site. Other than these intrusions, the site has almost no modern development on it (though an overhead cable-car system is obtrusive), nor has it been subject to conservation or reconstruction.

2.3.5. Comparison with Other Similar Properties
As a tell, Tell es-Sultan is a common type of archaeological site in south-western Asia; its distinction lies in the results of excavation and in the scholarship applied to their publication. Fifty years after its principal excavation, and despite much work on other sites, notably at Çatalhöyük in south-western Turkey, it remains an outstanding place of world significance for its evidence of early domestication and urbanisation. Comparisons can be made in Jordan with sites such as Beidha, Basta and ‘Ain Ghazal.

3. Conclusions
The cultural and natural heritages are priceless and irreplaceable possessions, not only for individuals or nations but for mankind as a whole. The loss through whatever means of these possessions constitutes an
impoverishment of the universal heritage. The protection of Tell es-Sultan is essential to preserve the heritage of humankind.

Annex I: Protection of the Cultural Heritage in the Palestinian Territories

26 COM 6.1.\(^5\)

The World Heritage Committee:


2. *notes* the provisions of the Convention concerning the Protection of the World Cultural and Natural Heritage (1972), the Convention for the Protection of Cultural Property in the Event of Armed Conflict (The Hague, 1954), and other relevant international legal instruments;

3. *takes* note of the Executive Board decision taken at its 164\(^{th}\) session (164EX/3.1.1);

4. *deplores* the destruction and damage caused to the cultural heritage of Palestine;

5. *emphasizes* the exceptional universal value of cultural heritage in Palestine;

6. *considers* that, until the conditions for the inscription of this heritage on the World Heritage List are fulfilled, appropriate measures shall be taken to ensure its protection;

7. *invites* the Director General, in consultation with the Chairman of the Committee, to assist with the task of establishing an inventory of this cultural and natural heritage, assessing state of conservation and the measures for its preservation and rehabilitation;

8. *further decides* to provide financial support for the implementation of this task and that part of this contribution should be used for training and capacity building of Palestinians specialists in the field of preservation and safeguarding of cultural and natural heritage;

9. *appeals* to the concerned parties to co-operate with the Director General in his efforts in the protection of the cultural and natural heritage in Palestine;

10. *invites* the Director General to report on the execution of this decision during the 27\(^{th}\) session of the Committee in 2003.

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\(^5\) Extracts from the 26\(^{th}\) session of the World Heritage Committee.
1. Premise: the Tell es-Sultan Joint Expedition

More than ten years have elapsed since 1994, when following the Oslo and Madrid Agreements the Department of Antiquities of Palestine was established with the aim of preserving and re-evaluating the rich historical and archaeological patrimony of this Country, which yields a substantial and quite unique part of the Humankind Cultural Heritage. Seven years have already gone since the reborn Department of Antiquities of Palestine and Rome “La Sapienza” University started the Pilot Project of Archaeological Investigations and Tourist Re-evaluation of Tell es-Sultan, ancient Jericho. This project achieved many scientific goals, which are illustrated in Section 1 of this volume. Since its development on the field was forcibly interrupted in year 2000, it is, perhaps, interesting to recall how it has been carried on in years 2001-2005, and what is the conceptual background and the practical setting of research activities conducted up to now.

1.1. A “Post-Colonial” Approach

The theoretical framework of such a Project deserves a special mention. Still today, after seven years, it marks a distinct change and possibly represents a new operational standard in Near Eastern Archaeology. It was the first joint archaeological expedition involving an European Country, which did not foresee an “excavation permit”. There was no deregulation or shifting of legal responsibilities concerning the site study and management by the Department of Antiquities towards another subject, as it happens in many other countries of the Near East and even in Europe. The excavations were formally and substantially conducted by the Department of Antiquities, and Rome “La Sapienza” University is proud to have been invited to participate in them with the contribution of its funds and specialists.

* Department of Historical, Archaeological and Anthropological Sciences of Antiquity, Rome “La Sapienza” University; director of Rome “La Sapienza” Expedition to Palestine & Jordan.

† Marchetti - Nigro eds. 1998; 2000; in press; see also Marchetti 2003.
Such conceptual outline not only characterized the first Palestinian Excavation on a Palestinian Site (i.e. Tell es-Sultan), but also set a standard for a definitely new approach to Near Eastern Archaeology, that one may propose to call a “post-colonial” or “post-mandatarian” approach, in which local archaeologists welcome international cooperation to preserve and rehabilitate a site or a monument part of the World Cultural Heritage, without, however, dismissing their primary role of leading the process, and being responsible for the site preservation, valorization and management². Being one counterpart of such an innovative process, I would like to stress the far-seeing perspective of the Academic Authorities of Rome “La Sapienza” University, first of all our Master Prof. Paolo Matthiae, Vice-President of the University, who supported the Expedition and the cooperation agreement upon which it was set up.

2. Continuing Research Activity in Years 2001-2005

With the hope to resume the activity on the field, in the meantime, during the “standby status” of 2001-2005, the Expedition concentrated its financial and scientific resources on Palestinian archaeology and, especially, on the Jericho area by means of the attribution of five PhD theses on topics related with the site and its history and archaeology of Palestine in pre-classical periods³. Some of these dissertations also implied the gathering of data on Palestinian archaeological materials spread all over museums of Europe and the rest of the world.

A further effort, however, must be done to re-evaluate the Jericho archaeological resources, and especially Tell es-Sultan, which is really an extraordinary archaeological site:

- Tell es-Sultan is the site where one of the earliest agricultural communities of the Near East settled and developed at a level which has almost no comparisons: its extension and findings from the

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² On this matter see Taha 2005; in press.
³ These theses are the following: Dr. Gilberta Spreafico on “Religious Architecture in Palestine During the Iron Age”; Dr. Sandra Antonetti on “Unpublished Middle Bronze Age Tombs and Burials at Tell es-Sultan and in the Nearby Necropolis”; Dr. Andrea Polcaro on “Funerary Customs in the Southern Levant During the Early Bronze I”; Dr. Anna Rita Lisella on “Clay Figurines in Palestine During the Bronze and Iron Ages”; Dr. Maura Sala on “The Khirbet Kerak Ware: a Complete Inventory and a Stratigraphic and Chronological Study”.
Neolithic Period made it the foremost site of the whole Fertile Crescent⁴;
- Tell es-Sultan is the site where the earliest urban culture of the Levant had a splendid flourishing in the Bronze Age⁵; a site with such massive fortifications⁶, that they became immortal in the Biblical Narrative;
- Tell es-Sultan is the site around which one of the largest pre-classical necropolis of the entire ancient Near East was established, telling us the history of its inhabitants for more than one millennium⁷.

The richness in history and significance of this site is an overwhelming heritage for the whole Humankind. It is our duty to cooperate for its preservation and valorization. For all these reasons, Jericho deserves the concern not only of archaeologists, but also of all authorities involved in its valorization, as a primary cultural resource of the modern city of Ariha.

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⁴ Kenyon 1957, 51-92.
⁶ See Garstang 1931; Kenyon 1957, 167-183; Nigro in this volume, and also Nigro in press.
⁷ See Polcaro in this volume.
2.1. The Pilot Project for the Creation of the Archaeological Park of the Jericho Oasis

In this perspective, in years 2001-2005, Rome “La Sapienza” University contribution has been twofold: from one hand, the Project for the creation of the Archaeological Park of Tell es-Sultan has been implemented, sharing the conviction that this will be a basic resource for tourism and economic development of the city of Ariha. On the other hand, pursuing the urgent goal of safeguard and preservation, another project has been launched, which is called “PADIS”: i.e. Palestine Archaeological Databank & Information System (see below).

As regards the Pilot Project for the creation of the Archaeological Park, a further step has been the proposal of removing the modern road cutting Tell es-Sultan in front of the spring ‘Ain es-Sultan, and the elaboration of a composite project including all the archaeological sites of the Jericho Oasis (fig. 1).

2.2. The Palestine Archaeological Databank & Information System

The PADIS is a coherent organization of archaeological and topographical data from the sites in the neighbours of Tell es-Sultan, to be available on the web for immediate consultation and planning, and for the physical defence of archaeological sites from fast urban development. The organization and functioning of such initial corpus of data is conceived to be the first act in a larger project, that will include all antiquities under the trustworthiness of the Palestinian National Authority.

In 1994 our University, in fruitful cooperation with the Department of Antiquities of Jordan, elaborated under the general organization of Dr. Gaetano Palumbo the Jordan Antiquities Database and Information System (JADIS). In a short period, the JADIS became a reference tool not only for archaeologists operating in Jordan, but also for the Department of Antiquities of Jordan for the sake of the protection of archaeological heritage and the progress of scientific research.

The concern about the safety of Palestinian Antiquities, threatened by territorial fragmentation, urban transformations, weak legal defence,
suggested to develop a GIS supported catalogue of archaeological sites and monuments, which may increase the awareness of local population about archaeological site preservation, and could help Palestinian Institutions operating in archaeological areas to safeguard them. We, thus, started to gather all available data on the many archaeological remains of the Jericho Oasis. The goal was the creation of a databank, collecting topographical data for the exact location of sites, finds and environmental features, together with the necessary historical and bibliographic references, including satellite images, aerial photos, excavation photos and topographical maps. The PADIS (Palestine Archaeological Databank & Information System), now almost completed for the Jericho Oasis, is available in the web thanks to the Italian “Consiglio Nazionale delle Ricerche” (CNR); it is now preliminarily compiled by a scientific team of Rome “La Sapienza” scholars and PhD students, and it is conceived to include mainly Palestinian scholars and archaeologists of the Department of Antiquities, which will fill in the records through internet. The updating of the system is continuous, as well as the filing of sites and monuments, which are under a constant danger. The PADIS web-site has two different ways of access: the site research form and the data-entry form; furthermore, a parallel bibliographic resource is always available, called PABIR (Palestine Archaeological Bibliographic Resource; fig. 2). The site-databank also shares information concerning the preservation state of archaeological sites and monuments and offers maps and updated photos of each site.

![Fig. 2 - Example of the bibliographic data-entry form.](image-url)
2.2.1. The Site Research Form

The way to find out a site in the databank is multiple (fig. 3): one can either enter the geographic coordinates of a site (according to the Palestine Grid, the UTM, or the Latitude/Longitude system), or digit its ancient or modern Arabic name. One can select sites by dimensions, occupational periods, elevation, or using particular finds from them. Monuments, urban and architectural features are included in the databank as well, and they may provide clues for enquiring the databank, according to different criteria, such as the typology of public and domestic buildings, the presence of a cemetery or of megalithic structures, etc.

![Fig. 3 - Example of the site research form.](image)

2.2.2. The Data-Entry Form

The data-entry page is aimed at unifying all kind of geographical, historical and archaeological data from different sites and sources. Special attention is given to direct monitoring of the site preservation state: local archaeologists can fill in on-line the form in the reserved area of the web site. This would make possible in a future to publish a short report on the state of the archaeological patrimony, in order to enhance the worldwide awareness on such a topic. The form (fig. 4) includes the names of the site, the topographical data, the extension and elevation, and other spatial characteristics. Together with these intrinsic references, it foresees the
description of the proper archaeological features of the site, such as visible architectural remains, stratigraphic observations, scattered materials, or any identifiable human relic. The chronological range of the site has then to be indicated, on the basis of already known data, or of the direct observation of diagnostic items (such as inscriptions, lithics, pottery, stratigraphy, etc., the presence of which is indicated by flags in the record).

The description of the site also includes the presence of modern structures and installations and their relationships with the site itself and its preservation/valorization. Each site-record has to be completed with an appropriate topographic and photographic documentation: the site located by the GIS on a 1:50.000 map of the district and aerial photos, as well as photos of the whole site and of its major features are attached to the form. A satellite image of the site is also available with a resolution of 5 to 2.5 m. New data made available by surveys and excavations can be added to a record at any moment, by means of a series of buttons, which allow the editing of records on-line to authorized clients.

2.2.3. The Site Preservation-State Form

This data-entry form is perhaps the most relevant form for the final goal of the PADIS, which is to contribute to the rescue, safeguard and valorization of the Palestinian Archaeological Heritage. All information concerning the state of preservation of the site is thus displayed in the site preservation form (fig. 5): to whom is the ownership of the land and if it is legally delimitated; if there is a fence and one or more entrances and where; if there are modern building activities threatening it\(^\text{11}\); if there is a project of preservation, restoration and valorization involving the site itself. Each site will be under the responsibility of an archaeologist who will visit it at least once a year. Updated photos and maps of the site will be part of the form (up to ten images are allowed). A code of priorities in terms of preservation is also indicated (low, middle, high, urgent), in respect of how dangerous is situation and, of course, of the overall relevance of the site itself. The insertion of a map (1:500-1:2000) for each site is a very important goal of the Project, which, in some cases, could be substituted by a satellite image at a convenient ratio. The PADIS also include a navigator, having a high resolution satellite image of the territory under the Palestinian National

\(^{11}\) Various types of modern injuries inflicted to archaeological sites are envisaged: road works, bulldozer cuts, cultivations, erosion, quarrying activities and so on.
Authority as cartographic basis. The navigator allows a direct approach to sites, and regional studies or selections according to parameters (i.e. the occurrence of some archaeological features, the dating, etc.). PADIS, which is now active only for the Jericho Oasis, will be implemented in the next years in order to become a common tool for the rescue, safeguard and valorization of the Palestinian Archaeological Patrimony. The web site, accessible to registered scholars, is already available at the address www.pad-is.it.

Fig. 4 - Example of the data-entry form.

PADIS has adopted for the whole Palestine a multicolour, high resolution satellite image. The resolution of 2.5 m, with the three band of colours, can show peculiarities of the terrain, the geological features of the site, the exact spatial definition of the tell, and, finally, allows the correlation with georadar system for elaborating detailed maps, with the possibility of further graphic elaboration as the 3D graphic presentation.
2.3. A Related Program: the PAIRR

There is another challenge for the protection and valorization of Tell es-Sultan, which is the query for material culture preservation, namely archaeological items, which are at all extent part of the cultural heritage of the site itself.

The dispersion of archaeological materials from Tell es-Sultan has characterized the history of explorations at the site, and is one of the more painful chapters in the whole archaeological history of Palestine. The celebrity of Jericho was so great that any archaeological museum, cultural institution, and especially private collections interested in Near Eastern antiquities was eager of owing Jericho artifacts.

This produced (and is still continuing to produce, unfortunately) a continuous flow of archaeological materials from the site and its vicinities towards the antique market. This depends on the fact that selling antiquities is allowed in Israel.

In order to give its contribution to the Department for the identification and the recovery of such items, Rome “La Sapienza” University started a program parallel to PADIS and included in the web-site of the latter, foreseeing a detailed survey of the Jericho artifacts all over the world, to be
listed in a databank, with the final goal of redirecting to their homeland these materials, their copies or, at least, their refined archaeological records.

2.3.1. Archaeological Items from Official Excavations

The history of the scattering of Jericho materials all over the world started already at the beginning of the exploration of the site, when Captain Charles Warren, who sounded the southern spur of Tell es-Sultan in 1868, collected some pottery vessels from farmers of the oasis and brought them to London.\textsuperscript{13}

The Austrian and German pioneer archaeologists Ernst Sellin and Charles Watzinger, during their excavations of 1907-1909\textsuperscript{14} sent the findings from Tell es-Sultan to Istanbul, including very interesting artifacts, such as a hoard of copper axes and chisels, retrieved in the north-western corner of the Early Bronze Age city-walls, beneath the floor of an Early Bronze Age IV house, or some Egyptian or Egyptianizing items found in the deepest layers so far reached.\textsuperscript{15}

The international team led by Dame Kathleen M. Kenyon was not only an example of scientific cooperation between many institutions, but also, unfortunately, the reason for the spreading of a large amount of archaeological items all over the world. Each institution participating in Kenyon’s Expedition received at the end of the excavations a small amount of artifacts from Jericho. The major corpus of finds was deposited in Amman, the most interesting of which have been recently pleasantly redisplayed in the Citadel Museum; however, many items were brought to England (fig. 6) and several send to numerous institutions worldwide.

Kathleen M. Kenyon and Thomas Holland were, nevertheless, very accurate in recording at the end of the \textit{Jericho Volume V} the location of all materials in museums and institutions, where they were shipped. Anyhow, since then (1958), many of these objects have been moved, transferred, and in some cases also deposited and gifted to other institutions or private companies. The official published locations may, thus, be obsolete. The complete list of finds from Kenyon’s Expedition is available at the Cambridge University Museum, but an updated file of these objects, which from many respects

\textsuperscript{13} Warren 1869.

\textsuperscript{14} Sellin - Watzinger 1913.

\textsuperscript{15} These dated back from the Early Bronze Age I (Sellin - Watzinger 1913, figs. 107-110; Nigro 2005, 7-13).
represent the basic comparative corpus of Palestinian archaeology through all ages, is fiercely needed.

The Italian-Palestinian Expedition filled up twelve boxes of archaeological items from 1997-2000 excavations, which are kept in the storerooms of the Department of Antiquities at Ramallah. All objects and pottery vessels were restored during the excavations and are available, when the Department deems it is possible, for being displayed in a Museum at the site or for an exhibition.

2.3.2. Rescuing Plundered Archaeological Items from Palestine

Apart from the items retrieved by archaeologists, the location of which is not always simple, but can be traced thanks to official documentation, there are also many other artifacts unfortunately plundered by illegal excavators. An extremely huge amount of archaeological materials were stolen from the sizable Jericho Necropolis, one of the largest of the whole

Fig. 6 - Finds from Kenyon’s excavation on display in the Ashmolean Museum, Oxford (Courtesy of the Ashmolean Museum).
Ancient Near East\textsuperscript{16}. The problem, which actually arose dramatically after the discoveries of the Qumran Scrolls, became even more impressive with the gradual transformation of the 1948-War refugee camp settled in the area of the necropolis into a modern suburb of Ariha. The main reason for the plundering of the Jericho Necropolis is, however, the already mentioned law of Israel, which allows antique dealers to encourage illegal excavations by purchasing archaeological objects. In Jerusalem, as well as in other European countries, one may find items from the Jericho Necropolis, easily distinguishable because of the strong peculiarities of pottery or metals production at the site, on sell. Moreover, internet has provided a new market for antiquities (of illicit provenance), but also for monitoring such an illegal market.

In order to help the Department of Antiquities in facing this challenge, Rome “La Sapienza” University has started a program named PAIRR (Palestine Archaeological Items Rescue and Recovering), which has been launched through a preliminary pilot project, entitled: “The Tell es-Sultan Virtual Archaeological Museum of Palestine”. The PAIRR, which is hosted in the PADIS web site, foresees:

- the recording of all excavated items in a databank, with at least a photo, and the indication of the museum or institution where the find presently is;
- a list of archaeological items from the Jericho area in the antique market, to be even redirected to their homeland (Italy, from this point of view, has a long lasting experience, with a special corpus of its police, a branch of the Carabinieri, devoted to the preservation of the Artistic and Archaeological Heritage).

The Palestine Archaeological Databank & Information System (PADIS) and the parallel program Palestine Archaeological Items Rescue and Recovering (PAIRR) are, thus, part of the contribution of Rome “La Sapienza” University to the preservation of the cultural heritage of Palestine. On the one hand, a computer aided complete and detailed catalogue of archaeological sites, often located in very threatened or already heavily damaged areas, is the first step for their protection (together with a new law by Palestinian Authorities), and its availability in internet will surely contribute to enhance the awareness of local population about archaeology. The identification of dispersed archaeological items and their

\textsuperscript{16} See Polcaro in this volume.
recovery, on the other hand, would hand back to Palestine very tangible pieces of its history, which may be part of a future National Museum. As regards Museums, the complete record of Kenyon’s excavations is presently at the Museum of Anthropology of Cambridge University in the United Kingdom; items there, in London by the Palestine Exploration Fund, in Paris by the Louvre Reserve, and in the Vatican Museums have been already listed. A great number of artifacts from John Garstang’s excavations is still in the Palestine Archaeological Museum, the so-called Rockefeller Museum\(^{17}\), while other objects are by the École Biblique. As it concerns materials in the antique market, the project started only in year 2004, and several items, especially metal weapons and pottery vessels surely from the Tell es-Sultan necropolis on sell by many dealers all over the world have been identified. The complete list of Jericho items so far identified will be published as a catalogue. One should then ask UNESCO to express an official statement for the recovering of such artifacts, and to indicate a legal way for their restitution to Palestine. Recovered archaeological items from Jericho, together with those excavated by the Italian-Palestinian Expedition may, in fact, be the bulk of a future Palestine Archaeological Museum, to be built up as a main pinpoint of the Pilot Project of the Archaeological Park of Jericho.

### 2.4. ROSAPAT

The third intervention carried out by Rome “La Sapienza” University to enhance the Archaeology of Palestine was the establishment in year 2005 of Rome “La Sapienza” Expedition to Palestine and Jordan, which started the publication of an international series entitled ROSAPAT: “Rome «La Sapienza» Studies on the Archaeology of Palestine & Transjordan”. It was conceived as a forum for studies on the Archaeology of Southern Levant, with a renewed perspective, especially dedicated to unpublished excavations, unexplored regions or subjects. The first issue of ROSAPAT was dedicated to Tell es-Sultan at the dawn of urbanization, in the Early Bronze Age I, with a large selection of unpublished photos and documents from previous excavations, which also included the programmatic

\(^{17}\) A few items where illicitly moved to the Israel Museum, as it happened also for some very famous finds from Tell el-Mutesellim (Megiddo), such as: the decorated ivory plaquette (Israel Antiquities Authority 38.780), the ivory box with lions and sphinxes (Israel Antiquities Authority 38.816), and the ivory female head (Israel Antiquities Authority 38.811) (after Seipel ed. 1997).
presentation of the Rome Expedition to Palestine & Jordan\textsuperscript{18}. The publication of these Proceedings as second volume of the series is thus a logical continuation of the series ROSAPAT.

3. The Scientific Program of Rome “La Sapienza” University

In conclusions, thanks to the cooperation with the Palestinian Department of Antiquities, Rome “La Sapienza” University has been able to carried on a series of research activities:

- the continuation of the study on Tell es-Sultan, aimed to the creation of an Archaeological Park of the Jericho Oasis;
- a web-site (www.pad-is.it) dedicated to Palestinian Antiquities protection, study and valorization (PADIS), which also incorporates a bibliographic resource (PABIR), and a program for the recovering of archaeological items stolen from the Country (PAIRR);
- the publication of a monograph series explicitly dedicated to the archaeology of Palestine and Transjordan (ROSAPAT).

Such ongoing activities would be completed, of course, by a resuming of the work on the field, which is awaited and especially expected for Tell es-Sultan, where restoration works, already started in years 1997-2000 (fig. 7), should be carried on and intensified with some major interventions in the huge trenches of the British excavations (Kenyon’s Trench I and Garstang’s North-Eastern Trench)\textsuperscript{19}, where unique monuments (the Neolithic tower, the Early Bronze Age city-walls) are in a very precarious situation.

The scientific endeavour of Rome “La Sapienza” University in Palestine and, namely, at Tell es-Sultan, ancient Jericho, has been chosen as a strategic field of research of our University, with the establishment of Rome “La Sapienza” Expedition to Palestine & Jordan, funded in January 2005, which will focus on the study of the early urban civilization of Southern Levant in both countries, sharing in antiquities several complementary cultural aspects.

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\textsuperscript{18} Nigro 2005, iii-viii.

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Fig. 7 - Visit to the restoration works carried out by the Italian-Palestinian Expedition to Tell es-Sultan in years 1997-2000 at Building B1, Area B, during the workshop (2005).

Fig. 8 - Multidisciplinary session during the last day of the workshop.
ARCHAEOLOGICAL SITE MANAGEMENT: THEORY, STRATEGIES AND IMPLEMENTATION FOR THE ARCHAEOLOGICAL LANDSCAPES OF JERICHO

Sjoerd van der Linde & Tim Williams

1. Introduction

Archaeological site and landscape management encompasses a variety of issues and concerns, including conservation, interpretation, sustainable tourism, research and local community participation. Reactive intervention is not sufficient to ensure the sustainability of the resource, or the needs of contemporary society. Expanding cultural tourism and globalisation, coupled with the impact of short-term economic strategies, are some of the reasons why integrated and holistic management has become, in recent years, an appealing approach to both the conservation and sustainable use of cultural resources.

Among several possible types of management, the model that has emerged through the Australian Burra Charter has acquired wide currency, mainly for its approach to the issue of local community involvement, and the ethical and ideological concepts of valuing the resource. But the intellectual framework for the ethical management of archaeological resources is less clear. Are issues of poverty relief (for example the Agenda 21: UNITED NATIONS 1992) and sustainable communities given sufficient attention? How do we balance the contemporary needs of the local community and wider society with the management and presentation of the archaeological resource? Most management models still advocate, either explicitly or implicitly, the primacy of conservation - sustaining the resource for future generations - as the core activity, but we need to accommodate the vital role the resource can play in meeting the needs of the current generation.

Jericbo provides an important challenge for cultural heritage management in Palestine: an opportunity to both develop approaches to the conservation of resources (not just physical resources but also skills and knowledge) and to address the contemporary needs of society, both economically and ideologically, through actions such as interpretation and education.

From the outset we were deeply impressed by the expertise at the Jericho workshop, most significantly by the excellent contributions of our Palestinian colleagues. There is a wealth of expertise within the country, with exciting and innovative work taking place in many fields, not least urban regeneration and architectural restoration (for example the work by

* Institute of Archaeology, University College of London.
Dr. Khaled Qawasme on the management of cultural resources in Hebron and the excellent contributions made during the workshop by the architect Nadia Habash. The development of a sustainable programme for Jericho will rely on mobilising this expertise and developing active participation. The support of the international community, through donors, UNESCO coordination, and expertise, will be important, but it is essential that the Jericho project, which has the potential to be a pioneering programme in the development of cultural resource management in the country, is seen as an exercise in developing internal Palestinian collaborations and exchange of expertise. The programme must be directed towards building the capacity of the Palestinian organisations to address complex archaeological landscape management and conservation, within the context of economic and social frameworks of participation. Interpretation, education, traditional skills, scientific analysis, conservation, design and urban planning are just some of the facets that will come together in the programme, and the challenge will be to bring the Palestinian expertise together in this process, hopefully building long-term partnerships between State, universities and private sector practices.

As the Mayor of Jericho, Mr. Hasan Saleh, stated in his introductory talk to the workshop, external circumstances have constrained development in the region. What are needed now are the resources and the political authority to make progress a reality. Everyone at the workshop was passionate about Jericho, both its present and its future. With the co-ordinating efforts of the Ministry of Tourism and Antiquities, Department of Antiquities and Cultural Heritage (MOTA-DACH) and the partnership of a variety of Palestinian organisations, a sustainable future is possible for this internationally important landscape.

We start this paper by exploring the concepts and theories behind value-based management planning models, and provide some thoughts on how to deal effectively with the tension between these planning models and the practicalities of daily management. We examine some of the issues, concerns and opportunities in the cultural heritage management of the Jericho Oasis, with an aim of contributing to the survival, enjoyment and sustainable development of its unique archaeological sites and landscapes.

2. Management Planning

Management planning is an important activity in the field of archaeological heritage management. At present, it is generally accepted that the development of integrated and holistic management plans is an essential foundation for the sustainable management. Within such management frame-
works, actions come after comprehensive planning, while reactive measures, or interventions implemented outside the framework of a wider plan, are regarded as a potential threat to the archaeological resource: a “reactive approach can lead towards ad hoc decisions that can result in unanticipated, negative consequences in the short and long term”\(^1\). Thus reactive intervention was not seen as sufficient to ensure the long-term preservation of the archaeological resource or the needs of contemporary society. Gaining impetus in the *Australian ICOMOS Charter for the Conservation of Places of Cultural Significance* (adopted as the *Burra Charter* 1979), these models applied the notion of a holistic, integrated analysis of values and contextual considerations at the core of a participatory planning process\(^2\). Value-based planning models, which are at present reflected in the recommendations of international organisations such as ICOMOS, UNESCO, the Getty Conservation Institute and the World Bank, are argued to allow for managing change in a complex world\(^3\). Sustainable decision-making is then the result of careful long-term planning and in line with the significance of the archaeological site\(^4\).

### 2.1. Values

Mason and Avrami define heritage values as “characteristics of things or objects”, or as “the qualities of the places (sites, buildings and landscapes) we refer to as heritage”\(^5\). Values could therefore be perceived as those characteristics that motivate the labelling of something as “heritage”. Since heritage can be seen as a social construction, the values ascribed to it embody personal and political considerations. As a result, heritage often has multiple and contested values as interpreted by different people\(^6\). The traditional view that heritage can be objectively perceived in static and intrinsic values are therefore no longer held as the absolute truth\(^7\); values are rather subjective, contextual and dynamic of character\(^8\). Since values rely on a human perception of the resource, they are inherently linked to the process of valuing and decision-making by stakeholders\(^9\). A good example

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1 Sullivan 1997, 16.
4 Demas 2002, 27.
5 Mason - Avrami 2002, 15.
7 Avrami 2000, 6.
8 Hall - McArthur 1996.
of this subjective notion of values can be seen in those management models with an emphasis on the “human dimension”, the multiple relationships between heritage, visitors and stakeholders and their perceived values10. What is not explicitly reflected in current management models is that values often reveal themselves through “means to ends” relationships11: values can be seen as inherent to a desired outcome of objectives and actions. Decision-making, therefore, is not only focused upon “existing values”, but also upon “potential values”. The notion of creating values by means of active modification or use of the resource is an issue that is ill defined in heritage management systems. Those values that require creativity in order to become realised might be termed “opportunities”. The distinction between existing and potential values has considerable implications for the practicalities of heritage management; if perceived significant, the first should be conserved, while the latter should be created. The tension between the conservation of existing values and the creation of potential values often constitutes a key element of decision-making. This tension is often dealt with prior to the assessment of values, leading to an approach where conservation takes precedence over other significant elements, and where the preservation of existing values is favoured over the creation of new ones. As will be argued later, this is especially the case for processes of interpretation, communication and education which are often dealt with too late in the management process.

2.2. Significance

The Burra Charter sees values as a fundamental part of the conservation process12. The assessment of values leading to the compilation of a statement of “Cultural Significance” is then placed at the foreground of its systematic approach. Even if the notion of cultural significance is expanded by including a broader range of values, such as through the inclusion of economic and political values13, it can be argued that the value-based approach does not effectively allow for the creation of new values or for the identification of opportunities. Opportunities should be regarded as a fundamental part of the site’s significance and when confronted with the need for immediate decision-making adapting to opportunities can help to establish or clarify significance.

11 Darvill 1995, 41.
12 Truscott - Young 2000.
13 Truscott - Young 2000


\section*{2.3. Approaches to Management Planning}

Management planning is often described as a linear process\textsuperscript{14}. It has been summarised\textsuperscript{15} as a series of steps that aim to:

- identify stakeholders and values, document and identify the resource, describe the site and its physical condition, explore management context;
- assess and analyse the values, and articulate the significance of the place;
- develop policies that sustain and enhance the values, often with long, medium and short term goals;
- establishment objectives, strategies and tasks;
- and implement and monitor a strategy.

All of these stages can be seen as responses to the complex issues relating to the management of specific heritage resources, within particular and specific social, economic, political and physical environments.

A linear planning process, if completed in its logical sequence, has the advantage of reducing the risk of unforeseen impacts of uninformed decision-making, as well as providing useful guidelines for focusing in detail on complex situations. As a result, however, the focus can be very much on conserving the archaeological resource, after carefully examining its significance, and only then implementing interpretive activities. Although strategic planning is designed to be interpretive in order to deal with the dynamic and complex characteristics of reality\textsuperscript{16}, the linear planning model can mean that immediate decision-making, in order to adapt to threats or opportunities, cannot be effectively dealt with.

\section*{2.4. Opportunities}

The development of management plans often faces many obstacles, such as the scale and complexity of the archaeological resource, or the lack of available resources, time and expertise. There are situations where the need, opportunity and desire for immediate action is evident, but there is not yet a developed management plan in place, creating a potential conflict in the decision-making process: “Logically, a consensus on the overall plan should precede the implementation of an important part of its recommended strategies. Realistically, it is well known that the practicalities of daily management often conflict with the ideals of its

\textsuperscript{14} Sullivan 1997, 15.
\textsuperscript{15} Mason 2002; Demas 2002; Truscott - Young 2000.
\textsuperscript{16} Hall - McArthur 1998, 21.
theory"\footnote{De La Luz Gutiérrez et al. 1996, 222.}. The field of interpretation, for example, is one of the areas in which this conflict is apparent. This is particularly the case when its planning is considered to be a part of the linear approaches towards management processes (as outlined above). However, the translation of an explicit recognition of this conflict into practical approaches for heritage managers is lacking; contemporary management models rather see conflicts as issues to be resolved in the decision-making process. As a result, the sustainable development of archaeological resources is in danger of being restricted, leading to reduced benefits for the public.

