2008



INCO-CT-2005-015416- Project QuarryScapes

QuarryScapes Report Site Management Concepts for Widan el Faras, Northern Fayoum, Egypt Work Package 6, Deliverable No. 7







Prepared by NSCE with the close collaboration of Naguib Amin

Quarry Scapes

Conservation of Ancient Stone Quarry Landscapes in the Eastern Mediterranean

Site Management Concepts for Widan el Faras, Northern Fayoum, Egypt

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North South Consultant Exchange (NSCE)

Work package 6: Egypt conservation concept: Management plan for Widan el-Faras *Innovation acivity*

| Report date: 06.06.2008 | ISBN 978-82-7385-135-4 | Grading: Op | pen |
|------------------------------------|---------------------------|-----------------------------|--------------------|
| QuarryScapes deliverable number: 7 | | ber of pages: 4 enclosures: | 0 + 489 (appendix) |
| Keywords: Faiyum | Ancient quarr | ies | Basalt |
| Protected area | Egypt | | UNESCO site |
| Ancient road | Conservation | 1 | |

QuarryScapes: Conservation of Ancient Stone Quarry Landscapes in the Eastern Mediterranean

QuarryScapes is the first project of its kind for addressing the importance of ancient quarry landscapes and raising the awareness of the urgent needs for protecting such sites. QuarryScapes will develop scientific and practical methodologies for documentation, characterisation and conservation of ancient quarry landscapes, raise the awareness of their significance and vulnerability and contribute to legal protection measures and sustainable management. Through case studies in Egypt, Jordan and Turkey, the project will address development of theoretical and practical methods pertaining to the major steps in the process of conservation: from recognition, investigation and assessment of significance, to understanding the risks, developing sound conservation and monitoring concepts, and suggesting mechanisms for sustainable management. The project is subdivided in ten work packages.

Coordinator:

The Geological Survey of Norway (NGU)

Partners:

Katholieke Universiteit Leuven (KUL), Belgium
University College London (UCL), United Kingdom
Middle East Technical University (METU), Turkey
Yarmouk University, Jordan (YU)
North South Consultants Exchange (NSCE), Egypt
Supreme Council of Antiquities (SCA) / Egyptian Antiquities Information System (EAIS)
Università IUAV di Venezia, Italy

Contract:

EU FP6, INCO/MED 015416

Contact:

QuarryScapes Project NGU Att: Tom Heldal N-7491 Trondheim Norway

Phone: +4773904000 tom.heldal@ngu.no www.quarryscapes.no

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LIST OF ABBREVIATIONS

Amlaak: SCA Department of Properties and Survey

CMT: Center Site Management and Training Center of SCA:

DoCoMoMo: International Committee for the Documentation and Conservation of Monuments and

Sites of the Modern Movement

EAIS: Egyptian Antiquities Information System

EEAA: Egyptian Environmental Affairs Agency

GIS: Geographical Information System:

GOPP: The General Organization of Physical Planning

ICCROM: International Centre for the Study of the Preservation and Restoration of Cultural Property

ICOMOS: International Council on Monuments and Sites

IUCN: World Conservation Union (formerly the International Union for Conservation of Nature and

Natural Resources)

NGO: Non-governmental organization

PC: SCA Permanent Committee

QS: QuarryScapes Project

SCA: The Supreme Council of Antiquities

SMP: Wīdān Al Faras Site Management Plan

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNWTO: The United Nations World Tourism Organization

WTO: World Tourism Organization

1. EXECUTIVE SUMMARY

WIDAN AL FARAS SITE MANAGEMENT CONCEPTS AND GUIDELINES (SMC) is a preliminary manual-like action plan developed through QuarryScapes project. It is indented to provide as a demonstration of adapted site management approaches and to guide in further developing, implementing and supervising comprehensive site management actions on the site.

Strategic guiding principles in the conception and implementation of the SMP mainly emphasize the need:

- (i) to have the SMP be part of establishing a national strategy of Site Management;
- (ii) to seek sustainability of site management planning;
- (iii) to reinforce Institutional Empowerment;
- (iv) to associate Governorate and other authorities and;
- (v) to build upon and learn from preceding site management actions in Fayoum;
- (vi) to conduct the work by a multidisciplinary team;
- (vii) to set a transparent and efficient legal status for Widan Al Faras extended area and its buffer zone;
- (viii) to undertake priority urgent actions versus long term operations;
- (ix) to apply international conventions guidelines; to be associated with archaeological missions;
- (x) to establish and act within extended site boundaries for a World Heritage Site;
- (xi) to use GIS and modern technical tools; and finally
- (xii) to assure effective maintenance and monitoring of the site during and upon the implementation of the SMP.

The partial design, approval and implementation of the Site Management Plan should involve the main stakeholder such as EEAA and SCA, other institutions or organizations, such as Giza and or Fayoum Governorates.

The SMP starts with the collection of data from sources of information, allowing for a conceptual analysis of existing conditions in areas related to the Plan's proposed actions. Based on this analytical approach, urgent and priority intervention actions are preliminarily proposed.

Carrying out the Socio economic conditions analysis before management planning of the site is one of the first steps to be taken. This helps giving the SMP the role of a local development and decision making tool. For Widan Al Faras, a Socio Economic Impact Assessment (SEIA) has been conducted (Annex.3) to show the way the study can serve a SMP.

The main findings of the SEIA for Fayoum and Widan Al Faras area are as follow:

- 1. the main revenue in the region is not granted from the existing quarrying activities
- 2. Lots of NGOs are involved into a local development projects through different donors and projects
- 3. the guarries are not directly benefiting the local population

The SEIA has to guide all the actions foreseen by the SMP. This has to guarantee the involvement of the population to ensure the sustainability of any action or strategy taken.

Signage arrangements specify basic modalities to design and install indicative panels that enhance the value of visits and direct pre-designed routes. The design and specifications would be developed at a foreseen detailed studies stage.

Architectural Programming of new buildings, such as Visitors Center, sanitation, guards or storage facilities has to be discussed.

Site Marketing orientations are then proposed. Their objective is to pave the way towards developing a marketing strategy, approach, tools and actions to promote the site, linked to the marketing of Fayoum as a whole, and as a World Heritage Site. Publicity material are to be prepared as part of the Marketing Plan and could include a website and the publication and distribution of a brochure.

An Action Plan to deal with the very threatening quarrying activities on the site is essential to build convergence and compatibility of interests between business communities, the tourism sector (visitors and administration), heritage sites management actors (SCA and archeological missions) and the conservation of natural resources (EEAA missions) as well as the protected area administration in Fayoum.

A number of technical sub plans are also part of the comprehensive SMP. They consist of control plans for all factors that would affect the site, such as quarrying, intrusive visitation security, vandalism, theft and neglect.

Institutional and collaboration arrangements are set as a guaranty for the SMP's institutional approval and implementation. Implementation table are finally proposed for overall actions, but all need to be developed at the next executive implementation stage.

2. STRATEGY

This section outlines strategic guiding principles to direct the conception and implementation of the SMP:

2.1 Sustainability of the Site Management Planning and practices

Sustainability of the Site Management Planning and practices should balance between historic heritage conservation, population and social needs; economic development and the protection of environment, as related to specific historical site. In the case of Wīdān al Faras, the interests of the site natural and historical preservation should be guaranteeing the interests of the quarrying companies and in concert with the (sustainable) development needs of local authorities. For this an intersectoral site committee should be set at decision making level to ensure transparency and implementation of the decisions related to SMP.

2.2 <u>Building upon previously prepared documentation, projects and protection</u> measures:

A number of studies and interventions were completed and are being conducted that are proposing protection and management measures for Wīdān al Faras. The SMP should examine these efforts and build upon them, namely concerned legalization and protection steps taken by the Supreme Council of Antiquities for UNESCO registration; related studies and GIS work taken by EEAA for protected areas, documentation and GIS work of Fayoum also prepared by EAIS; natural protectorate project piloted by NSCE, currently ongoing SCA piloted Risk Analysis and mapping in Fayoum region.

2.3 <u>Conducting coherent and comprehensive site assessment and analysis of existing conditions</u>

As a pre-requisite to proposing site management actions, a comprehensive assessment should cover historical, archaeological, environmental, legal and other information and data, including study of physical features, itineraries, visitation patterns and accesses.

2.4 Multidisciplinary approach

The SMP has to involve several disciplines and can not be based upon the application of archaeological preservation techniques alone. It requires the interaction of multidisciplinary working team. Independent consultants and moderators to reconcile different actors and human resources specialists to help create site management team would – among others – be called upon

An agreement between EEAA and SCA as main actors in the area will help to ensure transparent and coherent implementation and monitoring of the SMP.

2.5 Relating Wīdān al Faras Site Management Planning to National Heritage protection policies and effort

Egyptian Ministry of Culture, through SCA, has pioneered new measures for Site Management. This includes (i) launching a number of historical sites protection and enhancement projects (in Luxor, Aswan, the Pyramids area and North shore and (ii) creating a Site Management Center in Luxor. The first activity of this Center has been to train inspectors and the ongoing preparation of National guidelines for Site Management to be followed by nationwide Cultural Heritage Projects.

In this context, the Site Management Planning for Wīdān Al Faras should assure close collaboration with this Center and eventually use trained inspectors to take part in the preparation and implementation of the Plan, without excluding the training and involvement of other inspectors from Fayoum.

2.6 <u>Setting a transparent, protective and efficient legal status for Wīdān Al</u> Faras site

Wīdān AI Faras has an ambiguous registration category which affects its protection status and its efficiency. The ambiguity resides in the fact that the site has both a historical and natural high importance.

The exact legal status of the site's ownership and protection level, either owned or under the protection of SCA, registered or in course of registration, should be established prior to proposing final Site Management measures.

Although attempts and steps to set a clear status and subsequent implemented protection measures for the site have been already taken by SCA, these should be reviewed and assessed, prior to eventually consolidating the legal status and proposing advanced measures for full protection.

Currently, the site is part of the Qarun protected area and the UNESCO registration request has been submitted by SCA.

2.7 Undertaking priority urgent actions before long term interventions

Legal and illegal systematic quarrying activities; increasing uncontrolled visitation to the site; and destruction of archeological remains are main threats that suggest that there is a need to take rapid emergency measures to protect the site. This has been confirmed by primary risk analysis conducted through SCA for Wīdān Al Faras and ongoing for Madinet Madi and other parts in Fayoum,

In this context, physical, legal, and organizational measures to control both quarry and site visitation, need to be rapidly taken without waiting for the design and implementation of an all-inclusive Site Management Plan.

2.8 Applying international conventions guidelines

The SMP preparation has to follow systematic steps that are in line with national guidelines, as well as the guidelines of international conventions ratified by Egypt and that are binding and informative.

Accordance with the steps proposed by the world Heritage Convention and its Operational guidelines for implementation would at a later stage allow for applying and eventually including Wīdān Al Faras and surrounding area and Sites on the World Heritage List. Moreover, following these guidelines would help benefiting from technical or financial assistance available through the convention to list the sites and to prepare Sites Management Plan for them.

2.9 Defining actors and executive agencies

The plan should clearly define the administrations and organization and individuals who would prepare, approve, make official, implement, then assure the long term monitoring of the Site Management Plan, and the maintenance of the site. The remoteness of Wīdān AL Faras and its location between two governorates should be carefully considered, along with long term sustainable administration needs.

Measures regarding training, capacity building would assure the creation of a professional team within a legally and officially recognized institutional framework. The implication of the newly created Quarries department in SCA would help create an incubator to prepare the professional team and to house part of the stakeholders of the project.

A training strategy and program should be part of the Site Management Plan.

2.10 <u>Involving stakeholders in all steps of preparation, validation and implementation</u> of the Site Management Plan

The participation of relevant stakeholders should be guaranteed as an integrated part of the SMP. This would assure the plan's implementation and sustainability as well as its possible replication.

Coherent and analytically justified classification of stakeholders and their level/area of participation should be done. In addition to the agency that would legally prepare, adopt and implement the plan, other authorities that would be indirectly involved should be identified and participate in the conceptualization prior to their approval for the Site Management Concepts.

Chiefly identified stakeholders are SCA Central Management; EEAA; the inspectorate; the Qarun protected area administration in Fayoum, SCA Site Management Center in Luxor; the Governorates of Fayoum and Giza; the Quarrying companies and archaeological missions.

2.11 Establishing extended site boundaries for Wīdān AL Faras

Considering that Wīdān Al Faras is in proximity of other historical sites and a number of plans for both archeological and environmental resources management are currently being developed, the boundaries of area covered by the SMP should not be limited to the direct adjacent zone of the Site, but rather extended, as primarily (but not finally) proposed in the attached map.

An action taken by EEAA that lead to the extension of the limits of Qarun protected area to Wīdān Al Faras

2.12 Using GIS and advanced technical tools

A number of maps that are part of GIS development through other QuarryScapes project component where prepared. These maps should be collected and used. Besides GIS and linked tools (such as Satellite images and mapping analysis), the use of advanced informatics in the preparation of a SMP should be assured. This would include GPS, database analysis, design and drawing simulation Software.

For the added value of the GIS to make it as a common decision making tool, the modality of information exchange through some GIS database layers should be examined between the main stakeholders involved into the management of the site. This will enable data and information sharing ensuring sustainable actions.

2.13 Maintenance and Monitoring

As Site Management is an ongoing process of protection, development and maintenance, the actions prescribed in the Site Management Plan for Wīdān Al Faras must be regularly monitored to inspect progress and ensure that work is proceeding according to this plan. Typically, a site management plan must be revised every 5 years to put the plan on course.

A system for regular data collection should be proposed as part of the site management plan.

2.14 Systematic steps and content for the SMP

The following content and sequence reflect basic methodology in preparing a SMP:

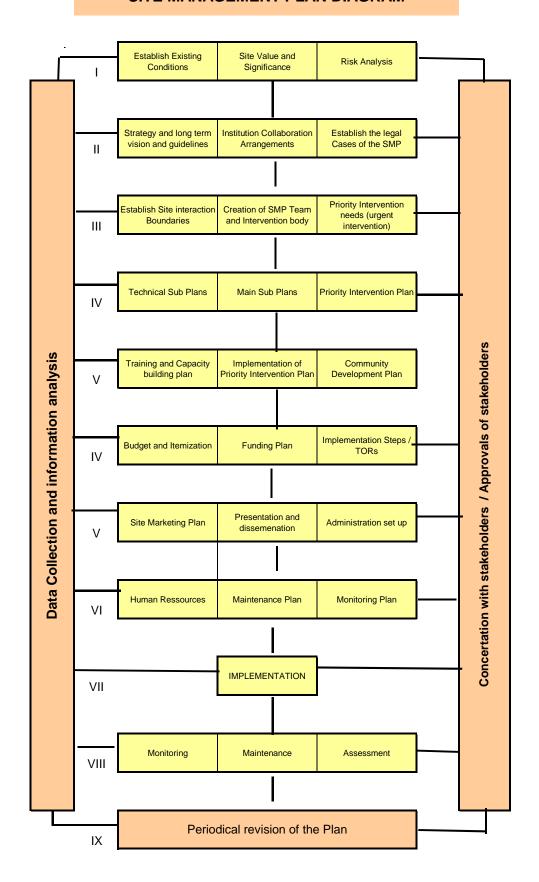
- Conduct continuous documentation and data collection: including maps and
 photographic accounts in the start and along each step of the SMP preparation. A simple
 data collection sheet should be provided into the SMP as well as a training plan to use
 this sheet by people on the field. `
- **Establish existing conditions:** Collected documents and data are assessed to establish existing site's physical and related socio-economic conditions.

Physical conditions include the site's archaeological status, history, state of preservation, threats and risks, buffer zones, accesses, land uses, site's surroundings, accesses and boundaries, visitation data, and all other conditions linked to a foreseen intervention as part of the SMP, such as rising sub soil water level.

Socio-economic conditions and protection status, include institutional roles in site management, policies, stakeholders, missions' data, population, organization of local

- communities, laws and their efficiency and enforcement levels, and all aspects related to the site's legal status, such as ownership, official documents, legal limits and intrusions.
- Justify Wīdān Al Faras Value and Significance: The value and significance of the site
 establish the reasons why a site should be protected and sustained.
- Set up Planning vision and strategies: strategies adopted and long term objectives of the SMP, as summarized further in this text for Wīdān Al Faras
- Conduct risk analysis and determine prioritized needs: Risk analysis, as part of
 existing conditions analysis will determine and set the programming of urgent and priority
 interventions.
- Prepare Main sub Plans and Integrated Sub-Plans. These are action plans to take
 towards a specific problem or activities. They include, but are not limited to, Plans for
 restoration and preservation of archaeological remains; Site Visitation, presentation and
 itinerary plan; architectural and construction work plan; site presentation plan: illumination
 plan; marketing plan etc.
 - Main Plans include landscape, land use, architecture, construction and housing plans; community interaction and participation plans; collaboration modalities with Partners and Stakeholders including Institutional and collaboration and training arrangements.
- Establish Legal basis of the SMP and legislative protection. This should be recognized considering that the elaboration and implementation of a SMP should be well en suite authorized; applicable and sanctioned by coherent laws and decrees that assures its validity and factuality of its implementation
- Approve the Comprehensive SMP: Once the bulk of a SMP is prepared, its approval by stakeholders and decision making organizations and actors is essential to assure its implementation.
- Set Implementation modalities and schedule: The plan's implementation modalities
 and execution time table are set, including staff to be involved, job descriptions and
 tendering norms. Budgeting including approved itemized costs linked has to be set for
 each sub-plan.
- **Funding plan:** Funding Plan identify sources and funding institutions. Resources should be secured before and along the implementation.
- Monitoring Plan and quality control standards are set and followed to assure excellent quality of implementation and planning. They cover management administrative norms and assignment, responsibilities of executive teams.
- **Presentation and Dissemination:** The SMP is to be presented for final approval to official and community stakeholders
- **Maintenance Plan:** Once the SMP is implemented, maintenance plan is to be continuously followed and updated taking into account any changes occurred on the site.
- Revision and updating the SMP: A SMP should is a dynamic tool for management and decision making. It should be regularly adapted and revised to face new or more intense threats, new development objectives or to adapt changing conditions. Modalities of revision should be part of the SMP and approved at the same time as for the SMP. Changes could be political, economic, or natural.

SITE MANAGEMENT PLAN DIAGRAM



3. EXISTING CONDITIONS AND SITE ASSESSMENT

3.1 Archaeological and historical facts

The following 3D map of Wīdān Al Faras offers an overall historical view of the site. Yet more data collection, survey and analysis is required to plan and conduct each main and technical sub plans.



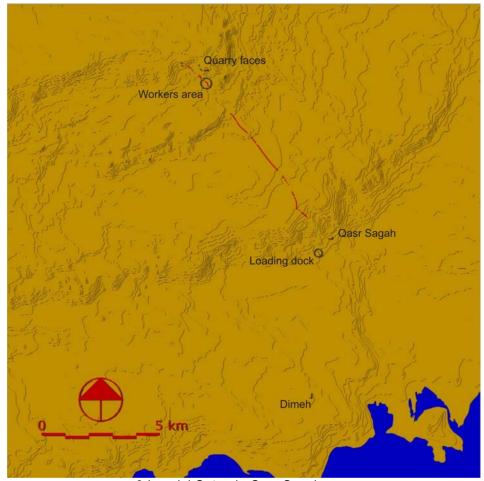
Widan al Faras site : the five main quarrying areas are located around the two mountains seen from the quarrying area

A 3d model of the terrain covering the Widan al Faras area, the Qattrani quarries, the ancient paved road and the loading area near Qasr el Sagha has been made for illustration purposes. The model covers and area of 20 x 20 km. and also includes the ruins of Dimeh as well as a small area of the present lake for reference.

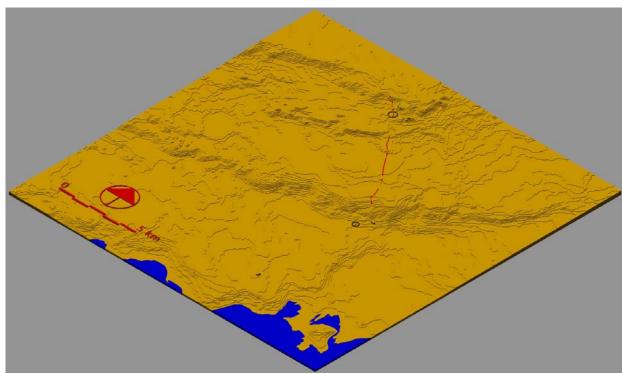
The basis of the model is the current 1:50 000 map from the Egyptian Survey Authority, with contour interval of 10 meters. The contours were manually traced, extruded and assembled using AutoCad, a standard drafting software package.

Registrations made by Bloxham, Storemyr and Heldal 2002-3 have been added showing location of the old quarry faces, the area where the blocks were initially worked, the remains of the ancient paved transport road and the loading docks. Locations of Qasr al Sagha and Dimeh have also been included.

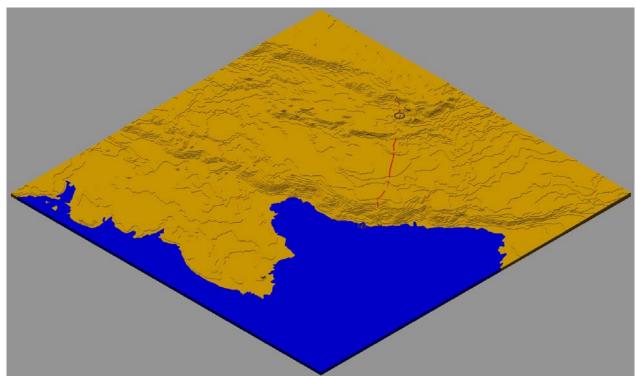
The level of Lake Qaroun (Moeris) has over time fluctuated considerably. The current level of the lake is 46 meters below sea level. During the time of quarrying, the Old Kingdom, 3rd millennium BC, the lake fluctuated with the Nile floods and may have reached up to 20 meters above sea level, i.e. some 60 meters above present level. This is illustrated with the model being "flooded" up to this level, illustrating a possible shoreline at maximum water height.