2.5. Participation, Vision and Sustainable Development

A participatory planning process (by which those responsible for implementing the plan are also those who have helped in formulating it), is nowadays generally accepted as an essential element of heritage management models, since it will increase the sense of ownership and hence its effective implementation\footnote{De La Luz Gutiérrez et al. 1996, 216; Cossons 1994, 17.}. In reality, it is often the heritage managers who are the empowered stakeholders concerned with the need to make creative interventions and adaptive decisions in times of conflict; time and resources are not always available to provide consultation for every decision in the field\footnote{De La Luz Gutiérrez et al. 1996, 222.}. The notion of vision and the managerial freedom to act according to opportunities can then be seen as effective solutions to allow creativity in order to deal with the need for immediate decision-making. Unfortunately, vision is sometimes perceived as inherent to leadership\footnote{Burret 1985.}, effectively reducing creativity to something that can only be pursued apart from the constraints opposed by other stakeholders. In this respect, management models have been argued to lead “too often to a ‘consensus’ approach, deadening creativity and eliminating opportunism”\footnote{Cossons 1994, 13.}. In our opinion, an effective balance between opportunism and management planning can only be applied by recognising explicitly that the heritage manager is not only just one of the stakeholders, but also influences the decision-making process by means of a subjective and creative intervention in the valorization process. Such an explicit approach might then allow for combining participatory planning and creativity more effectively, by defining “areas in which ... to take initiatives, even if the opportunities and resources are not yet avail-

\begin{footnotes}
\item De La Luz Gutiérrez et al. 1996, 222.
\item De La Luz Gutiérrez et al. 1996, 216; Cossons 1994, 17.
\item De La Luz Gutiérrez et al. 1996, 222.
\item Burret 1985.
\item Cossons 1994, 13.
\end{footnotes}
By doing so, it is possible to act immediately when an opportunity arises that fits the vision for the site, which should be established in the early phases of the management process. It will then be important to explicitly communicate the decisions made.

2.6. Balancing Options and Decision-Making

Current management planning models allow for the development of long-term solutions that are based on an informed context and on the existence of a developed management strategy for reducing the risk of unforeseen negative implications as well as providing useful guidelines for focusing in detail on complex situations. However, such an approach does not explicitly allow for adapting to those opportunities that are challenged by the absence of a fully developed management strategy, even though they might contribute to the perceived vision of the stakeholders. As argued above, we therefore believe that a more creative and positive approach to the possible adaptation to opportunities by the heritage manager, can lead more explicitly to sustainable solutions in the long-term to the benefit of all stakeholders. This does not imply that short-term activities are to be preferred over long-term solutions; it rather stresses the fact that they might contribute more efficiently to sustainable benefits in some cases. Indeed, short-term solutions are often not as effective as they could have been in the linear model. The need to balance the two different approaches as mentioned above, is therefore one of the fundamental challenges when making decisions in the field of site management planning. What is needed is to weigh up the short-term gain and the possible long-term impact of such decisions. Subsequently, this balance has to be compared both to the benefits of long-term informed solutions that can be implemented after a fully developed management plan, and to the impact of the decision not to adapt to a certain opportunity. In this respect, it is essential to act according to a shared vision and not out of concern over anticipated obstacles and objections; the process of prioritising management solutions as a result of assessing inherent capacities to foster sustainable benefits, should also take place when predictions about future values are uncertain.

The fact that this paper does not focus in particular on the impact, constraints or possibilities deriving from economic resources, does not mean that these are not considered as highly important when setting out objectives or making decisions about the future of archaeological resources. The point here is that “the simple moral is that irrespective of economic circum-

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22 Cossons 1994, 14.
stances ... whether there are plenty of certainties or uncertainties, the need to have a clear vision ... is imperative. Obviously, there are many other elements that will influence the decision-making process in practice, such as factors in the field of the management and condition context, the availability of resources and skills, and the political environment. Indeed, “any particular balance will be decided on ... politically, not as a matter of optimal, objective solution.” This paper will not, however, focus upon how these factors influence decision-making processes; rather, it will suggest that the principle of sustainable development should guide the processes of balancing options and decision-making in times of conflict.

3. Interpretation

One of the areas in which to explore initiatives at the earliest possible opportunity should be that of interpretation. Many authors believe that education forms the basis of interpretation. The role of interpretation has, for example, been described as “to educate people about the place they are visiting.” The focus on the educational role of interpretation is then primarily aimed at visitors, with the underlying goals of providing understanding, appreciation and enjoyment of the archaeological resource. While the creation of “mindful” visitors is an important tool in generating support for the management and conservation of the archaeological resource, there are numerous other possible benefits deriving from an incorporation of archaeological resources within the field of education. Amongst others, these include benefits for children, their families, schools and teachers, through interpretation focused on the local community. Interpretation can then be approached from both the perspective of formal and informal education, with an emphasis upon both life-long learning and evidence-based learning. Education can therefore be seen as a “form of instruction, training or study set up to help people to acquire knowledge, skills and awareness.” The educational role of interpretation, therefore, should include

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26 Timothy - Boyd 2003, 197.
31 Hall - McArthur 1998, 166.
benefits for the public, and particularly the local community, through the appreciation, enjoyment, use and understanding of the past, the development of awareness and public support of the archaeological heritage, the acquisition of useful skills covering a wide range of curricula\textsuperscript{32}, training and capacity building in a wide range of archaeological management and conservation practices, and the development of a sense of place. All these aspects can actively contribute towards sustainable benefits.

3.1. Interpretation, Conservation and Sustainable Development

The sustainable role of interpretation within heritage management models is primarily approached from a conservation perspective. The underlying value of the educational and entertainment roles of interpretation is then to enhance awareness and to create a sense of ownership, which can lead to a greater realisation for the need to preserve and protect the archaeological resource. This can potentially lead to visitors’ behaviour that reduces the negative impact of activities such as looting, rubbish dumping and erosion. Some examples in the field of archaeological heritage management have shown that conservation can indeed be an effective and even enjoyable part of interpretive programmes\textsuperscript{33}.

Interpretation should, however, not only focus on sustainable benefits that can be accomplished through the use of interpretive resources and presentation techniques as a result of fully developed interpretive strategies. The processes of decision-making, conservation, archaeology and management, and the development of resources provide equally important opportunities to include sustainable benefits by means of interpretive activities. In other words, interpretation should be seen as a dynamic part of the archaeological management process. By doing so, it can serve several functions that can be of benefit for the development of management plans.

Interpretation and education are then argued to be useful to:

- raise awareness and understand the values and uses of heritage;
- raise awareness and understand the issues facing the management of heritage and the way in which management is dealing with them;
- influence or change visitor behaviour;
- seek public input and involvement with various aspects of heritage and visitor management\textsuperscript{34}.

\textsuperscript{32} Corbishley 2004, 2-3; Pearson 2001, ix.
\textsuperscript{34} Hall - McArthur 1998, 168.
Seen as such, interpretation should aim to improve the visitor’s experience, as well as to actively contribute to the vision and objectives of the management plan. Moreover, by communicating the decision-making process, it can play a fundamental part in the development of management planning. Interpretation and education should therefore not only communicate what is actually happening at archaeological sites, but also what could, would and should be happening.

### 3.2. Interpretation, Communication and Management Planning

Interpretation has to focus actively on this process of decision-making by communicating the perceived significance and potential benefits to both stakeholders and the general public. A focus on interpretation as a “communication mechanism” can increase the perceptions of risk, develop public awareness and support, and establish active involvement of stakeholders in order to contribute to the management, development and conservation of the archaeological resource. The significance of the archaeological resource, the need for conservation, the decision-making process as well as the potential benefits of present use and future development should therefore be communicated to the public as soon as possible in the process of management planning; the processes of interpretation and education should never be regarded as end-products.

If one acknowledges that the processes of archaeological excavation, conservation, presentation and management are worthy topics of interpretation and education as well, the need to implement interpretive planning within a dynamic management planning strategy becomes even more apparent. From an educational point of view, it is also essential to involve pupils, teachers and the local educational community “at the earliest possible opportunity.” Furthermore, it has been suggested that archaeology can only provide added social and educational values “if we take the broad view of what constitutes the past.”

Such an incorporation of interpretive planning within broader management models can only succeed if incremental implementation is secured in a way that ensures that unforeseen changes can be made if necessary. Having its genesis in Tilden’s fundamental principles of interpretation, interpretive planning must therefore be based upon several guiding elements in order

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37 Corbishley 2004, 1.
38 Tilden 1977.
to deliver “sustainable interpretation”, such as efficiency, flexibility and optimum resource use\textsuperscript{39}. Although the process of delivering interpretive messages lies outside the scope of this paper, it is worth remembering that “the message is more important than the medium in increasing understanding”\textsuperscript{40}, and that the processes of archaeology and conservation often allow for a relatively easy translation to flexible and (cost-)effective resources\textsuperscript{41}. Although constraints in the field of management and available resources will influence the way in which the potential capacity for fostering sustainable benefits will be assessed in the process of balancing short-term interpretive activities and long-term solutions, it means that providing flexible and (cost-)effective short-term interpretation should never be discarded \textit{a priori}.

4. Issues and Concerns at Jericho

4.1. Local Community Participation

We discussed (above) the important role that participatory planning can and should play in the development of archaeological site management strategies. Clearly the process has already started at Jericho, and the range of interests, groups and organisations present at the workshop shows a clear commitment to develop this facet of the planning and implementation process. However, getting the local community engaged is often difficult when people feel that they have been denied a political voice. Recent elections may have helped, but the question was raised by some speakers as to whether local people feel engaged with the site. We heard many speakers describe the site with pride, and there is no doubt that there is a strong commitment to the place and the cultural heritage, but substantial efforts will need to be made to widen the participation and develop greater understanding of the range of issues and values. The production of more material in Arabic would be one important step, enabling access to information and dialogue, but developing genuine participation, as opposed to more generic consultation, will be a major task that needs to start in the earliest phases of the project.

\textsuperscript{39} Timothy - Boyd 2003, 233.
\textsuperscript{40} Uzzel 1994, 295.
\textsuperscript{41} Pearson 2001, 49-55.
4.2. Tourism

Although not the main focus of this particular paper, the issue of cultural tourism and its ability to be a driving force in the economic sustainability of the Jericho area in general, and the sites in particular, is a major area for research and planning. The allocation of resources, dispersal of returns, coordination in development, realistic targeting (taking account of wider fluctuations in the market and political contexts), etc., are all substantive issues that need to be explored in the development of a sustainable management plan. Preparing for tourism now – whilst visitor numbers are relatively low – will enable the project, the sites and the communities to prepare in advance of the substantial increases that may take place as wider political circumstances improve. To this end, the development of local educational resources (see below) could provide valuable experience in assessing carrying capacities, visitor impacts, interpretation strategies, etc., while also developing expertise in guiding, interpretation, etc.

There is a lot more to the Jericho Oasis than just the focal site of Tell es-Sultan. By broadening the interpretation and presentation of sites in the area, initially to include major monument complexes such as Hisham’s Palace, and in the long-term broader landscape interpretation incorporating all the sites of this complex oasis, it would be possible to spread the visitors’ load and increase the overall capacity of the region. Eco-tourism, and the exploration of other aspects of intangible cultural heritage, could also diversify and integrate the tourism strategies for the area. The aim, sustainable tourism, requires much thought about carrying capacities and local impacts, and this needs to be carefully integrated with the site management strategies.

4.3. Boundaries

There are difficult choices to be made regarding the boundaries of any putative Archaeological Park or World Heritage Site at Jericho. There is an understandable focus upon Tell es-Sultan and on the Neolithic, but even here the boundaries of the area are not easily established: clearly the limits of the extant tell are only part of a complex landscape in the immediate vicinity. Burials surround the tell area and while some areas have been extensively excavated, many have not even been mapped, and their full extent is unknown. Remote sensing would be of value in many areas, but the scale of surviving buried archaeological resources in the refuge camp to the south also needs careful, and sensitive, exploration.

But what of the wider cultural landscapes of the Jericho Oasis? There is extensive survival of aqueducts, wider irrigation systems - both funda-
mental to the exploitation and management of the Oasis over many centuries: should the evidence for these be included in the park? What of other major monument complexes within the Oasis, such as Hisham’s Palace, or the variety of lesser known but important monuments such as Tell es-Samrat racecourse or the later sugar factories? Perhaps the 45 kms\(^2\) of the Jericho Oasis provides a logical and cohesive landscape for research, designation and management? What is evident is that the designation of boundaries for the suggested Archaeological Park or World Heritage Site (Tell es-Sultan is already on the inventory of potential World Heritage Sites) will not be simple. Cultural landscapes encompass complex issues of geographic, cultural and chronological depth, and defining spheres of interest and management for the Oasis should be considered an important task. A single boundary to the archaeological park will probably not be the answer, especially given the complexity of modern land-holdings within the area. Practically, it is likely that a number of discontinuous boundaries will be conceived to encompass groups of monuments or landscape features, although issues of the wider management of the landscape, and monument setting, will need careful consideration. Once again, the lack of documentation from survey, geo-prospection and aerial survey will hamper effective and sustainable decision-making. A programme of evaluation and documentation will be an important first step. Clearly the boundary for any Archaeological Park or World Heritage Site nomination (which need not be the same), need not (in fact almost certainly will not) represent the boundary of concern or management. Zones of management and research interests (often rather misleadingly referred to as buffer zones) will be essential in integrating any proposals with the Jericho Master Plan being developed by the local authority. The chronological boundaries of the Jericho landscape also need consideration. While there has been an understandable focus on the Neolithic and Bronze Age, the landscape is a palimpsest of earlier and later activities which together comprise the complex history of human exploitation of the Oasis. The occupation of the Iron Age, Hellenistic, Roman, Byzantine, Jewish, Islamic, and Ottoman periods, for example, are all crucial to the understanding of the place and the complexity of human settlement. All will need to feature strongly in conservation, interpretation and education strategies. A notable example of the issues to be addressed is the refugee camps on the very edge of the Tell es-Sultan site: as one of the very first refugee camp constructed in Palestine, it has strong historical and symbolic values, mixed with the complex needs of sustaining a community that still inhabits the space, sometimes in very difficult conditions. To develop a
management strategy for both the historic environment and the living communities of Jericho will require sensitive planning.

4.4. Documentation

There is a vital need for documentation to be collated for the Jericho Oasis, to underpin sustainable decision-making: "Good decisions preserve the values of a place, are sustainable, and result from careful planning"\(^\text{42}\). The aim should be to establish an effective documentation platform by collecting the material dispersed across the world to provide the basis for planning and interpretation. This may be difficult when much of the primary sources on previous works, including much of the physical remains (notebooks, drawings, photographs, artefacts, etc.), reside outside Palestine: some are accessible in the Hashemite Kingdom of Jordan, but many are within European, American or Asian institutions. However, virtual documentation and repatriation has become increasingly achievable: while it may take some time to negotiate the physical return of material to Palestine, the access to the intellectual information, and its virtual return in the form of electronic copies, is both achievable and essential for the effective planning of management and interpretative activities at Jericho. It is also essential that more material is made available in Arabic. If the Jericho project is to develop an effective dialogue with local communities and the Palestinian State, and to promote participatory planning strategies (see below), then it is crucial that those communities have access to information and ideas. As it was discussed at the workshop, many people from the Jericho Oasis are unaware of the wide range of values currently identified in the management proposals, and, concomitantly, their views are almost certainly currently undervalued in the process. Developing dialogue, and creating contexts for that dialogue (see the example below), must be a priority.

4.4.1. The Photographic and Film Archive: an Example of Documentation and Opportunity

The work on documentation can also provide opportunities to develop international collaborations and local skills. The photographic archive of the excavations by Kathleen M. Kenyon, for example, can be seen as an opportunity to establish links between MOTA-DACH and international universities. The digitised datasets of Rome “La Sapienza” University and the Institute of Archaeology, University College London should be integrated and made available as soon as possible: this material will underpin

\(^\text{42}\) Demas 2002, 27.
decisions concerning the need for conservation, helping to prioritise areas for immediate preventive conservation activities, the current condition of the resource and how it has changed since excavation, providing important information about the speed of decay, and assessments of the legibility of the archaeological resource, both now and in the past, which will be central to many aspect of the on-site interpretation strategy (see below). Work on the digital archive can also be seen as a capacity building programme, developing digital data storage and manipulation skills, and infrastructure, within MOTA-DACH. In addition, this material should be seen as a significant resource for interpretation in the short- and medium-term. For example, a television documentary on the Kenyon’s excavations, made during the 1950’s by the BBC, can provide links to the process of excavation and discovery, an important element in understanding, presenting and interpreting the site. The film and photographic archive can also be used as an opportunity to engage elements of the local community. The documentation of the oral histories and experiences of those people from the Jericho Oasis who worked with K.M. Kenyon from 1952 to 1958 would not only add considerably to the interpretative resource, providing a more balanced and nuanced interpretation of the resource, but could also play an important role in developing links with the community.

5. Management Planning at Jericho

It is important to see the development of a management plan as a living tool, not as a definitive solution. Indeed, the process of developing the management plan is often more important than the product, as it is the process that develops dialogue and partnerships, raises tensions, recognises conflicts and explores alternatives. It should help to develop sustainable short, medium and long-term management: as everyone is aware, it should not simply be a tool to obtain World Heritage status, only to then be forgotten (like so many). It is also important to develop the vision for the area, which can only be achieved through consultation and dialogue. It is unlikely that everyone will share a single vision for the Jericho landscape, either in terms of its conservation and management, or its relevance and importance to contemporary Palestinian society. Nevertheless, it is the dialogue over this future that will bring these issues to the fore. It is interesting that a number of visions, perhaps complementary, came forward during the workshop, such as the ability of the cultural resources to change people’s lives: “Jericho is the hope for the future” stated the Mayor when discussing the Jericho Master Plan. There was also a vision of a “Green Jericho”, a modern ecologically conscious
adaptation of the landscape reflecting perceived values of the heritage of the Oasis as a rich agricultural area, sustaining communities through the careful management of water resources. The opportunity of the Jericho project to further develop a sense of Palestinian heritage and archaeology was also discussed. There are perhaps some tensions between these visions. For example, the Green Oasis necessarily involves an intensification of agriculture and water-management that will have an impact upon the buried archaeological resource of the Oasis, much of which is still inadequately understood and mapped. It will also be interesting to see how visions of modern landscape management will interact with the notions of historical exploitation; but these are exactly the issues that must be developed and debated in the wider plan if we are to achieve a sustainable future for both the cultural resources and the local community. As with many areas of policy development, there is a need to consider the development of management planning in the Jericho Oasis as an holistic exercise. Each facet of the study will have impacts upon the other: for example, conservation cannot be approached without consideration of the impacts upon interpretation and educational potential. Preservation, conservation, interpretation, education, ecology, tourism, economic impact, archaeological research, capacity building, etc. are all interconnected, and while we can explore the development of specific policies and strategies in each of these areas, their connectivity is central to a sustainable approach. Nevertheless, we will discuss some initial ideas in some of these areas.

5.1. Governance
The legal framework for the area is complex: the Tell es-Sultan site is owned and managed by MOTA, as some of the other monuments within the landscape. However, the majority of the surrounding countryside and urban areas (and so archaeological sites) are owned by a patchwork of the Municipality and private individuals. Crucial management issues that are likely to arise – the position and use of roads, access, parking, commercial activity, the refugee camp, etc. – are going to bring the issues of ownership and power to the fore. Careful consultation and documentation will be an important first step in establishing interests and concerns. We’d suggest that since governance is likely to include complex negotiation between existing parties – the State, national organisations, the Municipality, the local people – there will be a need for dedicated co-ordination and staff. Communication and documentation, both vital roles in the process, will be time consuming but essential. Establishing effective monitoring mechanisms will be similarly crucial in developing the implementation of strategies.
5.2. **Capacity Building**

We see capacity building as lying at the very core of the processes to be undertaken at Jericho. This project represents an unrivalled opportunity to develop Palestinian capacity in archaeological site management, including policy development, strategic planning, site conservation, interpretation and education. Given the excellent skills base that is already available in Palestine, this is as much about bringing the various expertises together in Palestine as it is about bringing in external skills. Political constraints in the past have impaired the sharing of information, and are likely to do so in the future, but the Palestinian Authority has created a more stable platform to develop efforts in co-ordinating action and advice.

5.3. **Research Strategy**

There is a strong role for active research within the Jericho project. Targeted research is likely to be important to:

- enhance our understanding of the resource, enabling it to be managed more effectively;
- improve the quality and depth of interpretation to visitors;
- improve the quality and range of educational resources;
- develop active research that maintains, or enhances, Jericho’s reputation and continues to attract visitors.

It would be useful to develop an explicit strategy for future research, which could help focus resources and prioritise research activities. It would also enable the research, including any new excavations, to be closely co-ordinated with the conservation, education, interpretation and tourism strategies. As is now increasingly common practice, any new excavations should have planned conservation and interpretive outcomes: these should not be seen as optional extras to be added to the excavation programme if the excavator sees fit. Planning for reburial or display and interpretation should be integrated facets of a mature archaeological strategy. It is suggested that new archaeological excavations at Tell es-Sultan should only be undertaken when clear policies are in place for the conservation and presentation of the site. In selecting new excavation areas the effective presentation of stratigraphy and architecture should be considered as part of the planning criteria. The archaeological exercise in itself should also be explored for its immediate interpretive value. If visitors, local residents and school groups can be engaged within the archaeological process, by producing flexible and short-term interpretive activities and materials (such as guided tours, leaflets, outreach projects and participation), it could provide
future benefits for management planning at the site. It will be important that future academic research is made available in the Arabic language.

5.4. Conservation Strategy

As the other suggestions on developing strategies, this section is largely focused on a response to the specific problems of Tell es-Sultan, which was the focus of the workshop. However, many of the strategies and research, for example into traditional approaches to the maintenance of earthen architecture, are applicable to the needs of the wider Jericho Oasis project.

5.4.1. Condition Assessment

Fig. 1 - The western section of Kenyon’s trench at Site M in 2005. The legibility of the section is still clear after more than 50 years of exposure. There is good definition of the stratigraphy and structural features can be discerned. The surface of the section seems to be relatively uneroded, suggesting that this face, protected from the prevailing winds, can survive well with minimal conservation or maintenance (the other sections, while relatively stable, are more obscured by rainwater and wind erosion). The main problem for the western section is the upper portion, where less compacted stratigraphy has collapsed, probably, in part, as a result of poor drainage (note a substantial rainwater gulley in the centre of section, cutting into the stratigraphy) and the proximity of the spoil heaps to the edge of the trench. Some simple interventions - removing the spoil heaps, improving the drainage, removing the damp soil at the base of the section - could rapidly improve the situation here.
There is a pressing need to understand the nature of the conservation problems at both Tell es-Sultan and within the wider landscape. There are a complex variety of processes taking place at Tell es-Sultan for example, including erosion and degradation caused by rainfall, drainage problems, wind, vegetation, and probably temperature variations, animals, etc. There are certainly problems caused by visitor routes, site security and the use of inappropriate materials. The first step in establishing an effective conservation strategy, closely linked to a coherent approach to the interpretation for the site, is to understand the processes that are at work, and the speed with which these are impacting upon the resource. Clearly different aspects of the site are changing at different rates due to localised problems (fig. 1). Systematic monitoring coupled with an analysis of archival material (especially photographic evidence) could provide a strong baseline for decision-making.

5.4.2. Emergency Work

As with many archaeological sites, there is a tension between the need to undertake emergency preventive conservation and long-term strategies for the protection of the site, including the landscape management of the site and its environs. In the case of Tell es-Sultan there is urgent work that is needed in order to prevent further loss. However, the aim of all such interventions should be to ensure that the approaches are reversible and, as far as is possible, do not compromise or substantially increase the costs of long-term conservation, display and interpretation. Emergency preservation and conservation of the site to prevent further deterioration should include:

a. the development of a short-term emergency and preventive conservation plan;
b. the establishment of documentation and publication procedures for conservation activities;
c. the establishment of procedures for conservation works, including how (and who) defines the priorities, and the role and selection of implementing agencies;
d. undertaking a condition assessment (see above). Documentation of current condition and establishment of monitoring programmes to assess speed of change and factors effecting survival;
e. there is an immediate need for emergency conservation works, to include:
   - basic drainage works (probably using natural slopes and sacrificial layers rather than below ground interventions), repair of fences and

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43 See Nigro in press, fig. 16.
paths, cleaning, vegetation removal, etc., to protect the excavated trenches;
- perimeter fencing repairs and maintenance;
- consideration should be given to a reburial strategy for vulnerable material, especially where the material adds little to the current visitor experience. The rapid degradation of Area F is an example of continued and rapid loss. The Garstang’s trench, on the contrary, may have largely reached a state of stasis (fig. 2). Reburial is cheap, effective, and reversible. It does mean a short-term loss of interpretative opportunity, but the site can be relatively easily re-exposed later if new solutions or resources permit (fig. 3). Reburial techniques, however, need to be carefully considered and implemented: for example, consideration should be given to the use of geotextile separators and archaeological sterile materials;

f. it is suggested that no further archaeological excavation should take place until basic conservation has been undertaken and a strategy for future research developed.

Fig. 2 - Garstang’s excavation. The sides of the excavation trench have collapsed and the slope is now relatively stable. The damage has been done and reburial is now unnecessary (except in small areas), although monitoring will be needed. Cleaning or re-excavation of this trench would require a conservation solution to be in place at the outset.
5.4.3. Planning for Future Conservation Work
To provide a platform for the future conservation of the site there are a number of areas of research and development that might be considered.

Research into Earthen Materials
Earthen building materials comprise a substantial element of the site’s architecture. It will be important to carry out experiments on physical characteristics of the materials of the site in order to understand the technological aspect of their history and to be able to find the proper treatments of such materials in the future. The sampling of historic materials and the testing of new soil mixes will be important, and probably need to be supported by the establishment of a small soils laboratory\(^4\). Research into current local practices in earth building, coupled with an ethnographic study of recent (19\(^{th}\) and 20\(^{th}\) centuries) approaches in the Jericho Oasis (which needs to take place as soon as possible as many of the structures are now derelict and in urgent need of documentation and analysis), would strongly support the development of conservation responses. It may also provide the basis for sustainable approaches to the survival and maintenance of the archaeological resource, and develop local contacts and skills (see below). In addition, the study would be a useful interpretive resource in its own right.

Fig. 3,a-b - Reburying archaeological excavations at Merv, Turkmenistan; protecting the archaeological resources without removing future options for presentation and display.

\(^{44}\) See Diab in this volume; MAPEI 1999; Cerulli 2000.
Conservation as a Sustainable Communal Development
Conservation should be seen as a sustainable development activity, helping to revive local traditions and building crafts. Priority should perhaps be given to establishing traditional techniques of earthen architecture maintenance (see above).

Research into Approaches
Research is needed into a number of potential conservation approaches to the site of Tell es-Sultan.
Techniques used elsewhere that may form notable elements of any subsequent strategy developed for Tell es-Sultan include the use of shelters to protect fragile resources, reburial, sacrificial layers, soft and hard landscaping (e.g. grasses to stabilise slopes) and maintenance regimes. While all have been employed on archaeological sites, some within the region, the specifics of the site need to be taken on board in selecting appropriate responses for the site, dependant upon the outcomes of the condition assessment. Too often, for example, relatively expensive shelters are considered as solutions when they neither address the specific conservation issues nor are sustainable as on-site structures.

Monitoring
A monitoring strategy for the site is essential, to provide feedback on the performance of conservation measures and their wider impacts (for example, on interpretation and visitor experience). Monitoring of areas where no intervention has been undertaken, for example the relative stable eroded Garstang’s trench (see above), should also be undertaken.

Development of Permission Criteria for Future Excavations
Any archaeological intervention in the future should be accompanied by explicit and resourced conservation, restoration or reburial plans, and clear interpretation outcomes.

Participation
Explore the role of conservation activities in providing links to younger generations, raising their awareness of the fields of archaeology, conservation and site management.

Conservation Capacity Building
A careful review of key skills, resources and training is needed to underpin future activities. Sustainable crafts, such as the development of traditional skills in earthen architecture, could not only provide important conservation expertise, but also much needed local employment. They may also have a wider impact upon the continued use of earthen materials in the Oasis and the character of local building renovation.
5.5. Education and Interpretation Strategy

The education and interpretation strategy for the site of Tell es-Sultan should combine the short-term enhancement of visitor facilities at the site, with medium-term development of more sophisticated interpretation, including a possible interpretation centre and more developed strategies for the promotion of the site. There are also major questions about how to integrate the interpretation and education strategies for Tell es-Sultan into the wider landscape interpretation, including the other sites and locations within the Oasis.

5.5.1. Short-Term Activities

On-site presentation and interpretation should be a priority. Not only will this improve the visitor experience, but it could also provide the mechanism for valuable training and experimentation with materials. Some basic improvements could be made relatively easily, including signage and leaflets. Accessibility needs to be researched, and some basic steps taken to improve access as soon as possible. The history and approaches of the archaeological excavations should be part of site interpretation and archive material needs to be collated as soon as possible: for example, interviewing local people who worked on the past projects and documenting their oral histories is an immediate priority.

Work also needs to commence in understanding the potential audiences for interpretation. International and national visitors have complex reasons for visiting the Jericho area, including belief-systems, cultural heritage, climate and leisure (for example its role as a winter retreat). The reasons local people visit the historic sites in the area are no less complex and the process of establishing values and needs will be vital in developing interpretation strategies that cater for the diversity of potential visitors.

5.5.2. Education

There is a new generation of the local community that can be engaged, not just with the cultural histories that the archaeological sites of the Jericho Oasis offer, but also with the issues of sustainability, ecology, conservation, and participation. There are already some good contacts and procedures in place with local schools, and these could provide a platform for developing connections, site visits, and educational resources (such as resources for classrooms, teachers' handbooks, and site-based activity sheets). The Jericho area could be seen as a pilot study for future national approaches. There are also opportunities for developing physical interactions, such as getting schools involved in basic site maintenance and conservation: processes that can be used to develop technical skills and a sense of ownership of cultural resources. Developing these contacts and materials,
approaches to evidence-based learning (see above), and capacity building for teachers and site staff, are all be important activities that could get underway in advance of the more mid to long-term development of the sites. Indeed, the opportunity to develop these resources and skills should be seen as a useful learning experience for all parties, and could enhance the degree of communication and participation within the local community. The integration of strategies for archaeological education within the National Curriculum is an important process, but one that is likely to take some time. The Jericho project is a pioneering development in Palestine, perhaps leading to the creation of the first integrated archaeological park in the country. As such, it has an opportunity to develop a dialogue with the educational authorities that should not be missed.

At a university level, there are already strong links between Birzeit University and the Jericho area. The re-opening of the Institute of Archaeology there would be an important step in developing capacity for the future. In general, collaboration between the university sector and MOTA-DACH will be vital in developing skills to sustain the development of archaeological parks in Palestine, and the future research into and management of the cultural resources of the country. A field-school at the site, for example, could provide regular interaction and planned learning opportunities between the Jericho project and the university sector. The Jericho project, as a long-term programme of site management, provides a unique opportunity to develop these capacity building links.

5.5.3. In Situ Presentation and Museum/Interpretation Centres

There are considerable advantages and disadvantages to the in situ display of archaeological remains at Tell es-Sultan. The weaknesses include problems with the visual intelligibility of the archaeological remains: as archaeologists we are used to reading strata and interpreting from fragmentary remains, but this is a difficult issue to communicate to the non-specialist (fig. 4). We are also usually dealing with very fragmentary and incomplete building plans, and the leap from a few walls to the layout of domestic building, for example, is often difficult (fig. 5). There is a complexity of narratives and visualisations that can be difficult to grasp on site, with limited interpretational space, even for archaeologists! It is also a facto that in situ conservation can be relatively expensive and, especially when dealing with the deep excavation trenches and earthen architecture at Jericho, problematic.

Conversely, there are many strengths to in situ display. Visitors to the site have come to experience a place, not just to understand the archaeology, which could be achieved at a remote location or through other media
(books, websites, etc.). A sense of place is vital to creating the experience and engagement, and *in situ* remains are often an integral part of that sense of direct experience. Displayed remains also convey a sense of scale and texture (for example the size of the stone tower/bastion at Jericho is arguably more visually impressive and intelligible on site than through photographs and drawings; fig. 6).

![Fig. 4 - The legibility of the archaeological section: can this be “read” by non-specialist audiences?](image1)

![Fig. 5 - The fragility of *in situ* remains. Does this make much sense to the visitor, let alone archaeologists? I like looking at mud-bricks as much as the next person, but is the exposure of this material, and its consequent degradation worth the interpretative gain?](image2)

They also enable the visitor to experience aspects of setting and wider landscape context. And despite the problems of reading archaeological stratigraphy, *in situ* presentation enables us to engage the visitor in issues of the complexity of archaeological stratigraphy, and the scale and nature of the archaeological endeavour: both of which are crucial aspects of the significance of Tell es-Sultan, with its deep sequences and pioneering position in the development of stratigraphic excavation in the Middle East.
As a result, there needs to be a careful examination of the extant excavation sites at Tell es-Sultan, assessing their potential for display and interpretation and integrated this with the conservation condition assessment (see above) to develop a strategy for reburial, conservation and on-site interpretation. Similarly, there are a number of issues to be considered before the construction of an interpretation centre at Tell es-Sultan. There are clearly strengths to create an interpretative and educational venue at the site. Approaches such as models, 3D computer visualisations and complex narratives (with multiple strands) become more achievable. The wealth of artefacts (for example the well preserved material from burials), environmental information and photographic/film data for the site can be used to develop issues such as crafts and technologies, domestic life (figs. 7-8), trade, beliefs, etc., in a way that cannot easily be achieved on-site. How such a centre could also function in terms of the wider landscape interpretation, as a hub for other sites in the Oasis, and as a venue for educational and participatory activities, needs to be explored during the development of the overall strategy for the project.