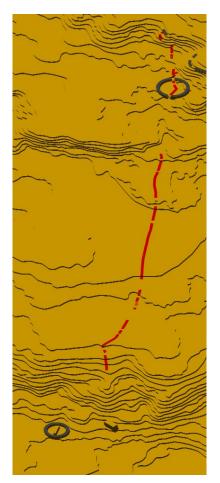
3d model Qatrani - Qasr Sagah area



Axonometric view seen from south east.

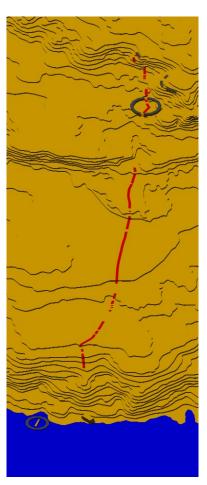


Same view, water level 20 m above sea level



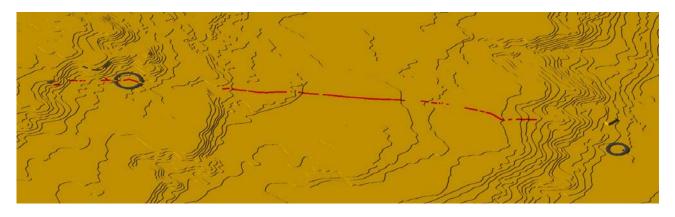
Detail of model from quarry area down to loading dock.

The loading dock area to the left of Qasr al Sagah has been exaggerated to show on the model.

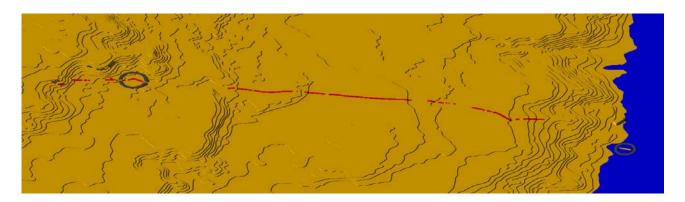


Same detail with water level 20 m above sea level.

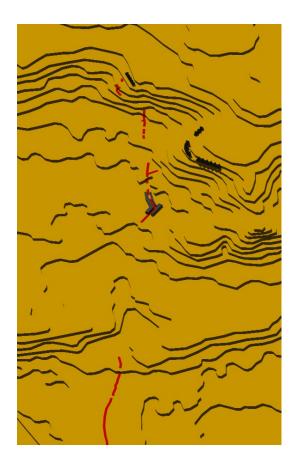
The exaggerated dock comes out of the water. The real level of the dock is ca 12-15 m above sea level. At full flood it would have been covered by water.



Same detail as above seen from south west.



Same detail, flooded.



Detail of the quarry area seen from south east.

Quarry faces are marked with small black triangles. As of 2003 all registered faces were intact. Current mining has destroyed them. Today only the easternmost (last row to right) are in place, but buried beneath rubble dumped from above...

3.2 Infringement and illegal quarrying

Illegal or informal quarrying within the limits established by SCA Amlāk department for the site are common and require control and efficient measures to arrest them. To start with, it is vital to analyze the cycle and administration of quarrying activities and regulating frameworks by the SCA, the Governorates and EEAA regarding the natural protected part of the site. Site boundaries and buffer zone

3.3 Site boundaries and buffer zone

Official boundaries of Wīdān al Faras are not clearly defined by SCA Amlak department. They are primarily identified and marked by EAIS following recommendations of the Archeological mission.

The site is divided into four areas including Qasr Al Sagha Temple; The Eastern Quarry; The Western Quarry; and the Ancient Road. There is no officially set buffer zones for the site, which need to be defined considering that the site is situated within the extended Natural Heritage Protectorate of Lake Qarun and the foreseen Historic World heritage site.

Steps to define the status of the site is necessary to transfer its ownership to the SCA (Amlaak status), or at least under its supervision (Ikhda' status). This should be done interactively with the definition of the status and limits of the World Heritage area and in close collaboration with EEAA.

3.4 Number and profile of visitors

On site observation indicate a very limited level of visitation. Yet, visitors number is rapidly increasing and is (as part of Site Management Plan and the World Heritage Site status) expected to increase.

Typically, small groups of foreign residents pay short visits to the site using four wheel drives vehicles. Effects of vehicles in addition to extensive picking of archeological findings are the most risky factors.

The damaging effect of visitation is clear noting the fragility of its remains. Control of numbers and itinerary would have to consider such vulnerability as discussed further in this document.

Visits seem to halt in Qasr Al Sagha, where tourists stop for a rest or a camp out for to two hours, noting that the visit is part of a tour of other main surrounding sites. In general, visitors show respect for the monument, but they commonly smoke and eat within or near the temple and sit on stone ledges.



Qasr Al Sagha is the oldest temple in the Quarrying area which needs conservation and restoration measures

No signage is available to the visitors on site. Therefore, they are obliged to rely on books for interpretation.

3.5 Maps and GIS

A number of maps from different scales and dates of production were collected, scanned and rectified as part of QuarryScapes project and in preparation of the World Heritage Site file. Some additional GIS applications would be required to prepare SMP executive drawings.

3.6 Institutional and administration development needs

Currently, there is no clear management structure that could be effectively responsible for conducting site management planning and concrete actions for both the site and Fayoum. Institutional and administrative development conditions must be taken into consideration in preparing the plan and in establishing its feasibility and sustainability, both at EEAA, SCA, Governorate and quarrying companies' levels. This is part of a general need to help formulate and adopt clear strategies, capacity building programs, systematic planning and coordinated projects within SCA and jointly with the main stakeholders.

Considering that the SMP is part of such a vision, it is crucial to create a clear and capable administrative organization that would prepare and implement it and assure its sustainability. A chart and responsibilities should be part of the SMP.

3.7 Stakeholders

Main stakeholders and their roles in the preparation, approval and implementation of the Site Management Plan are summarized in the following table:

| SCA Central | - Approval of the SMP |
|---|--|
| Management and PC SCA Permanent Committee | - Approval of Financing |
| EEAA: Egyptian | - Approval of the SMP |
| Environmental Affairs Agency | - Approval of Financing |
| , mail or going | Both the EEAA and the Ministry of State for Environmental Affairs should be associated to the SMP on a strategic, planning and implementation levels bearing in mind that Wīdān al Faras has a dual value and significance; both historical and natural, and, as discussed further, is to be part of a dually protected World Heritage area. |
| SCA inspectorate in | - Approval of SMP |
| Fayoum and Giza | - Follow up implementation work |
| | - Maintenance and monitoring |
| Qarun Protected area | - Implementation and monitoring of the SMP |
| SCA Site Management | Integrate the SMP as part of national effort of the Site Management Planning |
| Center in Luxor | - Integrate the Plan as part of the World Heritage Site plan of Fayoum. |
| The Governorates | - Partnership in implementing the Plan |
| of Fayoum, and Giza | - Partnership in marketing the Site |
| | Integrating the SMP into the Governorate expansion and tourism development plans |
| | Although Wīdān Al Faras is officially (and currently) located within the boundaries of Fayoum Governorate, yet the site could change location status from one governorate to the other. For this, it is essential in order to assure that protection measures are applied without overlapping or conflict of implementation, that both Governorates be involved) |
| Quarrying companies | Acting and potentially active quarrying companies on the site should be involved. Current conflict of interest should be solved as part of the planning approval process. This would include joined protection measures and promotion of durable activities that assure the preservation of archaeological remains. |
| QS: QuarryScapes project | QS is responsible for preparing the SMP' concepts and can be involved in preparing a final SMP and be involved init. |

| Archaeological missions | - The association between SCA and international archaeological mission on site is a crucial need to further develop the Plan, namely in its archeological and documentation part and for the transfer of know how (including direct training)to SCA personnel through the finalization and implementation of the SMP. |
|-------------------------|---|
| ICCROM, ICOMOS | Approval of the SMP as part of the Site Management Plan for the |
| UNESCO | extended World Heritage Site in Fayoum |

4. ASSESSMENT OF WĪDĀN AL FARAS SIGNIFICANCE

Hierarchal classification of values as basis for prioritising conservation and site value enhancement interventions:

- Exceptional value: when the value is related to a unique, extremely rare, well preserved object or remains.
- Considerable value: when the value shares exceptional characteristics with limited number of sites or monuments.
- **Some value:** when the value has no great importance for the stakeholders and/or when it is shared with other sites or monuments.
- **Little value:** when the value has lost of its authenticity or is of secondary importance comparing to the conservation and preservation constraints.

A statement of significance for the site is discussed in section 17: Literature Review. It demonstrated that the site has an exceptional to a very considerable Historic, Archaeological and Educational Value, as well as a unique Aesthetic Value due to the variety of its entire landscape as part of the Fayoum depression and the extension of its use from prehistory to the Coptic and Islamic periods.

5. RISK ANALYSIS

5.1 Background studies and overall risks

A risk analysis study entitled "Egypt risk monitoring and assessment of threats" has been prepared as part of QuarryScapes Project (WP5) by Per Storemyr, from Geological Survey of Norway. The findings and conclusion of this study attached to this document must be taken into consideration in developing advanced Risk Analysis for Widan Al Faras.

The study objective is to recommend realistic tools for the analysis of human and natural threats, as pertinent to ancient quarries; and to promote long-term methodical monitoring based on clear indicators and through field checks and satellite imagery analysis.

The direct aim is to measure, not only separated archaeological features, but the physical risks that may affect the entire quarry landscape. In addition, it has to thorough assessment of the initial causes of the threats, all with a view to protect and preserve quarry landscapes.

Overall physical risks on quarries in, and as it may apply to Egypt are identified as: Building development/expansion; industrial development, including modern quarrying; agricultural development; Infrastructure associated works; Theft and vandalism, uncontrolled tourism; natural hazards, structural decay, erosion and weathering. Globally, it identifies the main causes as conducting modern development without due consideration of cultural heritage values and that Cultural heritage is too rarely considered in the urban and landscape planning process

Three case study areas (under study by Bloxam, Heldal, Storemyr & Kelany since before 2001) are also being researched including the Aswan quarry landscape; the Northern Fayoum quarry landscape and Chephren's Quarry.

In the case of Widan Al Faras, a number of facts currently cause or are subject to cause (on the long run) damage to the extended site, including:

- The delayed UNESCO registration and protection status of the site and more specifically in the quarry area.
- The development plans in both Fayoum and Giza Governorate disregard the existence and the potential of the site.
- The authorities are reluctant to end illegal and informal quarrying or relocate modern quarrying away from ancient quarries
- Unclear boundaries borders of the extended site and of the fragile quarry landscape.
- Lack of awareness among quarrying companies and governmental authorities of the value and significance of the site
- Absence of a comprehensive site management plan for the World Heritage site which integrates Widan Al Faras.
- Lack of efficient monitoring and conservation actions.
- Lack of coordination between SCA, planning agencies, local authorities and international projects in the area.

Currently, from among the above, the most immediate hazards and risks on the site are modern quarrying, effect of increased tourism and neglect with complete lack of conservation maintenance.

5.2 Hazard from modern quarrying:

The unclear legal ownership, right of exploitation and protection level of the quarry area incite quarrying right within the pharaoh site

Risks:

 Illegal or informal quarrying activities within the site extensively cause destruction and downgrade the site's values.

5.3 Hazard from Visitation

As discussed in section 3.4, on-site observation indicates a limited level of visitation. Yet, their number is rapidly increasing and a control of access and itinerary would have to be considered without delay.

Risks:

- Among the most damage resulting from visitors is picking the remains, which amount is decreasing continuously.
- In Qasr al Sagha, visitors sit on wall bases and touch remains, gradually eroding the stone. Littering occurs both within the site and immediately outside.
- The negative impact of tourists touring the site is largely caused by their 4x4 vehicles, which lead to destruction of the remains.

5.4 <u>Hazard from Neglect and Lack of Conservation</u>

Risks:

- Lack of conservation actions accelerate decay of the remains (see section 8: conservation maintenance)
- Insufficient protection actions accelerate the theft and picking of remains in quarrying camps.

5.5 Main Risk Table:

The table below presents the level of Vulnerability and Exposure for specific areas of the extended site.

| PARTICULARLY AFFECTED AREAS | EXPOSURE | VULNERABILIT Y | RISK | HAZARD |
|---|------------------------------|-------------------|--|--------------------------------|
| Ancient quarries | High | High | Destruction of quarry sites | Illegal and informal quarrying |
| Areas in outskirts of the Temple and Road | Low and expected to increase | Medium | Destruction and disappearance of remains | Theft and picking of remains |
| The Road | Medium | Medium | Decay of structures and remains | Lack of conservation |
| Areas in outskirts of the Temple, the Road and the extended site | Medium | Medium | Decay and cracks and pollution | Traffic |
| Temple and Road | Medium | Medium | Wear and Tear | Touching and littering |

5.6 Priority of intervention

Although closer inspection of risk factors should be conducted to prepare final mitigation plans, the previous basic risk assessment indicates that needed actions by order of priority are:

- Establishing clear legal status and protected borders for the site to primarily control illegal and informal quarrying
- Take protection actions to control theft and picking of remains.
- Raise capacity of the involved agencies and staff to set regular conservation maintenance actions
- Limit traffic and number and itinerary of vehicles
- Raise awareness of the site's value and set means to control touching and littering by visitors.

6. FUTURE SITE LIMITS, BOUNDARIES AND BUFFER ZONES

6.1 <u>Determination of site boundaries</u>

The attached map shows the limits of the site as established by SCA following discussions with QuarryScapes project and EAIS department. Buffer zones of the site still remain to be delimited. Within this zone, a set of regulations are to be developed, legally approved and applied.

The buffer zones, an integral part of the Widan Al Faras extended site, should be defined according to a number of criteria as follows:

- Legal boundaries of the site should be officially set and approved by SCA Amlāk, department.
- Limits of natural protected area as set by EEAA.
- Proximity and link to other adjacent archeological sites
- The limits of threat effects and the need for urgent protection and integrated risk control measures.
- The proposed itineraries of visitation and circulation around the site.
- The extension of the site's landscape views and its landscape.
- Widan Al Faras unity as part of an extended World Heritage Site that is to be defined.

6.2 Boundaries levels

Based on the above criteria, three boundaries levels are to be set:

- Area One includes SCA directly controlled land (official limits and status to be set) as shown in MAP 4 which includes four sub areas: (Qasr Al Sagha temple; The Eastern Quarry; The Western Quarry; and the leading road), plus the buffer zone that needs to be identified.
- Area Two includes area One as integrated to an extended within Lake Qarun Natural Protectorate. This entails coordination and collaboration with EEAA to set the exact modalities of combined protection and management.
- Area Three includes Area Two as integrated into the further extended proposed World Heritage Areas

7. CONSERVATION MAINTENANCE

The objective of conservation maintenance is to program and integrate scheduled maintenance in the form of continuous, periodic and non-aggressive - versus punctual and concentrated - conservation actions

In the case of Widan Al Faras, preventive conservation, practiced by measures that do not act on the structure of the monument or on the site, but rather on the risks caused by surrounding human or environmental factors, should be prescribed. In the case of Widan AL Faras this primarily means prescribing clear Risk Control measures against informal or uncontrolled quarrying.

There is apparently no need of restoration measures on the site. Some form of restoration may be needed to restore the material that forms the structures of the temple or the Road, in order to repair them to solidity conditions that would protect them. Following this, on a long term, with an expected raise of visitation to the site, and considering the fragility of the Road, some form of Maintenance conservation, which purpose is to conserve or maintain the condition that would be re-established or created through physical restoration.

Maintenance conservation should not only include the antiquity and archaeology feature of the site, but also covers the natural aspects that are completely integrated to the site. This would mean prescribing measures to control ways and types of access and visitation behavior related to tourism. All other introduced elements on the site such as panels, signalization and rest points should also be included in the conservation maintenance programming.



Oldest paved road in the world that was used by the Pharaohs for basalt transportation from Fayoum to Giza Pyramids through Moeris lake



8. ITINERARY AND CONTROL OF VISITORS' IMPACT

The objective is to minimize the negative impact on the structures and archeological remains caused by visitors, while facilitating and making the visit enjoyable.

The purpose of the Internal Site Visitation Plan is to reorganize the itinerary within the temple and its related signage, urban furniture, flooring and illumination. This is to be done in synergy, with the external visitation, architectural and landscaping treatments.

8.1 **Guiding concepts**

The expected continuous increase in visitor numbers should be taken into consideration.

- The itinerary should be flexible, easy to identify and to follow by visitors. It should facilitate the work of the tour guides and avoid a situation by which it would compete with their role
- Different itineraries for different types of visitors should be prescribed (mass tourism versus interested or specialized tourism)
- Itinerary should avoid direct proximity to the temple, the ancient paved road and within the antique quarry.
- Conditions for dispersed remains preservation should be considered.
- Any facilities built as part of the Visitation Plans should be minimized without visual impact on the site.
- Tourist police must be informed about need to guide tourists if necessary and to proper behavior on the site to set an example for visitors and guides. This will require closer cooperation between the police and the site responsible (SCA, EEAA, Protectorate).
- Ensure that both guides and visitors are aware of the rules of conduct on the site. The rules should be clearly displayed in convenient spots along the trail.
- SCA, EEAA and police staff should be properly trained and consequently paid for their
 work to ensure they are completely involved and motivated to combat negative impacts
 caused by visitors. The staff should have the means and skills to control any negative
 action caused by the visitors.

8.2 Controlling Visitors Impact

- Visitation should be managed in a way that relieves pressure on the most vulnerable sectors and remains.
- Visitors sitting on monuments should be forbidden and alternative resting points should be accommodated.
- Climbing on monuments or walking across vulnerable remains should be forbidden and restricted through indication of authorized walking trails.
- Inform visitors of the importance of respecting the monuments and of the rules of conduct during the visit.
- The proposed itinerary should be integrated into an overall visitation of nearby sites in the area.
- Thematic routings, mainly related to quarrying, are a possibility but these should then be
 explained with the help of special brochures or guides that could be sold or leased to
 the visitors at the entrance. On a longer run, the same should be available for a special
 route for school children.
- While organizing the itinerary risks and negative impact of visitors should be reduced, along with enhancement of the visit's attraction and the site's value and significance.

- Survey and statistic analysis of flow and traffic should be prepared prior to the finalization of site visitation plan
- Traffic adjacent to the temple should be decreased and the creation of a pedestrian only should be taken in consideration.
- Proposed architectural programming and design, building regulations, illumination and urban furniture treatment would all be in synergy with the visitation's recommendations.

9. SIGNAGE AND PANELS

Signage and panels add pleasure, enhance the value of the visit, and encourage pre-designed routes in order to minimize negative impact.

9.1 Guiding Concepts

- As part of the SMP, placement of panels, their content and layout throughout the area should be proposed.
- The panels and texts should be visible, easy to read and comprehend. They should cover factual and articulated information, in several languages.
- Use friendly material, scale, color and design that are in harmony with the site without disturbing its physical and visual identity. Lettering (size, shape and fonts) should be clear enough to allow elderly visitors to read at a distance, and to facilitate reading by children.
- Panels should be located within the flow of the itinerary. They should not obstruct the views, but be an adjunct to them..
- Panels' material should be endurable, proof protected against sun, harsh climate, dust, touching, tagging and general vandalism, and should be easy to clean and maintain.
- The panels, including the text should highlight the personality of the area namely its brand features. The architectural of the temple; the oldest road in the world; the basalt quarries; the landscape; the association of the site with the natural environment and the lake.....
- The length of the panels is of major concern. Basic information needs to be provided and should be quickly accessible, but there should also be an opportunity for someone wanting to know more to gain this information.
- Efforts should be taken to incorporate the entire scope of scientific research conducted and archaeological material found during excavations in the site.
- Panels should include:
 - A plan of the site temple marking important adjacent monuments and a "you are here" dot. The proposed routing developed could be shown on every plan.
 - o A relief or other illustration, relevant to the panel in question.
 - Logos of sponsors should appear on the panels.
- The fact that the area is a World Heritage Site should be actively stressed. Adding the World Heritage logo on each panel would be a good way to integrate this notion.
- The texts should be in English and Arabic but on the long run, translation should be available in other languages in the form of brochures or leaflets handed out by the entrance or attached to the panels.

10. URBAN FURNITURE & ARCHITECTURAL ELEMENTS PLAN

A number of elements need to be designed, manufactured and installed for the comfort of visitors and staff working on site.

- Urban furniture, in a minimum number and in a minimalist design, installed near the
 visitors' itinerary would include: benches, waste bins, eventually shades, and light
 fences. Elements to facilitate routing and access (floor treatment elements, may be
 installed at a longer term for indication).
- Urban furniture design installation interacts with itineraries. Quantity and type would be limited noting that visitors' numbers is currently limited.
- In order to assure protection of archeological elements, direct proximity of urban furniture to remains should be avoided.
- Urban furniture material should be local, natural, endurable and proof protected against sun, harsh climate, dust, touching and vandalism;
- It should not obstruct the views, but enhance value, and should adopt a friendly scale, adapted color and design to assure harmony with the site without disturbing its artistic, physical and visual identity.
- The location of new elements (rest point for inspectors and restroom for visitors) should be as discreet as possible as they should not disturb the harmony of the site neither block its panorama and views. Architectural design should be harmonious, and adapted to the nature and landscape of the site
- Buildings should be easy to maintain, solid and adapted to the local conditions

11. SITE MARKETING PLAN

The objective is to propose a strategy, approaches and tools that guide coherent marketing actions aimed at an effective and sustainable development and non damaging exploitation of Widan Al Faras.

The Strategy would be closely linked to crafting a new identity for Widan Al Faras. A branding campaign could have a positive effect on all the sites of the area.