Fig. 7 - The quality of survival at Tell es-Sultan. The remains of woven basket (1953: Basket 17 from Area H Tomb H18).
5.6. Recognising Opportunities: Creative Site Management

5.6.1. Interpretation and Conservation

The proposed management framework for Tell es-Sultan recognises both the importance of holistic and integrated planning. This is important in order to ensure that the archaeological site is not subject to isolated, individual projects which could have a negative impact due to a lack of coordination. It also identifies the need for short-term emergency preventive conservation at the site. This will both prevent further deterioration and provide a safe environment for the visitors, effectively safeguarding the interpretive potential of the fragile archaeological resource. This is especially relevant for the already excavated trenches, such as Kenyon’s Trench I. Since conservation measures – such as backfilling, sheltering or preventive conservation – all have different implications for the future presentation of the archaeology, their interpretive value should be taken into account when prioritising areas for conservation. This does not mean that immediate interpretation should be valued over long-term conservation, but rather suggests that one should also aim to preserve the interpretive potential. Reversible approaches (techniques that can be easily removed without damaging the original structure/material) offer the opportunity to rethink the values, policies or strategies employed. It is also important to take up the opportunity to plan for visitor circulation, and for mitigating the negative effects of visitor erosion.
When applying a creative management approach at the site of Tell es-Sultan, the proposed conservation work itself should also be seen as an interpretive opportunity. By communicating the methods and needs for preserving the unique value of the resource to the current visitors, a greater understanding and awareness can be accomplished that potentially could benefit the future survival and management of Tell es-Sultan. It also means that the focus during this work should not only be on training and capacity building in the field of conservation, but also on the development of the relevant short-term interpretive resources.

5.6.2. Interpretive Resources
The development of flexible and low-cost interpretive materials and activities, such as leaflets, signage and guided tours, can provide immediate interpretive benefits for existing visitors. It is necessary then to make sure that all interpretation focuses on the need for conservation and on improving visitor behaviour. The development of flexible and low-cost interpretive materials can also serve as a period of training for guides and interpretive designers, enhancing the participation and local skills platform on which an interpretive plan can be established. Although resources arguably would be better committed within the context of a well developed long-term interpretive strategy, this does not imply that valuable resources are wasted when one chooses to implement short-term interpretive activities and materials. First, the focus on training and capacity building provides benefits that are valuable in their own right. Secondly, the process provides important experience that can help to plan for future interpretation, as well as providing insight into visitor profiles, expectations and needs. Finally, one should acknowledge that most interpretive resources, such as leaflets, signage and interpretive panels, often have a short life span: while the resources spent on materials might not be reusable, the interpretive content, research and experience, can be re-used and enhanced when the longer-term interpretive strategy is in place. Interpretative action may also provide a context for training tourist guides, a potential source of economic benefit for the local communities of the Jericho Oasis.

The need for short-term interpretive activities does not imply that a detailed long-term interpretive strategy is not needed: on the contrary, short-term activities should be regarded as a useful tool for creating momentum and engagement, as well as obtaining insight into visitor profiles and the effectiveness of delivery methods that can inform the interpretive strategy. The envisaged interpretation centre at Tell es-Sultan can also benefit from such an approach, especially when short-term
interpretive materials are designed in such a way as to be transformed easily into the interpretive design for future exhibitions, in terms of their content, research and gained experience (see above). It is in the development of all these processes that the local communities, park staff and tourist guides should be involved from the outset.

5.6.3. Educational Resources
Engaging educational groups at the earliest possible opportunity within the management of Tell es-Sultan has many potential benefits for the visitors, local community and archaeological resource alike. In particular, the potential for producing a teacher’s handbook and additional training courses should be explored in this context. Such a resource, which should aim to make interpretive material available for schools throughout the Jericho Oasis and beyond, could explore the history, status, archaeology and need for conservation at Tell es-Sultan. In addition, it should provide guidance on effective approaches for teachers to enable students to explore, understand and enjoy the archaeological resources through means of site visits. It is necessary then to focus on evidence-based learning, encouraging children to investigate the archaeological resource and conservation processes for themselves. By providing “resource sheets” and “activity sheets” incrementally, this means that information can be provided at low-cost as work progresses over time. This in turn, allows for a provision of educational benefits to the children from the outset and can provide the necessary momentum for investigating opportunities to integrate Tell es-Sultan in the national curriculum. It can increase awareness of the cultural heritage amongst children and adults alike and communicate its significance. It can also establish an educational platform that can become the basis upon which future interpretation, such as a visitor centre, can be planned.

6. Conclusions
The realisation that “reactive intervention” to conservation issues is not sufficient to ensure the long-term preservation of the archaeological resource has resulted over the last few decades in the development of “value-based” management planning models. Since values come from human perceptions of the resource, values are central to the identification of objectives and actions by stakeholders.

The tension between the preservation of existing values on the one hand, and the realisation of potential values on the other, often constitutes a key element in decision-making. This paper advocates a “creative site management” approach, which reinforces the concept of significance by
including, indeed emphasising, the ability to provide opportunities and recognise potential values.
The paper has also explored some of the practicalities of management, especially where the opportunities and desires for immediate action are challenged by the absence of fully developed management plans. The notion of a shared vision, established through consultation with stakeholders in the early phases of the management process, can be an effective solution for dealing with the need for immediate decision-making.
If the role of interpretation and education focuses primarily on the development of sustainable benefits to both the local communities and the visitor at the earliest possible opportunity, such an approach might also provide the framework for long-term preservation of the archaeological resource. By highlighting some opportunities in the field of interpretation, promotion and education at Tell es-Sultan, and by providing some thoughts on how an early focus on interpretive planning and implementation can benefit its development and preservation, it is hoped that this paper can contribute to the survival, enjoyment and appreciation of this unique archaeological site.

6.1. Ways Forward
We know that the development of holistic archaeological site management and effective participatory planning with local communities is not simple, even in political contexts easier than Palestine. But there is evidently a strong will in the potential Palestinian partners to undertake the process: throughout the workshop there was a real sense of enthusiasm, commitment and passion. There are also considerable skills and expertise within the country and these need to be effectively enabled in the process, not side-lined by the excessive use of international experts. This workshop has helped to create an agenda for action.

Developing a management plan for the Tell es-Sultan site, and hopefully the wider cultural resources of the Oasis, should be seen as the creation of a living tool. It can provide a framework to help ensure the effective conservation of the values of the site, integrate the management of the site with the needs of the local community, enhance the educational opportunities of the site, interpret and present the significance of the site to visitors (local, national and international) and promote sustainable tourism.
The process can help to achieve a sustainable future for the cultural resources and the local communities of Jericho. There is also a fantastic
opportunity to further develop a sense of Palestinian archaeology and a skills base to support it.

For us, the issues that lay at the core of the Jericho workshop were the sustainability of actions and the contemporary relevance of the process to the local people. Preservation and conservation of the cultural resources are vital, but so is the issue of the contemporary use of the resource to sustain living communities: economically, educationally, socially and ideologically. Frameworks for the ethical management of archaeological resources – such as poverty relief, United Nations Agenda 21, and notions of sustainable communities – create a wider framework for our actions and responsibilities. Finding the beneficial balance should perhaps lie at the core of our decision-making: the *Brundtland Report* defined sustainable development as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”\(^45\). Sustainability requires a political choice, which will need to be modified continuously to reflect new knowledge, changing conditions, or unforeseen developments. The World Tourism Organisation predicts that cultural tourism will be one of the five key tourism market segments in the future, and notes that growth in this sector will present increasing challenges in terms of managing visitor flows to cultural sites\(^46\). By using the archaeological resource we are inevitably eroding it, in some ways reducing it, and changing its values, but by using it we might also help to create more employment, better education opportunities, develop skills and crafts and generally to improve the quality of people’s life.

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We would like to express our gratitude to Dr. Hamdan Taha, Director General of MOTA-DACH, and Arch. Giovanni Fontana Antonelli, Programme Specialist for Culture at the UNESCO Office in Ramallah, for their support and hospitality during our stay in Jericho, and for their important work on organising the conference and making such excellent progress with the management approaches to Jericho in such a short time. In this regard, we also would like to thank Mr. Ahmed Rjoob of MOTA-DACH and Arch. Maha Samman Mansour, Consultant at UNESCO for their valuable input. Thanks also go to Prof. Lorenzo Nigro, of the Rome "La Sapienza" University, for his contribution to co-organizing the conference and for making the publication of the workshop possible. Furthermore, we would

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\(^{45}\) United Nations 1987, 54.  
like to thank all participants and organisers, especially our Palestinian colleagues, for their support, expertise, and above all, hospitality. Finally, we would like to thank Louise Cooke for her valuable contribution to this paper, especially on approaches to the conservation and maintenance of earthen architecture and on reburial strategies.

The Kathleen M. Kenyon Photographic Archive is a work in progress at the Institute of Archaeology, University College London. Please contact Stuart Laidlaw (s.laidlaw@ucl.ac.uk) for further details.

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This paper focuses on the management of Tell es-Sultan under various administrations, from the British Mandate until today. It aims at assessing the development of the site within its context in terms of management, presentation and interpretation, and showing how different administrations have dealt with the site under different jurisdictions.

1. History of Research at Tell es-Sultan

Tell es-Sultan has been the object of archaeological investigations since 1868 when Captain Charles Warren dug some shafts through the site looking for biblical events. In 1894 the site was described by Bliss as “a mass of debris caused by the ruins of several mud-brick towns over the first Jericho”. However, Sellin and Watzinger conducted a big scale excavations (between 1907-1909) on behalf of the German Oriental Society which showed the great potential of the site. From 1930 to 1936 John Garstang conducted a set of excavations on behalf of the Liverpool University. His excavations revealed the Neolithic phases of the site; nevertheless, he neither understood the site stratigraphy, nor succeeded in publishing a final report. Between 1952-1958 the British School of Archaeology in Jerusalem, the Palestine Exploration Fund and the British Academy launched the most important expedition conducted by Kathleen M. Kenyon. Thanks to her new method of excavation, she exposed 23 phases of occupation, including the Neolithic town with its meaningful features and the remains of the Bronze Age cities\(^1\). Finally, in 1997 a joint Italian-Palestinian Expedition was launched within a detailed program of excavations at the site. The excavations were focused upon the fortification system of the Early Bronze Age II-III and the Middle Bronze Age. They cleared out the impressive MB city-walls and their related ramparts, domestic houses and material of pottery, flints and fauna\(^2\).

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\(^1\) Kenyon 1957.

2. Management of the Site under British Mandate

The site was managed, as all archaeological sites in Palestine, by the British Mandatory Department of Antiquities of Palestine which was established in 1920.

In 1929, the British Mandate issued the law of antiquities. Accordingly, the Department of Antiquities was responsible for supervising all archaeological activities in Palestine and for protecting the ancient sites. Meanwhile the Palestine Archaeological Museum (nowadays Rockefeller Archaeological Museum), based in East Jerusalem and opened in 1938, was established to house the extraordinary collection of artifacts discovered in the excavations conducted in Palestine during the time of the British Mandate (1919-1948). In doing so, the archaeological excavations at Tell es-Sultan were undertaken in the light of this law and precious artifacts moved to the Palestine Museum.

3. Management of the Site During Jordanian Time

The 1929 Antiquities law had been used by the Jordanians till 1966, when it was so far updated. Kenyon’s excavations were undertaken under this law. The extraordinary artifacts were moved partially to the Palestine Museum and to the Castle Museum in Amman, and others to the British Museum in London, and elsewhere.

4. Management of the Site During the Israeli Military Administration

After the Israeli occupation in 1967, the 1966 Jordanian Archaeology law was applied in the West Bank. This law was overlaid by Israeli military orders transferring all powers under the law to the archaeological Staff Officer, who is an officer of the Civil Administration. Accordingly, an illegal limited excavation was undertaken under the Israeli military administration at the site (south of Kenyon’s Trench I) without any distinctive results or final scientific report.

During the Israeli military administration, Tell es-Sultan became one of the Israeli National parks. It was opened to the public in 1984 without serious efforts to conserve its features. However, the following interventions were undertaken:

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3 See Nigro in this volume, pp. 103-107.
• a tourist route was marked and installed with several interpretation panels, reflecting the Biblical story of the site;
• a shading shelter place for visitors was built at the highest point of the site;
• the physical boundary of the site was fenced;
• some facilities for the site were also installed, such as toilets and a parking place;
• the site linked with the Israeli tourist package.

5. Current Management of Tell es-Sultan “under Palestinian Authority”
Palestinian Department of Antiquities has taken over its responsibilities on the site in 1994[4]. The 1966 Jordanian law has become again the in forced law in the Palestinian Territories. From the outset, the Department of Antiquities has dealt with the site as one of the most important and endangered sites in Palestine. Many conservation interventions were carried out through several projects such as the Emergence Clearance Campaign project (1996-1998), and the joint Italian-Palestinian excavation and conservation of the site (1997-2000).

5.1. Assessment of the Management of Tell es-Sultan
5.1.1. Legal and Legislative Context
As mentioned previously, the 1966 Jordanian law is the statutory base by which the site is managed. It is inefficient to protect the cultural values of the site and their physical attributes because of the following:
• the law is, so far, effective for on site protection (inside the physical boundaries), but ineffective for off-site protection. Consequently, essential parts of the site remain without any proper legislative protection means, including its cemetery, its spring, its setting, and its cultural landscape;
• there is no appropriate other statutory means to regulate land-use out of the site. For example, there is no master plan for Jericho Municipality;
• in addition to the mentioned above, putting the law into force is the major problem. In spite of the ineffectiveness of current legislations, it can secure the minimum protection of the site if there is an executive tool of it. For example, the cable car project and the Quruntal

restaurant haven't the legal approval of the Department of Antiquities; however, they were built without respecting the cultural landscape of the site or its setting.

5.1.2. The Ownership
The site, inside the physical boundaries, is a public property, managed by the DACH.
However, out of the physical boundaries, the ownership is partially a public property (Islamic and Christian Endowment) or a private one, as the following:
- the current park south of the site is public property hired by the private sector, as well as the western part;
- the northern part is managed by UNERWA;
- the eastern land (‘Ain es-Sultan) was sliced from the site by the asphalt street; it is a public property managed by the Jericho Municipality.

5.1.3. Infrastructure and Facilities
Current infrastructure at Tell es-Sultan is inadequate in terms of quality and quantity. Nevertheless, the minimum infrastructure for a tourist site is available including:
- toilettes;
- reception;
- improper parking area related to the private sector;
- souvenir shops close to the site.
However, most of these installations are constructed casually without any plan, overlapping with the site conservation and its sustainability.

5.2. Staff Resources and Expertise
Currently, Tell es-Sultan is managed by the Department of Antiquities and Cultural Heritage. All needed interventions are undertaken through the Department of Restoration and Sites within DACH. The current working team consists of:
- two full time employees guard the site and manage visitors’ accessibility and admission fees;
- tourist police guarantees the security of visitors;
- the Jericho’s branch office of DACH supervises and monitors the site.

5.3. Financial Resources Allocated to the Site
There is no regular budget allocated to conserve or promote the site; although Tell es-Sultan is the most visited site in Palestine, visited by 250,000 visitors annually, it gets mostly nothing in return from the admission fees which pour into the Ministry of Finance budget.
5.4. **Visitors’ Numbers**

Tell es-Sultan is the most visited site in the Palestinian Territories. It was visited by 250,000 yearly before the al-Aqsa Intifada.

<table>
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</table>

5.5. **Visitors’ Profile**

The table below shows that most of Tell es-Sultan visitors are foreigners, while local visitors are the minority.

<table>
<thead>
<tr>
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<td>10961</td>
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<td>45307</td>
<td>232973</td>
</tr>
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5.6. Site Presentation and Interpretation

The site opens daily at 8:00 am and closed at 5:00 pm, excluding the official vacations; however, this system is not suitable for the weather of Jericho, mainly during the very hot summer. As it concerns the accessibility to the site, the Joint Italian-Palestinian Expedition constructed a visitors’ route on the site and a wheelchair ramp (fig. 1). However, there are some problems in this path, including the following:

- there is no access to the wheelchair ramp from the entrance;
- there is no continuity to the ramp inside the site;
- the path above the Neolithic tower is problematic, because the visitors have to get back from the same path to explore the Bronze Age fortifications.

Fig. 1 - The wheelchair ramp built by the Italian-Palestinian Expedition (1997-2000).

5.7. Presentation and Interpretation

- Interpretation signage: Nemours of interpretation and oriented signage are distributed in the site (fig. 2). Unfortunately, the current interpretation panels are not compatible with all visitors categories, especially the handicaps and children, either because of their impropriate height or farness.
• The overall interpretation method is not enough to tell the story of the site. It needs to be assessed and planned according to the statement of significance of the site and its story, taking into carefully consideration the complexity of Tell es-Sultan, which is very difficult to be interpreted without an interpretation centre having all means of interpretation technology, such as audio-visual, brochures, catalogues and so on.

![Interpretive panel realized by the Italian-Palestinian Expedition on the site (1997-2000).](image)

5.8. Visitors’ Safety
The site is, so far, safe and secured, although visitors’ safety is threatened in some places, especially above the Neolithic tower, where the soil is eroding under the path.

5.9. State of Conservation and Site Vulnerability
The site suffers from fast deterioration and is very sensitive for any physical intervention. More than 30% of the site was excavated by deep dangerous trenches at different places. Although 60% of the site is unexcavated, it is mostly covered under huge mounds of earth accumulated by previous excavations.
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**THE PRINCIPLES OF LOCAL SUSTAINABLE DEVELOPMENT**

Gianluca Solera

1. What Is Sustainable Development?

- “A development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, World Commission on Environment and Development, 1987).

The 4 Pillars of Local Sustainable Development:
1. Economic prosperity and full employment.
2. Equality, social inclusion and regeneration.
3. Protection and improvement of the environment towards local and global sustainability.
4. Good urban governance, policy integration, political and financial accountability, and local empowerment.

*From Rio de Janeiro (1992)*...

Local Authorities’ initiatives in support of Agenda 21 (Chapter 28.1):
Because so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and sub-national environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development.

*...to Johannesburg (2002)*

The *Johannesburg Call*:

Leaders and representatives of local government across the globe gathered at the Johannesburg Summit 2002 adopted the *Johannesburg Call*. They acknowledged “that ours is not an equal, fair or just world... We recognize

**Editorial board elaboration from the power-point presentation given to the Workshop.**

*Greens-European Free Alliance Group in the European Parliament.*
that without political commitment, nothing will be achieved. We therefore pledge our unwavering commitment to eradicating poverty, correcting the imbalances between the developed and developing world and fundamentally reshaping our world. We also commit ourselves to developing very practical, realistic Action Plans and to implement them through Local Action 21 programs to realize these goals. ... The time to act is now. Let us not lose this opportunity; there may not be another”.

2. From Local Agenda 21... to Local Action 21

1. Pro-actively creating sustainable communities and cities. It will mean assisting communities to go beyond general sustainable development planning and address specific factors that prevent a great number of them from becoming sustainable: issues such as poverty; injustice, exclusion and conflict; or unhealthy environment.

2. Pro-actively creating sustainable communities and cities. It will mean assisting communities to go beyond general sustainable development planning and address specific factors that prevent a great number of them from becoming sustainable: issues such as poverty; injustice, exclusion and conflict; or unhealthy environment.

3. Instituting municipal sustainability management that applies state-of-the-art systems and tools. Local Action 21 will introduce and anchor instruments in municipal management to ensure unwavering implementation, effective monitoring and continual improvement.

3. The WEHAB Agenda

“Five specific areas where concrete results are both essential and achievable” (UN Secretary General Kofi Annan, 17 May 2002):
1. Water and Sanitation (Provide access to at least 1 billion people who lack clean drinking water and 2 billion people who lack proper sanitation);

2. Energy (Provide access to more than 2 billion people who lack modern energy services; promote renewable energy; reduce over-consumption; and ratify the Kyoto protocol to address climate change);

3. Health (Address the effects of toxic and hazardous materials; reduce air pollution, which kills 3 million people each year; and lower the incidence of viruses, which are linked to polluted water and poor sanitation);

4. Agricultural production (Work to reverse land degradation, which affects about two thirds of the world's agricultural production);
5. Biodiversity and ecosystem management (Reverse the processes that have destroyed about half the world's tropical rainforests and mangroves and are threatening 70% of the world's coral reefs and decimating the world's fisheries).

4. **LA 21 Networks: the European Case**
   - Mutual political, technical, and scientific support
   - Charter of Aalborg
   - European Sustainable Cities Campaign
   - Aalborg+10 – Inspiring Futures

4.1. **The Aalborg Commitments**
1. Governance
2. Local Management towards Sustainability
3. Natural Common Goods
4. Responsible Consumption and Lifestyle Choices
5. Planning and Design
6. Better Mobility, Less Traffic
7. Local Action for Health
8. Vibrant and Sustainable Local Economy
9. Social Equity and Justice
10. Local to Global

4.1.1. Governance
Develop a commonly shared long-term vision for a sustainable city or town:
1. build participation and sustainable development capacity in the local community and municipal administration;
2. invite all sectors of local society to participate effectively in decision-making;
3. make decisions open, accountable and transparent;
4. cooperate effectively and in partnership with other cities and towns.

4.1.2. Local Management towards Sustainability
1. Strengthen LA 21 or other local sustainability processes and mainstream them into the heart of local government;
2. deliver integrated management towards sustainability, based on the precautionary principle;
3. set targets and time schemes in the framework of the Aalborg Commitments and create and follow the Aalborg Commitments monitoring review;
4. ensure that resource allocation in the decision making is based on strong and broad sustainability criteria;
5. cooperate with the European Sustainable Cities & Towns Campaign and its networks to monitor and evaluate progress.

4.1.3. Natural Common Goods
1. Reduce primary energy consumption, and increase the share of renewable energies;
2. improve water quality, save water, and use water more efficiently;
3. promote and increase biodiversity, and extend and care for designated nature areas and green spaces;
4. improve soil quality, preserve ecologically productive land and promote sustainable agriculture and forestry;
5. improve air quality.

4.1.4. Responsible Consumption and Lifestyle Choices
1. Avoid and reduce waste, and increase re-use and recycling;
2. manage and treat waste in accordance with best practice standards;
3. avoid unnecessary energy consumption, and improve end-use energy efficiency;
4. undertake sustainable procurement;
5. actively promote sustainable production and consumption, in particular of eco-labeled, organic, ethical and fair trade products.

4.1.5. Planning and Design
1. Re-use and regenerate derelict or disadvantaged areas;
2. avoid urban sprawl by achieving appropriate urban densities and prioritizing brownfield site over greenfield site development;
3. ensure the mixed use of buildings and developments with a good balance of jobs, housing and services, giving priority to residential use in city centers;
4. ensure appropriate conservation, renovation and use/re-use of our urban cultural heritage;
5. apply requirements for sustainable design and construction and promote high quality architecture and building technologies.

4.1.6. Better Mobility, Less Traffic
1. Reduce the necessity for private motorized transport and promote attractive alternatives accessible to all;
2. increase the share of journeys made by public transport, on foot and by bicycle;
3. encourage transition to low-emission vehicles;
4. develop an integrated and sustainable urban mobility plan;
5. reduce the impact of transport on the environment and public health.
4.1.7. Local Action for Health
1. Raise awareness and take action on the wider determinants of health, most of which lie outside the health sector;
2. promote city health development planning, which provides our cities with a means to build and maintain strategic partnerships for health;
3. reduce inequalities in health and address poverty, reporting regularly on progress towards reducing the gaps;
4. promote health impact assessment as a means for all sectors to focus their work on health and the quality of life;
5. mobilize urban planners to integrate health considerations in their planning strategies and initiatives.

4.1.8. Vibrant and Sustainable Local Economy
1. Adopt measures that stimulate and support local employment and business start-ups;
2. cooperate with local businesses to promote and implement good corporate practice;
3. develop and implement sustainability principles for the location of businesses;
4. encourage markets for high quality local and regional produce;
5. promote sustainable local tourism.

4.1.9. Social Equity and Justice
1. Develop and implement programs to prevent and alleviate poverty;
2. ensure equitable access to public services, education, employment opportunities, training, information, and cultural activities;
3. foster social inclusion and gender equality;
4. improve community safety and security;
5. secure good quality and socially integrated housing and living conditions.

4.1.10. Local to Global
1. Develop and follow a strategic and integrated approach to mitigate climate change, and work towards a sustainable level of greenhouse gas emissions;
2. mainstream climate protection policy into our policies in the areas of energy, transport, procurement, waste, agriculture, and forestry;
3. raise awareness of the causes and probable impacts of climate change;
4. reduce our impact on the global environment and promote the principle of environmental justice;
5. strengthen the international cooperation and develop local responses to global problems in partnership with local governments, communities and relevant stakeholders.

4.2. Monitoring LA 21 Progresses

- The Local Authorities’ Self Assessment of Local Agenda 21 (LASALA) research project.
- The European Common Indicators Project.

4.2.1. The European Common Indicators

Monitoring environmental sustainability at the local level:
1. citizen satisfaction with the local community;
2. local contribution to global climatic change;
3. local mobility and passenger transportation;
4. availability of local public open areas and services;
5. quality of local ambient air;
6. journeys by children to and from school;
7. sustainable management of the local authority and local business;
8. noise pollution;
9. sustainable land use;
10. products promoting sustainability;
11. ecological footprint.

4.2.2. Best Practices

Leicester - UK; Schwabach/Hamm - Germany; Calviá - Spain; Ferrara - Italy; ICLEI.

5. “Think Globally, Act Locally”

- Act strategically, plan your future;
- promote local partnership and participation;
- work with international networks (Eurocities-Access, Energy-Cities, Climate Alliance, Med-cities...);
- involve research institutes and universities.

6. And Jericho?

Jericho, the first Palestinian Sustainable City?
THE HEBRON REHABILITATION COMMITTEE:  
MANAGEMENT OF CULTURAL RESOURCES IN HEBRON

Khaled Qawasme*

1. Introduction
Hebron is one of the oldest and most sacred cities in the world, located in the south of Palestine with about 140,000 inhabitants. Hebron is one of the best preserved examples of medieval cities in the world, but was progressively abandoned and falling into a state of disrepair after the Israeli occupation of the Old City in 1967.
The settler campaign and the consequent tighter restrictions on the movement of the residents together with an increasing economic deterioration led to drive out most families and shopkeepers with property in the Old City, who moved to more secure and newer neighbourhoods with better infrastructure and investment possibilities. Most of those who remained were social hardship cases and marginalized groups who could not afford to improve the existing housing facilities and urban infrastructure, and to prevent cultural heritage decay and environmental degradation.
A presidential decree was issued in August 1996 to compose Hebron Rehabilitation Committee (HRC).
Since its inception the Hebron Rehabilitation Committee (HRC) aimed at achieving three main objectives, namely to preserve the cultural heritage as a key element for keeping the collective identity of the people of Hebron, to counteract the Israeli political pressure by repopulating and revitalizing highly threatened, neglected and poverty-stricken areas in the Old City and to encourage community participation through the provision of adequate and affordable housing compatible with a cultural heritage conservation policy.
Recognizing the community needs, the HRC has also paid a great attention to the social, economic and cultural needs of the city’s residents. In addition to rehabilitating residential apartments, shopping stores, markets, streets and archways and missing parts of the old city architectural fabric, it should be highlighted that community centres, playgrounds, public utilities, educational, health, cultural and tourism resources have been also established and specific programmes have been launched to address the needs of the poorest residents of the Old City. Moreover, it has promoted

* Hebron Rehabilitation Committee.
legal initiatives in an attempt to halt further Israeli settlement constructions and demolition of Arab-owned houses. The rehabilitation programme promotes the use of labour-intensive methods as a means to create sustainable employment opportunities, provide specialized training on traditional methods of conservation and increase the level of income of the community. The HRC has drawn up comprehensive revitalization guidelines for conservation and community housing, as well as promoted the use of international standards of renovation on the national level. Various international and national public and private institutions consider the HRC experience as a reference model and consult it regularly on technical and legal issues related to cultural heritage preservation and community projects. The HRC is working closely with several governmental bodies of the Palestinian National Authority (PNA) and many other governmental and non-governmental organizations. It has received political and financial support by many Arab and international donors and organizations.

2. The Situation before the Initiative

Hebron Old City was in very bad state of disrepair caused by the devastating political situation that drove out the majority of its residents. The remaining inhabitants lacked almost all means of livelihood, as well as access to schools, health care and social services. The ruin of housing and urban infrastructure caused widespread environmental degradation as well as loss of architectural richness of many of its buildings. The Old City lacked amenities, such as public parks and gardens. Living spaces and utilities were obsolete.

3. Establishment of the Priorities

Following the establishment of the HRC in 1996 and in close cooperation with local authorities, communities, social anthropologists, ethnographers and archaeologists among others, the HRC began by drawing up comprehensive revitalization guidelines for conservation and community housing, carrying out technical studies, socio-economic surveys including studies of property ownership and community needs, and the implementation of pilot projects. Rehabilitation and restoration plans specifically took into account how architectural modifications would meet with the inhabitants’ needs as a way to relate them to the Old City and raise their awareness on its historical value and the need to live in a safe and healthy environment. Full documentation and survey was to be carried
out for each intervention. The Committee's immediate aim was to renovate and then inhabit historic buildings. The use of internationally recognized standards, as well as traditional materials (stone and lime) was promoted. No substantial modifications were made that could jeopardize the architectural and historical value of the buildings. On-the-job training was also prioritized in order to create employment and expertise in traditional methods of restoration.

4. Living under Israeli Military Administration

According to Hebron Protocol, an agreement was signed between Palestinians and Israelis in 1997; Hebron city was divided into two parts: Hebron 1 (H1 area) under the Palestinian full authority, and Hebron 2 (H2 area) under the Israeli security authority.

The Israeli side, according to the mentioned Protocol, supposes to be the only side who is responsible for ensuring security for both Palestinians and Israelis. Unfortunately, the Israeli Army and police heavily ensure security for settlers and Israelis, but they rarely ensure security for Palestinians whenever needed.

H2 area, the occupied part of Hebron City, has been witnessing lately many Israeli violations of local and international laws, such as confiscating lands and properties, sealing stores, closing streets and shops, demolishing houses, imposing long unjustified curfews and closures.

During the last Intifada, more than five hundred days of curfew were imposed on H2 area, since 28-9-2000 until now, during which all life aspects were paused. For labours of that area, it meant no work during days of curfew, no work after that for long time.

Even whenever there is no curfew, residents of H2 area are facing many obstacles to move and get outside the area, they might be checked by Israeli soldiers on their way out & in their way in, they might be stopped for hours before being released, and they have to be home early, otherwise they might not be able to get back home if there is a curfew.

All accesses of the Old City have been closed. No vehicles are allowed through, but Israeli forces’ and settlers’. In some streets Palestinians are forbidden even to walk. Most of shops owners in H2 area are not allowed to open their shop and work their.

Residents of Hebron Old City are suffering much of pressure and stress because of the Israeli measurements. Social life of people living over there is almost destroyed. They became isolated from their relatives and friends.
5. Formulation of Objectives and Strategies
Following the Oslo Agreement, the Palestinian National Authority established in 1996 the Hebron Rehabilitation Committee, which is composed of local representatives from relevant PA ministries, Hebron municipality, University, technical experts and community leaders. The goals and strategies put forth by the Committee can be summarized as follows:

- preservation of the cultural heritage through maintaining the original construction elements of the old buildings to sustain the integrity of the architectural fabric as a whole;
- reviving and strengthening the Palestinian Population presence in the Old City through a repopulation policy compatible with cultural heritage protection and community needs;
- improving the living conditions of the inhabitants by providing health aid and technical assistance, as well as support for the renovation and reconstruction of the residents’ houses;
- rehabilitating the infrastructure and connecting it to other city neighbourhoods;
- setting up dynamic employment campaigns to help residents to find jobs, thus reducing unemployment and poverty;
- working to reinvigorate economic and commercial activities in the Old City by facilitating a return of residents to the area, increasing tourism and both local and general trade;
- protection of threatened areas in the Old City due to widespread degradation and/or political pressure;
- looking after the humanitarian aspects of life in the Old City of Hebron in terms of health, education, entertainment, social and financial aids.

6. Mobilization of Resources
The HRC was established with a team of local engineers, architects, consultant sector specialists and social workers, and legal advisers. Several PNA institutions, such as the Ministries of Local Governments, Public Works, Transportation, Awqaf, Housing, Tourism, Planning and Education as well as the municipality of Hebron, the University Graduates Union, and the Aqsa Mosque Rehabilitation Committee, provided qualified staff and expertise to the Engineering Office, greatly contributing to the success of the programme.

The studies done by the University Graduates Union and various other institutions in the city have supplied an excellent knowledge base that
accelerated our ability to initiate and execute our projects. The Palestinian Bureau of Statistics has also helped by updating the statistical data available about the Old City and its inhabitants.

7. Process

Hebron is an Arab Muslim city founded by the “Canaanite” over 5,500 years ago. Its main site is the Abraham mosque, where Prophet Abraham, as well as his sons, is buried in the cavern underneath. The city grew around this mosque due to its religious and historic importance. Since 1967 Hebron was occupied by the State of Israel and it still remains under its control. As a result of the Israeli settlement policy, repressive measures were imposed towards the Palestinian population in the city, such as curfews, blockages, creation of settlement enclaves and military checkpoints inside the old core, etc. These measures have led to the migration of a large number of Old City’s inhabitants from their homes and the deterioration of the standards of living for those who remained. Environmental degradation spread resulting in many social- and health-hazards amongst the population.