The potential of an integrated brand, destination and campaign for the whole area of Fayoum should therefore be exploited. This translates into the joint promotion under the banner of 'World Heritage Site" that needs to be considered and linked to Widan Al Faras.

The marketing plan should be constructed around several integrated actions and principles:

- Increasing awareness, understanding and enjoyment of the special character of the site amongst enterprises, visitors and eventually educational groups.
- Helping to conserve the site through effective visitor management and raising support for its conservation from visitors.
- Enabling and encouraging access to, and appreciation of the whole site in ways which
 are sensitive to the natural environment, mainly to promote the access by foot to the
 fragile remains.

Marketing tools

Considering that marketing Widan Al Faras as part of the marketing of Fayoum, it should be considered in its entire perspective, including the natural and functional surroundings, in order to communicate its environmental values, its human history and culture.

- Develop link to the marketing of the World Heritage Site
- Develop brand/logo for Widan Al Faras.
- Communicate the World Heritage link-status more effectively, through use of the emblem and a tagline (brand promise).
- Explore the possibility of preparing a house style guide.
- Increasing people's familiarity; and appreciation and engaging them the need to preserve the site and its fragility.
- Participating in tourist agents' exhibitions; in congresses, meetings and seminars of specific tourist segments and producing electronic audio-visual media, all as linked to Fayoum promotion.

Creating important events such as the Open monuments day

Once a year on a special day open **Fayoum** sites to the public. Visits will be free of charge. In and around those sites many events are displayed such as

- Information about the history of the site
- Information about the natural importance and the protected area.
- Guided tours
- Demonstrations of quarries craft
- Restoration practice, activities for children offered to the public.

Though no longer considered an innovative marketing medium, a visitor-friendly website offers the opportunity to promote the site worldwide at a reasonable cost. Both Fayoum and Widan Al Faras can have their linked tourism brand and linked website.

Improving visitors' orientation in the area:

- Develop displays and maps in Tourist Information Centers.
- Develop thematic routes around the site.

Promoting overseas markets

- Develop joint marketing of Fayoum / Widan Al Faras within international World Heritage Sites promotional tools (websites; publications).
- Create Site friends association (both at national and international levels): Members of "Friends of the Site" grouping believe in the mission of the association, and possess a positive - free of charge - attitude toward the site and its related safeguard programs.

Educational programs

- Co-operation with schools: "junior archaeology", namely SCA schools in the Egyptian Museum
- Promote volunteer work at the site (waste control, collection)
- Produce a flyer and a Kids' Guide and conduct learning workshops.
- Working on themes (quarries)
- Finding a "partner site" in attracting visitors to the area (Fayoum);

Brochure for Widan Al Faras

As part of the development of the SMP, a brochure should be prepared, to be made available for free or for a nominal amount at the entrance to the site. Initially, English and an Arabic version will be developed. The advantage of charging for the brochure (however small), is that this will significantly minimize the risk of littering and waste of the product and there is a greater chance that tourists will actually read the information made available. A small stand by the entrance could be used for the sale/distribution of the brochure. The brochure should include:

- Text with natural and historical information
- Plan of site, with suggested routes and itineraries
- Illustrations of the site elements
- Logos of contributors
- Small info box on respect of the World Heritage and protected Area as a whole (no littering, no smoking, no picking)

The main points in the text of the brochure should include:

- Date and builder, function of site and sub-sites.
- Who were the builders? Important events during their reign
- Main function of a mortuary temple (economic, social and religious importance)
- The site as part of the extended World Heritage Site and natural protected area.

12. IMPLEMENTATION PLAN

The attached "matrix and scheduling for the complete site management plan" presents actions to take towards the implementation of the whole SMP, as it is presented in this document.

The purpose is to provide a methodology of planning the implementation rather than providing a detailed implementation plan, which would be developed upon the preparation of the final comprehensive SMP

| OVERALL WORKPLAN MATRIX: SITE MANAGEMENT PLAN | l FC | R V | /ID/ | AN A | AL F | AR | AS | | | | | | | | | |
|--|-------|-------|-------|--------|------|-------|------|-------|------|--------|-------|-----|------|------|-----|----------|
| QUARRYSCAPE PROJECT WP5 | | | | | | | | | | | | | | | | |
| SECTIONS 1 to 15 | | | | ent of | | ievei | ment | of re | sult | : To | | | | | | |
| Indicators: Cnceptaul Site Management Plan Developed to Detailed Final | esign | | | | | | | | | | | | | | | |
| Qualitative: High quality of reporting linked to proven work execution Quantitative: Steps in the design and execution of the plan are achieved a | nd a | ccoc | nod. | | | | Sou | ırces | of v | erific | ation | 1: | | | | |
| Months | | pera | | al | 1 | 2 | 3 | 10 | 11 | 12 | | | | | | |
| MOHUIS | Re | espor | nsibi | lity | Ŀ | _ | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | - | 12 |
| TIMETABLES | | | | | Oct | Nov | Dec | Jan | Fev | Mar | Apr | May | June | july | Aug | Sept |
| RESULT 1: DOCUMENTATION AND DATA COLLECTION ACHIEVED | | | | | | | | | | | | | | | | |
| Background studies, plans and maps gathered; sources, bibliographies and stakeholders identified | | | | | | | | | | | | | | | | |
| RESULT 2: LONG TERM VISION AND STRATEGY SET | | | | | | | | | | | | | | | | |
| 2.1 Strategic guidelines report produced, pesented and approved by stakeholders | | | | | | | | | | | | | | | | |
| 2.3 Preparatory adminsitrative and work organization steps taken | | | | | | | | | | | | | | | | |
| RESULT 3: EXISTING CONDITIONS AND SITE ASSESSED | | | | | | | | | | | | | | | | |
| Stakeholders' role, current legal framework (legal problems and legal protection) aassessed and linked to SCA and Governorates cultural heritage policies. | | | | | | | | | | | | | | | | |
| 3.2 Site profile sheet prepared and;e condition, current boundaries and buffer zone inspected | | | | | | | | | | | | | | | | |
| RESULT 4: Widan AI Faras VALUE AND SIGNIFIGANCE ASSESSED | | | | | | | | | | | | | | | | |
| Report on value and significance finalized and linked to the extented site | | | | | | | | | | | | | | | | |
| RESULT 5 RISK ANALYSIS CONDUCTED | | | | | | | | | | | | | | | | |
| 5.1 Review and finalization of criteria and methodology of risk assessment previously prepared | | | | | | | | | | | | | | | | |
| 5.2 Risk analysis report prepared Quarrying modalities assessed | | | | | | | | | | | | | | | | |
| RESULT 6: PRIORITY INTERVENTION JUSTIFIED | | | | | | | | | | | | | | | | |
| 6.1 Report justifying priority and need of intervention prepared | | | | | | | | | | | | | | | | |
| RESULT 7: PROJECTED SITE LIMITS, BOUNDARIES AND BUFFER ZONES SET | | | | | | | | | | | | | | | | |
| 7.1 Final maps and boundaries set; approved by stakeholders and legal aspects set | | | | | | | | | | | | | | | | |
| 7.2 Buffer zone of the site in coordination with SCA central and local office | | | | | | | | | | | | | | | | |
| 7.3 Steps to officially instaure the buffer zone identified; Legal requirements and regulations to maintain the buffer zone studied | | | | | | | | | | | | | | | | |
| 7.4 Official steps to officialze status of buffer zone started and set | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| RESULT 8 CONSERVATION MAINTENACE | L | | | | L | L | | | L | | L | | | | L | |
| 8.1 Priority conservation measures identified and assessed, including measures to arrest deterioration of remains | | | | | | | | | | | | | | | | |
| 8.2 Effects of visitation plan on conservation assessed; control | | | | | | | | | | | | | | | | |
| measures prescribed and prioritized 8.3 Capacity building and trainings designed and conducted (in relation to the need to raise conservation capacity of SCA on this site) | | | | | | | | | | | | | | | | |
| Workshops and activities to increase awareness of risks assessed and potentially proposed to SCA | | | | | | | | | | | | | | | | |
| 8.5 Leaflets or posters of risks and conservation measures potentially | | | | | | | | | | | | | | | | \vdash |
| designed and produced (no collection of material, No walking on remains etc) | | | | | | | | | | | | | | | | |
| RESULT 9 Itenirary and control of visitors | | | | | | | | | | | | | | | | |
| 9.1 Analysis of flow and type of visitors conducted; Means to control tourism impact on site assessed and integrated | | | | | | | | | | | | | | | | |
| 9.2 Visitation plan developed, showing exact positioning of the panels and signage. | | | | | | | | | | | | | | | | |
| 9.3 Plan discussed and approved by SCA | | | | | | | | | | | | | | | | |
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| RESULT 10 Signage and Panels | | | | | | | | | | | |
| 10.1 Signage and panels location finalized | | | | | | | | | | | |
| 10.2 Signage and Panels design and texts developed | | | | | | | | | | | |
| 10.3 Material, lettering and other details selected and shop drawings and specs prepared | | | | | | | | | | | |
| 10.4 Signage and panels design discussed and approved by SCA | | | | | | | | | | | |
| 10.5 Manufacturers selected and / or work tender | | | | | | | | | | | |
| 10.6 Unit installed inside and outside the temple | | | | | | | | | | | |
| RESULT 11. Architecture Elements and their Design | | | | | | | | | | | |
| 11.1 Architectre programming for elements (potentially W.C. and rest point or visitors center) | | | | | | | | | | | |
| 11.2 programming approved by SCA (Legal, admnsitrative and financi feasibility set) | 1 | | | | | | | | | | |
| 11.3 Final design prepared for each element | | | | | | | | | | | |
| 11.4 Final design approved by stakeholders | | | | | | | | | | | |
| 11.5 Specifications, shop drawings and budgeting prepared | | | | | | | | | | | |
| 11.6 Implementation; execution work ordered or tendered | | | | | | | | | | | |
| 11.7 Implementation team and norms set along implementation work | | | | | | | | | | | |
| RESULT 12 Urban furniture and built units | | | | | | | | | | | |
| 12.1 Design, shop drawings and specifications prepared for seating points and bins according to visitation flow prepared and approved by SCA | | | | | | | | | | | |
| 12.2 Manufacturers selected and / or tendered | | | | | | | | | | | |
| 12.3 Unit installed | | | | | | | | | | | |
| RESULT 13. Marketing Plan | | | | | | | | | | | |
| 13.1 Market development research and studies prepared | | | | | | | | | | | |
| 13.2 Prescribe promotional tools, as related to promoting a stronger brand for Fayyoum | | | | | | | | | | I | |
| 13.4 Prepare plans for (a) site logo; (b) Raising awareness in the local market; (c) Promotion tools (d) Creating site related events | l | | | | | | | | | | |
| 13.4 Prescribe Promotional tools for interactively with the promotion of Fayyoum | | | | | | | | | | | |

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ANNEX 1: WIDAN AL FARAS LITERATURE

Literature Review

Conservation of Ancient Stone Quarry Landscapes in the Eastern Mediterranean





Work Package 6: Egypt Conservation Concept

North South Consultants Exchange



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Summary

This literature review provides an outline of the archaeology and history of the basalt quarries and the surrounding landscape at Widan el-Faras in northern al-Fayoum governorate, Egypt. The geology is described along with current risks and threats affecting the archaeological and natural remains. In addition, a review of the main stakeholders and the interests of various national and international groups are provided as a background study to develop a site management concept and plan for the site.

1. Site Description

1.1 Statement of significance

The entire landscape of the Fayoum depression encompasses millennia of human activity, with remains from the pre-dynastic to the Coptic and Islamic periods. It is famous for its Graeco-Roman and early Christian settlements, the large numbers of papyrus found here and of course the Fayoum portraits, early Roman period mummy portraits showing a blend of Ancient Egyptian and Classical influences. Along the fertile shores of Lake Moeris some of the first agricultural communities in the world developed, and the remains of these villages are key sites in the archaeology of early Egypt. The natural landscape is equally important, with fossilised remains of fauna and flora showing the evolution of early mammals and sea creatures.

The Widan el-Faras area lies in the northern part of the Fayoum depression and represents an important part of the history of the Fayoum, and of ancient Egypt. The basalt quarries themselves, the oldest paved road in the world, several smaller flint and limestone extraction sites and habitation sites together form an industrial quarry landscape of great importance.

Hundreds of quarries are known and documented in Egypt, but Widan el-Faras is exceptional in being one of the few old hard stone quarries known. Umm es-Sawwan is likewise unique and constitutes the only known quarry for alabaster gypsum in the country. Landscape archaeology in Egypt is often limited because of modern activities and destruction, and it is rare to have access to a large area where the interplay between historical features all related to one activity in the landscape can be studied, rather than mere isolated sites.

The site is currently being threatened by a number of man-made factors, chiefly the on-going quarrying activities which has already destroyed large parts of the Old Kingdom quarry remains on top of the plateau. Increased traffic as a result of modern quarrying and tourism in the area is further damaging remains in the vicinity such as the paved road and smaller quarries and camp sites.

Today, there is a need to integrate the known human activities and the historical remains of the northern desert with site management of the Fayoum depression as a whole. Current destructive exploitation of the area should be stopped, and the protection of the area and its important cultural and natural remains consolidated. As an early stone quarry with associated infrastructure, the archaeology of the Widan el-Faras landscape is not only relevant to the history of ancient Egypt, but to the development of stone technologies throughout the world. There is still much to discover in the area regarding prehistoric and pharaonic use of the landscape, and like the famous Wadi el-Hitan (Whale Valley) in the southern part of the Fayoum, the possibility of unearthing important fossils is great.



1.2. Introduction to the site and the Fayoum area

The site – or rather, collection of sites – lie in the northern Fayoum desert about 12 km north of Qasr el-Sagha and approximately 80 km from Cairo. Widan el-Faras, meaning "Ears of the Mare", are two prominent peaks in Gebel Qatrani, a large escarpment capped with basalt flow, where the ancient and modern quarries are located.

Storemyr (2003) has divided the quarry landscape into five different areas:

- 1. East Quarry
- 2. West Quarry
- 3. Basalt block area (previously, "Quarrymen's camp")
- 4. Encampment area
- 5. Ancient paved quarry road from the quarries to Qasr el-Sagha, including the quay area.

In antiquity, the stone was quarried and transported down from the escarpment along the paved road to the quay area near Qasr el-Sagha. From there, it was shipped across the Fayoum and then upriver to the pyramid sites on the western bank of the Nile. The usefulness of basalt as a building stone decreased at the end of the Old Kingdom's Fifth Dynasty as lower levels of Lake Qarun (Lake Moeris in antiquity) made the transport too costly and difficult. From that period onwards, only statuary and smaller reliefs of basalt are known.

In addition to these five main areas, the gypsum quarry at **Umm es-Sawwan** to the northeast should be included within the Widan el-Faras landscape as well. This quarry was worked during the same periods as the basalt quarries, and should not be seen in isolation from other activities in the northern desert as it forms an important part of the history of land use and exploitation.

Fayoum is one of the most historically rich areas of Egypt and the landscape encompasses millennia of human activity, with remains from the pre-dynastic to the Coptic and Islamic periods. The name Fayoum comes from the Coptic *phiom*, referring to Lake Moeris, the large lake which enabled large-scale settlement and exploitation of the area. Without the lake and its rich resources in terms of food and fresh water, occupation of the depression would most likely have been on a scale similar to the other oases in the western desert. Instead, the oasis became the home of some of the earliest agricultural communities in Egypt, and remained an important area for food production throughout the pharaonic period. It was sacred to the crocodile god Sobek, and large settlements, temples and cemeteries from all periods of Egyptian history were established along the lake.

1.3 History of Scientific Research

Early explorations of the Fayoum largely focused on the rich geological and fossilized remains in the area. Fossil vertebrates, including remains of whales, were first described by the geologist Georg Schweinfurth in the 1870's which created a huge interest in the potential of the Western Desert in terms of early mammal development.

Other early investigations include Beadnell's geological survey and the Fayoum expedition of the American Museum in 1907, when the area was extensively searched for fossils (Morgan and Lucas 2002).

The approximate location of the paved road was plotted on a map in the geological survey by Beadnell, and the road was further examined by Caton-Thomson and Gardner in the 1920's and 1930's during their excavations in the northern Fayoum desert. By using motorcar, and not camels, Caton-Thompson and Gardner were able to penetrate further into the desert and stay for longer periods of time than previous explorers. Although Gardner was a geologist,



focus was very much on the archaeological remains in the area and the publications remain scientifically sound today. Apart from the excavations of the prehistoric Fayoum cultures along the lake short, several surveys were undertaken in the wider area and the gypsum quarries at Umm es-Sawwan were located and recorded.

More recent surveys were undertaken by an Argentinean team starting in 1987. Although more focused on the geology of the region, they mapped the road in more detail and discovered some new segments as well as confirmed the existence of ancient quarrying activities on top of the plateau (outlined in Harrell and Bown 1994, Hoffmeier 1993, Cornero et al 2000).

The Middle Kingdom activities around Qasr el-Sagha have been extensively documented (e.g. Arnold and Śliwa) with excavations of the temple, settlements and tombs. Starting from the late 1960's, geological and archaeological surveys along the ancient shorelines of Lake Moeris (including the quay area) have shed new light on the fluctuations of the lake level and the associated prehistoric fauna, flora and human activities (Ginter et al 1979, also Wenke et al 1983, Wendorf 1976).

Although the importance of the basalt quarries and the function of the ancient road has been long known (e.g. Lucas 1930) serious investigation of Widan el-Faras itself did not begin until the early 1990's with geological and archaeological surveys done in collaboration between the Supreme Council of Antiquities (SCA) and the Egyptian Geological Survey and Mining Authorities (EGSMA) (Storemyr, 2003). Several recent overview articles have been published (e.g. Harrell and Bown 1994, Bloxam and Storemyr 2002) and we are now moving towards a clearer understanding of the history of land use and exploitation in the northern Fayoum area as well as more detailed knowledge of the archaeological remains at the quarries themselves.

The latest survey was undertaken during the spring of 2006 as part of the QuarryScapes project. Work concentrated on the quarries along the top of the escarpment, by the encampment area and along the road, as well as by the quay area. Mapping and archaeological documentation and a GPS survey along the paved road were done as part of the overall mapping of the area. During the course of the survey, several smaller flint extraction sites were noted and two man-made cairns by the road were examined. Surface finds were mapped, described and photographed and consisted of Old Kingdom flint tools, diorite pounders and potsherds Storemyr 2006).

Archaeological interest in the quarries of ancient Egypt has a long history, but work has mostly concentrated on the procurement of raw material and transportation, with little interest in the dynamics and histories of the quarry sites themselves. There still exist problems with sourcing different types of stone and extraction techniques. Without inscriptions, a lot of quarry-related activities remain updateable, although significant advances in our knowledge have been made throughout sites in the Nile valley and deserts during the last decades. Recent explorations at Widan el-Faras constitute an important addition to this body of knowledge, not only in relation to ancient Egypt but for the understanding of the development of stone technology and quarrying in world history.

2. Archaeological and Historical Information on the quarry landscape at Widan el-Faras

2.1 Early exploitation of the area (Palaeolithic/Neolithic)

The earliest evidence of hunter-gatherers along the shore date to about 10 000 years ago with substantial evidence for fishing and hunting activities and associated tools and



technology (Wenke 1999). Fayoum is rightly famous for its fifth millennium **Neolithic** remains, extensively documented by Caton-Thompson and Gardner during their excavations in the 1920's. During this period, farmers established small communities along the northern shore of Lake Qarun. Domesticated sheep and cattle were kept, and wheat and barley grown, although traditional hunting and fishing activities continued to be a large part of the diet. Houses were most likely constructed of temporary reed shelters and it is possible that settlements shifted or were partially flooded during high Nile floods. Similarities in technologies exist both between other sites in the Western Desert and the Near East, and the Fayoum sites are crucial in understanding the developments in early farming, increased social complexity, and prehistoric interaction between Egypt and the ancient Near East.

2.2 Pre-dynastic and Early Dynastic

There is not much activity documented in the northern Fayoum desert during these periods, and it is likely that the basalt used for vessels known from the Nile valley originated from sources closer to modern Cairo (Mallory-Greenough 2002), near the large pre-dynastic settlement of Maadi.

Alabaster gypsum, on the other hand, was extensively used for vessels during these periods until the Third Dynasty. The stone most likely comes from the Umm es-Sawwan quarry, although other, as yet unidentified sources are also possible. Transport between Umm es-Sawwan and the Nile valley during this period probably took place through the northern desert straight to the Memphis area, and not south to the Fayoum.

It seems likely that the lack of activity in the northern Fayoum desert can be linked to increased nucleation of sites during the fourth millennium BC, where in particular the Upper Egyptian Nile valley became the centre of increasing social stratification, technological improvements, and developments in funerary rituals. However, small-scale settlements undoubtedly continued to exist along the rich shores of Lake Qarun although by now isolated and away from the rapid social and economic developments in the Nile valley (Wenke and Brewer 1992).

2.3 Old Kingdom

The scarce evidence of Early Dynastic exploitation of the landscape in the northern Fayoum desert changes drastically with the onset of the Old Kingdom. Starting from the Fourth Dynasty, the basalt quarries at Widan el-Faras were opened and the stone was used in several royal construction projects, including four pyramid complexes in the Memphite area. The level of Lake Moeris was approximately 20 meters higher than today which enabled transport by water to the Nile valley, where it could then be shipped upstream to the pyramid fields.

The basalt quarries should be seen as part of a wider network of associated infrastructure, temporary settlement sites and continuing working at other quarries, such as the gypsum quarries at Umm es-Sawwan. Links were made directly to the Nile valley (the pyramid fields) by the track passing by Umm es-Sawwan, and to the settlements of the Fayoum and the canal linking the lake to the Nile.

2.4 Middle Kingdom, New Kingdom and Late Period

In general, the Middle Kingdom was a period of immense activity in the Fayoum depression as increased control of the Bahr Yosef canal through the Hawara pass led to expanded agricultural areas and prosperity for the region as a whole.