One of the most important steps taken by the Committee was the elaboration of a master plan for the Old City emphasizing its connection with the Abraham mosque on one hand, and the provision of essential services required by the increase in the resident population on the other, as well as the development of tourism, transportation and other planning items. In composing the master plan, the Committee focused on incorporating the flexibility necessary to deal with two possibilities: first, the development of the settler enclaves and the work to encircle them; secondly, the removal of the settlements and a return of normality to the life of the city. The renovation and repopulating project includes the reopening of schools for local students, repairing commercial storefronts and providing humanitarian assistance to Old City residents. Furthermore, the HRC offers advice and expertise, and tailored-made training programs for workers and technicians, applied the concept of on-the-job training and use of labour-intensive methods, conducted field studies to ascertain the extent of the architectural solutions’ harmony with the needs of the population for modernization, while maintaining the buildings’ historic and architectural integrity.

Main technical problems stemmed from the shortage of trained experts and proper materials, inadequate earlier renovations, family disputes over ownership and restrictions imposed by the Israeli Army during the project’s implementation. Due to the congestion of the core city, owners had expanded their dwellings by building extensions in any space available,
resulting in many architectural deformations. Work had been carried out by unskilled labour without technical expertise and incompatible materials and techniques had also been used. Due to limited available resources prioritising of areas was carried out. Great efforts were devoted to raise awareness among owners and inhabitants of their architectural richness and the need to preserve them. Family “hosh” or dwellings built centuries ago for extended families needed to be broken into separate living areas for nuclear families. Community participation was encouraged introducing kitchen and bathroom facilities in many of the houses. Cost for the renovation of each individual housing was kept low. For an initial five-year period, the owners of empty houses were paid rent by the Committee during the renovation to encourage them to return. Those who did not, were rented for a period of five years by the Committee to new occupants with preference to homeless, local workers and poor people.

8. Knowledge Exchange

Various international and national public and private institutions consider the HRC experience as a reference model and consult it regularly on technical and legal issues related to cultural heritage preservation and community projects.

The HRC is working closely with several governmental bodies of the Palestinian National Authority (PNA) and many other governmental and non-governmental organizations.

Several public and private institutions working on different levels have approached the HRC to learn more about its experiences and success in its effort to provide and improve adequate living conditions, rehabilitate Palestinian Cultural Heritage and set out a national strategy for cultural heritage preservation. The Committee’s standards have been used as technical bases for renovation in various areas on the national level including the Bethlehem 2000 project. These are also pursued by conservation students in West Bank universities.

9. Aga Khan Award

The accomplishments of the Hebron Rehabilitation Committee reached their peak when the Committee won in the 1998 Aga Khan Award for Architecture.

This award represents one of the most prestigious international awards granted, once every two years, to the best architectural projects in the Islamic world.
The Rehabilitation Committee had the honour of receiving the Award from His Majesty, King Juan Carlos of Spain and the Aga Khan, Prince Karim, in Alhambra Palace, Granada, in October 1998.

10. The Achievements

The HRC has succeeded in rehabilitating historical buildings and urban infrastructure in accordance with the international renovation standards while converting these buildings into residential adequate and affordable apartments (figs. 1-3). More than 600 apartments have been renovated and eventually inhabited. Some of the commercial markets, streets and underground infrastructure have been renovated. The Committee has installed iron doors and windows for approximately 280 houses. Social assistance to poor families has also been provided for health care and essential services. Furthermore, a community centre, a children’s playground, a public garden and a fire-fighting system have been established and are now operational.

The Committee was able to change people’s perceptions about Hebron Old City from a bad, unsecured environment into a nicer place to live (fig. 4). Several thousands of new residents have moved into the old city since 1997 and there are currently many more waiting to be re-housed. Moreover, comprehensive renovation of neighbourhoods and large areas made people more aware of the significance of preserving their historical sites as a way to maintain the memory of a nation.

While the political situation has continued to deteriorate, unemployment and poverty have been reduced through the establishment of employment generating projects and the creation of immediate job opportunities both inside and outside, and indirect jobs in the construction industry. Expertise was accumulated in cultural heritage preservation and community interventions and Hebron has now a well trained local expertise in the field of old buildings renovation. A school of renovation was subsequently founded in cooperation with the local universities and institutions.

The Committee has also succeeded in uniting the efforts of Hebron’s institutions through collective work and coordination. It surrounded the Jewish settlements inside the Old City with circles of inhabited buildings to stop the horizontal expansion of the settlements, and halt the continuing construction of these settlements by increasing the density of the Arab population between them. The subsequent return of the inhabitants to the Old City had a major role in reviving trade and tourism in it.
Fig. 1 - Restoration interventions in Hebron Old City.
Fig. 2 - Restoration and valorization interventions in Hebron Old City.
Fig. 3 - Restoration interventions in Hebron Old City.
Fig. 4 - Community activities in Hebron Old City.
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SUSTAINABLE COMMUNITY THROUGH CONSERVATION AND RESTORATION PROJECTS

Nurjihan Riyad∗

1. Introduction
The “TASHGHIL Program” – “A Poverty Oriented Employment Generation Program through Economic & Social Infrastructure Development” – was initiated by UNDP-PAPP1 and generously funded by USAID2. Tashghil’s main goal is to alleviate poverty, generate employment and improve access to basic social services, which shall be achieved through a set of labour-based activities, from which is the restoration and rehabilitation of several sites in North West Bank.
For the conservation and restoration projects (Cultural Heritage protection), a memorandum of understanding was signed with the Department of Antiquities of the Ministry of Tourism and Antiquities (MOTA-DACH) in order to implement the projects in partnership with UNDP-PAPP.
A brief description of the designed Cultural Heritage Component is followed for the conservation and restoration of seven sites which are distributed in Jenin, Tulkarem and Salfit districts.

2. Conservation and Rehabilitation of Belamah Ancient Water Tunnel
At the very southern entrance of Jenin city, a tunnel lies which dates back to Early Bronze Age. This tunnel used to function as a safe passage for the inhabitants of Khirbet Belamah to a water spring located at the foot of the archaeological mound after cutting and curving it in the rocks. The tunnel was excavated by the Ministry of Tourism and Antiquities and is considered the second largest water tunnel uncovered so far in the Palestinian Territories3.
The project aims at cleaning the tunnel and making it more accessible for the visitors through installing a light stairway. The interpretation of the site shall be displayed during the visit. Originally, the project was designed to

∗ Architectural Conservator assigned as a field coordinator of the cultural heritage component of Tashghil Program.
1 United Nations Development Program/Program of Assistance to the Palestinian People.
2 United States Agency for International Development.
3 Taha 2000.
include a nearby interpretation centre; however MOTA-DACH did not succeed in reaching an agreement with the private owners of the land on which the interpretation centre should have been constructed. Physical implementation is expected to start at the beginning of April and come to an end by October 2005.

3. Rehabilitation of Burqin Old Core
Burqin Church is one of the oldest churches in the Holy Land. The church is believed to be the place where Jesus healed the ten lepers during his journey from Nazareth to Jerusalem, according to the Biblical story. The development project includes the rehabilitation and upgrading of the historical Old Road which includes the infrastructure and the beautification of the surrounding facades, in addition to the beautification of the church's surrounding. The project was designed to develop and upgrade the central “saha” of the town; however, the owners of the land had different interest. The physical implementation of the project started on September 2004 and is expected to conclude by March 2005.

4. Restoration and Rehabilitation of Abdel Hadi Palaces in Arraba
The Old Town of Arraba comprise of 13 separate complexes of palaces. These palaces, which have an Ottoman architectural style, are a testament of the rich history of Palestine, and are part of its living heritage in the present. The palaces are privately owned by the Abdel Hadi family and were used as a dwelling area for the political leaders in the region. To revitalize the old core of the town after years of negligence, the Municipality of Arraba reached an agreement with the owners of two of these Palaces for the purpose of rehabilitation. The project aims at adapting the use of one palace into a cultural centre, while the other as a child and mother development centre. The design of the second palace was made flexible so that it can be easily turned into a restaurant. Physical implementation started at the beginning of February 2005 and is expected to conclude by November 2005.

5. Restoration and Rehabilitation of Barqawi Castle
On the highest part of the centre of Shofa village, Barqawi Castle is located overseeing the entire village and its surrounding mountains. The Castle, which was built around 1600 AD, composes of two floors and a basement. Around it lies the visible remains of the defensive walls, which were built in
The castle was inhabited by one of the feudal and influential families of the region, namely the Barqawi family, and had played an essential role during the 1831 revolution against the Ottomans, during which parts of the castle were destroyed.

The MOTA reached an agreement with the owners for the rehabilitation of the Castle and its backyard, landscaping and upgrading the physical surroundings. The project aims at adapting the use of the Castle into a cultural centre. The basement will host a permanent exhibition of Barqawi family collection. The ground floor will include a temporary exhibition, the administration, the cafeteria (madafeh), and the kitchen. The first floor shall incorporate a small library, lecture room and workshop spaces. The backyard shall be landscaped to allow for several public cultural events. Physical implementation of the project started on January 2005 and shall be concluded by August 2005.

6. Restoration and Rehabilitation of Khirbet Irtah

Located on the southern slopes of Irtah village, the site of Khirbet Irtah overlooks the green Zaymar Valley. The site consists of a cluster of historical and archaeological sites bundled in a small area of land. At the entrance of the site, there is an Islamic shrine consisting of a small building with two floors and two domes. The lower floor of the shrine dates back to the Roman period, while the upper floor dates back to the Islamic period. Near the shrine are ancient Roman pools and at a distance of few meters, there are two traditional potteries which have fallen into neglect. These potteries use primitive methods of pottery production, and one of them is utilizing a Roman tomb as an exhibition place.

The project aims at developing the site into an archaeological park. The archaeological remains shall be protected and conserved; the potteries shall be upgraded and new temporary light structures shall be added. The central courtyard which joins all elements shall be landscaped and furnished with greenery and seating places.

Physical implementation shall start in April and conclude by August 2005.

7. Consolidation of Historical Buildings in Kur Village

With a characteristic shielded protective and massive architectural building style, Kur, the ruling headquarter “Kursi” of Al Jayusi family, is a small village located at a high mountain southeast of Tulkarem City. The entire village is a historical monument and a masterpiece of art consisting of a number of large historical buildings. It is the best model that resembles the
Mamluk - Ottoman villages in Palestine. The buildings of the village are still in a relatively good condition and have preserved their original architectural style.

The project work in Kur village will be limited to emergency consolidation works to prevent further deterioration of these historical buildings.

**8. Restoration and Rehabilitation of Old Town of Deir Istiya**

In the heart of the central highlands of the West Bank and surrounded with natural landscapes, lies Deir Istiya village. The fabric of the old core of the village is unique in Palestine and forms a model for a typical traditional Mamluk village with Ottoman additions. The old core is located in the middle of the village and has four main entrance gates separating the historical site from the modern extensions. The existence of these gates has contributed to preserving the original structure of the historical site.

The urban development in Deir Istiya was based on olive cultivation and the processing of its products. This inspired the idea of conservation and rehabilitation of the old core. Deir Istiya Municipality reached agreements with the owners of four historical buildings for the purpose of restoration and rehabilitation. The project also includes the rehabilitation of some internal roads and landscaping activities throughout the old core to make it more presentable and attractive to tourists.

Physical implementation of the project shall start in May and come to an end by September 2005.

**9. Conclusions**

Projects documents (historical and archaeological reports, documentation, pathology, intervention, bill of quantities, technical specifications) were prepared by consulting firms, who were pre-qualified by UNDP-PAPP and MOTA-DACH. Projects documents were reviewed and approved by UNDP and MOTA technical team. USAID also played a role in reviewing and approving stages of work.

It is worth mentioning the participation of the local community in the decision making process. Several workshops took place in which community was adequately addressed first regarding the importance of cultural heritage and behaviour of old historical structures, and second regarding the future utilization of the sites in order to adopt desirable utility programmes. Active local institutions, youth, women, elderly, municipality and other concerned were involved in these workshops. During implementation local community contributes to the implementation of the
projects through voluntary works in cleaning debris out of the old town, removal old electrical networks, etc.

After the completion of the physical restoration and rehabilitation of the seven sites, another unit from UNDP-PAPP will take over to operate the sites for a certain period of time through trained local personnel from the local community who shall be responsible for managing the sites afterwards.

The development aspect of these projects is geared towards providing jobs to the local community through conservation and rehabilitation activities. The sites will be utilized in the future for cultural tourism, educational and community purposes, and will be an important location on the cultural heritage map of the region. The activities planned through these projects will help sustain them developmentally and culturally.

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BIANCA
SPACE UTILIZATION AND DYNAMIC STABILITY IN A PALESTINIAN CULTURAL LANDSCAPE: TOWARDS A MANAGEMENT PLAN FOR THE BIRZEIT REGION

Hamid Salem*

1. Introduction
For the past decade, an increased awareness has been noticed to integrate the cultural landscape in comprehensive cultural heritage management plans. The threats affecting the cultural landscape lead various international heritage bodies, particularly the UNESCO, to call for the protection of the cultural landscape from being abused by modern activities. A discussion emerged to define which cultural landscape ingredients to be incorporated in a heritage management plan. Among the concerns are the ways to define the cultural landscape, selection of values, defining its boundaries and the implementation and a long term monitoring of the management plan1.

This paper deals with a tentative model of land use and dynamic stability in the mountains region of Birzeit. It proposes that any prospective management plan should incorporate the various aspects of the cultural landscape.

2. Basics Concerns in Cultural Landscape Management Plan Applying to the Birzeit Region

2.1. Definition
The cultural landscape is simply defined as any human made changes occurred over the “natural landscape”. The natural resources are considered a determinant factor in shaping the cultural landscape. So, it is difficult to “understand and manage the ‘natural’ environment unless we understand the human culture that shaped it”2. Combining both the natural and cultural Heritage, the World Heritage Committee defined the cultural landscape as an: “illustrative of the evolution of human society and settlement overtime, under the influence of the physical constraints and/or

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1 Breedlove 2003; Fowler 2003; WHC 2003.
opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal”³. The settlement cultural history should then include all aspects of the surroundings. So, the cultural landscape management approach shifts from focusing on a single settlement to the level of managing a settlement system which by turn includes all the space where a settlement is located and its satellites, sustaining areas and supporting sites.

2.2. Location and Boundary

A problem may arise when attempting to define the cultural landscape boundary. There are two boundaries, one is geographic and the other is cultural. The geographic boundary includes the site location, resources, access pathways to other regions and the local topography, mainly uadiat and mountains. The cultural boundary is defined according to any human made changes over natural elements being a large settlement or a small dug well. In specific, “boundaries should take into consideration spatial organization, circulation networks, natural elements, land uses, buildings, archeological sites and cultural traditions. By their very nature, cultural landscapes are more complex and difficult to delineate because they are comprised of multiple elements that often cross property boundaries”⁴.

There is more than one model to define cultural boundaries. A cultural landscape reflects a settlement system, its sustainable resources and cultural traditions (time depth or dynamic stability). The cultural landscape boundary is then defined by its own elements (components).

2.3. Elements (Components)

There is an agreement that any cultural landscape is composed of complex interconnected elements. Those are basically of natural and cultural nature. Examples of the Birzeit cultural landscape elements are:

- natural resources (agricultural lands, clay and mineral resources, water resources, uadiat and mountains, climate etc.);
- settlements (tell, khirbeh, beduin encampment and traditional villages);
- secondary sites (qasur, terracing, rujum, quarries, lime kilns, olive presses, wine presses, cemeteries, tombs, churches, mosques, khan, maqam);
- road system and tracks;
- values.

⁴ Louden County 2003.
As in any management plan, the issue of values will always affect decision makings about priorities of what to include in the management plan. The question is who will set these values, the academicians or the public, remains one of the basic issues.

However, a cultural landscape may have several values, namely, cultural (archaeological sites, traditional architecture), economic (qusur, wine press, terraces, rujum, quarries, lime kilns, olive press, wine press), religious (tomb, cemetery, church, monastery, mosque, maqam), social and individual (palaces), or military (castles, towers). It may also have more than one value (multi values).

Fowler argues that different “cultures have different ideas of what is and is not ‘authentic’, especially in landscape”. Therefore, “the cultural landscape of one society is not always visible to members of another society due to differing perceptions, values and political interests”.

At the end, the definition of the cultural landscape values should be subjective. They had to reflect the space and time dimensions without being biased by the researchers or the public. They should consider the larger scale efforts of representing the region, and not the narrow aspects.

### 2.4. Implementation and Monitoring Obstacles

Implementing a cultural heritage plan requires a high level cooperation at the governmental and individual levels. It may face the following obstacles:

1. political situation may cause the termination of or slowing the management plan, such as the current occupation practices, lack of coordination between the various governmental and non governmental bodies who are involved in the plan, lack of consensus, and lack of the necessary legislations;

2. lack of experience staff which will leave the management plans to the less experienced and in some cases untrained staff. Today, the planning for the protection of the cultural landscape needs an interdisciplinary team formed by various experts;

3. lack of financial resources is the most serious problem facing the implementation of the management plans regarding the cost of conservation and long term protection/implementation;

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5 Fowler 2003, 16.
6 Davidson-Hunt 2003, 22.
7 Laven et al. 2005.
4. lack of public awareness is also a major threat to any future management plans. In some cases sites are open to plundering and in others sites are destroyed by construction projects. The land owners’ fear of confiscations is another obstacle to implementing the plan. The following discussion will illustrate the management plan components focusing on the Birzeit region.

3. The Birzeit Region as a Case Study

3.1. Location
The Birzeit region is located at a main ancient road known as via Romania (fig. 1). The Birzeit region communities throughout time took advantage of this location by producing olive oil and quarry stones for import. Today it is one of the major quarry places in Palestine.

Fig. 1 - Map showing the main cultural landscape resources of the Birzeit Region.
The region is located at an elevation varied between 650 and 800 meters. The highest elevation is located at Kh. Birzeit of 817 meters. Uadiat surrounding Birzeit town are: Wadi el Zeitun, Wadi el Balat and Wadi el Hammra, Wadi Jifna and Wadi el Jalazoun, and Wadi el Marbaa (fig. 2).

![Fig. 2 - Aspects of the natural landscape in the Birzeit region.](image)

The area had plentiful water resources fed by more than 20 springs; 11 of them are located within a one kilometer distance from the old city and the rest within 2-3 kilometers distance.

### 3.2. Cultural Traditions of the Birzeit Region

The total survey area within the Birzeit region is about 250 hectares; 83 different archaeological localities were identified, of those 11 main settlements and the rest are supporting sites (fig. 1). The sites are concentrated on two major niches, forming two contemporary settlement systems (Kh. Birzeit and Kh. Saya).
The depositional history of these settlements suggest that the area was occupied from the Early Bronze Age till the modern times. The major occupation stage belongs to the Byzantine period which actually shaped the current cultural landscape of the region (fig. 3).

Kh. er-Ras is a small site (3 hectares) located 1.5 km north of Birzeit old city. In 1968, the major part of the site was removed by the landowner for fears of confiscation by the Israeli occupation. Also, modern buildings were constructed at the eastern slope. Now, only few remains are found. Sherds
collected from the site indicate that it was the earliest settlement in the region, started in the Early Bronze Age II.

No site was identified as belonging to the Middle and Late Bronze Ages. The Iron Age was represented by three sites. Remains are found at the site of Kh. Rujm er-Rujman. Iron Age I and II remains were also identified at the western slopes of Kh. Birzeit, but it sounds that they are connected to a cemetery since the area is formed mainly by bedrock. Kh. Turfein is located north of Kh. er-Ras. The site was not included within our survey area, but information is available from an old survey by Birzeit University. The site is one of the largest in the area. It is a multi-period site with remains from the Iron Age and the only site with remains from the Persian period.

Evidence of the Hellenistic period occupation was found at sites of Kh. Saya, Kh. Birzeit and the Old City of Birzeit (Mamsiah). These two latter sites are being connected during the later periods; shifting occupation is noticed between them. Sherds belonging to the Hellenistic period were collected from Kh. Birzeit, but it sounds that they don’t belong to an occupational phase, perhaps to a cemetery. Obviously, the Roman occupation shifted towards the old city of Birzeit, before it came back again to Kh. Birzeit during the Byzantine Period. The whole region flourished during this period – a network of villages is formed.

Remains of the Early Arab-Islamic period is found at the sites of Kh. Turfein, Kh. Birzeit and el Mubaid area. The core of some villages like Jifna and Jibia may have been established during the Byzantine period and continue to be occupied until today.

The Crusader-Ayyubid period had evidence at sites like Jifna, Kh. Burham and Kh. Deir Sa’ada. However, the second major occupation after the Byzantine is found during the Mamluke and Ottoman periods. Some abandoned sites of Kh. Birzeit (fig. 4), Kh. Deir Sa’ada and Kh. Burham. Other sites like Kh. Turfein continue to be occupied during this period.

Fig. 4 - Looking north towards Kh. Birzeit and Marj Birzeit; notice the rapid urban expansion.
It is noticed that the region is of a significance to study the Mamluke and Byzantine settlement systems. Therefore, the issue of settlement continuity within one kilometer is found for such settlement systems (i.e. population tends to move within this radius and so keeping the same economy through time). This issue should be the core of any proposed plan.

3.3. Economy

Our information about the ancient economy derived from the small supporting sites scattered off the settlement limits. Quarries and lime kilns sites were well represented in the cultural inventory of the region (figs. 5-6). Lime kilns were associated with the quarries mainly to burn the stone waste. Some of these lime kilns were used in several phases, and scattered of Roman, Byzantine and Ottoman sherds were found within the walls dirt. Quarrying was the major economic trend from the Byzantine period, and may be Iron Age, until today.

Agricultural is a secondary economic source for the Birzeit region. The region had a sustainable area of about 190 hectares (fig. 7). This will fall short for supporting the population of the Birzeit region (which can be estimated to about 5000 persons). “Mediterranean mountains always had the problem of the tension between the low carrying capacity of the environment and the population pressure”9. As an alternative to such limitation of land resources in the Birzeit region, terracing was intensively built especially to protect fig, olive and vineyard fields (figs. 8-9).

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9 Pinto-Correia - Vos 2002, 139.
The survey had produced several other installation sites associated with agricultural activities, which are scattered in the top of the mountains. Wine and olive oil presses were built in association with olive and vineyard products. The Qasr or Muntar (fig. 10) are built by various families as temporary houses used to guard the fields during production seasons. It is, however, very difficult to date all these small installation sites since few cultural remains are found in association with them. Sherds from the Byzantine and Late Ottoman periods were found in their vicinity, which suggests that they may have been used during these two periods.

3.4. **Road Systems**

One of the factors giving to the Birzeit region its dynamic stability is the road systems. A fragment of the Roman road, perhaps the known Via Romania, was identified. This road was mentioned by the survey of Western Palestine where a fragment next to Nabi Saleh was identified.
Another fragment was found to the western side in the Hamra area and next to Khirbet Saya. This will prove that the road have passed the Birzeit region towards the coastal region. It’s a valuable mean of exterior regional trade.

Later Mamluke and Roman roads were identified (fig. 11). However, scattered Roman and Byzantine sherds were found off the sides of these roads, which suggest that they may have been used from then. The majority of them are being used until recently. They are mainly connecting the modern villages.

However, many fragments of the ancient road system were also removed when building the modern main roads and recently by establishing other agricultural roads leading to the fields. The same tracks were followed in both cases, and so the ancient roads were moved by bulldozers.

**Fig. 11 - Examples of old roads.**

### 3.5. Other Secondary Sites

Rock cut tombs are a major component of the cultural landscape of the Birzeit region. The majority of these tombs are dated to the Hellenistic and Roman periods, and they were not directly connected to any nearby settlement.
The most significant are the Marj cemetery, which contains about 11 rock-cut tombs (fig. 12). In addition, few tombs were found next to Kh. Saya and the Roman cemetery of Qarn Qirwash, dated to the Roman and Byzantine periods. An abandoned Mamluke cemetery containing about 20 graves (more likely of multiple nature) was found at the western side of Khirbet Birzeit. A Byzantine tomb is found at the southern side. Scattered of tombs are also found in the region. It should be noticed that the tombs were severely plundered and none was intact. Some of them were also used by modern Bedouin.

4. Conclusions
The above case illustrates the components and difficulties of a management plan for the cultural landscape of the Birzeit region. In the first hand, site management plans focused on a single settlement boundary
with little attention to its location within a settlement system. As the case of many archaeological settlements many information are missing from the depositional history of a settlement. Studying the settlements system will lead to filling the "occupational gaps" by studying the settlement cultural landscape and its catchment's area including various evidence of its economy and cultural continuity, in other words its dynamic stability. Such information will be filled by including secondary sites.

In the second hand, the case presented from the Birzeit region indicates that the cultural landscape is endangered by two current threats. First, the rapid expansion of the urban development is a major threat to the natural and archaeological components of the cultural landscape. One major notice is the rapid disappearance of ancient roads, mainly Roman and Mamluke by the construction of new agricultural roadways. Agricultural lands, such as those of the Marj area, are losing its economic value in favor of new economic values. The abandonment of agriculture as an economy is one main reason in favor of other easy going jobs. Water resources are considered a private property and in two cases the springs are changed to recreation places. Many other projects may also develop. Changing the traditional function of the cultural landscape may create a conflict between urban and rural nature\textsuperscript{10}.

Second, the lack of an immediate Management Plan for the region is leading to neglect. There are two levels of neglect: one is caused by the public and the other by the governmental bodies. The public has little concern of the cultural heritage due to the changing values of the Birzeit region. The close location of Birzeit to Ramallah city and the improvement of the road system has rapidly changed the area from rural to urban community. Neglect is connected to the changing value of the cultural landscapes where the new generation is rejecting their grandfathers' traditions of working in agriculture and conserving the traditional and ancient cultural elements of the cultural landscape. The change of ownership also changes the value of the landscape. The priority of the new landowners is to impose development projects without considering the historic or economic values. Also, the modern quarry systems using heavy equipments has caused a rapid change to the natural landscape, although quarrying maintains one of the traditional values of the region. Other sites like burial caves or cemeteries are destroyed by looting activities, causing damage to the site contents.

\textsuperscript{10} Antrop 2002.
Although the problem of protecting the cultural landscape is in the mind of many, there is still needy work to develop policy tools to integrate the cultural landscape in a comprehensive planning strategy. At the governmental level, little attention is given to the management of cultural landscapes. Priorities are considered for one settlement, and only those of economic values. For example, the National Register of archaeological sites ignored the cultural landscapes. Still not clear is whether it should be included in any future registry. The legislations also lack the necessary steps to protect the cultural landscapes from being abused by modern activities. It should be noticed that without putting the cultural landscape in the agenda of the government’s bodies, it will be difficult to implement any management plan for the region, because it needs coordination between governmental bodies and the various stakeholders.

For the Birzeit region, there is a need to impose an indigenous resource management system based on the historic and cultural values of the region and so to protect the various aspects of the cultural landscape before it is gone for ever.

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CULTURAL HERITAGE PLANNING AND MANAGEMENT FOR DEVELOPMENT:
THE PALESTINIAN ARCHAEOLOGICAL PARK OF THE JERICHO OASIS

Francesco Nigro*

1. Introduction

The landscape of the Jericho Oasis potentially includes all the necessary elements to start a process of development based upon the enhancement of the cultural resources according to the most recent approaches, expressed for instance by the international organisms that are dealt with the cultural heritage and the consequent experimentations started in the last years in different territories of the Mediterranean area.

At the base of these approaches there are the larger vision of what today it is considered cultural heritage and the values ascribable to it. In synthesis, what it is meant for cultural heritage is:

- **material heritage**:
  - natural resources: physical environment, natural areas, etc.
  - cultural resources: archaeological sites, historical centres and monuments, cultural traces of various kind (including roads, hydraulic systems, diffused religious or symbolic signs), museums, literature and iconography, etc.;
- **immaterial heritage**:
  - popular traditions, market and fairs, live performances (music, songs, costumes, feats and celebrations, rites, myths and memories), ethnic handicraft and manufacture, typical food production, etc.

To these elements of the cultural heritage new values are recognized in addition to the “traditional” artistic, historical, aesthetical and witness meanings:

- social values and issue of cultural identity;
- improvement of the quality of environment and human life;
- economic values.

It is therefore possible to consider the whole of the cultural heritage and the values ascribable to it, as a resource for the sustainable development of the territory and population according to manifold aspects: social, cultural, educational, physical-spatial, economic and productive.

In this perspective, the enhancement of the cultural heritage can and must act as a local internal “driving force” and as a key factor of the sustainable

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development of the quality of life of the population. The process of enhancement of cultural heritage, and by extension that of the entire territory, constitutes a significant opportunity because of the cultural, economic and social impact, as well as for the physical and functional qualification of the space that its implementation can entail in favour of a development aimed at seeking out in local situations its reasons, coherences, balances, sustainability, advantages and competitiveness. This is made possible by an *integrated approach* to the planning and management of the process of enhancement, in order to create and empower the relations among the values and the potentialities of the cultural heritage and the territorial, social and economic context.

The integrated planning of cultural heritage for development means:

- **integration of heritage resources**:  
  - physical integration (visibility, accessibility, usability);  
  - conceptual and interpretative integration (historical and cultural interpretation and presentation of the territory and its history);
- **integration of heritage resources and social, economic and territorial context**;
- **integration of institutions and their management instruments** of cultural heritage, landscape-environmental and territorial heritages (sharing activity of objectives, strategies and actions);
- **integration of the public and private actors that operate in the territory**;
- **integration of the enhancement process effects on cultural heritage and social, economic and territorial context**.

The case of Jericho asks for the application of this type of approaches and the consequent definition of tools and actions; this both for the quality and the variety of resources present in the territory (pl. 1)\(^1\), that require of an integrated planning and management able to join conservation, enhancement and development\(^2\); and because, considering also the particular political, social and economic situation in the region, the population and the territory of Jericho are called to build their development and future on the base of the cultural, environmental, human, social and economic resources they have.

In particular, to start processes of sustainable development, based on the integrated valorization of the territorial, cultural and environmental resources, it is necessary to set up the conditions and tools both to ensure the integration of the actions on the different resources and among their

\(^1\) The project illustrated in the plans has been elaborated by Arch. F. Nigro.

\(^2\) Nigro F. 1998.
cultural, territorial and partner-economic effects, and to assure the coordination and the sharing of the choices among the public and private actors operating in the territory. The tools to be used must, in fact, allow the achievement of the general following objectives:

- conservation and valorization of the material and immaterial cultural heritage;
- improvement of territorial resources;
- development of the local economic system;
- qualification of the human capital, of the local abilities and of the forms of community participation.

It is necessary that the shared functions of orientation, coordination and decision are ensured, as well as, accordingly, the fundamental function of providing addresses, criteria and methodologies for the actors and the related tools operating in the territory, so that the achievement of these objectives produces the desired effects in the different involved sectors (culture, environment, territory, economy, society, etc.). The general finality is to constitute an “integrated territorial system” that aims to the protection and conservation of the cultural heritage as principal asset of the territory, the enhancement of which is finalized to build opportunities of territorial, cultural, social and economic development of the involved context, with the dynamic contribution of all the actors (institutions, administrations, private businessmen, civil society, etc.) to the pursuit of the objectives of conservation, enhancement and development.

2. Guidelines for the Palestinian Archaeological Park of the Jericho Oasis

This integrated process is made possible by the creation of an Archaeological Park. The Park should orient and coordinate the objectives, strategies and actions implemented by different institutions and actors, both public and private, in order to produce knowledge, protection, conservation, enhancement and development in the Oasis territory. In this perspective the Park should be an autonomous institution composed of members of local and national institutions and should guarantee management, control and monitoring of the enhancement and development process.

4 We are basing here upon the Italian experience, where many of such parks are starting to function: in Pompei, near Naples; in Western Sicily; in Tuscany in the Val di Cornia Etruscan complex.
2.1. The Process of Formation of the Park
The formation of the Park depends on the initiative of a promoting subject/group\(^5\), that will have to provide:
- to identify the Park on the base of data related to geographical, environmental, cultural, historical and social aspects of the territory;
- to involve the public and private actors operating in the territory, interested in participating in the process of development;
- to identify the juridical-institutional form of the Park, according to the opportunities of the existing legislation or appraising the possibilities of a new specific provision;
- to individualize the existing and/or potential financial resources for the launch of the Park.

2.2. The Creation and Management of the Park
The creation and the management of the Park ask for specific tools to enhance the cultural resources, to improve the territorial resources and to develop the local economic system:
- management framework, necessary to ensure the functioning of the Park both in the phase of constitution and in the phase of ordinary management;
- action plans:
  - knowledge plan;
  - protection/conservation plan;
  - enhancement plan;
  - development plan.

2.3. Management Framework
The management framework of the Park will have to ensure the following functions: orientation and political-administrative coordination, technical-scientific support, consultation of the involved subjects. These functions can be developed by:

\(^5\) The Workshop organized by UNESCO, of which this volume wants to be the tangible result, represents already the intention of some Palestinian institutions and administrations of governmental and local level, of international scientific-cultural institutions, as well as of UNESCO itself, to start a process of reflection and awareness on the necessity to look for a solution for the planning and integrated management of the territory and the resources of the Jericho Oasis.
committee of coordination, composed by the public actors competent on the territory, eventually presided by a representative of an institution of government level (Ministry, etc.);

technical-scientific committee, which, in close contact with the committee of coordination, attends to defining the planning contents of the different plans necessary to provide information and data for the subjects operating in the territory, with the purpose to ensure the achievement of the shared objectives;

organism of consultation, that is the space of the comparison and the sharing with all the public and private actors, as well as with the local community, involved in the process of development, useful to communicate the initiatives and the choices of the Park, but also to listen to necessities and desires of the local population and the civil society.

The way of creation and development of the Park, as said, foresees the predisposition of four different action plans, purposely separated to promote its realization according to the articulation of the competences of the involved public subjects, but conceived in an integrated way for maximizing the synergies between the interventions and the use of the available financial resources.