The basalt quarries at Widan el-Faras were not re-opened and only small pieces of basalt statuary and reliefs have been found in Egypt from the Middle Kingdom to the Late Period. It



is likely that the objects dating to these periods were made from reused blocks already present in the Nile valley (chiefly at the pyramid sites) or picked up by the quarry area itself.

2.5 Graeco-Roman and Coptic periods

Following the conquest of Alexander in 332 BC and the increased incorporation of Egypt into the Mediterranean sphere, Fayoum was a key factor in the prosperity of the country. Large-scale agricultural and urban development characterises the Fayoum depression during these periods and remains of towns, farmsteads and irrigation systems have been extensively documented (e.g. Gazda 1983 for Karanis, for Dime Davoli 1998, Boak 1935 and Caton-Thompson 1929 for Ptolemaic irrigation systems).

During the **Ptolemaic period** (332-30 BC), the level of the lake was drastically reduced due to increased regulation of the Hawara channel and the construction of several dikes. The lake begun to shrink to its current size, mainly due to evaporation. The exposed fertile land was used for irrigation and Fayoum became one of the most important grain-producing areas of Egypt. In the third century BC the area reached full Nome status, and became the Arsinote nome (after Arsinoe II, the queen of Ptolemy II).

It was not until the **Roman period** that quarrying was again resumed in a limited section of the Eastern Quarry. Extraction went deeper than in the Old Kingdom and the blocks in this section are less weathered. Wedge holes and pottery are other indications of Roman activity in the area.

The Fayoum is an important area in the history of early Christianity in Egypt with a large number of monasteries and churches dotted around the lake area. However, several of the major Ptolemaic settlements such as Karanis and Bacchias were deserted during the third and fourth centuries AD and the population became more dispersed in smaller rural settlements. Like many other pharaonic remains in Egypt, the temple at Qasr el-Sagha was re-inhabited by Coptic monks and the monastery of Deir Abu Lifa was established northeast of the temple during the seventh to ninth centuries.

3. Synthesis of main elements of the Widan el-Faras/northern Fayoum landscape

3.1 Widan el-Faras: basalt quarries

Caton-Thompson and Gardner mentioned the quarries in their publication of their work in the northern Fayoum (1935, 136-137) and accurately suggested an Old Kingdom date for the main period of activity. The area has subsequently been investigated by several geological and archaeological surveys, most notably Harrell and Bown (1995) and Bloxam and Storemyr (2002).

Two main quarries have been located on top of the escarpment at Widan el-Faras. The **Eastern Quarry** extends for about 800 meters, and contains the remains of four quarries while the **Western Quarry** is much smaller with a length of about 60 meters.

The actual extraction locations are characterised by small depressions and benches and are often quite difficult to define. The workers did not dig into the mountain itself, but moved horizontally along the edge. Old Kingdom stone mauls and other tools have been recorded on the escarpment, including large numbers of diorite pounders made of imported stone (Harrell and Bown 1995, Bloxam and Storemyr 2002). The basalt on top of the escarpment was most likely quarried by using levers to split and remove the blocks, which were then tumbled down the slope and taken to the road (alternatively, taken down with ropes). Harrell



and Bown (1994) date the Roman pottery at Widan to the fourth to sixth centuries AD, and suggest it comes from Christian ascetics who withdrew to the desert. However, there is also evidence of Roman quarrying on the plateau, as shown by the presence of distinctive wedge holes and the pottery is most likely related to that activity (Bloxam and Storemyr 2003).

3.2 Widan el-Faras: settlements

Harrell and Bown identified several circular depressions below Widan el-Faras as remains of the quarrymen's camp from the Old Kingdom. They measures between 2 and 7 meters in diameter with surface pottery dating to the Fourth Dynasty (Bloxam and Storemyr 2003) and the Roman period. The depressions were marked by basalt debris, suggested to be the remains of low windbreaks. They also mentioned the possibility of the area being used for the trimming of stone blocks; a suggestion confirmed by more recent archaeological surveys (Bloxam and Storemyr 2003). This survey significantly lowered the number of existing stone circles from 160 to 24. Bloxam and Storemyr suggest an alternative location for the ancient settlement to the southwest of the quarrymen's camp, closer to the entrance of Widan el-Faras. Here, circular and oval structures are located in a more sheltered location and marked by small basalt blocks. The pottery found on the surface consists of storage vessels and cooking bowls from the Fourth to Fifth Dynasty, confirming the domestic nature of the area. It is possible that some trimming also was undertaken in this area and large numbers of fragmentary and complete pounders have been recorded here.

3.3 Widan el-Faras: road

It is the oldest paved road in the world, and is therefore of immense interest not only for ancient Egyptian history but for the development of transportation technologies worldwide. Caton-Thompson located (1927) only a few pieces of Roman pottery close to Widan el-Faras which led her to suggest a Roman date for the road but since then, the evidence is in favour of an Old Kingdom origin, as no other means of transporting the stone blocks have been discovered in the area.

Its remaining total length measures 11.5 km (Storemyr 2003, 11) and consists of a 2.10 meters wide flagstone paving made of flat limestone, sandstone and basalt pieces as well as parts of silicified wood. All these material were readily available in the vicinity and would thus have been easy to repair as needed. It runs in a roughly direct line from the vicinity of Qasr el-Sagha (the shoreline of Lake Moeris) to Widan el-Faras, where it branches out to form several smaller tracks connected to separate quarry areas. It is unclear for how long this road was in use and exactly how the stone was transported to the quay area (for a discussion of transport techniques, see Harrell and Bown 1994).

3.4 Widan el-Faras: quay and harbour area

The quay area itself is difficult to interpret. A long promontory (311x19 meters) is located close to the terminus of the paved road. The surface is covered with broken blocks and small pieces of basalt, some scattered potsherds (Old and Middle Kingdom) and stone tools. Some of the basalt blocks are arranged in circles around shallow depressions and it is possible that some basic trimming of the stones also took place here, like in the encampment area.

Closer to the ancient shoreline of Lake Moeris there are four large promontories, circa 22 m high (described by Caton-Thompson and Gardner 1934, 134-135, Harrell and Bown 1995). Although natural in origin, the sides have been reinforced with limestone and sandstone slabs. They have been interpreted as the harbour area, where the basalt blocks were loaded onto boats or barges during flood levels, although it is difficult to see how the ridges could withstand erosion for a longer period of time.



3.5 Qasr el-Sagha temple and environs

Caton-Thompson and Gardner (1934) report abundant Old Kingdom remains in the area around Qasr el-Sagha with characteristic flint tools, diorite pounders and potsherds. Further west, in the so-called L. Basin, an Old Kingdom village was recorded although no traces of structures were found.

The temple at Qasr el-Sagha was excavated and recorded in the 1970's by the German Archaeological Institute in Cairo Dieter and Dorothea Arnold (1979). This small sandstone temple was never finished but contains seven small shrines and a transverse room.

Middle Kingdom rock-cut tombs and shaft tombs have also been recorded around Qasr el-Sagha. The settlement lay to the west of the temple and was probably inhabited from the Middle Kingdom until the end of the Second Intermediate Period. The settlement was laid out in a planned form with a surrounding wall and a central street connecting the two main entrances. Regular domestic areas, pottery, stone vessels and numerous small objects were found in the settlement. Pottery from the Middle Kingdom has been noted in the quay area but could easily be connected to activity at the nearby temple.

Following the investigations of Caton-Thompson and Gardner in the prehistory of the northern Fayoum, this area has been extensively investigated by later archaeologists. Wendorf and Schild (1976) excavated several Palaeolithic through Old Kingdom sites, with their associated lacustrine deposits. (See below)

3.6 Umm es-Sawwan: gypsum quarries

The alabaster gypsum quarried was used for vase making and more than three thousand unfinished vases were recorded at the site during the course of the excavations. The crushed gypsum was also used as mortar in the vast Memphite tomb cemeteries of the Old Kingdom (first reported and named by Caton-Thompson 1928).

Unlike the transportation of the basalt, which was done across Lake Moeris, the gypsum could have been brought across land directly to the pyramid fields by a track terminating at Dahshur, near the Mastabat Fara'un (the "Dahschurstrasse"). This was not a paved road, but rather a wide cleared strip of ground.

During the excavations of Caton-Thompson and Gardner an Old Kingdom date was established based on shreds, crescent-type drills and pebble hand-picks. Literally thousands of unfinished stone vases were strewn across the area, showing the extent to which gypsum was quarried and used.

The pottery was dated by Caton-Thompson and Gardner (1934, 110 ff) to the Third and Fourth Dynasties.

3.7 Umm es-Sawwan: settlements

Several workshops and possible settlement areas were identified during the first excavations of the site by Caton-Thompson and Gardner (1934). They reported over two hundred stone circles, placed on the edge of the scarp. Previously believed to be the foundations of hut shelters, they are now interpreted as workshop areas with abundant evidence of gypsum production but no living floors or domestic pottery (Storemyr 2006).

This highlights the difficulties in interpreting quarry related materials, and shows the importance of renewed investigations and surveys – not only for the local history of the Widan el-Faras landscape but for the technological development in Egypt as a whole.

Importance of basalt in the Old Kingdom

The basalt extracted from the quarries was used mainly as architectural elements such as floors and walls. Basalt was used as flooring in five pyramid complexes of the Old Kingdom: Khufu (4th dynasty Giza), Userkaf (5th dynasty Saggara) and Sahure and Niuserre and



possibly Nererirkare (5th Dynasty, Abusir) (Hoffmeier 1993, contra Bloxam and Storemyr 2003, who list four pyramid sites with basalt). In the Userkaf temple, basalt was also used as a cover for the causeway leading down to the valley temple. During the Sixth Dynasty, some pavements and walls in the Pepi I pyramid complex were also made of basalt (reported in Hoffmeier 1993). Hoffmeier (1993) has suggested that the use of basalt for flooring in the mortuary temples symbolized the black land (Kmt) and the earth god Geb, important for the ascension of the dead king to the sky. In this sense, by using black stone to symbolize the earth and roofing blocks decorated with stars, a microcosm was created within the temple walls and the whole country of Egypt combined symbolically into one place.

Transport, logistics and workers in the Widan el-Faras area

Several aspects of the transport and logistics behind the quarrying and use of basalt from Widan el-Faras in the royal construction projects in the Nile valley remain poorly understood. Based on the small amount of basalt actually used in the Old Kingdom pyramid fields and the time period involved, Bloxam and Storemyr (2003) suggest that quarrying was limited to seasonal activity. To extract the amount of stone documented, a relatively small work force was needed, again supporting the lack of evidence of large-scale permanent settlements in the area.

4. Environmental information and current condition of the site

4.1 Geology and ecology

The Fayoum depression is one of several depressions in the Western Desert, situated in an Eocene limestone plateau which covers large parts of the desert. Most of them consist of an escarpment to the north which gently slopes down to the south. Geologists now agree that the Western Desert and its depressions were primarily formed by wind erosion, and not as a result of tectonic activity (Said, 12-14). The total area of the Fayoum depression is 1700 sq km with the lowest point being 45 meters below sea level (Ball 1952).