The four plans mentioned above will be expressed in terms of addresses, guidelines, actions and projects for:

- protection policies;
- conservation and enhancement intervention programs;
- cultural heritage management;
- territorial and urban planning and management;
- landscape planning and management;
- economic and social intervention programs.

2.4. Knowledge Plan

The knowledge of the territory, the interpretation of its values and its identity, the evaluation of its points of weakness and its risks are at the base of any process of local development that aims to the environmental sustainability and to the socio-cultural and economic compatibility of its initiatives. Also in the case of the Jericho Oasis it is necessary to achieve a knowledge and an evaluation of the territorial realities that are the common base on which to found the strategic choices of intervention. The Knowledge Plan has the following contents:

- characterization and interpretation of the territory according to different criteria (historical/cultural, landscape/environmental, etc.);
- analysis and evaluation of the cultural and territorial resources (for instance through the creation of a register/catalogue based on a Gis system);
- evaluation of the risks and definition of the opportunities.
In particular, the evaluation can be carried out through the SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats) which allows to build an actual scenery, comparing points of strength and weakness, risks and opportunities of the resources and the territory taken into consideration, useful to have meaningful data and information to define choices and contents of the plans of protection, enhancement and development. In this sense, the register/catalogue can be used to define the physical relationships and the relationships of sense between the cultural resources and the territory, but also to identify the relationships between the different resources and the uses of the territory, the regulatory system constraints, and it can be the basic of future town-planning schemes and landscape planning of territorial actions compatible with the resources.

2.5. Protection/Conservation Plan
The protection and the conservation of the cultural resources, main asset of the Park, needs diversified actions at the level of the whole Park and at the level of every resource/site, finalized to create the minimum conditions for their enhancement:
- for the whole Park:
  - new protection law (national level): the present regulatory constraints are not sufficient for the sites protection because no specific rules have been developed until now;
  - new land use and landscape master plan at Jericho Oasis (local level);
- for each site/resource:
  - definition of the protection area;
  - conservation and restoration interventions;
  - protection systems for archaeological and architectural remains (protective shelters, water drainage, etc.).

2.6. Enhancement Plan
In the Jericho Oasis the valorization of the cultural heritage aims: to favour the usability, the knowledge and the understanding of the resources; to support the relationship among the material and immaterial resources; to facilitate the communication of the intrinsic meanings to the cultural heritage; to arouse the growth of the identity sense of affiliation of the
cultural heritage to the territory and the communities in the present; to increase the ability of attraction of tourism. Also the Enhancement Plan has to operate according to actions related to the whole Park and to the single resources:

- for the whole Park:
  - improvement actions of accessibility and usability of the territory;
  - organization of the visiting routes and transports according to a specific project of knowledge of the territory and its cultural heritage;
  - promotion of activities aimed to maintain and to strengthen the different forms of immaterial cultural heritage;
  - realization of the new visitor and information centre of the Park;
  - communication and cultural activities promotion (publishing, medias, schools, etc.);

- for each site/resource:
  - improvement actions of accessibility and usability;
  - organization and improvement of visiting pathways;
  - presentation tools aimed to know and understand the site;
  - services and facilities for visitors.

2.7. Development Plan
The Development Plan has the task to create the conditions of territorial and socio-economic context able to favour the full valorization of the cultural heritage and to increase its benefits to the advantage both of the visitors and, above all, of the local economic system and the inhabitants. The actions and the projects foreseen in the Development Plan concern on the one hand the improvement of the territory and of its infrastructures and equipments, on the other hand the development of the local economic system, and the involvement and the qualification of the existing human capital.

The main actions for the development of the territory and of the city of Ariha are:
- urban renewal and buildings rehabilitation;
- improvement and equipment of urban public spaces;
- increase, qualification and differentiation of the reception and welcoming facilities for tourism and commerce;
- increase, qualification and differentiation of the facilities for leisure time and sport;
- increase, qualification and differentiation of the territorial service (healthcare, education, public centres, administration and institutional office, etc.).
The main actions for the development of the local economic system, the human capital and the forms of participation are:
- marketing and social enjoyment and tourism promotion on the Park (organisation of tracks, itineraries, information facilities, etc.);
- integration and development of the economic strands that are involved or can be involved in the enhancement process;
- creation of opportunities to attract new economical activities;
- increase training for the local population in the field of cultural heritage, research, conservation, tourism, etc.;
- interventions for local contractors (empowerment, capacity building, incentives for local entrepreneurship, etc.).

2.8. Priority Actions for the Archaeological Park

The whole of the actions of the four plans represents the operational translation of the joint integrated strategy which is at the base of the process of valorization and development that is possible to start in the Jericho Oasis through the constitution of the Archaeological Park.

The actions, as said, will have to set up addresses and orientations for every actor present on the territory who, according to his own competences and tools, is called to bring his contribution through the definition and realization of the interventions included in every action (for instance, UNESCO; Ministry of Tourism and Antiquities; Local Government; Municipality of Ariha; private economic businessmen; etc.)

The actions and the related interventions that today appear priority for the creation of the Park of the Jericho Oasis (pl. 2) and the start of the process of valorization and development, from the different competent subjects, are the followings:

- for protection:
  - implementation of landscape-environmental and historical-archaeological regulatory system constraints through: geographical definition of landscape-environmental constraints and definition of historical-archaeological protected areas (constraints of territorial uses);

- for accessibility:
  - improvement of accessibility and mobility of the territory through: improvement of main roads; definition and organization of the accesses to the Park; improvement of relations between heritage resources; definition and realization of a new road system around the site of Tell es-Sultan;

- for conservation and enhancement:
  - increase environmental, historical and archaeological researches;
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- increase restoration activities of remains;
- realization of visit pathways;
- realization of visitors services and facilities;

• for territory development (urban renewal of Ariha town):
  - rehabilitation and improvement of public buildings and social services;
  - rehabilitation and restoration of historical buildings;
  - improvement of public spaces;
  - rehabilitation of Ariha central square;
  - realization of Archaeological Park visitor centre and tourist services and facilities;
  - realization of commercial and reception facilities;
  - realization of Park transport system;

• for management:
  - cooperation and coordination among territory and heritage managers to program and plan the integrated development process of the Park;
  - definition of territorial integrated actions compatible with the environmental and archaeological resources (territorial urban planning scheme and landscape planning).

Among the priorities of the program for the formation of the Park of the Oasis the archaeological site of Tell es-Sultan has a primary position. Main resource and tourist destination of the territory, the ancient city needs a specific integrated project that allows it to fully develop, and in a state of effective protection and conservation, the role of historical-cultural centrality and image of the foreseen Park. The integrated Tell es-Sultan Project, as it will be seen in detail below, will have to face particularly the following themes:

- definition of interventions for the protection and the rehabilitation of the neighbouring areas to the site (territorial and landscape context of the site);
- historical-archaeological research;
- organisation of accessibility from outside (displacement of road between the site and ‘Ain es-Sultan);
- restoration of archaeological remains (with particular attention for Kenyon’s Trench I and the finds brought to light by the excavations of Rome “La Sapienza” University);
- organization of the accessibility and the usability inner to the site (new main entrance, new pathways, safety devices, etc.);
- improvement of the equipments for the visitors (site presentation tools, visitor centre, museum, bookshop, etc.).
3. Guidelines for the Tell es-Sultan Project

Within the proposal of institution and launch of the Archaeological Park of the Jericho Oasis, the archaeological site of the ancient city of Jericho requires, as said, a particular care and attention both for its historical-cultural value, not completely disclosed if we keep in mind the information that still miss for reconstructing its history (related, for instance, to the real dimensions of the city in the period of its maximum expansion or to the exact location of the city-gates), and for the problems of protection and conservation that its material structure (it deals with very ancient archaeological remains above all in mud-bricks placed inside trenches of very friable earth) and its immediate territorial context (urbanized areas characterized by the constant settlement growth of residences and equipments for tourists, as well as the road that crosses the archaeological site cutting the tell on its oriental slope) set to any serious initiative of interventions of search as well as of restoration and valorization. For these reasons it is necessary that the Project for Tell es-Sultan faces in a general and integrated way all the matters and the existing and potential problems through the contribution of the different involved disciplines (archaeology, urban planning, archaeological restoration, architecture, cultural heritage management, etc.) of the different competent public actors (Department of Antiquities, Department of Tourism, Local government, Municipality, etc.) and the potential public and private financiers, in order to realize an archaeological site able to act at the same time as “place of the culture” but also chance for the rehabilitation and the development of the territory.

3.1. Main Topics

In this vision, the Tell es-Sultan Project is finalized to guarantee the protection of the archaeological site in its largest extension, to increase its historical-archaeological knowledge, to ensure its conservation and valorization, to develop its accessibility and availability, to do of it an occasion of landscape rehabilitation and socio-economic development for the whole Oasis, as well as the centre of the proposed Park. It appears therefore useful, before illustrating possible solutions, to point out some main matters and priorities that inevitably characterize and direct the

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6 For an analysis of the problems that characterize the site of Tell es-Sultan and for a first proposal of interventions of conservation and valorization of the archaeological site, see Nigro F. 1998; 2000.
definition of the present guidelines for the Project and that, for this reason, are expressed in very operational form.
To sum up, the main themes for the Project and its interventions are:

- **research**
  - limited knowledge of the archaeological site (for instance the city gates and the temple remain undiscovered);

- **protection**
  - from “human action” (construction of buildings and roads next to the site; conditions of degrade of the context; the current applied law protects just inside the physical borders of the site; there is no law or regulatory system constraints to protect the overall site or the environment and the relationship of the site with the outside);
  - from natural action (atmospheric agents: constant sunlight, wind action, rainfalls, water erosion);

- **conservation**
  - the uniqueness and vulnerability of the materials (different kinds of mud-bricks: variety of physical-chemical characteristics, different mix, etc.);
  - the uniqueness of the “monuments” to preserve (deep trenches of excavation; high archaeological earthen section; mud-bricks wall; stone wall; etc.);
  - lack of conservation, restoration and conservation interventions;

- **enhancement**
  - visitors’ difficulty to understand the archaeological remains;
  - need of visitors’ pathways and presentation tools;
  - need of visitors’ services;
  - need of structures and panels for archaeological materials and objects conservation and valorization (pottery, stone objects, etc.);
  - need of visitors’ and workers’ safety devices;

- **management**
  - cooperation among the different site managers;
  - cooperation and organisation among site managers and the different institutions working in the territory (central and local government; municipality).

### 3.2. The Project Priorities

According to these main themes it is possible to point out some priority actions which constitute the base of the program of interventions of the Tell es-Sultan Project and that can be indifferently inserted inside the two
options related to the reorganization of the territorial setting of the site, that will be illustrated below.
According to the action-lines already mentioned, these priority actions are:

- **research**
  - increase historical and archaeological investigations, researches and excavations (research activity is basic for the site understanding, conservation and development, also for attracting public interest);
  - increase analysis and research activities for mud-brick restoration;

- **protection**
  - definition of protected archaeological area and rules of regulatory system constraints;
  - definition of land use and territorial constraints of the areas immediately surrounding the site;
  - displacement of the road in both sides of the site (the road to Nablus and Jenin cuts the eastern slope of the site and has created physical separation between Tell es-Sultan and the spring of ‘Ain es-Sultan);

- **conservation**
  - definition of restoration interventions type and methodology;
  - restoration of the mud-brick and stone structures which have been brought to light;
  - Kenyon’s Trench I coverage and accommodation of the area to visit and understand the archaeological complex;

- **enhancement**
  - accommodation and equipment of the new main entrance to the site;
  - realization visit pathways with safety devices (they have to be both flexible and reversible closely following the progress in excavation);
  - realization of presentation tools for visiting and understanding the site (panels, brochures, informative stations, etc.);
  - realization site office, site information centre, museum and restoration laboratory, tourist police office and visitors’ services (services, bookshop, etc.);
  - improvement of the ‘Ain es-Sultan area in direct connection with the site;

- **management**
  - co-operation and co-ordination between site’s managers;
  - co-operation and co-ordination among site’s managers and territory and land use managers for urban and landscape planning, development policies and actions for the economic local system, etc.
3.3. Main Solutions for Tell es-Sultan

In order to build the minimum conditions to start the Project it is priority to clearly define the real extension of the archaeological site, that for archaeological evidence and historical reasons has to include the area of ‘Ain es-Sultan, as well as to individualize a buffer zones of protection to submit to cultural heritage regulatory system constraints and to rehabilitate and to assign to compatible uses and/or services for the same archaeological site. This involves on the one hand to get the availability of the neighbouring areas (whereas they are private ownership), but, above all, to remove the road for Nablus-Jenin, that separates the site from ‘Ain es-Sultan, defining an alternative by-pass passage to east of the site.

The shift of the road would allow to widen the protected area of the archaeological site and, together with a series of interventions of improvement of the roads and of the existing crossroads to south, west and north of the tell, to organize the accessibility from the outside to the site through the creation of new green areas of parking lot and the establishment of the main entrance to the site with services for the visitors.

The two solutions proposed in this place, as it concerns the alternatives of road by-pass and the consequent enlargement of the archaeological site, can also respectively represent a background of brief-middle period (pl. 3 and fig. 1) and a background of long period (pl. 4 and fig. 2), according to the administrative, legislative and financial possibilities that will be available during the process of formation and realization of the projects of the Archaeological Park and of Tell es-Sultan.

Solution 1 (pl. 3 and fig. 1) foresees the shift of the road through an eastern by-pass mainly to existing roads, that joins again to the road to Nablus-Jenin to the north-eastern corner of the tell. The boundary of the archaeological site could be widened, in this way, to include the area of ‘Ain es-Sultan to be retrained and to be equipped with services for the visitors. At the same time, without the separation caused by the road, it would be possible to reorganize the access to the site in the same position of the exiting entrance.

Solution 2 (pl. 4 and fig. 2) also foresees the shift of the road with an eastern by-pass that joins again to the road to Nablus-Jenin to the north of the tell, and the reunification to the east with ‘Ain es-Sultan, but, above all, it proposes the enlargement of the archaeological site in the areas to the west of the same tell delimited by the existing viability. The new areas included in the archaeological site would guarantee a best physical and landscape protection of the site itself, offering new spaces for archaeological investigations and, according to the results of these last
investigations, for services and equipments of the archaeological site. In particular, it would be possible to locate the new main entrance to Tell es-Sultan in axis to Kenyon’s Trench I and to the Neolithic tower, with undeniable advantages from the point of view of the accessibility and the organization of the visits, as well as of the suggestive image that the visitors would have of the site entering it. In both cases, according to the differences just described, the actions to be foreseen in the Tell es-Sultan Project have to consider interventions of different nature both inside the archaeological site and in its immediate proximities (pls. 3-4).

As it concerns the surroundings areas, besides the definition of specific rules of restraint of the transformations and uses of the territory also for the landscape-environmental protection of the archaeological site, it is necessary, for instance, to foresee interventions of rehabilitation of the refugee camp immediately to north of the site and rehabilitation of the free areas as green areas eventually equipped for the site (parking areas), as well as improvement of the existing roads.

As it concerns the archaeological site, interventions are finalized at the same time to the conservation of the finds, to the accessibility and usability of the site, to the understanding of the visible archaeological remains, to the communication and divulgation of the cultural contents, to the comfort and the safety of the visitors, to the endowment of services and equipments (museum, bookshop, offices, laboratories of restoration, etc.), to the best organization and management of the cultural activities of the site itself.

Beside the whole of the general interventions (parking areas, entrances, pathways, information view points, services and equipments of the site, etc.) there are five priority projects concerning the main areas of the site, that need a specific planning of integrated actions of conservation, restoration and presentation of the archaeological finds (pls. 3-4). The most important contents for these projects are pointed out:

1. **Kenyon’s Trench I**
   - creation of the new site main entrance (only in the case of the described Solution 2);
   - restoration of the Neolithic tower;
   - regularization of the trench excavation limits;
   - realization of water drainage system;
   - realization of roof-covering the whole area;
   - fixing the archaeological sections;
2. Kenyon’s Trench II
- continuation of the archaeological research;
- restoration of the existing Early Bronze Age city-wall section;
- realization of water drainage system;
- fixing the archaeological sections;
- realization of pathways with safety devices and presentation structures.

3. Kenyon’s Trench III
- continuation of the archaeological research (stone wall rampart);
- restoration of the mud-bricks structures;
- realization of water drainage system;
- fixing the archaeological sections;
- realization of pathways with safety devices and presentation structures.

4. Early Bronze Age residential quarter (Area F)
- restoration of the mud-bricks structures;
- realization of water drainage system;
- fixing the archaeological sections;
- realization of pathways with safety devices and presentation structures.

5. Eastern slope and ‘Ain es-Sultan
- continuation of the archaeological research on the removed road;
- rehabilitation of the removed road area;
- direct pathway connection between site and ‘Ain es-Sultan;
- realization of presentation structures;
- rehabilitation of ‘Ain es-Sultan area with visitors facilities.
The definition of the mentioned interventions will have to be the result of the cooperation among archaeologists, restorers, architects and cultural heritage managers, so that the Tell es-Sultan Project brings to the creation of an archaeological site able to produce knowledge and culture for the visitors and the local population, but also opportunities of socio-economic development.
4. Final Remarks

The proposals, outlined in this paper, for the creation of the Archaeological Park of the Jericho Oasis and the preparation of a specific Project for Tell es-Sultans, want to be an operational contribution to the reflection on the numerous issues and hierarchies involved in the realisation of the Park,
which envisages the active cooperation among the interested administrations and institutions.

The arrangement of a way of sustainable development for the Jericho Oasis, in fact, has to pass through a careful and integrated scheduling and planning of the conservation, valorization and development of the existing resources. The success of these proposals depends, anyway, on some conditions that cannot be given up:

- the sharing of the objectives and choices of development among administrations, institutions and local civil society;
- the shared definition of the interventions of the Plan for the Archaeological Park and the interventions of the Tell es-Sultan Project;
- the cooperation, collaboration and coordination among the actors involved in the scheduling, planning and realization of the interventions;
- the search of public and private financings for the arrangement of the Plan of the Park and of the Tell es-Sultan Project;
- the support to the activities of scheduling, planning, design and realization from scientifically competent institutions and subjects (UNESCO, universities, advisors, etc.).

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NIGRO, F.


THE MASTER PLAN AND THE CULTURAL RESOURCES OF JERICHO**

Basel Hijazi*

1. Jericho Always at the Top of the Story
Jericho was the first city where Israel transferred responsibilities for PA after "Gaza-Jericho Agreement" in May 1994. Nowadays Jericho has been again nominated to be the successful model for independency in Palestine.

Why Jericho?
Jericho is unique in many things.
Jericho is the oldest continuously inhabited existing city.
Jericho is a popular winter resort.
Jericho is rich of cultural heritage sites.
Jericho is the place where Jesus stay.
Jericho is the history of the past.
Jericho is the hope for the future.

2. Cultural Sites at Jericho
The main cultural sites in the Jericho landscape (figs. 1-4):

Fig. 1 - Hisham’s Palace and the Mount of Temptation.

** Editorial board elaboration from the power-point presentation given to the Workshop.
* City Engineer, Municipality of Jericho.
Fig. 3 - Tell es-Sultan/ Old Jericho and the surrounding landscape.

Fig. 4 - Reconstruction of Herod’s Palace.
3. Problems and Difficulties
- Political situation;
- deteriorated infrastructures;
- no Sewage Treatment System.

4. The Strategic Plan for Development

5. The Master Plan of Jericho
The implementation of the Master Plan for the old city is a very important way to reach development at cultural, social and economical aspects.

5.1. The Way for Implementing the Master Plan:
- studying and identifying the existing situation:
  - strengths and potential:
    - cultural sites;
    - unique city;
    - holy area;
    - the landscape;
    - climate;
    - low density of population;
  - problems and difficulties;
- promoting the strategic plan for development;
- promoting an implementation plan.
BIANCA
NOTES OF FIRST-AID RESTORATION TECHNIQUES IN THE FIELD
FROM THE EXPERIENCE AT TELL ES-SULTAN

Stefano Ferrari∗

The treatments here described are basic, tending to be more first aid methods than restoration procedures. This is done not because conservators-restorers want to prevent others from treading on their territory, but because it should be never assumed that field conservation is easy and can be done by all members of the excavation team. Thus only those treatments that an untrained person can do are dealt with here. However, we must be realistic and we must recognize that the conservation treatment done in the field, no matter how basic, is often the only treatment the objects will ever receive. In fact, often is not possible to organize a laboratory for restoration treatments in the field. However, if it is clear that objects will not receive a post-excavation treatment, a conservator-restorer should be included in the excavation team. For these reasons we wish to remember the differences between the words: preventive conservation, curative conservation and restoration. In the field we put in action especially methods of preventive conservation, conservative methods directed to remove or reduce causes of degradation and consisting in indirect and optional interventions on the environment of the object. For example, we can handle the material of the objects as little as possible. Each person of the excavation team can make sure to cover the objects with plastic films to avoid an extreme desiccation, or can limit the heat of the sun with a beach umbrella, because each of them knows that the objects are adapted to the conditions of burial and that they will undergo a process of modification when discovered. So, each of us can contribute towards preventive conservation if is well-informed and trained. A restoration treatment is an optional intervention directed on the material of the object with the aim to improve the reading. Often archaeological objects don't need a gaps filling treatment, because we used to see them incomplete, we agree to fragments. Differently, a treatment of curative conservation, directed to remove the effects of degradation, is always compulsory and only a trained conservator can do it. Unfortunately these procedures are long and often expensive, but it is possible to bound them using correct procedures of preventive conservation.

∗ Istituto Centrale per il Restauro, Rome.
† Guillemard 1992, 15.
It is necessary to remember how many factors - the agents that produce the course of degradation - can contribute towards the degradation of inorganic and organic materials of the objects and their nature. They always operate simultaneously. For example, water and soluble salts, both chemical factors, operate together when they are absorbed in pottery and produce chemical degradation. But when that pottery is discovered and water evaporate, soluble salts crystallize, producing the growth of the volume and, as a consequence, cracks and fractures, physical damages. These agents of degradation operate during the phases of life of the objects (creation phase, use phase, archaeological phase, post excavation phase). We must interpret these phases as many as causes of degradation. It is essential for a conservator to work close to the archaeologist, because the archaeologist can contribute to know important notices especially around the creation and the use phases of the objects. This knowledge must affect the work of each conservator.

Moreover, a great deal of wasted effort and damage to objects can be avoided if archaeologists know their site well. That is, if the soil conditions, local climate and depth of deposits is known, as well as the kinds of materials and objects likely to be found, it is then possible to predict with a degree of accuracy the conditions in which objects are to be found and to anticipate basic conservation problems. The archaeologist can consult with a conservator to work out methods of treatment appropriate for that particular site. The archaeologist should go into the field with suitable equipment, and thus be better prepared to deal adequately with whatever is found. Knowledge of climatic conditions will enable a conservator to anticipate problems that might arise when using certain materials, like the use of too volatile solvents to consolidate the objects in hot and dry climate.

The following is the most important point to keep in mind at all times: if an object appears to be sound and has a good chance of survival without having anything done to it, then nothing at all should be done in the field. Always only superficial dirt on an object must be remove, because it is the first protection for each material and it contributes to slow down the speed of the deterioration. Always you should limit your cleaning to a minimum and keep constant and like as the burial conditions. In fact, from the moment the object is exposed to air, the processes of deterioration begin again. Some materials are more sensitive than others to these changes. With organic materials and with metals this process can be very rapid.

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2 Robbiola 1990, 10.
causing objects to disintegrate. Remember that whatever is done in the field by a non-conservator must be undone in a laboratory by a conservator. Any treatment applied to an object must be reversible and when you use chemical materials, use them only if necessary. For example, if you use a consolidant or an adhesive on a dirty surface, you will consolidate the dirt too. Only the smallest quantities needed to ensure the safety of the object should be used.

Many tools useful in the field for cleaning the dirt from the objects are easily available. Brushes are always in demand on a site and it is useful to have a wide variety of sizes and shapes on hand (fig. 1). Tooth-brushes are good for cleaning robust objects and are available at supermarkets. Paint brushes are generally available and 2 to 5 cm are good for cleaning objects still in the ground. Very fine artist's brushes should be available for fragile objects. If only a limited supply of brushes is available, a considerable variety can be achieved by cutting of some of the bristles. It is important to remember that any brush to be used with solvents must have natural hair bristles, because synthetic bristles could dissolve in solvents. Scalpels are useful for cleaning off encrustations from objects. Blades and handles are available from medical and dental supply houses and conservation suppliers. Dental tools are useful in lifting and cleaning objects but they are very expensive. However, dentists could donate old tools that are no longer useful.

Fig. 1 - Brushes with natural hair bristles.

Wooden toothpicks can be used with cotton wool to make swabs for delicate cleaning work and they are readily obtained from supermarkets. Do not use plastic toothpicks because solvents will dissolve them. Be sure

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3 Sease 1987, 20.
that cotton wool is indeed cotton and not a synthetic equivalent which dissolves in solvents. Wooden tongue depressors are useful for removing dirt around objects prior to lifting them out of the ground. They can also be used for other purposes such as stirring solutions (fig. 2). Cutting them you can make different shapes. Plastic wrap serves as a separator when using Plaster of Paris or polyurethane foam. It is available from supermarkets. Aluminium foil too serves as a separator.

About Plaster of Paris, its major disadvantage is that it is heavy, thus requiring mechanical means to remove it and that a considerable amount of heat is generated as it sets, so it cannot be used on heat-sensitive materials.

Gauze bandage is used to wrap an object to give it support once it is out of the ground. It is also used in conjunction with Plaster of Paris and consolidants. It is readily available at pharmacies.

Polyurethane foam comes as two liquid components that, when mixed together, produce a foam. It is important to remember that polyurethane foam is a dangerous material and should be used only when if necessary. In fact, it gives off toxic fumes as it cures and when the foam is cut. Before facings are used, all facings materials should be carefully washed to remove any dressings on them. Sprayers are readily available from supermarkets.

We think it is important to remember some points around the correct use of solvents and consolidants indicated in this speech. A low percentage of resin (in 1% to 3%) is useful if you want to consolidate a material. For this purpose use a not volatile solvent, like ethyl alcohol, because acetone dries on the surface, especially in dry climate. If you want a protection, use a
low percentage of resin and a volatile solvent, but if you wish to harden a bandage, use a high percentage (in 10% to 20%). If you have a dry material use Paraloid B72 in acetone or Movithal B60 HH in ethyl alcohol, but if you have a wet material, use Klucel G in a solution of deionized water/ethyl alcohol (70 and 30%). Finally, we would remember that both Paraloid and Movithal are adhesives when dissolved in their solvent at high percentages (in 15% to 30%).

Bandaging helps you to remove whole a vessel out of the ground also when it is cracked. Take long, rolled-up strips of bandage and wrap it around the vessel in a spiral. Approximately on a third of it each strip should overlap the preceding one and, in turn, be covered by the succeeding one. When one strip ends, fasten it securely with tape. Add a successive layer on the diagonal opposite to the first one, and then a third layer vertically (fig. 3). You can achieve a good bandage also using strips of plastic wrap. If simple bandaging do not provide a sufficient support, further wrap the object with bandage impregnated with Plaster of Paris, but before use a layer of plastic wrap. It is also possible to use an acrylic resin like Paraloid B72 at 10% in acetone, but remember that, in this case, you will consolidate the dirt on the surface too.

Fig. 3 - The bandaging method.

4 Acrylic resin manufactured by Rohm and Haas (U.K.).
5 Polyvinyl butyral (polyvinyl alcohol and butyraldeide) manufactured by Hoechst (Frannkfurt, Germany).
6 Idrossipropylcellulose manufactured by Aqualon, Hopewell.
7 Sease 1987, 27.
The process of backing\textsuperscript{8} is useful when an object is flat, fragile and cracked into a myriad of fragments. Remove the dirt surrounding and clean as much as possible of the exposed surface and expose its sides. Prepare some strips of gauze bandage slightly longer than the object and place the first one on the area. Using a stiff brush tamp the bandage with Paraloid B72 in 10\% to 20\% in acetone, or Movithal B60 HH. Add the resin until the gauze will be saturated and push down being sure to include all the sides. Apply additional strips until the entire surface is covered and then apply a second layer of strips at right angles to the first (fig. 4). When the bandage is dry excavate underneath the object (fig. 5). When the object is completely free, place your hands under it and carefully invert it so that the bandage is on the bottom (fig. 6). Store the object well supported in a rigid container. An alternate form of backing can be used with Plaster of Paris, but before use some pieces of plastic wrap as separators.

When an object is less flat, it is possible to use a block lifting method\textsuperscript{9}. If the surrounding soil is cohesive, like a clayey soil or a wet soil, lifting can be done by isolating a block of dirt containing the object. Then, surround the block with a wooden frame and slowly undercut the block and, when free, slide it onto a rigid support (fig. 7). Take it in a short time to a

\textsuperscript{8} Sease 1987, 28.
\textsuperscript{9} Sease 1987, 29.
conservator because a clayey soil cracks when is dry. If it is no possible to construct a wooden frame, you can use a bandage with Plaster of Paris.

Fig. 6 - The backed object inverted on a rigid support.

Fig. 7 - The block lifting method of an object from a cohesive soil.

A more elaborate method to prepare a block is necessary when the surrounding soil is not cohesive, like a sandy soil. In this case, leave the object on a pedestal of dirt and cover the object with a plastic film or with aluminium foil. Then pose a wooden frame around the object and cover it with Plaster of Paris, filling the surrounding space too. When the plaster has set, place a grid of thin wooden strip and prepare other plaster. Cover this grid with a new layer of plaster. When it is dry, cut the pedestal and invert the block (fig. 8).
You should remember that the combined weight of the object, plaster, soil and a wooden frame would make it difficult to handle the block. Polyurethane foam, being both rigid and light-weight, can be used for this purpose. It is, however, a very dangerous material and it should be used wearing a mask for organic vapors. Remove the surrounding dirt as described above and leave the object on the pedestal of dirt. Construct the wooden frame allowing a generous margin around it. Cover the object with one or more plastic films. When joining two pieces or two layers of plastic film, be careful to fold the joining edges over together and use masking tape. Make very sure that there are no holes in the plastic where the foam could get through to the object. Prepare the foam following the mixing instructions. As soon as the foaming begins, work quickly because the mixture will seem to explode into foam.

Depending on the ambient temperature, it will take approximately 15 minutes for the foam to cure after the initial foaming begins. Polyurethane foam does not work well in cool temperature and will not foam at all below 10°C. As cured the foam can be cut following the procedure described above (figs. 9-11).
At this point we wish to remember some simple principles about a correct handling of archaeological objects\textsuperscript{10}. As a general rule, always assume that every excavated object is extremely fragile. The condition of an object is never readily apparent. Some materials may appear quite robust and strong but can actually be riddled with cracks hidden by dirt. All objects should be subject to a minimum of handling, especially during cleaning and studying. In fact, we must remember that also during the phase of conservation and restoration work, we can produce a new physical deterioration. How you can see reading the following points, handling is most a matter of common sense:

- pick up objects at the thickest and strongest part: never pick up vessels by their handles and rims, but place both hands on the lower half of the body and lift;

\textsuperscript{10} Sease 1987, 23.
• always hold the objects over a table and try to keep the distance between them to a minimum: if you must examine an object closely, bring your eyes down;
• never leave objects close to the edge of a table or shelf where they can easily be swept off onto the floor;
• the workroom should not be a common room for the excavation staff, because shovels, stadia rods, ranging poles or too much people can knock over the objects.

About cleaning it is important to remember that this phase of a conservative treatment is an irreversible one and that is always a critical intervention. After the removal of superficial and incoherent dirt, a more extensive cleaning procedure should be left for a trained conservator. Especially metal surfaces can be scratched very easily and surface detail can be obliterated. In badly deteriorated pieces, corrosion is only a thin, powdery layer. If you need a kind of solvent, avoid the use of absolute water, and eventually prepare a solution with alcohol.

About the different reversible materials for adhesion we remember Paraloid B72, Movithal B60 HH and Uhu Extra\textsuperscript{11}. You could use Paraloid or Movithal if you need a very fluid adhesive, because you can select the concentration of the resin in the solvent and so it is possible to prepare many different glues. If it is necessary to remove drippings of the glue, you can use acetone or ethyl alcohol. Both the solvents are useful for Paraloid and Uhu Extra. Only a conservator can use an epoxy and irreversible adhesive like Uhu Plus, because it needs the application of a reversible layer with acrylic resin on the edges of the fragments.

The packing of archaeological material is a matter of common sense. All packing materials should be selected with care. Only inert materials such as acid free paper and tissue, or polyethylene should come in direct contact with the objects (fig. 12). Toilet paper should be avoided because it could contain harmful additives; and newspaper because it is dirty and highly acidic. They can be used, however, to pad out boxes filled with individually wrapped objects. Also cotton wool should never come in direct contact with objects, but it is a useful packing and cushioning material. If you use it, keep a layer of tissue or plastic film between it and the object. Polyethylene is a very good and stable material; it is diffused as plastic bags, as bubblecup\textsuperscript{12} and as foam\textsuperscript{13}. This last material is very useful because it has a

\begin{footnotesize}
\begin{itemize}
\item Polyvinyl acetate manufactured by Lingner and Fischer GmbH, Germany.
\item Fused polyethylene sheets with air pockets sealed between surfaces.
\end{itemize}
\end{footnotesize}
good shock-absorbing quality, it is soft and flexible. You can cut it and prepare boxes in different shapes and sizes. Paper envelopes are recommended for packing carbonized material because they allow the samples to dry out. When packing metals objects, a layer of moisturising-absorbing silica gel should be placed in the bottom of the box. Silica gel is an indispensable material to keep moisture-sensitive material dry. It is important that silica gel not come in direct contact with the object. The packing of waterlogged material is not any more difficult or complicated than the packing of dry objects. The primary aim is to prevent such materials from drying out. Waterlogged material should only be wrapped and padded with damp polyethylene foam, because paper and cloth are apt to rot in a short time. To prevent object from drying out in their bags, use more than one bag and put the object with some of the mud surrounding and with some water with some fungicide.

![Fig. 12 - Polyethylene foam (Ethafoam), bags and bubble-pack.](image)

We desire to remember some important points about the common inorganic and organic material you should find in the field\(^\text{14}\). Clay is a material baked in the sun used for bricks, tablets, jar sealings and figurines. It is important to remember the use of only soft brushes and wooden tools to remove the dirt surrounding. When you lift a broken tablet, be extremely careful to remove all the fragments, because even the smallest ones could be vital to the text when the pieces are joined

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\(^{13}\) Available in different densities, shapes, thicknesses and colours (other brand names on market: Foamflex, Ethafoam).

\(^{14}\) Sease 1987, chapter 5.
together. Remember also to sieve all the soil surrounding the area after lifting the tablet.

Pottery is a quite robust material, but generally when freshly uncovered, especially low-fired pottery, can be very soft and friable. Do not lift a sherd or pot before ascertaining the condition of its surface. Make sure there is no paint layer or applied decoration that has become detached from the surface. If you find a pot badly crushed into a myriad of small pieces, treat them as a whole and lift following a bandaging, backing or block lifting procedure. Not all pottery needs to be washed in water and in many cases it is no possible. When you wash a pottery, immerse the fragments for a short time, use only a soft brush to remove the dirt and change the wash water frequently because the dirty water itself can be very abrasive. After washing spread the sherds out and allow them to dry slowly, away from direct sunlight.

About glass, be careful not to detach any iridescence and if necessary leave the dirt adhering to the glass because it protects these thin and fragile layers. Never immerse any glass in water and if you need to clean with water use only moist swabs. When a glass vessel is made, the glass is put under a certain amount of tension. If the vessel is broken, this tension will be released and distortion can occur. This condition is called “springing” and because it is frequently a problem, the joining of glass pieces is best done by a conservator.

Sometimes metals are totally transformed into minerals and they are in a very fragile condition. They could snap or break easily and only a superficial cleaning is possible in the field. Metals are very sensitive to moisture, so if you find them dry, leave dry. Place metal objects in polyethylene boxes with some silica gel and store in as dry a place as possible. Remember metals need curative conservation procedures as soon as it is possible because they are very reactive materials.

Bone, antler and horn objects undergo complex deterioration. In fact, acidic soils attack the mineral components, which give them their rigidity, alkaline soils attack the organic components rendering them brittle and friable. Especially for these materials is important to understand if they are dry or damp and to operate the correct selection of consolidant. In fact, they are moisture sensitive materials and if you find them dry, leave them dry, if you find them wet, leave them wet. When they are found wet, it could be necessary a storage in cool conditions.

Ivory is much more sensitive to moisture than bone and must be treated accordingly. When you find it dry never use water, but clean it only with gentle dry brushing. Remember that dry ivory should be stored in a room
where the climate is neither too damp nor too dry, where relative humidity is between 45% and 55%. If you find wet ivory you should leave it wet and you should store it in a cool and possibly refrigerate place. Never try to wash a piece of dry textile or bring it in contact with water. The cleaning of archaeological textiles is always a difficult job that only a conservator can do, because the fibers are always very brittle and break under the slight pressure. If the textile is crumpled or folded, do not try to unfold or flatten it, because this action will result in breakage. If you find a piece of textile wet, store it wet in a refrigerate place.

In dry climate is difficult to find wood and generally it is possible to find charcoal or other carbonized material (nuts, seeds and other plant remains). A carbonization preserve the material that becomes resistant to chemical and biological activity. When you store this material find as dry a place as possible, away from direct sources of heat. It is possible to find well preserved wood under extremely wet conditions. Waterlogged bacterial and chemical degradation destroy the cellulosic portion, but the lignin structures remain. As a result the wood retain its shape and bulk. If the water absorption is sufficient the wood does not float, but it is very fragile and you should keep it in as cool a place as possible.

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Sease, C.
BIANCA
CONSERVATION OF MUD-BRICK STRUCTURES AT TELL ES-SULTAN

Mohammed Diab*

1. Introduction

Since ancient times man used mud-bricks to build his home, and today we can still find the remains of these structures, especially in dry regions. Mud with pounded pebbles and sand was mixed with straw and then put in brick molds in the sun to dry; such mud-bricks were used in building earthen architecture. Local and international attention has been drawn to earthen structures, for they reflect rich diversity in architecture and decorative designs; they are living documentation of the development of traditional methods of building and traditional materials designs; and, finally, because they are deteriorating and facing destruction because of natural elements, and new methods of building. These earthen structures, some of which are very ancient, are in a great danger of disappearing.

Mud-brick is the main construction material used at Tell es-Sultan from the Neolithic period until the end of last century. It consists of the following:

1. sun-dry mud-brick: it is the main construction material, used for building domestic houses and fortification systems (fig. 1);
2. stone: it was mostly used for foundations of domestic houses and fortifications (fig. 2);
3. fired mud-brick and lime-plaster: it is available with little quantities, used for storage installations especially during the Byzantine period.

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2. Destruction Effects on Tell es-Sultan

Tell es-Sultan has suffered from two main destruction effects: human effects and natural effects, which have caused strong damage and erosion of the cultural heritage features of the site as the following.

The Human Factors include the following:

- archaeological excavations carried out during the last century: although these excavations contribute to expose the significance of the site, they have a fatal passive impact on the conservation of the site and its deterioration. All of excavation methods used on the site focused on uncovering its features rather than conserving them;
- land-use surrounding the site: the improper use of the surrounding land of the site, especially during the last century, caused a lot of destruction of the cultural landscape of the site itself and its setting. There are many new interventions around the site, such as the urban expansion, the construction of new commercial and tourist facilities, the asphalt road which separates the spring from the site, the refugee camp built on the northern side of the site, and so on.

The Natural Factors include two types:

- Climate Factors:
  - rainfall: the annual average of the rainfall in the Jericho area is 140-160mm. The average is relatively low; however, it falls for a few hours in the form of violent and heavy showers, causing soil erosion at the site; in addition, the physical components of the Jericho soil don't absorb the water causing the water flooding. The weather forecast reported that from 50-60 mm of rain water fall within half an hour once every five to six years which is the direct cause of the site erosion (fig. 3);
  - winds: winds speed on the site reaches 70-80km/h; however, in the stormy weather it reaches 100km/h;
  - temperature: Jericho has a high temperature in summer; the average is 18-40°C; however, the average in winter is 5-20°C. This difference in the temperature has a crucial role in the deterioration of mud-bricks and it weakens the physical and chemical bounds of the material.

- Biological Factors: their impacts is less strong than the weather factors, including the following:
  - birds: birds dig their nests into the mud-brick walls (fig. 4);
  - wild animals: wild animals such as dogs and foxes dig their burrows into the site (fig. 5);
- plants and grass, mainly their roots, have an impact on the deterioration of the site.

Fig. 3 - The erosion caused by the rainfall into mud-brick walls.

Fig. 4 - The effect of birds digging into mud-brick structures.

Fig. 5 - The effect of animal digging into the site.

All the above mentioned factors effected in damaging the mud-brick structures at the site, as it is shown in the following photos. These photos show the average of the deterioration of Kenyon’s Trench I (figs. 6-8):

Fig. 6 - The black rectangle shows the size of Kenyon’s Trench I 50 years ago. Originally, the width of this trench was 5 m; however, it is now 10-11 m at the top and 6-7 m at the bottom, because of the soil erosion. This means that the average of trenches deterioration, especially in the upper parts, is 10 cm annually, dumping the lower parts of the trenches.
3. Conservation and Restoration Interventions at Tell es-Sultan

The Palestinian experience in conservation of earthen structures in the Jericho area in the Jordan Valley (that is one of the most famous areas for earthen structures) started in 1997, and was stopped in 2000 because of the current political situation. The Department of Antiquities and Cultural Heritage conservation works in 1997 were mainly the following:

1. reconstructing a new mud-brick wall to support and stabilize the foundations of Early Bronze Age fortifications;
2. using chemical materials (Primal), which formed a thin isolation layer for six months;
3. digging drainage ditches to mitigate the soil erosion at different trenches;
4. comprehensive cleaning up of the site;
5. fencing the site;
6. back-filling of Trench I, II, III to make them on the level of cultural layers and refilling of all other holes in the site.

In 1998-1999, the Italian-Palestinian conservators used the following methods in conserving the earthen structures.

3.1. Conservation of Mud-Brick Structures Using New Chemical Materials

Experiments were conducted jointly with a team of Rome “La Sapienza” University by using new chemical materials. The aim of these experiments was to try and conserve the earthen structures, and keep the decorative designs intact. Two types of chemical materials were used:

1. Ethyl Silicate.

Before using this material on the actual structures, experiments were done in the laboratory on bricks found in excavations to test the effects of this chemical material on mud-bricks (figs. 9-11). The success in laboratory experiments exceeded 80%. Therefore, the decision was taken to try and work on small parts of mud-brick structures at the actual site, in two Areas, to the south and to the north of Tell es-Sultan: Area A and Area F (fig. 12). These experiments were done to examine how the mud reacts using Ethyl Silicate in its natural habitat. Two methods were used to treat the mud with Ethyl Silicate: spraying (one sample) and injection (two samples). The samples were observed for three years (the first few months observation was constant and concentrated). We found out that the mud particles of the sample in the northern area (Area F), which were injected with the chemical material, began to disintegrate in the first month. Instead, the two samples in the southern area (Area A) of the site (one was injected, the other was sprayed) were 60% successful.

The laboratory analysis of “La Sapienza” University found that the physical characterises of mud-brick walls change from section to section, and even from brick to brick. After four month, the treated mud-bricks with the Ethyl Silicate had badly deteriorated, while others that had not been treated, and yet were exposed to the same weather conditions, were well preserved.

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1 The conservation and restoration interventions were carried out by Dr. Salvatore Tricoli, Master Stefano Ferrari and Arch. Francesco Nigro.
2. Primal.
In 1997, during the joint excavation with the team of Rome “La Sapienza” University at Tell es-Sultan, samples of mud-bricks were sprayed with Primal chemical (fig. 13).
The resistance in the very beginning was encouraging; however, after six months, the chemical was not effective. The effect of the Primal doesn’t last for a long time, especially in hot areas.

Fig. 9 - Diagram showing the speed of water movement upwards inside samples of mud-bricks.

Fig. 10, a-c - Mud-bricks treated using Ethyl Silicate, in 1998. Note that morning dew remained on the surface and did not penetrate the mud.
Fig. 11 - Laboratory section of mud-brick components from Tell es-Sultan.

Fig. 12,a-b - Use of injected Ethyl Silicate on samples into mud-brick structures in Area F, in 1998.

Fig. 13 - Spraying Primal on a small area at Tell es-Sultan, in 1997.
3.2. Conservation of Mud-Brick Structures Using Traditional Materials

In 1999, the mud-bricks conservation intervention turned to use the traditional materials similar to those used at the site. Experiments on the use of traditional materials proved to be effective in preserving mud-brick structures. Three different methods were used in restoration.

1. Construction of new mud-brick walls attached to the old ones.
As a result of the hot sun, wind and rain, some parts of the old walls had fallen down.
An emergency plan was necessary to save the rest of them, especially those walls in direct contact with natural effects. New mud-brick walls were erected to preserve the old ones (figs. 14-15).

2. Plastering walls with traditional mortar.
This method is the most used in preserving old mud buildings since ancient times: plastering parts of original mud walls, especially deteriorated ones, and the new supporting walls, with mixture of traditional mortar and new materials like hydraulic lime, to improve and strengthen the traditional mortar.
The shortcomings of these two methods, erecting supporting walls and using traditional plaster, is that they hide (in the first case) or distort (in the second case) the original facades, and decorative features.
3. Reconstructing damaged parts of original mud-brick walls. Reconstructing damaged parts of original mud-brick walls is used in certain cases: reconstruction by using mud-bricks fallen from the original buildings, or by using new mud-bricks. In both methods, we made it clear where we had interfered. Reconstruction is used only in the areas of the wall which is most affected by natural effects (fig. 16).

4. Consolidation by injection. Cracks and holes inside walls are injected with traditional mortar, either by using special pressure pups or manually.

4. Recommendations

1. Archaeological excavations should be avoided until finding effective solutions to control over the conservation state of the site.
2. Practical solutions should be investigated to solve the negative impact of wind on the site.
3. Rainfall and sun harmful impact on different features of the site should be solved by using suitable coverage and pack-filling methods.
4. Soil erosion which is caused by rainwater and runoff should be solved by digging drainage ditches.
5. Animal harmful impact should be solved by fencing the site properly.
6. Proper solutions must be looked for to prevent birds from digging their nests into the site.
7. A comprehensive conservation plan of the site should be prepared to mitigate its deterioration and to control over its conservation state.
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NIGRO, F.

1. Introduction

The Khirbet al-Mafjar complex lays in the agricultural area of Jericho, an area once accurately irrigated. After its discovery – first by Warren and Condor in 1873, then by the Palestinian Antiquities Department from 1934 to 1948, published by Hamilton in 19591 – the Palace appeared completely destroyed, probably because of an earthquake occurring in 747-748 AD. The archaeologists who first discovered the Palace asserted that the construction might have been completed at the time of the earthquake and that the Audience Room presented just some signs of use.

The name “Hisham” appears on some underground passages of foundation, and it refers to its builder, Walid Ibn Yazid (Hisham’s nephew), who succeeded his uncle in 743 and was murdered the year later. Creswell asserts instead that Hisham began the works in 739 and that his nephew, Walid the Second, continued the construction until the hall. According to some other archaeologists the hall appears complete and presents signs of use.

The different building times of the complex, the baths, the castle and the mosque, are linked by the introduction of a rectangular porch-court. One of the major scholars of the complex of Khirbet al-Mafjar, Hamilton, has definitely demonstrated that Walid Ibn Yazid was the purchaser, and he brings as proof the fact that the baths had already been used, even if the Palace had not been completed.

The Building, in the period of the excavations effected throughout the ’30ies and the ’50ies of last century, had some interventions of “maintenance” at first by means of R.W. Hamilton and subsequently by means of the Jordan government (up to the 1967) and by means of Israeli military government (up to the ’80ies). Such interventions, up to today, not always well recognizable because of the use in the works of

1 Hamilton 1959.
“reconstruction” of material coming from the excavations or material entirely similar to the original ones, have partially modified the original elevation, regularizing the levels of the masonry, and, in some cases, have reconstructed architectural structures, as the “polilobati” pillars of the Great Hall of the Baths, sometimes using modern material. Such interventions, at this point, are historicized and have been kept in proper consideration in the elaboration of the definitive proposal of project.

2. Proposal for a Conservative Intervention

The monumental conservation of the Qasr Hisham site in Jericho is now in precarious conditions. Most damage is due to wind erosion, high temperature and climate drifts, hitting the region every day and causing degradation of materials; furthermore, a strong anthropic degrade has worsen the situation, since the state of the complex is already fragile in its nature.

Our intervention aims to defend the entire complex and will provide the final valorization of cultural heritage both as economic resource and as symbol of the Palestinian National Authority.

Since 1995 it was clear the necessity to revise the visit system to the Palace, together with the protective and service measures. The master plan wants to define some programmatic lines, so as to give a priority order to the conservative operations and to conform the infrastructures of the site to a modern idea of development.

The geophysical survey and chemical and physical analysis of excavated materials\(^2\) have emphasized that the archaeological remains are affected by intense degradation phenomena affecting the present state of the site. The area we are examining is made up by lapidous materials of different hardness, easy to sculpture but scarcely resistant to atmospheric agents. There are materials resulting from calcareous rocks, light and porous, originating from a quarry about 5 Km. far. Qasr Hisham north side, called Khirbath as-Samrah. The serious state of degradation is due to different factors: the wall remains, the carrying structures and the covering surfaces fastened the erosion of seasonal rains, strong winds and temperature drifts.

The aim of the project is mainly conservative, both for the archaeological heritage already discovered and for what has still to be found, and consequently, preserved.

\(^2\) See the report in Sabelli 2001.
The first phase of the restoration project for the archaeological Qasr Hisham site, according to the director of the Department of Antiquities, the Scientific Advisor and the UNESCO office for Palestine, foresees:

- planning of fruition routes, parking areas and non-visible service buildings;
- structures and surfaces consolidation and restoration specifications;
- planning to realise expositive and specialized spaces;
- executive covering projects for: the Gate and the corridor to the main colonnade courtyard; the stairwell to the Sirdab; the Large Bathroom and the Diwan, with mosaics.

### 2.1. Planning of Fruition Routes, Parking Areas and Non-Visible Service Buildings

The project foresees the realization of a parking area, equipped with sanitary fittings (the one obtained in a breach of the ancient walls of the Palace will be demolished). It is also foresees a little expository area for sale of tourist material. Such area is foreseen on the left of the arrival road by Jericho to the Palace. This area is the result of removing and remodelling the artificial hill that has been obtained from the archaeological excavation, as screen and element of separation from the monument. From the hill it will be possible to see all the area of the Palace, giving a view of the whole territory. Into the first boundary of the Palace it is foreseen a route for disabled people, that leads to the Big Hall called of the Bathrooms, avoiding, in this way, a long route (fig. 1).

### 2.2. Restoration Specifications

The punctual and diffuse restoration interventions on the mural structures and the coverings are definite by technical intervention forms. These forms give an indication of the typologies of degradation, providing methodological and technical information on the way to work for the restoration. The forms are adaptable to typologies of unforeseen degradation and they give us the possibility to intervene every time a type of degradation occurs. All the foreseen interventions are thought for conservative purposes and following the idea of the minimum impact and of the max reversibility (fig. 2).
Fig. 1 - The project of the Jericho Qasr Hisham Archaeological Park.
2.3. Expositive and Specialized Spaces

The project foresees the individuation of a few environments to be destined to equipped spaces for the management and to increase in value of the site. In particular, the importance of the two mosques, a big one and a small one, which will be highlighted by the realization of a flooring, leant against the current countryside plan, in white and pink stones (the so called “Jerusalem stone”). Another area that will be utilized as Visitor
Centre is the big rectangular area with central pillars close to the big central courtyard.
Other usable environments as deposits of archaeological materials and as possible offices are the ones concerning the rooms on the east wing of the Palace, to the sides of the access door to the Big Hall. It is also provided, in case of necessity, the enlargement of the body of factory of the current Antiquarium, having it gone on along the east limit of the enclosure area.

2.4. Covering Projects

2.4.1. The Gate
The access door to the internal principal court, at present not covered, needs a covering, like also the lying one behind corridor, because, as it turns out from the geophysical survey, the stony material is subject to strong thermal excursions due to the direct exposure to the sunlight and for this reason it must be sheltered from the sun. The importance to protect this part of the monument is due to the presence of a few decorative elements and original plaster portions. The adopted solution is conformed to the used technical choice for the Big Hall of the Bathrooms and foresees the realization of a covering of spires, opened on the sides, with a structure made of inox steel and with covering made of slabs of copper 6/10 the natural one.

2.4.2. The Sirdab
The Sirdab has been object of a restoration intervention in the last years. Such intervention has had as object the internal surfaces of the Sirdab, plasters and mosaics, and the protection of the link stair between the superior court and the hypogeum room. The problem of the big erosion of the vertical walls of the room has not been solved yet at today. The erosion, caused by the characteristics of the stony material, is made worse by the water infiltrations coming from the superior levels and by the exposure to the sunlight and to the wind. All these appearances have been faced to arrive to the definitive covering proposal in this project. Therefore a “reconstructive” covering of a Peristyle section is foreseen with wooden frames and mantle of pantiles and big tiles. Some clay elements concerning original coverings are preserved in a few neighbouring rooms to the Sirdab. The proposed typology tries to acquit also to a didactic function which, in similar cases, had found good expository solutions. The parapet of the climbs, at present rebuilt in metal material, it is foreseen to do again it on the documented original model, realized with pillars alternated to slabs in stone. Such solution, besides for aesthetic factors, finds justifica-
tion in the necessity to reduce the action of the wind which, in the case of the climbs, makes a dangerous Eolian whirl to the stony material (fig. 3).

Fig. 3. - The Sirdab Restoration Project.

2.4.3. The Large Bathroom and the Diwan
The project foresees the covering and the side closure of the environments of the Big Hall of the Bathrooms and of the Diwan, with an extent of the only covering on the thermal environments to North of the room. The necessity of “obscurely” closing the Big Hall is dictated by the demand to preserve the wonderful mosaic floor at today still covered. Such request has been advanced also by the Prof. M. Piccirillo and from Dr. H. Taha. The carrying structure of the covering is foreseen in truss in inox steel anchored to the internal quadrilobed rebuilt pillars and perimetrically on internal punctual anchorages steel to some of the slabs in synthetic stone, which with the alternation of slabs constitute the perimetal vertical screen of the Big Hall and of the Diwan.
The covering is foreseen constituted by reduced pyramidal elements with ampleness imposed by the light of the stitch of the trusses. The pyramids are constituted by a cover of elements with slabs in copper 6/10, leaning
up panels in sea fir with interposed a bituminous sheath; the panels in fir will be anchored to metal battens of the thermal insulation system in insulating panels (ISOTEC kind), which will lean on the structure in steel of the pyramids and on the sleeper parallels. The intrados of the covering will be finished with panels in plasterboard, screwed on wooden lists, stuccoed and painted with a colouring dust made of stone, with granulometry and with shades as the local stone. The Big Hall and the Diwan will be lighted by the inclusion in the covering of diffusers elements (Solatube kind), whose capacity of refraction of the light allow to obtain, by natural light, a lighting diffuse, optimum for the legibility of the mosaic floors.

Inside, the natural system lighting up the insertion of an electric lighting system is foreseen, usable in a few moments during the winter and, in particular, nights during visits. The electric plant is foreseen by the use of conductors in Pirotex, that allows to trace the plant outside the structure, with high qualifications of security, aesthetic adaptability and complete reversibility.

The banked route, for the protection of the mosaic floors, is foreseen anchored and suspended to the lattice structure of covering by round elements in steel. To the round elements it is foresees to anchor a structure in inox steel for footbridge with trampling plan realized with a zinc plated painted and grill. All the structures of the covering and the vertical one of closing is gatherable out work and completely reversible. The internal route to the big room appears through a glazed ribbon on the environments of the thermal bath placed to the North. The doors of access and exit at the room will be realized by metal frames and tampon doors with panels in wood, covered with punched slabs made of copper. All the doors will open towards the outside and will be supplied with panic bolt (figs. 4-7). The graphics (fig. 4) clear up the details of the adopted solutions for the vertical closing elements, with the possibility of adding windows that can be opened. To clarify the relationship between the existing walls and the new vertical elements a section of wall was chosen among the most decayed and with different heights. This choice has made necessary to integrate a minimal part of the face below, to have a surface which is sufficiently regular to connect to new buffering elements. The section also clears up the relationship between the existing walls and the new panels. The dimension of the new closing elements are very reduced compared to the current walls, so as to leave the top surface of the walls almost completely free. The axonometric graphics clarifies the relationship between the various parts and the free vertical communication space within the conference room.
Fig. 4 - Adopted solutions for the vertical closing elements.

Fig. 5 - Covering project of the Big Hall and the Diwan Hall.
Fig. 6 - Covering project of the Big Hall and the Diwan Hall.

The pavilions with copper roof (fig. 6), insulated and ventilated panels, have a rain drainage gutter around their perimeter. The top part of the pavilions will be open, using overlapping of copper (10/10 mm) “chimney” elements. These chimneys, along with ventilation grating placed on the room doors and perimeter windows, will permit an adequate change of air, which will be easily to regulate, based on the seasons and external climate conditions. Regulation can be effected by opening and closing the vertical elements and chimneys. The total time for completely changing the air in the Large Room and the Diwan is estimated to be approximately two hours.

Fig. 7 - Covering project of the Big Hall and the Diwan Hall.
3. Chronicle of the Project

In 1995, following an agreement with the Palestinian Authority - Ministry and Antiquities, the Studium Biblicum Franciscanum and the Syremont (sponsor), the above mentioned institutions together with the architects L. Marino, R. Sabelli and O. Dinelli were designated to give effect to a project on the feasibility of restoration and the creation of the Jericho Qasr Hisham Archaeological Park.

This project is aimed to salvage, through the necessary restorative operations, a valuable area and highly important Islamic monument. It also aims to provide a programming instrument for digs still to be carried out, for salvage of uncovered structures and the building of new structures and infrastructures suitable for a modern monumental area with high tourist possibilities.

The feasibility project carried out has given us the possibility of asking for, formally and profitably, economic contributions and specialized intervention so as to help the Palestinian Authorities to conserve and increase the value of this important testimony of their cultural heritage.

3.1. Phase I

The first contributions (1998) made possible the restoration of the rooms in the Sirdab (Sabelli’s project) together with restoration of the mosaic floorings and the plaster work. This work was carried out by those restorers who later created the Jericho Mosaic School.

3.2. Phase II

Thanks to UNESCO other contributions were given so as to carry out the second phase of the project and, in particular:

- geophysical survey and chemical and physical analysis of excavated materials;
- covering projects for: the Gate and the corridor to the main colonnade courtyard; the stairwell to the Sirdab; the Large Bathroom and the Diwan, with mosaics;
- specifications about structures and surfaces consolidations and restorations;
- planning of fruition routes, parking areas and non-visible service buildings;
- planning of reutilization of some structures directed to realise exhibition and specialised spaces;
- planning of the futures archaeological investigations.
In July 2000, an agreement between UNESCO and Roberto Sabelli was drawn up so as to carry out the above said project. After inspection and meetings with others involved in the project, intervention strategies and needs were decided on (“hermetic” sealing of the Grand Bathroom, overhead visiting route for the mosaics, etc.) These requirements have characterized and influenced the solutions adopted. Following research and seeing the problems created by the visible deterioration, a geo-radar research was requested together with a chemical-physical study of the materials so as to understand their deterioration mechanisms. Following the forced stoppage, caused by political situation in Palestine, research was started by Efferre s.r.l. in June 2001 and concluded in October 2001. Project work, in spite of the stoppage, has continued, even if with difficulty due to the impossibility of on-site working. Planning procedure, with particular reference to the proposals of coverings and the possibility of visiting the Bathroom, has been coherent, even if articulated, and based on the requirements and observations made by the Palestinian Authorities and by the Studium Biblicum Franciscanum.

More than ten proposals have been made (fig. 8), which began with a flat covering, but after seeing the characteristics of the site and the amount of intervention needed, concluded with the definition of a solution which combines the salvage needs of the structure with those of the whole context. Following various meetings in Palestine (June 2001) and in Italy (November 2001) a proposal for the covering has been planned which, in spite of the use of advanced techniques especially for the supports and covering surface, respects the whole site and at the same time improves the architectonic space, being an inevitable element for perusal of the monument, the mosaic floor and the site as a whole. Seen the extensive 20th century reconstructions and seen the extension of the walls, it seems advisable to rest the covering structure partly on them as it causes no risks to the original structure. This choice is supported through knowledge of the wall’s carrying capacity and by the certainty that eventual external basements could create ulterior problems to adjacent structures yet to be investigated. In November 2001, a technical revision to be carried out by Prof. Blasi was proposed, with particular reference to the covering of the Bathroom.

After having had a meeting with Prof. Blasi, where some ideas were put forth, he suggested, as he had to go to Paris for other reasons, to take the projects with him so as to show them, unofficially, to Dr. A. Beschausch and Dr. O. Lehmann. On his return, Prof. Blasi raised some technical doubts on the project.
The doubts raised were mainly in reference to the burden on the pillars and perimetrical walls. Prof. Blasi also suggested, with the use of some drawings, that we try to design a “overhanging” structure so as to free the covering from the perimeter of the room. Both requirements have found a solution. The arches are foreseen to be realized by thermic insulated sandwich panels, which are supported with a centering, these determines a burden of 35 kg per mq, distributed on the side walls, and can be rapidly created off-site and mounted subsequently. The “overhanging” solution has two proposals: the first with a network of beams having a thickness able to support the “overhanging” and the second with external “stays” so as to reduce the free “overhanging” and therefore the necessary section of the beams. The solution with a network of beams has also been used for the arched coverings so as to verify the possibility of using the same technique for the architectonic shape previously studied and shown in Paris. Following these controls some doubts have been arisen. The “overhanging” structures which must be anchored to the existent pillars in reinforced concrete inside the room are difficult to create due to the surface to cover
and the length of the “jumps”. Also, these structures would not be able to support the overhead visiting route which we don’t want to anchor to the existing walls. “Overhanging” structures, seen the size, must necessarily be characterized by extremely simple forms, which in this case would not be suitable for the monument and their visual impact would be detrimental to the “reading” and enjoyment of the whole monumental complex.

The “overhanging” solution necessarily assimilable with flat structures causes an obvious aesthetic handicap which would damage the highly delicate context of the whole complex.

It is our conviction, and not only ours, as many experiences of this type have been carried out in Italy and abroad, that the anonymity of a modern structure which “serves” antiquities does not always give dignity to the monument and to the context to be protected and does not conserve those characteristic architectonic structures within the whole context which are apart from the original monument.

We therefore believe that the best proposal, which satisfies all requirements, is that of adopting a solution which, respecting the existent structure (nothing existent is taken away or altered and what is added is reversible), allows conservation, makes visiting needs compatible and, at the same time, is pleasant to the eye and respects the monumental and environmental context and the local architectonic traditions.

3.3. Phase III (Present Phase; 2004-2005)

Following the conclusions and recommendations of the “Symposium on Cultural Heritage Conservation in Palestine - Conservation Plan of Hisham’s Palace”, held in Jericho on 7-8 December 2003, the Action Plan considers five key areas of intervention. However, absolute priority will be given to the emergency conservation and restoration of the stone-built elements of the Palace and urgent safeguarding measures to be carried out on the site.

Given that preliminary conservation of mosaics has been already undertaken and that the protection of the mosaics of the Great Bath Hall is currently ensured by a 30 cm layer of sand, UNESCO Office in Ramallah, in consultation with Palestinian specialists, evaluated that emergency safeguarding measures for the protection and conservation of the stone-built archaeological and architectural elements must be implemented as soon as possible. Therefore, this activity is the absolute priority.

Following this recommendation, the Project Steering Committee requested Mr. Sabelli, expert in archaeological restoration and already in charge of

3 Hamdan - Benelli 2005.
the project of the Master Plan of the Hisham’s Palace Archaeological Park as a UNESCO Consultant, to submit a proposed Operational Plan of Actions for the protection of the stone materials. Mr. Sabelli submitted his proposal on 11 March 2004. Mr. Sabelli, in the specific, is responsible for the overall coordination of the conservation works, including the diagnosis of the existing elements *in situ*, in close cooperation with the Department of Antiquities and Cultural Heritage and Studium Biblicum Franciscanum. The tasks to be carried out are the following:

1. set up of the methodology for interventions;
2. mapping of the degradation of stone materials, including the indication of practical interventions;
3. preparation of the Maintenance Practical Protocol;
4. preliminary testing on materials (in cooperation with the geologist);
5. topographic positioning of the areas of interventions (in cooperation with the land surveyor);
6. verification of alterations (in cooperation with the geologist);
7. testing on materials, by mortars’ absorption and aging tests (in cooperation with the geologist);
8. training of four local trainees in stone conservation and restoration;
9. supervising the conservation works to ensure the quality and checking the finished works before taking-over;
10. monitoring and reporting.

The Palestinian Department of Antiquities and Cultural Heritage, co-responsible of the coordination of the project, will provide four workers/trainees in stone conservation, one geologist with expertise in petrography, and one topographic land surveyor responsible for the mapping, and will undertake the required salvage work and testing. Mr. Sabelli will be assisted by an international specialist in conservation, Mr. Stefano Sarri (from Museo Guarnacci of Volterra) who will work under his supervision (figs. 9-12).

The Qasr Hisham Project was implemented by the Palestinian Department of Antiquities in partnership with UNESCO and the Studium Biblicum Franciscanum of Jerusalem, and it was funded by the Government of Italy for the benefit of the Palestinian Ministry of Tourism and Antiquities.

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4 Taha 2005, 179-188.
5 During the last one mission (May 2005), we have tested some solutions to consolidate the lacunae in the walls. In this pictures you can see the solutions by natural stone and by artificial stone. These tests shall be verified after summer.
Figs. 9-12 - Tested solutions to consolidate the *lacunae* in the walls.

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THE JERICHO NECROPOLIS:
STUDY, PROTECTION AND POSSIBLE TOURIST EXPLOITATION

Andrea Polcaro*

1. The Archaeological Importance of the Necropolis

The funerary area of Tell es-Sultan is one of the most important of the whole ancient Near East, for the valuable corpus of data principally due to J. Garstang’s and K.M. Kenyon’s excavations (fig. 1).1

Fig. 1 - View of Tell es-Sultan and the areas of the nearby necropolis explored by J. Garstang (1) and K.M. Kenyon (2, 3), in an aerial photo of the '50ies (redrawn after Kenyon 1960).

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1 Kenyon 1960; 1965; Garstang 1932a; 1932b; 1934; Garstang et al. 1935; 1936; Nigro 1999.
The main interest of the necropolis depends on the chronological extension and continuity of tomb sequences, starting from the earliest stage of the urbanization in Palestine down to the Late Bronze Age. The Early Bronze Age phases are extremely important for understanding the economical and social issues and the ideological reasons at the base of the phenomenon of sedentarization in Early Bronze Age I Palestina², and the following urbanization and rise of complex society in the Early Bronze Age II-III. The Jericho necropolis is also very interesting for the EB IV, Middle Bronze and Late Bronze Age Periods. For its importance in the archaeology of the ancient Near East, and its possible tourist exploitation, the necropolis deserves the same attention given to the settlement in the organization of the Jericho Oasis Archaeological Park.

Up to date, the cemeteries of the Early Bronze Age identified by the previous excavations are four (fig. 2): Area A, located at the northern edge of the necropolis, where K.M. Kenyon discovered ten tombs of the Early Bronze Age I-II; Area K, located at its southern limit, where K.M. Kenyon discovered two tombs of the Early Bronze Age I, very close to the area where previously J. Garstang brought to light two tombs of the EB I-II, Tomb 24 and Tomb A³. In the Early Bronze Age II-III two more cemeteries were opened: Area D, with only one tomb (D12) dated to the EB II⁴; and Area F, where K.M. Kenyon discovered four big tombs of the EB III⁵. In the following Early Bronze Age IV, the use of the cemetery is extended to Areas P and O (fig. 2). The total space occupied by the Bronze Age cemeteries is more than 10 hectares; if we add the tombs of the Iron Age and the Roman Period it becomes clear why the Tell es-Sultan Necropolis is one of the most important in the history of the whole Southern Levant.

The tombs of the Early Bronze Age I show the following funerary features: burial chambers are located inside natural caves on the side of the wadi around the tell; the bodies are buried in secondary position with the bones piled in the centre of the chamber, and skulls aligned along the walls⁶. The characteristics of the tombs point to family burials that paid attention to the ancient dead and to a funerary ritual indicating an ideology of death centred on the community ancestors⁷.

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² For a recent analysis of the proto-urban phases at Tell es-Sultan see Nigro 2005.
³ Polcaro 2005a, 49-70.
⁴ Kenyon 1960, 94-126.
⁵ Tomb F2, F3, F4, F5 (Kenyon 1960, 126-146; 156-172; 147-156; 172-174).
⁶ For a description of the Early Bronze I burial costumes at Tell es-Sultan see Polcaro 2005b, 109-122.
⁷ Polcaro in press.
The example of Tomb A94 (fig. 3), which shows incineration of decomposed corps, indicates different burial costumes for different family groups that used the necropolis of Jericho in the Early Bronze Age.\(^8\)

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\(^8\) Kenyon 1960, 16-40.
Fig. 3 - Tomb A94: skulls and pottery aligned along the wall of the burial chamber (after Kenyon 1960, pl. II:1).

Tomb K1 is another example of the EB I tombs (fig. 4), with the same typical architecture of Tomb A94, but with a central pillar used for supporting the roof (probably due to an extensive use of the burial chamber); even though the inhumation is adopted, again the dead are buried in secondary position.

EB IA funerary assemblages show not only pottery, but also symbolic objects, such as mace-heads of semi-precious stones (as calcite and marble), indicative of the social organization of this period and of the exchanges between the Jordan Valley and Egypt.

The attention paid to skulls is not only useful for the reconstruction of the burial ritual and the ideological consideration of the dead, but also for the evolution of the human knowledge, as it is clearly illustrated by the perforation of the skulls for surgical operations (fig. 5).

10 Mace-heads are typical funerary objects in the necropolis of the Southern Levant in the Early Bronze Age, especially at Yazur and Bab edh-Dhra' (Ben-Tor 1975; Rast - Schaub 1989). One peculiarity of Tell es-Sultan in this period are the bone “flautes” deposited in the burial chambers. They are pierced animal bones with two or four holes on one end and sometimes another one on the long side, which K.M. Kenyon interpreted as musical instruments, possibly played during funerary rituals (Kenyon 1965, 27-31).
The tombs of Jericho present two evolution in the EB IB: the passage from secondary to primary deposition of the dead in the burial chambers, and the evolution of inner architecture, with the typical stone platforms, where the dead and sometime the funerary assemblage are located, as it is shown by Tomb K2 (fig. 6). In the EB IB some characteristic pottery types and decorations appear, such as the spouted bowls and the net painted decoration, possibly related to agricultural and food costumes deriving from sedentarization\textsuperscript{11}.

Urbanization caused other changes in burial costumes indicating the evolution of a complex society in the Early Bronze Age II. Human bones analyses show a rise of infant mortality and the diffusion of plagues and death due to weapons injuries.

The architectural features show an evolution of tomb organization, as it is visible in Tomb D1\textsuperscript{12}, possibly belonging to an important family of the EB II-III urban Jericho. The shape of the tomb (the \textit{dromos} entrance and

\textsuperscript{11} Philip - Baird 2000, 13-17. For a recent analysis of the changing in architecture during the passage from the EB IA to the EB IB at Tell es-Sultan, see Nigro 2005; Sala 2005.

\textsuperscript{12} Kenyon 1960, 94-126; Polcaro 2005b.
square form of the burial chamber) and the findings suggest that members of this family had an important religious and social role (fig. 7).

In the middle of this chronological phase, the appearance of distinctive pottery of the northern Palestine, as Khirbet Kerak Ware in Tomb D12 is exemplificative of the new political and economical pattern of the region, and of the growth of complexity in economic exchanges. The architectonical feature of the dromos entrance also indicates the cultural and ideological link of the Palestinian élites with the growing power of Egypt. In the Early Bronze Age III, Area F is the primary cemetery of the necropolis. Tombs of Area F show the rise of an urban élite, that use some distinctive objects as symbols of his power.

Fig. 6 - Plan of Tomb K2, EB IB phase (after Kenyon 1965, fig. 7). The flat stones platform is a typical EB IB funerary device (see for comparison Tomb A100 of Bab edh-Dhra’ or Tomb 2.1 of Tell el-Jazari; Rast - Schaub 1979, 46-50; Macalister 1912, 74-76).

In this period, weapons, bronze daggers and crescent shape axes appear in the assemblage, related to some important dead as representation of social roles and exemplification of the evolution of a military ideology.

Leaving the description of the Middle and Late Bronze Age tombs to another occasion, some words on the Early Bronze Age IV cemetery is necessary. L. Nigro has deeply studied the tombs of this period, making an accurate and innovative analysis on the material culture of these tombs present in the Vatican Museums.

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13 Another example in Palestine of a dromos entrance tomb is the “princess tomb” of Tell el-Khuwellifeh, dated to the EB IB (Levy et al. 1997).
15 Nigro 1999.
The EB IV period shows an increase of architectural features, and the growth of seven different tomb types already recognized by K.M. Kenyon: the “Dagger Type”, the “Pottery Type”, the “Square-shaft Type”, the “Bead Type”, the “Outsize Type”, the “Composite Type”, and the “Multiple Burial”. The description and the analysis of the architectural features of each typology of tomb is indicative of the different semi-nomadic culture that spread after the collapse of the EB II-III urban culture in Palestine, mixed to a return to village culture and tribal organization. The EB IV tombs are important for the funerary assemblages too that illustrate changes in material culture and the use of single object to state the rank of the dead in the society.

Tell es-Sultan necropolis is still important for the knowledge of the cultural evolution of Palestine population during the Middle Bronze Age. Actually, in the Middle Bronze Palestine there are many differences between the archi-

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16 For a complete analysis of Tell es-Sultan in the EB IV see Nigro 2003a.
17 G. Palumbo in his analysis of the qualitative and quantitative differences of the funerary gifts in the EB IV tombs in Palestine and Transjordan shows how the social élites had particular rituals in the same ideological framework of the whole community (Palumbo 1990, 132).
tectural features of the tombs\textsuperscript{18}, also in the same necropolis\textsuperscript{19}, showing different costumes of many funerary areas inside and outside the settlement\textsuperscript{20}. On the contrary, the Jericho population keeps its funerary architecture as in the Early Bronze Age: the funerary costumes maintained the typical burial caves for the deposition of the dead, with multiple successive burials\textsuperscript{21}. As in the Early Bronze Age, older burials in the caves were pushed to the sides of the chamber to allow room to the new ones. The only difference is that the body of the dead was posed on a wooden bed, in the centre of the chamber. This new burial costumes is clearly identified in Jericho, where the good condition of the recovering allows to recognize perishable materials as the wooden bed for the dead\textsuperscript{22}. The most important characteristic of the Middle Bronze tombs of Tell es-Sultan is the richness of the funerary gifts, such as Egyptianizing scarab seals (fig. 8)\textsuperscript{23}. This class of object was identified first in the Coastal Plain of Palestine, but became widespread during the Middle Bronze III in all country. The presence of scarab seals in the Jericho tombs indicates a new relationship with Egypt and it can help the archaeologists to recognize the evolution in the commercial and political exchanges between Palestine and Egypt in the Middle Bronze Age\textsuperscript{24}. As in the Early Bronze Age, some Egyptian funerary gifts, such as palettes, can indicate the cultural influence of that country, thus the scarab seals of the Middle Bronze can explain the method of cultural penetration of the Egyptian élites in the urban Palestinian communities.

\textsuperscript{18} Six different typologies of tombs can be distinguished in the Middle Bronze Age: rock-carved chamber tombs, masonry chamber tombs, shaft burials, masonry cist tombs, simple pit or cist burials, and jar burials (Ilan 1998, 318).

\textsuperscript{19} The differences between the architectural features of the tombs can be interpreted in many ways: in some cases (as, for example, Tell el-Qadi) the different architectural features of chambers, cists, shafts, pits and jar burials, in the same context of an intramural cemetery, seem to be explained by age/demographic status differentiation: chamber tombs for individuals over the age of 13 years, cist tombs for individuals of 3-12 years, and jar burials for infants under the age of 2-3 years and fetus (Ilan 1998, 318-319).

\textsuperscript{20} The long rock-cut cist tombs of Tell el-Qedah, with tunnel or dromos entrance, discovered inside the settlement, under the large building in Area F, with spacious subterranean chambers, are probably to be related to members of the royalty; also the tombs beneath houses inside the city at Tell el-Mutesellim was interpreted in the same way (Kenyon 1969).

\textsuperscript{21} Kenyon 1960, 263-518.

\textsuperscript{22} Kenyon 1965, 167-478.

\textsuperscript{23} Garstang - Garstang 1948, 103-108.

\textsuperscript{24} Ilan 1998, 310-311.
Another characteristic of the Tell es-Sultan necropolis is the presence of the typical Middle Bronze “warrior tombs”, typical of this period\(^{25}\). This kind of tomb identify, mainly by the weapon funerary gifts, a class of specialists of the Middle Bronze urban society: the soldiers\(^{26}\). This particular attribution of a tomb to a singular member of a military fine fleur is very important in the study of the evolution of burial costumes and royal ideology, that was started at the end of Early Bronze Age.

### 2. Protection and Tourist Exploitation

All these examples clearly show why the Necropolis of Jericho is considered, from the worldwide archaeology, one of the most important complex of cemeteries in the Ancient Near East; and this consideration brings us to the important question of the necessary protection of such an exceptional piece of the cultural heritage of Palestine. Today, the situation of the Tell es-Sultan necropolis, investigated by the archaeologist in the past, is critical. Most of the northern area is now completely covered by modern buildings grown on the refugee camp and it is very unlikely that any remains of even a single tomb would be still preserved (fig. 9). This situation concerns the whole areas P and A, as well as the extension of this last area, called by K.M. Kenyon the area A+ (fig. 10). The northern parts of Area K and Area D, with all the other areas excavated by K.M. Kenyon, are also intensively damaged by the town expansion with the advance of house construction near the tell (fig. 11).

\(^{25}\) Philip 1995.
\(^{26}\) Antonetti *in press.*
The smaller area investigated by J. Garstang, where he discovered Tomb A, was damaged by a bulldozer cut during the construction of two roads. The critical situation of the preservation of the necropolis is thus evident. In this perspective, it is necessary re-investigating the area west of the tell, first, with topographical system, for example GPS investigation to mark tombs, and Georadar System, that would possibly indicate some burial chambers or cavities under the terrain; then, by means of satellite observation, and
the sophisticate analysis of the multispectral references of these high resolution images.\textsuperscript{27}

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{area_a_p.png}
\caption{A recent image of cemeteries A and P, viewed from the tell.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{area_k_d.png}
\caption{A recent image of cemeteries K and D, viewed from the tell.}
\end{figure}

These analyses are suggested on the base of a number of considerations and studies already experienced by the Rome “La Sapienza” University school of archaeology. In our research we have noticed, on the base of other Palestinian necropolis of the Bronze Age too, that the complex area of the necropolis is generally more large than expected. The tombs excavated by J. Garstang in the western part of the Jericho necropolis could be only a part of a further cemetery, not investigated by K.M. Kenyon, that, in particular for the Early Bronze Age, was possibly extended west of the tell. The geographical location of the uadiat around Tell es-Sultan and the use of the natural caves around there for funerary purposes also supports the possibility of a larger funerary use around the site. The possibility of a tourist valorization remains, however, valid. It may be interesting to create a path showing the area of the necropolis. A major problem is the scarce visibility of the archaeological features of the tombs,

\textsuperscript{27} In recent times in Italy this typology of analysis is growing in the archaeological studies. See Parmegiani - Poscolieri 1993; 2002; 2003; Bianchi \textit{et al.} 1997; Cavalli \textit{et al.} 2000.
that are not preserved and very difficult to visit. The re-excavation and rehabilitation of an ancient tomb, previously investigated in old excavations, may be foreseen, or, if it would be not possible, the best solution would be to reconstruct a tomb and to indicate the spot of this and others tombs with panels. A well illustrated tomb to be reconstructed is Tomb A excavated by J. Garstang (fig. 13)\textsuperscript{28}. It is particularly interesting to make a reproduction of the layers 3/2b, where the transition from the EB IB to the EB II is shown. Figure 13 shows such a possible reconstruction. On the western corner is visible stratum 2b, where all corps of the precedent period, mainly skulls, are located near the walls of the burial chamber in order to free the soil for new primary burials. On the other side of the chamber, the intact corps are visible, and also the original position of pottery and other items of the funerary inventory should be reproduced. This is the case where the assemblage is clearly referred to a single dead for the first time. The historical importance of this tomb and of this stratum in particular is the reason of its choice for the reconstruction, to be assembled as an exhibition either in an antiquarium on the site or in a future Jericho Museum. The reconstruction points to the valorization of tourist potential of the Jericho necropolis: we hope that the clear view of the correlation between bones, pottery deposition and architecture of the burial chamber, with the support of explicative panels, can help the tourists to understand the burial costumes of the population of ancient Palestine in an important and formative period as like as the Early Bronze Age.

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GARSTANG’S NORTH-EASTERN TRENCH: ARCHAEOLOGICAL EVIDENCES AND POTENTIAL

Maura Sala

1. Introduction

The north-eastern sector of Tell es-Sultan has been extensively excavated by all of the expeditions which worked at the mound. The first Austro-German Expedition directed by E. Sellin and C. Watzinger in 1907-1909 broadly investigated the northern plateau, here tracing the Early and Middle Bronze Age fortification systems and exposing part of a dwelling quarter of the EB III fortified town. At the time of Garstang’s excavations in the ’30ies, the choice of the north-eastern corner of the mound (Squares E7-8; figs. 1-3) was suggested by the specific aim of investigating the deepest occupational levels at the tell, since the area had been already superficially excavated by the Austro-German Expedition and it joined to the east the EB III dwelling quarter exposed by Sellin and Watzinger. This sector would have been re-explored to some extent by the second British Expedition directed by K.M. Kenyon in 1952-1958 by the opening of Squares EIII-IV immediately to the south of Garstang’s trench, where the EB occupational levels were re-investigated with a major stratigraphical precision; and Squares EI, II and V at the bottom of Garstang’s trench (in Square E7), with a renewed examination of the Neolithic levels. Finally, the Italian-Palestinian Expedition in 1997-2000 opened a new area just to the south-west of Kenyon’s Squares EIII-IV (Area F), where emerging mud-brick structures in a sector kept safe from previous excavations showed the possibility of re-examining the whole sequence of the EB structural layers. Even in the light of the following investigations, a re-examination and a reassessment of Garstang’s excavations and

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1 “Kanaanitische” in their chronology; Square E6; Sellin - Watzinger 1913, fig. 17, pl. I.
2 Garstang et al. 1935, 143-144.
4 Kenyon 1981, 267-308.
5 Nigro 2000; and also Nigro in this volume, pp. 5-6, 10-17.
archaeological results in the North-Eastern Trench appear particularly fruitful.

The North-Eastern Trench was excavated by the Marston-Melchett Expedition directed by J. Garstang in the two last seasons of working at Tell es-Sultan, in 1935-1936. This excavation was the setting for the first wide investigation of the earliest strata at Tell es-Sultan. It brought two new and major results to the archaeological reconstruction of the history of the site: for the first time, the Neolithic occupational levels were reached,

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6 See also Nigro in this volume, fig. 2, for a general plan of the areas excavated by the Austro-German and British Expeditions, and by the Italian-Palestinian Expedition (1997-2000).
7 Garstang et al. 1935; 1936.
identified and horizontally exposed (see § 2)\(^8\); secondly, the Early Bronze structural layers were investigated and unearthed within a large extent, offering a clear and coherent picture of the town of the Early Bronze Age (see § 3).

Even if a detailed stratigraphical attention wasn’t paid during Garstang’s excavations, neither in the publications of the results, so to make often the dating of the structures a mere guesswork\(^9\), nevertheless the excavations

\(^8\) Some Neolithic types of flints and floors had been already reached by Garstang in the previous campaigns at the bottom of Square F5 by widening and deepening a trench of the former Austro-German excavations (Garstang 1930, 126), and in Squares C6-D6 in the deep section cut into the northern slope of the mound (Garstang 1932, 5-6).

\(^9\) Garstang used the term “level” to name the major occupational and stratigraphical phases distinguished in the deep accumulation excavated in the North-Eastern Trench. In the present paper, the denomination in “levels” is preserved to label Garstang’s stratigraphical distinctions, which aren’t always based on coherent observations. A greater difficult arose from the natural fall of the ground from west to east and from south to north in this sector of the mound. Anyway, the distinction in “levels” made by Garstang is, generally, sufficiently reliable as it regards the attribution of the major building structures, but it must be very carefully considered as it regards the ascription of the materials and also the relationships among non adjacent structures.
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in the North-Eastern Trench provided findings of basic value concerning the earliest occupational phases at the site. Even now, these results can supply a significant extent of information to be compared with the achievements of the following excavations.

In the context of this workshop, it seems useful briefly presenting the major results and archaeological features of the trench, focusing on its importance in the history of excavations at the site; and its potential, both in the viewpoint of the tourist valorization and creation of the Archaeological Park of Tell es-Sultan, and in the perspective of future resuming researches on the mound.

Fig. 3 - The beginning of the excavations in the great North-Eastern Trench dug by J. Garstang in 1935-1936 (after Garstang et al. 1935, pl. XLVII,a).

2. The First Identification and Exposure of the Neolithic Levels

One of the most important achievements of Garstang’s excavations in the North-Eastern Trench was the uncovering that beneath the 5 m deep Early Bronze Age stratification there was a deep Neolithic accumulation, of a culture hitherto almost unknown. The main result of the excavations was the first wide investigation of the Neolithic levels (both structures and material culture), not only at Tell es-Sultan but also in Palestine, as in the contemporary excavations at Tell el-Mutesellim and Tell el-Hosn, where the
first occupation at the mounds went up to the Neolithic period, the earliest
deposits had been investigated in a very limited area\textsuperscript{10}, and only sparse
fragments of flints and pottery, without substantial structures, had been
retrieved.

<table>
<thead>
<tr>
<th>Garstang’s levels in NE Trench</th>
<th>Kenyon’s periodization</th>
<th>Italian-Palestinian periodization</th>
<th>Archaeological periodization</th>
<th>Chronology</th>
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<td>PPNB</td>
<td>Sultan Ic</td>
<td>PPNB</td>
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<td>PNA</td>
<td>Sultan IIa</td>
<td>PNA</td>
<td>6000-5000</td>
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<td>PNB</td>
<td>Sultan IIb</td>
<td>PNB</td>
<td>5000-4300</td>
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<td>-</td>
<td>(Sultan IIc?)</td>
<td>Chalcolithic</td>
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<td>EB-MB</td>
<td>Sultan IIId</td>
<td>EB IV</td>
<td>2300-2000</td>
</tr>
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</table>

\textbf{Tab. 1 - Stratigraphical correlation between Garstang’s levels in the North-Eastern Trench and the following periodizations of Kenyon’s British Expedition and the Italian-Palestinian Expedition.}

Garstang was able to distinguish in the deep Neolithic stratification two
main stages (each one subdivided in levels, from XVII to VIII), basically
differentiated by the presence or not of pottery, and named respectively
“Early Neolithic” (the first stage without pottery: levels XVII-X) and “Late
Neolithic” (the latest stage characterized by the pottery appearance: levels
IX-VIII)\textsuperscript{11}. The following Kenyon’s excavations in the ’50ies would have
sharply defined these two main periods, named by K.M. Kenyon Pre-Pottery
Neolithic (PPN) and Potter Neolithic (PN), and, with the continuation down
of part of Garstang’s trench in Squares EI, II and V to the east of the his

\textsuperscript{10} On Tell el-Mutesellim see Loud 1948, 59-61, pls. 1-2; on Tell el-Hosn see
Fitzgerald 1934, 124-126.

\textsuperscript{11} Garstang \textit{et al}. 1936, 68-69. In the first campaign of 1935, Garstang named the
uppermost level of the Neolithic sequence (level VIII), 1,5 m deep, as "chalcolithic"
(Garstang \textit{et al}. 1935, 143), but he soon dismissed this term in favour of "Late
Neolithic" as a basic continuity both in the flint industry and in the pottery
production could be observed between levels VIII and IX.
deep sounding (see below)\textsuperscript{12}, they would have been able to further distinguish the break between the two PPN phases, namely PPNA (the earlier one) and PPNB (the later one). A similar subdivision was identified in the uppermost Pottery Neolithic deposits, that is PNA and PNB (tab. 1).

The earliest Neolithic occupational levels detected by J. Garstang (levels XVII-X)\textsuperscript{13}, namely Pre-Pottery Neolithic B levels, were extensively exposed within the trench up to level XI (figs. 4-5). The lowest deposits (from level XII to XVII, and below) were unearthed only in the deep sounding (from $7.50 \times 7$ m at the top to less then 2 mq at the base) at the western end of the trench\textsuperscript{14}, in a too restricted area to make structures clearly recognisable at the very bottom (fig. 6).

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\textsuperscript{12} Kenyon 1981, 267-271.

\textsuperscript{13} With a total depth of 5 m (Garstang 1935b, 355).

\textsuperscript{14} Garstang \textit{et al.} 1936, pl. XXVIII.
Fig. 5 - The northern section of the great North-Eastern Trench, down to level XI (PPNB); the so-called “megaron” in the central foreground (PEF).

Fig. 6 - The western part of the schematic stratigraphical section of the North-Eastern Trench dug by J. Garstang (after Garstang et al. 1936, pl. XXVIII).
The excavations of XI-X levels\textsuperscript{15} (upper PPNB levels; period Sultan Ic)\textsuperscript{16} revealed a culture distinguished by houses with both walls and floors covered with a smooth lime surface (fig. 7), burials in the fill beneath the floors, and plastered skulls associated with funerary ritual\textsuperscript{17}. The houses had a multi-room rectangular plan (nearly 3-4 \times 6.5-7 m), with inner partitions constituted by cross-walls opened both on the central axis and against the side walls, and rounded ends at the openings; sunken floors laid upon a bed of limestone cobbles; grain bins; and inner walls and floors faced with a thick layer of hard lime mortar\textsuperscript{18}, painted in red or brown and highly burnished. Many of such buildings would have been also unearthed by K.M. Kenyon in her following excavations within Garstang’s trench in Squares EI, II, and V\textsuperscript{19}.

Fig. 7 - Neolithic floor 208, with plastered post-holes and a child burial (level XI, PPNB) (after Garstang \textit{et al}. 1935, pl. LI1,c).

\textsuperscript{16} See tab. 1. For the periodization of the Italian-Palestinian Expedition see Marchetti - Nigro eds. 1998, 13-14.
\textsuperscript{17} Also found by K.M. Kenyon in her following excavations in Squares EI, II and V (Garstang - Garstang 1948, pl. IX,b; Kenyon 1957, 60-64; 1981, pls. 163b, 166-167a, 170b-171).
\textsuperscript{18} In the earlier levels (below level XIII), examined only in the westerner sounding, the surface coating was thinner and the base was made of mud; Garstang \textit{et al}. 1936, 69; and also Kenyon 1957, 70-71.
\textsuperscript{19} Kenyon 1981, 289-308, pls. 159-162, 164b, 168-169, 172a-173.
Among the structures excavated by Garstang, one building of level XI, the so-called “megaron” (loci 208+461+463; figs. 4-5, 7)\(^{20}\) – reconstructed upon its original plan no less than six times – was interpreted by the excavator as a possible shrine because of its larger dimensions. As Kenyon’s excavations would have clearly pointed out, it shows, indeed, the typical plan of PPNB buildings, often characterized by considerable dimensions and leaning out on a court (here locus 475), with possible smaller rooms adjoining\(^{21}\). In room 208, plastered post-holes were unearthed; two burials (one of a man and one of a child) laid under the floor\(^{22}\), and outside the main entrance numerous clay figurines, representing chiefly domestic animals, were found.

Other features of material culture, such as flint implements, stone mortars and querns, grinding and burnishing stones, bone points, beans and pierced shells, were retrieved from Garstang’s excavation and acted as remarkable outlines for the first definition of the Neolithic culture in Palestine. The uppermost Pottery Neolithic levels (period Sultan IIa-b), Garstang’s levels IX (PNA) and VIII (PNB), were characterized by the first pottery appearance and by some examples of an outstanding plastic art\(^{23}\). The way of living changed from the previous Pre-Pottery Neolithic occupation: the building structures were less monumental, and they were replaced by sunken shallow pit dwellings with concave sides\(^{24}\) and more scanty orthostatic walls (fig. 8).

Two meters below the Early Bronze stratification, in a layer with Neolithic flints and pottery sherds, two amazing groups of plastic human images were found. In each one a man, a woman and a child seemed to form a triad. They were, respectively, the fragmentary group 190 and the better preserved group 195, realized in a carefully smoothed unbaked clay and most probably related to the ancestors’ cult (figs. 9-10)\(^{25}\).


\(^{21}\) Another building of similar plan was excavated by Garstang to further east, that is building 479+480+481 (Garstang et al. 1936, pl. XXVIII).

\(^{22}\) Garstang 1935b, 356.

\(^{23}\) Garstang et al. 1935, 163-166; Garstang et al. 1936, 70-73; Garstang - Garstang 1948, 64-72.

\(^{24}\) Initially interpreted by J. Garstang as grain pits (Garstang et al. 1935, 163); but see Kenyon 1993, 677 (contra her first interpretation as quarry pits; Kenyon 1957, 77-81).

\(^{25}\) Garstang 1935b, 355-356; Garstang et al. 1935, 166-167. Garstang ascribed both the statues’ groups to his level X (the uppermost of the PPN levels), but he
Finally, among the findings of the Pottery Neolithic period, a remarkable place belongs to the plastic model of a building of some sort, 102 cm high (a beehive house or a shrine?), retrieved in level IX from the eastern end of the trench (locus 261).  

![Fig. 8 - Neolithic stone walls and pits in locus 188 (level VIII) (after Garstang et al. 1935, pl. XLVI,c).](image)

![Fig. 9 - Statues’ group 195 from locus 205 as found (PNA) (after Garstang et al. 1935, pl. LII,b).](image)

![Fig. 10 - Modelled head of statue 195. To be noted the reddish-brown painted lines to represent hair and beard, and the eyes inlaid with sea-shells (after Garstang et al. 1935, pl. LIII).](image)

said to have found them in a layer with Neolithic pottery (1935b, 355), so that their stratigraphical attribution appears doubtful (see also in the section – Garstang et al. 1935, pl. XXVI – the position of two statues groups clearly above the loci 202 and 205 which they are related to by Garstang). As suggested by K.M. Kenyon (1957, 84-85), they seem to belong to the upper Pottery Neolithic stage (PNA).  

Garstang et al. 1936, 71, pl. XL,b.
Thus, Garstang’s excavations in the North-Eastern Trench not only allowed the first clear identification and definition of the Neolithic culture at Tell es-Sultan and in Palestine, but they also returned some among the most noteworthy discoveries of this period on the tell.

3. The Extensive Exploration of the Early Bronze Age Settlement

Two main results can be ascribed to the extensive exposure of the Early Bronze Age occupational levels in the North-Eastern Trench (Garstang’s levels VII-I)\(^ {27}\): first, the investigation of the structural layers of the EB I village (period Sultan IIIa)\(^ {28}\); secondly, the excavation down to its foundations of the inner fortification wall of the double city-wall system erected at Tell es-Sultan at the beginning of the Early Bronze III (period Sultan IIIc1), along the northern side of the trench\(^ {29}\).

3.1. The EB I Village: the First Stratigraphical Distinction of the EB I Occupation at Tell es-Sultan and the Identification of Shrine 420

Garstang’s excavation of the EB I structural layers in the North-Eastern Trench (levels VII-VI), widened to the south of the trench by KM. Kenyon’s excavations in Squares EIII-IV\(^ {30}\), has up to now a prominent value, since these strata haven’t been so extensively investigated elsewhere on the mound\(^ {31}\), though representing a key period in order to understand the development of the first Bronze Age urban culture at the site and, more in general, in the Southern Levant.

These levels, detected by the British excavator “directly” above the Pottery Neolithic accumulation\(^ {32}\), were immediately considered the earliest evidence of a new culture, namely the Early Bronze Age culture, for their distinctive

\(^{27}\) Garstang et al. 1935, 146-154; 1936, 68, 73-76; Garstang - Garstang 1948, 75-88; and also Kenyon 1981, 314-338.

\(^{28}\) For a complete picture of the EB I occupation at Tell es-Sultan see Nigro 2005.

\(^{29}\) Nigro in press, § 5.

\(^{30}\) Garstang et al. 1936, 73-74; Kenyon 1981, 315-325.

\(^{31}\) Kenyon’s excavations reached the EB I (“Proto-Urban”) layers also in Trench I, II, III, in Area L and Square MI, but they exposed them in a larger extent only in Squares III-IV (Nigro 2005, 109-126).

\(^{32}\) On the problem of the presence, or not, of a Chalcolithic occupation at Tell es-Sultan see North 1981; Garfinkel 1999. Anyway, at least scanty traces of a presence at the tell in the Chalcolithic period have been retrieved, such as a cornet base and a churn from Trench I (Holland 1987, 22) and a flint hammer and a fan scraper from Area F.
aspects both in architectural structures and in the flint and pottery traditions, completely different from those of the preceding period. Garstang was able to sharply distinguish in the EB I occupation two main architectural phases, named level VII and VI, which can be detected also in the following Kenyon’s excavations\(^\text{33}\), and which can now be equalized respectively to period Sultan IIIa1 and Sultan IIIa2 of the Italian-Palestinian periodization, datable to the EB IA (3300-3200 BC) and EB IB (3200-3000 BC) periods. The EB I layers in the North-Eastern Trench show, on one hand, the round and curvilinear domestic architecture (in mud-bricks laid upon foundations of undressed stones; fig. 11)\(^\text{34}\), now ascertained to be characteristic of the very first phase of the Early Bronze Age in Southern Levant\(^\text{35}\), with the addition, in a later phase, of rectangular structures, sometimes with rounded angles, and greater apsidal buildings\(^\text{36}\), probably designed to extra-family or community functions\(^\text{37}\) and sign of a growing social complexity, also testified by the presence of some status objects (such as limestone and calcite mace-heads)\(^\text{38}\) and by the diversification of pottery assemblages in the contemporary tombs\(^\text{39}\).

The other diagnostic element of the material culture of the EB I village is the Line-Painted Ware, typical of EB I pottery assemblage in central and southern Palestine, which finds numerous comparisons in the funerary assemblages of the tombs of et-Tell, the Ophel and Tell en-Nasbeh\(^\text{40}\). Among the buildings of the EB I village, one noteworthy structure, with a quite different plan from that of the surrounding ordinary dwellings, was

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\(^{33}\) Garstang’s levels can be now respectively equalized: level VII to Kenyon’s Stages XIII-XIV in Trench II and Stages XI-XIII in Trench III, and to the Phases DD-R of the sequence elaborated by J.B. Hennessy for Squares EIII-IV (Hennessy 1967, 6-7, 15-18); level VI to Kenyon’s Stage XV in Trench II and Stages XIV-XV in Trench III, and to Hennessy’s Phases Q-N in Squares EIII-IV.

\(^{34}\) Nigro 2005, 15-41.

\(^{35}\) Braun 1989; Enea 1996.

\(^{36}\) As it can also be observed in Kenyon’s Trench II (Kenyon 1981, 146-149, pls. 100a, 249) and Squares EIII-IV (Kenyon 1981, 314-325, pls. 313-314).

\(^{37}\) Such as the building excavated by K.M. Kenyon to the south of Garstang’s trench in Squares EIII-IV (building ZB+ZC+ZD/ZN; Kenyon 1981, 322-324, pls. 174, 313b-314).

\(^{38}\) Garstang et al. 1936, 68, pl. XXXVI:24-26; Garstang - Garstang 1948, 79; Nigro 2005, 12-13, 33-34.

\(^{39}\) Polcaro 2005a; 2005b.

\(^{40}\) Vincent 1911, pls. IX-X; Marquet-Krause 1949, pls. XLII-XLV, LVI-LVII, LX-LXIV; Wampler 1947, pl. 12:204-206; Sala 2005b, 174-175.
exposed in level VII close to the northern limit of the trench\textsuperscript{41}, nearby the north-eastern corner of the EB III fortification wall, and it was interpreted by the excavator as a small shrine. The building well represents a cult structure for both its architectural features and the kind of the related finds. This is Shrine 420\textsuperscript{42}. It was erected in a later phase of Sultan IIIa\textsubscript{1} period, in an area deliberately separated from the contemporary structures on the nearby southern terrace of the village by the erection of a north-west/south-east demarcation wall. It shows a roughly rectangular chamber with a bent-axis entrance on the long northern side, so to suggest to Garstang the denomination of “Babylonian Shrine”. A large dais with some circular depressions at the western end opposite to the entrance and a continuous bench against the other walls were exposed inside the building. Dais, walls, benches, floor and entrance were all carefully plastered. Some cult furnishings were found in the same level and were associated by Garstang to the shrine\textsuperscript{43}; namely: a stone smoothed object of oval section, tentatively interpreted as a massebah; a small libation altar;

\textsuperscript{41} So that the front part of the building, where the presence of a court seems feasible (to be noted the continuation northwards of the side walls) remained concealed.

\textsuperscript{42} Garstang \textit{et al.} 1936, 73-74, pl. XLI,a; Garstang - Garstang 1948, 78-79, fig. 8; Sala 2005a.

\textsuperscript{43} Garstang \textit{et al.} 1936, 73-74, pl. XLI,b.
two bulgy bases (?) and the fragmentary stems of other two small stone pillars, probably attesting to the religious function of the building. Nearby the eastern end of the trench, two Egyptian or Egyptianizing mace-heads and a possible stone palette were recovered from the bottom of the EB levels and ascribed to level VII. These items, characteristic of the late pre- and proto-dynastic period in Egypt, provide one of the most important inter-cultural links for the first Early Bronze occupation at Tell es-Sultan and testify to the particular relationship between the site and the pre- and proto-dynastic Egypt (which will have such a prominent role in the development of the first urban culture in Palestine), due, on one hand, to the position of Tell es-Sultan on an important crossroad in the Jordan Valley, on the other hand, to the numerous resources of the oasis and the near Dead Sea, that through Jericho had to be exported.

3.2. The Fortified Town of the EB II-III and the EB III Inner City-Wall

The later Early Bronze Age levels (from V to I) detected in the North-Eastern Trench were dated by Garstang to the EB II (levels V-IV) and EB III (levels III-II), and are now respectively ascribable to the periods Sultan IIIb and Sultan IIIc. The uppermost III-II levels belonged to the phase of the erection of the EB III fortification walls and of the presence of the characteristic Khirbet Kerak Ware; while level I, indeed already extensively removed by the previous Austro-German Expedition, pertained most probably to the last phase of the Early Bronze IIIB, or even to the Early Bronze IV. The main result of the investigation of the structural layers of the EB II-III city in this sector of the mound was undoubtedly the identification and the clear exposure down to its foundation on its southern face of a wide portion of the EB III inner city-wall, which bordered the area of the trench on the north (figs. 12-13).

45 Nigro 2005, 34, 199.
46 See tab. 1.
47 Garstang et al. 1935, 155, pls. XXVII:7, XXVIII:10, 12-12b, 15-20, 23, XXIX:21-22. Few Khirbet Kerak fragments were also found by K.M. Kenyon to the south in Squares EIII-IV (Kenyon - Holland 1982, 163; 1983, 374, fig. 147:12), while much more Khirbet Kerak specimens have been retrieved in Area F by the Italian-Palestinian Expedition (see Nigro in this volume, pp. 15-16, and note 26).
48 On the nature and layout of the EB III double city-wall system at Tell es-Sultan see Kenyon 1981, 14-15; Marchetti - Nigro eds. 1998, 89-91; Nigro in press, § 5. The inner and outer walls of the fortification system were both exposed only in
Fig. 12 - The EB III dwelling structures and inner city-wall excavated by J. Garstang in the North-Eastern Trench as drawn in the plan published by the Author (after Garstang - Garstang 1948, pl. V,b).

Fig. 13 - Plan of the EB III double fortification wall excavated by the Austro-German and British Expeditions (after Kenyon 1981, fig. 3).

On this side, the city-wall foundations sharply sloped down eastwards, following the natural slope of the ground from west to east, as it is clearly shown by the northern section of the trench (fig. 14). Some spots: in the western half of the northern side, in the northern part of the western side and, finally, in restricted spots of the southern side. In the northeastern corner, the outer wall was lost due to the presence of an EB IV building (Nigro 2003, 124, figs. 5-6). Garstang ascribed the inner wall, traced along the northern and western sides of the mound, to his Second City (Garstang - Garstang 1948, pl. V,b) and he, finally, dated it to Early Bronze III (Garstang 1935a, 61); but he considered the outer wall of the same fortification system as an addition of the Late Bronze Age (Garstang 1930, 126-132; 1931, 186-192; but see Garstang - Garstang 1948, 34 for a possible revision of his interpretation).

49 Garstang et al. 1935, 147-154, pl. XLVII.
50 From level 12.06 m a.s.l. on the west, to level 9.30 m a.s.l. on the east, where the wall turned eastwards enclosing room 244 (Garstang et al. 1935, 150, pl. XIII,a, XXVI,a).
The city-wall was built in sections, mainly in reddish, nearly square mud-bricks, laid upon a stone foundation, consisting mostly of large stones set in three or four rough courses, more than half meter high. It had an average thickness of 4 m and it was still preserved to an average height of 3 m. This archeological result has a prominent value both in the history of the exploration of the Early Bronze Age fortified town at Tell es-Sultan, and in the perspective of a possible valorization and tourist exploitation of this prominent sector of the tell, as the EB III city-wall undoubtedly represents one of the imposing monuments of the site and its monumental inner face could be plainly re-exposed by cleaning the section of the trench (fig. 15).

As it briefly regards the outline and architectural features of the EB II-III domestic quarter unearthed to the south of the city-wall, and to the east of

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51 Garstang et al. 1936, pl. XXVIII. As it regards the earlier EB II city-wall, a stretch of it was exposed eastwards outside and below the line of the EB III city-wall (Garstang et al. 1935, pl. L.c; Nigro in press, § 4.1, fig. 11).
52 Differently from the dune yellowish mud-bricks of the earlier EB II city-wall (Sellin - Watzinger 1913, 17, pl. 3,a; Nigro in press, § 5.4; Nigro in this volume, p. 5).
53 The height of the stone foundation was, anyway, uneven, and it curiously increased to the west under room 98, whereas also the ground raise.
54 Garstang et al. 1935, 150-151, pl. XLVII. The original overall height of the inner city-wall should be about 10 m (Nigro in press, § 5.4).
the EB III dwellings excavated by Sellin and Watzinger, it shows a gradual
growth both in the houses’ layout and in the nature and number of instal-
lations for food production and preparation from the former village of
Sultan IIIa55. The dwelling quarter consisted of a dense agglomeration of
squarish rooms (3 to 5 m wide), with benches, cutting and grinding slabs,
pulping holes and silos, and it was crossed by a main curving street,
sharply bending from SW to NW because of the presence of the city-wall56.

4. Towards a Feasible Rehabilitation of the North-Eastern
Trench

Nowadays, remains of stone walls and structures excavated in the ’30ies,
though heavily damaged, are still visible in the northern cut of the trench,
providing an immediate evidence of the long occupational history of site
(figs. 15-17). The westerner part of Garstang’s trench was re-excavated by
K.M. Kenyon in the ’50ies, and the trench was widened to the south with
the opening of the Squares EIII-IV, but, unfortunately, its eastern end was
used as dumping site, so that part of the structures exposed by J. Gar-
stang, still preserved after many years57, were definitively covered and the
look of the trench was inevitably defaced. A rehabilitation of this important
sector of the site, so deeply investigated, starting with a cleaning and a
consolidation of its large northern cut, could recover one the most signifi-
cant stratigraphic section of the tell, testifying to its long occupation from
the earliest time through the whole Early Bronze Age. The clearing of large
and deep trenches, such as Kenyon’s Trench I58 and Garstang’s North-
Eastern Trench, can offer a basic reference in providing the stratigraphic
sequence of tell, by which the site periodization can be tested and updated,
and visitors can easily grasp the historical depth of Tell es-Sultan.

55 Garstang et al. 1935, 152-153, pl. XXIII; Garstang - Garstang 1948, pl. IV,c;
56 The prosecution westwards of the same street was outlined in the EB III
dwelling quarter excavated in Square E6 by the Sellin and Watzinger (1913, 36-38,
fig. 17, pl. II); while its prosecution southwards has been excavated by the Italian-
Palestinian Expedition in Area F (street L.437, then L.307) in the north-western
corner of square BfIII10, to the south of Garstang’s Square E7 (Nigro 2000, 22-23,
figs. 1;2, 1:15; Nigro in this volume, pp. 5, 10).
57 See Kenyon 1981, pl. 144a.
58 Kenyon 1981, 6-113.
Fig. 15 - General view from south of the northern section of the North-Eastern Trench, from street L.437 excavated in Area F by the Italian-Palestinian Expedition (2000).

Fig. 16 - General view from east of the North-Eastern Trench. On the left, the section of Kenyon’s Squares EIII-IV; in the central background, the dwelling unities of Area F; on the right, the northern edge of the trench; in the far background, the Mount of Temptations (Jebel Quruntul) (2004).
The restoration of Neolithic and Early Bronze Age structures on both sides of the trench could be also desirable, in order to show, in an extended area, a portion of the earliest settlements of Jericho, and to better understand the origin, growth and development of the first urban culture at Tell es-Sultan.

The creation of a pathway running from the top into the step-trench, starting from its uppermost Middle Bronze levels recently excavated in Area F, down to its lowest Pre-Pottery Neolithic levels, accomplished by a general restoration and covering of the structures exposed in order to guarantee their surest preservation, could be the best strategy both to rehabilitate this large sector of the mound and to retrieved in a clearer way to the general public an extended piece of the long-living history of this unique archaeological site.

Fig. 17 - General view from north of the North-Eastern Trench. In the central background, the section of Kenyon’s Squares EIII-IV; in the right background, the dwelling unities of Area F excavated by the Italian-Palestinian Expedition in 1998-2000 (2004).
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نتائج المؤتمر الدولي المنعقد في أريحا
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نظرًاً إلى السلطان في السياق الحضاري لودادي الأردن: إدارة الموقع، الحفاظ والتنمية المستدامة

عُدِّت ورشة "السلطان في السياق الحضاري لودادي الأردن: إدارة الموقع، الحفاظ والتنمية المستدامة" في أربعة ما بين 7-11 فبراير سنة 2005. وقد تُنظِّمَت الورشة من قبل دائرة الآثار والتراث الثقافي في وزارة السياحة والأثار ومكتب اليوسفى في رام الله وجامعة روما "الإسباينا" بدعم مالي من لجنة الثروات العالمية.

وتركز الاهتمام في هذه الورشة على مكانة السلطان في السياق الإيكولوجي والحضاري والاقتصادي الاجتماعي العام باعتباره موقعًا رئيسيًا في منطقة الشرق الأوسط وبالنظر إلى أهميته العالمية. فهو أقدم مدينة في العالم ويعد تاريخه الحضاري على مدار عشرة آلاف سنة. وتمثل الموقع أقدم قرية زراعية من العصر الحجري الحديث في فلسطين والتي تضم أقدم نظام دفاعي معروف في العالم، إلى جانب القيمة الاستراتيجية من مرحلة التصنيم.

ويتمتع تل السلطان بأهمية خاصة في تاريخ البحث الأثري في فلسطين، فمن الأسرار الأولى التي قام بها وارن لحساب صندوق استكشاف فلسطين نُقدَّم أربع حلقات تفقّد واستماع في التلمع، وهي بعثة سليم في بداية القرن العشرين وغازستاغن ثم تفتقيت كتبت استقراءً بالتنقيبات الفلسطينية. الإيطالية المشتركة تحت إشراف د. حمدان طه والبروفيسور باولو مانتيو. ودفعت الحملة الأخيرة إلى إجراء تقديم أثري لنتائج التبقيات السابقة وتغيير حالة الحفاظ للموقع وانتظاره المستقبلي.

وأُسِمِّحت هذه التبقيات في معرفة أفضل للموقع إلى جانب اتخاذ التدابير العاجلة لصيانة الموقع. تم إعداد لوضع خطة إدارة شاملة. وذلك لكي غربياً أن تبدأ تل السلطان الرقم الثاني على اللائحة المهنية للتراث الثقافي والطبيعي العالمي في فلسطين.

وشارك في ورشة أربعة الدولية مجموعة من العلماء والباحثين إلى جانب الشركاء المحليين بهدف ملائمة عملية إدارة الموقع والحفاظ عليه وتمتيمه. وشارك من المؤسسات المحلية خبراء من دائرة الأثار والتراث الثقافي وجامعة بيرزيت ولجنة إعمار الخليل ومؤسسة التعاون، ومن المؤسسات الدولية خبراء من جامعة لندن وجامعة بيرغت في النوروج والكلية الجامعية في لندن إلى جانب خبراء من الخبراء من جامعة روما "الإسباينا" في إيطاليا.

أما أبرز ما جاء في تاريخ البحث الأثري تل السلطان منطقة بادي الأردن: إدارة موقع تل السلطان في الحفاظ والتنمية المستدامة، فقد عُرِض بعض التجارب كدراسات حالة إلى جانب قضايا التنمية. وقامت منهجية الورشة على طرح سبل تطوير إدارة الموقع، ووصولاً إلى المشاريع المستقلة، وذلك على سبيل المثال: نقل المشروعات، ويعود في هذا السياق، ويعد المشاريع في كل من القسم والخليج والعواصم الشمالي. تركزت التجارب حول تل السلطان والمنطقة المحيطة به، وتخليد المؤتمر زيارات ميدانية لموقع تل السلطان، وعدد من المواقع الأثرية في منطقة أربعة.

وقبل انتهاء المؤتمر، تم تنظيم تلقى طالب مستبة، بواسطة مشاركة عدد من المؤسسات الدولية بهدف تطوير الاهتمام بالموقع وتحديث الدعم الدولي لتطويره. كما جرى تشكيل لجنة عمل لمناقشة قضايا المطروحة، إلى جانب تشكيل لجنة متابعة، كان من نتائجها إعداد وثيقة تطور الموقع.
القسم الأول: التنبؤات الجديدة في القياس السفلي من وادي الأردن

نيغرو، لورنزو- نتائج التنبؤات الفلسطينية-الإيطالية في تل السلطان: فجر التمدن في فلسطين

أمضى علماء الآثار والفنون الإيطاليون من جامعة روما "إليسانزا" مواسم تنقيب لا تنتهي مع شركائهم الفلسطينيين من دائرة الآثار. وقد أعطت نتائج هذه التنبؤات في المؤتمر الدولي لآثار الشرق الأوسط الذي عقد في روما وكوبنهاجن وباريس، وبرلين تباعًا أسهمت هذه التنبؤات المشتركة في تغيير بعض التفسيرات الديموغرافية -_ADMIN: 1992- حول مدينة العصر البرونزي التي ازدهرت في الحوض الصغيرية في عهد السلالة ary. وقد أشارت النتائج على الشكل الجديد لعين السلطان لمدة أكثر من ألف سنة. لقد قالت التنقيبات الجديدة للنمر لمحاولات تشييد أسوار مدينة العصر البرونزي المبكر والجوفي، وأظهرت بالأول مرة هيئة مدينة الضنية خارج أسوار المدينة المعروفة، ولهذا السبب في قمة الموقع، ومنحدرات الجنوبية، ونسبة النتائج العقلية للتنبيهات تفتقد سلسلة من أعمال الترميم والتداول. شملت ترميم مطعَّم من السور السريبي لمدينة العصر البرونزي المبكر الثالث وتخطيط مسارات سياحية لليهود، كما تزودت الموقع بشرح موضوعي ملتزم في إطار رسم خطة مدة الموقع، وترافق ذلك مع برنامج للتدريب المهني.

فإن ديركوي، غيرت- وادي الأردن وتقلبات الحياة في در علا في العصرين البرونزي والحديثي

يقع وادي الأردن جزءًا من الهلال الخصيب، ولعب دور الجسر ما بين أوروبا وآسيا وأوروبا. وقد شكلت هذه الخصائص مسيرة سيرة تطورها حتى الوقت الحاضر. وأظهرت نتائج التنقيبات الأثرية خلال استتان بعد تاريخه إلى أكثر من مليون وأربعمائة ألف سنة. وظل وادي الأردن على مدار التاريخ مكانًا ملاذاً للاستتان البشري. وقد بدأت الصورة في التغيير مع ظهور المجتمعات الزراعية، وبرز تزايدات ما بين منطقة وادي الأردن الأعلى والأسفل، وتراها هذه الفترة مجمعة من القضايا والمنطق، وعانت وادي الأردن، وعانت الإنسان في منطقة وادي الأردن، وأيضاً سايات الإنسان هناك؟ وما هي مسببات التنبيه الاستاني والانتقال إلى نظام الرعي والبلاوا؟. ورغم أن دراسة هذه القضايا ترتبط بكفاءة الفترات الأثرية، فقد نرى تناولها بالعلاقة مع مشروع جامعة لاندنج، وجامعة البرموك في منطقة در علا في القسم الأوسط والأدنى من وادي الأردن.

أفنسيت، نيلز- بعض جوانب التنقيب والتعاون والإدارة: التنبؤات الفلسطينية-الروزيجية


Arabic Abstract

2006

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القسم الثاني: إدارة التراث الأثري الفلسطيني وحمايته

فونتان، جيوفان أنونيل- تل السلطان كموقع على لائحة التراث العالمي: ملف الترشيح وخططة الإدارة ومتطلبات التسجيل

لأحقا لحركات نيسان-أيار 2002 في الأراضي الفلسطينية المحتلة بالعوائق الإسرائيلية وما تنتج عنه من تدمير التراث الثقافي، خاصة تلك الحضارة الطويلة لكنيسة المهده وتمديد إجزاء من البلدان القديمة لمدينة نابلس، عبرت لجنة تراث العالم عن قلقها البالغ لهذا التدمير الشديد إلى الأهمية البالغة لهذا التراث كجزء من التراث الإنساني. كما أقرت اللجنة في اجتماعها السادس والعشرين، المعقود في بودافست خلال شهر حزيران 2002، تخصيص مبلغ 150,000 دولار أمريكي لدعم التراث الفلسطيني والحفاظ عليه من خلال مساعدة السلطة الوطنية الفلسطينية في عمل جرد ل مواقع التراث الثقافي والطبيبي الفلسطيني وتحديد المواقع ذات الأهمية العالمية الاستثنائية ثم تقوم حالة هذه المواقع ودرجة حفظها ومعايير حمايتها، ومساعدة المؤسسات الفلسطينية الوطنية ذات العلاقة بتطبيق إدارة التراث العالمي من خلال المساعدة في تأهيلها وبناء قدراتها الفنية والبشرية. وقد قام فريق مهني بالدرب على مهمات إعداد اللائحة التمهيدية والتفصيلية الدولية، وفي أواخر عام 2005 تم إصدار اللائحة التمهيدية للتراث العالمي وتضمن عشرين موقعًا تعبر عن غنى التراث الفلسطيني.

وتتنوع

نيغرو، لورنزو- الحفاظ على آثار تل السلطان: مساهمة جامعة روما "الأسبانيزا"

مندت عشر سنوات على تأسيس دائرة الأثار الفلسطينية وذلك بهدف حماية التراث الثقافي الفلسطيني، والذي يضم جزءاً جوهرياً من التراث الأثري للبشرية. كما مضت سبع سنوات على بدء مشروع التنمية والتعاون من دائرة الأثار الفلسطينية وجامعة روما "الأسبانيزا" للاستثمار الأثري لموقع وتقسيمه لأعاص التطور السياحي. رغم توقف العمل في البداية بسبب الظروف التي أنتجت سنة 2000، غير أن بعض أوجه النشاط الباحثي تواصلت دون انقطاع في الفترة ما بين 2001-2005. وشمل هذا توجيه أبحاث الدراسات العليا لدراسة جوانب مختلفة من تاريخ الموقع، وإعداد قاعدة معلوماتية.

فان دير لندو، و لاماس، تيم- إدارة الموقع الأثري: النظرية والإستراتيجية والتطبيق

للمسؤول المثلي في أريحا

إن إدارة المواقع الأثرية والمشيد الأثري عموما تستعين عدداً من القضايا والاهتمامات وتشمل الترميم والحفاظ والتنقيص والسياحة المستدامة والبحث والمشاركة المجتمعية المحلية. تتعارض هذه الطرق في البداية إلى المفاهيم والتطبيقات التي مكمن مختلف نماذج الإدارة على الوقوف، وتقدم بعض الأفكار حول التعامل مع التناقض ما بين نماذج التخطيط المختلفة والقضايا العملية للأمور الرئيسية. كما جرى تخريج القضايا المتعلقة بالمحافظة والحرص لإدارة التراث الثقافي لمنطقة أريحا وذلك بهدف المشاركة في إدامتها والتمتع بها وضمان التنمية المستدامة لمواهب الأثري النادرة.

ورجوب، أحمد- إدارة موقع تل السلطان
نظرًا إلى السلطان موضوعًا للاستكشافات الأثرية منذ التنقيبات الأثرية الأولى التي قام بها المستكشف
تشير إلى سنة 1868 وحسب صندوق استكشاف فلسطين. وتلك تنقيبات سينين ووذكر
jisr، ووازنة
إلى الثقوب، وتادمر
تحسين
الزوارة.
التراث
تأهيل
إلى الأمام، وبعد نقل الصلاحيات إلى السلطة الفلسطينية، بدأ
 العمل في إطار المشروع الفلسطيني الإيطالي منذ سنة 1997 بهدف إعادة تقديم حالة حفظ الموقع،
وتكررت التنقيبات على استكشاف النظام الدفاعي للمدينة، وعلى صعيد إدارة الموقع، مر
السلطان بلسالة من المرحلة منذ الإقامة البريطانية موردا بقطر الحكم الأردني والاحتلال
الإسرائيلي وصولا إلى السلطة الفلسطينية، وقد ارتكب نظام الإدارة بقانون الأمر الموصل به حتى
الآن وهو قانون الأثر الأولي لسنة 1966. ورغم التدابير إلى تمت، لا يزال الموقع بحاجة إلى
خطوة إدارة تأخذ بين الاعتبار فضايا التطور والترجمة والحفاظ.

فؤاد، ج - مبادئ التنمية المحلية المستدامة

تعبر الورقة إلى مفهوم التنمية المستدامة، باعتبارها تجميعية تتيح استجابات الجيل الحاضر دون
 أن تعتزم حق الأجاي الاقلية في الحصول على استجاباتها. أيضا باعتبارها تجميعية تهدف إلى تحسين
شروط حياة الناس دون تجاوز الحدود الممكنة للنظم الإيكولوجية. ويشير إلى أركان التنمية الأربعة
والإرادة الإقتصادية والمساواة والحماية والحكم الجيد، وتعرض الورقة الجهود الدولية في
تطوير مفهوم التنمية المستدامة تطبيقاته العملية، كذلك تتداخل المجتمع المحلي وتحديد الخطط
التنموية. يتبع محاولات التنمية التي حددها الأم المحددة وهي الماء والأطواء والصحة والزراعة
والتنوع البيئي بالإشارة إلى بعض النماذج التطبيقية الأوروبية.

القاسم، خالد - إدارة موارد التوثق الثقافي في الخليل

تعتبر الخليل أحد أقدم المدن التاريخية في العالم، وتم نمذجتها حيا للدمن التاريخية من العصور
الوسطى، وهي تعرض للسحر والجمال بعد الاحتلال الإسرائيلي للأراضي الفلسطينية سنة 1967.
فقد تعرضت المدينة لحالة استثنائية بوصف تهجيرها وتهربها من سكانها، ترافقت ذلك مع ندأ
الوضع الإقتصادي نتيجة الحصار الدائم الذي ت تعرض له المدينة. في سنة 1996 شكلت لجنة اعمار
الخليل برنامجا لتأهيل البلدة القديمة، وتمكين سكانها من العودة للسكون فيها. وقامت لجنة الإعمار الألماني
للأعمال الإقتصادية والاجتماعية الثقافية، وجاري تأهيل الأسواق العامة كالشارع والمنزل، وبوت
السكان والأعمال التجارية القديمة.

رياس، نورجي، النموذجية المستدامة من خلال مشاريع الترميم والصيانة

يعتبر مشروع الحفاظ على التوثق الثقافي في المحافظة هو جزءًا من إستراتيجية الحفاظ على التوثق الثقافي
لأغراض التنمية المحلية. وبائي المشروع في إطار التعاون ما بين إدارة الأثار والتراث الثقافي في
وزارة السياحة والآثار وبرنامج الأمم المتحدة الإبيات برامج مساعدات أتابع الفلسطيني بتمويل من
وكالة التنمية الأمريكية. ويشمل المشروع سبع مواقع للتراث الثقافي وهي: النفق المائي في خريزة
بلدة بالقرب من جنين، البلدة القديمة في يرق، قصر دارة، البلدة القديمة في دير إستيا، خليعة
البرقاوي في قرية شوق، محيم مقام النبي يعقوب في أريحا، والبلدة القديمة في كور. وقد جرى
تنفيذ الأعمال من خلال منهج الشراكة بالتعاون مع المجتمع المحلي. حيث يجري تطوير هذه المواقع لتناسب احتياجات التنمية المحلية.

سالم، حامد- استعمال المكان وألية الشبات في المشهد الثقافي الفلسطيني: نحو خطة إدارية لمنطقة بيرزيت.

شهدت السنوات العشر الماضية وعيًا متناميًا بأهمية الحفاظ على المشهد الثقافي في إطار خطة إدارة التراث الثقافي والحفاظ عليه. وتطرح الورقة نماذج تمثيلية واستخدامات الأراضي والثبات في منطقة بيرزيت الواحدة، وتقترح بأن أي خطة إدارية يجب أن تدمج الجوانب المختلفة للمشهد الثقافي. وتعبر منهجية البحث المفاهيم الأولية لخطة إدارة المشهد الثقافي في منطقة بيرزيت والموقع وحدودها وعناصرها، وتطبيق خطة الإدارة والواقع من تطبيقها. وفي دراسة الحالاتを見せ فيها بيرزيت تطبيق الدراسة عند الموقع والانتشار الثقافي والاقتصاد ونظم الطرق.

القسم الثالث: المصالح الثقافية لحديقة أريحا الأثرية

نيغرو، فرانچيسكو- تخطيط التراث الثقافي وإدارته من اجل التنمية: الحديقة الأثرية الفلسطينية في واحة أريحا.

يشمل المشهد الثقافي لحديقة أريحا عناصر كثيرة بما يستدعي البدء في خطة تنمية محددة. ويضم التراث الثقافي والمادي وغير المادي ويمكن اعتبار هذه العناصر مدروساً لتنمية المنطقة لحديقة أريحا، والقوة الدافعة للتنمية وتحسين شروط حياة الناس. ولابد من العمل بمنهجية كمالية في التخطيط تشمل المشاريع الثقافية في السياق الاجتماعي والاقتصادي والمناطفي، وتكامل عمل المؤسسات والقطاعين العام والخاص. ويسهم تطوير الحديقة الأثرية لأن السلطان في تطوير مقومات التنمية في أريحا.

حاجزي، بابس- المخطط الشامل والموارد الثقافية في أريحا.

كانت أريحا أول مدينة تقع فيها الصلاحيات إلى السلطة الفلسطينية سنة 1994 اثر اتفاقية غزة - أريحا، وهي مدينة واعدة تميز بها أقدم مدينة في العالم، ظلت مسكونة على الدوام، كما تميز بغري تاريخها الحضاري وتنوعه. وتعرف البلدية حاليا على إعداد المخطط الشامل للمدينة، والذي سيكون مرشدا لتطوير المدينة.

القسم الرابع- الترميم والحفاظ والتأهيل

فراري، سي- ملاحظات حول تقنيات ترميم الإسهام الأولي الميداني من خلال تجربة تل السلطان.

تهدف أشكال التنسيق الموضوعة في هذه الورقة إلى تبيان طرق الإسهام الأولي في المحاولة أثناء عمليات التنقيب، أكثر من كونها تدابير للترميم في الأحوال العادية. وهذا ينبع من الإدراك بأهمية التنسيق السريع ولا يقل عن شأن عمليات الترميم الميدانية. وتعرض هذه الورقة إلى أساليب التدخل.
التي يمكن لشخص غير مدرّب القيام بها، بما يتضمن التمييز بين الترميم الوقائي والترميم المتحفي.
وفي الحالات وأثناء أعمال التنقيب، غالبًا ما نستخدم تقنيات الترميم الوقائي بهدف المحافظة على الأثر وإزالة عوامل التآكل أو التقليل منها.

سابيلو، روبرتو- حديث قصر هشام الأثرية

تظهر المعرفة في وسط منطقة زراعية إلى الشمال من مدينة أريحا. وقد قام فيها تنقلات من قبل دائرة الآثار الفلسطينية تحت إشراف روبرتو سانتاغ في المكان الذي تُوَفِّد عليه هوية أثرية ضرّبة المنطقة سنة 747-748 ميلادية إلى الخليفة الأموي هشام بن عبد الملك. بعد الكشف عن الموقع بدأ يتعرض لتعاملاً تحت فين وجرت محاولات لتصنيفه وترميمه وواجهة التردي السريع في حالة الموقع، بما استدعى التدخل من أجل وضع خطّة للحفاظ على الموقع الأثرية وإدارته. ومنذ سنة 1997 يجري العمل بالتعاون مع منظمة اليونسكو بدءًا من الحكومة الأردنية على تأهيل الموقع، وتُقبل دراسات السينما وملحمة عوامل تلف الحجر وتطوير خطّة إدارة الموقع.

بلكلورو، أ- مدافن أريحا: دراستها والحفاظ عليها وبديل الاستغلال السياحي

 تعرض الورقة إلى أهمية مدافن أريحا الواقعة على الامتداد العربي للسلطانات وتشير إلى أحد أهم المناطق الدينية في منطقة الشرق الأوسط، نظراً إلى أمور الملاحظات التي تم الاستخلاص منها خلال الحقيبة كاملة من غارستانج وصبي. تتكون أهمية هذه المدارية من مدى الزمني الطويل الذي تمثّله، الممتدة من فجر التاريخ وحتى العصر البرونزي المتأخّر. وهذه المدارية ذات أهمية بالغة في فهم العناصر الاقتصادية والاجتماعية إلى جانب الاختلافات الإيديولوجية. وتحتاج المنطقة التي أُهملت في الماضي إلى إمدادها ضمن خطة تأهيل الموقع، وصولاً إلى حفر البناء في محيط الموقع. وتُقترح الورقة سبل الحفاظ على منطقة الدفن بما في ذلك إبرازها ضمن خطة تصور الموقع.

سالمية- الخندق الشمالي- الغربي لغارستانج: الدلالات والموارد الأثرية

السماح لتكنولوجيا من أثرية الشمال الفرنسي للسلطان من قبل البلدان المتاحة في الموقع. وقد قدمت الحلقة السياسية-المدنية تحت إشراف مسدد والوظائف في الهياكلية الشريفة والتي أظهرت الأنظمة الدفعة لمدينة العصر البرونزي المبكر، وبعدها إلى جانب الكشف عن منطقة سكنية لمدينة العصر البرونزي المبكر الثالث. كما تابع غارستانج في عدد الثلاثاءات المتقدمة في الزاوية الشمالية الغربية، بحيث الاتصال إلى الاتجاهات السكانية المتراكمة في المنطقة، كما أعطت هذه الأدوات الخريطة للفنون والفنون التطبيقية في المدينة.

لمدةERRY من 1997-2000. قام مارستون بشرح تأويل في هذا الخندق تحت إشراف غارستانج الإيطالية. وظهرت هذه المنطقة نتائج هامة تساعد في إعادة بناء التاريخ الأثري للموقع. فقد تم الفحص إلى طبقات العصر الحجري الحديث لأول مرة وتكشف عن طبقات العصر البرونزي المبكر على نطاق واسع.

دياب، محمود- ترميم المباني الطينية في تل السلطان

استعمل الإنسان مادة الطين لبناء مسكته منذ القدم. ومثل خلق الطين مع القش والحمص الصغيرة لصناعة اللين المستخدم في بناء البيوت، وكان للتين يلف تحت الشمس. ويعتبر اللين مادة رئيسية
لبناء البيوت في أربع من عشرة آلاف سنة، فقد شيدت بيوت مدينة العصر الحجري الحديث من مادة اللين. بعد التنقيب عن المباني الطينية في تل السلطان بدأت في التعرض لعوامل التلف، وتشمل عوامل إنسانية تتعلق بنشاط الإنسان الزراعي واستخدامات الأراضي ثم العوامل الطبيعية. وهي الأمطار والرياح وتتبذب درجات الحرارة، هذا إلى جانب العوامل البيولوجية. وفب إطار المشروع الفلسطيني- الإيطالي المشترك تم استخدام تقنيات كيميائية حديثة وتقليدية لترميم المباني الطينية والحفاظ عليها.
تل السلطان في السياق الحضاري لوادي الأردن

إدارة الموقع، الحفاظ، والتنمية المستدامة

تحرير
لورنزو نيجرو حمدان طه

روما 2006