The oldest rock units in the Fayoum date to the Middle Eocene era, while most of the northern part consists of Upper Eocene limestone, shale and marl bands (including the Qasr el-Sagha formation). Large numbers of vertebrate and invertebrate fossil remains have been found in these rock units.

The Gebel Qatrani (with its basalt sheet) is a sandstone promontory of this northern plateau to the northwest of the depression dated to the Oligocene era, overlaying the older Qasr el-Sagha formation (Said 1962, 11-12, also Wendorf and Schild 1976).

The most significant feature of the Fayoum area is the large Lake Qarun (Birket Qarun), ancient Lake Moeris and the fluctuations in lake levels have been a main focus of research since the 19th century (outline in Ball 1952, also Wendorf and Schild 1976). The lake was mentioned by Herodotus as an artificial structure, probably created during the Middle Kingdom, although it is now agreed that a natural lake existed in the area from prehistoric times, connected to the Nile. The geological and archaeological investigations of Caton-Thompson and Gardner revealed a large number of lacustrine and flint deposits, enabling them to reconstruct variations of lake levels and connect them to human activity along the lake shore (Caton-Thompson and Gardner 1929, More recent investigations have established the existence of several fluctuations of the lake level during the Holocene, with the lake shrinking and expanding in intervals (Kozlowksi and Ginter 1993, Wendorf and Schild 1976).

In antiquity, the lake was much larger than today and extended north to the quay area and the Qasr el-Sagha temple. During pharaonic times the lake was connected to the Nile River by the canal Bahr Yosef, meaning that the level of the lake fluctuated according to the annual flooding of the river. The connection to the Nile also allowed a deposit of Nile mud similar to the Nile valley and the Delta to accumulate in the depression (Ball 1952, 35).



The lake probably reached its highest level during the Fourth Dynasty of the Old Kingdom and enabled the shipment of large basalt blocks to the construction works in the Nile valley. The level of the lake seems to have fallen at the end of the Old Kingdom, leading to a cessation of large-scale activity at the quarries themselves. This should probably be seen in connection with the end of the so-called Neolithic wet phase, when there was more abundant rainfall than in the following periods. Following the Old Kingdom, the lake was lowered and remained stable in height until the time of Herodotus (Kozlowski and Ginter 1993).

The current lake Qarun is one tenth of the size of ancient Moeris (Morgan and Lucas 2002, 7) and is in the lowest part of the Fayoum depression. Increased salinity means that the fresh water species have significantly decreased. Birdlife is also retreating, although several measures have been undertaken the last decades to protect the migratory and resident birds (EEAA 2002).

4.2 Palaeontology

The Fayoum depression has been much studied by geologists and palaeontologists since the 19th century. The recent declaration of Wadi el-Hitan (Whale Valley) as a Natural World Heritage site in 2005 has brought attention to the importance of the natural landscape of the Fayoum and its place in the history of early mammal development. The fossils collected in the Fayoum depression constitute the most well-known faunal assemblage from Africa. As was noted above, these remains and their associated geological features were the main reason for scientific research prior to the archaeological investigations of Caton-Thompson and Gardner in the 1920's. The important fossils date to a period between the late Eocene and early Oligocene when the area consisted of several swampy rivers with a tropical animal and plant life.

The many geological surveys undertaken in the area have led to the discovery of a number of important species, both ancestors of current animals as well as now extinct species. Important animals include giant sea snakes, the oldest known elephant (Paleomastodon) four-horned ungulates and several new primates. The most famous animals, which have given Wadi el-Hitan its name, are of course the remains of providing new evidence on the development of modern whales and their origin from land-dwelling, hoofed animals with hind legs, not flippers (Morgan and Lucas 2002). The Fayoum area is by no means exhausted in terms of fossils, and it is thus vital that the area remain protected for future generations.

Wadi el-Hitan is today part of Wadi Rayyan Protected Area to the south of Lake Qarun, but important fossils have been found to the north of the lake as well, in the Qasr el-Sagha formations. Typical of the Widan el-Faras landscape are the silicified forests; large scatters of broken pieces of wood and tree trunks visible as dark patches in the desert. The existence of important fossil finds in the northern area was confirmed during the QuarryScapes survey in the spring of 2006 (Storemyr 2006).

4.3 Widan el-Faras Basalt

The basalt flow at Widan el-Faras and Gebel el-Qatrani in general, is visible as a dark cap about 25 meters thick overlaying the gravel beds of the older Gebel Qatrani formation. (Harrell and Bown 1994, Said 1962). The basalt flow itself is part of the Haddadin flow which stretches from north of Cairo (Abu Zabaal) to the Fayoum area (Mallory-Greenouch 2002).

In terms of mineral and chemical composition, the basalt at Widan el-Faras consists of olivine basalt, with plagioclase, clinopyroxene, ortho-pyroxene and Fe-Ti oxides (Storemyr et al 2003, 2).



Natural weathering has had immense impact on the Widan el-Faras region as basalt blocks easily crack and splinter. The entire area is strewn with basalt debris, both as a result of natural weathering and man-made alterations.

4.4 Hazards to the Widan el-Faras quarry landscape

The entire quarry landscape is subjected to a number of man-made and natural threats which have been highlighted in recent work on the area. Wind deflation is a problem along the paved road, and natural weathering tends to split basalt blocks. In the quay area, there is a risk of flash floods removing surface scatters of archaeological remains and completely obliterating more fragile areas. The landscape is therefore not static, but has shifted and changed considerably over the centuries. The problem of site management for the area lies in combining these characteristics with reliable and permanent preservation of the archaeological remains.

Man-made threats are increasing in intensity. The main problem is naturally the modern quarrying in the area, outlined above. Increased industrial activity is not only a threat on top of the plateau, but intensified traffic to and from the site run the risk of destroying other significant features as well. Particularly vulnerable is the paved road which acts as a natural marker in the landscape, meaning that it is often sought out and followed. It is completely unprotected and has been destroyed in several places, where car tracks are seen crossing the road. As mentioned, wind deflation is slowly destroying the road as well, and in several instances the road now 50 cm or so higher than the surrounding desert. Several slabs have slid off on both sides (Harrell and Bown 1994).

The nature of the remains at Widan el-Faras means that they are difficult to protect without damaging the overall effect of the landscape and their setting. Many sites are exposed on the surface and are not conspicuous to the untrained eye – making them easily obliterated by a car.

Even a small group of people, randomly picking up a potsherd or a piece of flint, run the risk of quickly destroying archaeological evidence. Therefore it is vital that information is made available on the fragility of the remains and the importance of leaving things *in situ*.

These problems need to be monitored on a regular basis and linked to other site management activities in the area (for example, SCA supervision of the Qasr el-Sagha temple, protection of Graeco-Roman and prehistoric remains closer to the ancient lake shore).

Another threat related to Widan el-Faras is its current legal status, hindering adequate site protection and preservation activities (see below).

In a report issued by the EEAA, a number of problems related to the Lake Qarun Protected Area have been identified. These include a general lack of funds, unchecked construction around the lake shore and pollution. Although more concerned with the heart of the QPA; the lake and its shores, these problems are clearly relevant to the developments at Widan el-Faras and its surrounding landscape. It is therefore vital that any plans related to the continued protection of Widan el-Faras are integrated within a wider framework of a strategy of Qarun Protected Area development.

Widan el-Faras is somewhat unique in being spared the most common and obvious threat to most archaeological sites in Egypt; that of the increasing water table as a result of the construction of the Aswan High Dam. The constant level of subsoil water and the lack of drainage as the flood waters would remove salt and other minerals from the soil have meant that damage of salt and humidity on stone and mud brick remains are increasing. Conservation measures have been taken at several of the larger sites in the Nile valley (most famously at Luxor temple), but destruction is quick and only desert sites are spared – at least



until agricultural development encroaches on these sites as well. Therefore, the most dangerous environmental threat can be eliminated at Widan and efforts concentrated on curbing the man-made threats.

5. Stakeholders and legal status

5.1 Ownership patterns, legal status

The management of all archaeological sites in Egypt is the responsibility of the Supreme Council of Antiquities (SCA), belonging to the Ministry of Culture. The SCA employs a large number of archaeologists, conservators and site guards, but is plagued by a lack of adequate funds, training and expertise, as well as necessary technological equipment.

SCA recognizes three different kinds of legal status of archaeological sites and buildings. Sites that are the Property of the SCA mean that the SCA owns the land and has control over construction and development. Sites under SCA Supervision are situated on private land but no development or changes can be made that could potentially damage the archaeological remains. Finally, sites Under Registration Request are sites in the process of becoming officially registered and legally protected. Large groups of Egypt's cultural heritage are currently unregistered with a clear signal that these sites have little or no historical value. Groups include quarries, several prehistoric areas, as well as large parts of the modern architectural heritage represented in the major cities.

No archaeological remains within the Widan el-Faras quarry landscape are officially owned by the SCA, not even the Qasr el-Sagha temple although it does have a site guard. This means that the SCA have no means of adequately protecting the site, and that it is not part of any future development plans for the historical remains of the greater Fayoum area. However, recently the SCA has taken an active interest in Widan el-Faras and has been an instrumental factor in the attempts at stopping the modern quarrying activities on the top of the plateau.

In the general Fayoum area, there are currently two protected areas: Lake Qarun Protected Area and Wadi el-Rayyan Protected Area. Both areas were declared protected in 1989 through Prime Ministerial Decree # 943. Wadi el-Hitan is considered part of Wadi el-Rayyan Protected Area and was awarded status as a World Heritage Site in 1985.

5.2 Stakeholders outline

Several key organizations are stakeholders in the Widan el-Faras quarry landscape. A brief outline of stakeholders is provided here, and will be analyzed in further detail in the site management plan.

Ministry of State for Environmental Affairs – EEAA and NCS

EEAA (Egyptian Environmental Affairs Agency) is the department responsible for environmental protection throughout the country while the NCS (Nature Conservation Sector) is responsible for Protected Areas, including Lake Qarun Protected Area and Wadi Rayyan Protected Area. They are therefore one of the main stakeholders of the Widan el-Faras landscape, part of which is already part of the Lake Qarun PA. The possibility of widening this Protected Area to include more or all of Widan el-Faras needs to be evaluated.

Ministry of Culture – SCA and EAIS

SCA (Supreme Council of Antiquities) is the main body responsible for documenting and protecting cultural heritage. EAIS is the official GIS centre of the SCA and is developing a database of registered, official sites in Egypt with updated maps and site borders. SCA is also a main stakeholder and steps should be taken in order to declare parts of the landscape registered, giving it at least a minimum form of protection against exploitation and



destruction. EAIS (Egyptian Antiquities Information System) is the official GIS centre of the SCA and is working on developing GIS (including digitizing site maps and creating a database over archaeological sites) in Egypt.

Ministry of Petroleum – EGSMA

EGSMA (Egyptian Geological Survey and Mining Authority) evaluates the potential of mining and quarrying activities. They will be instrumental in establishing areas of exploitation on the Widan el-Faras plateau, and ensuring that the limits of these areas are kept.

6. Site Management

6.1 Development of SM in Egypt

The concepts of Site Management and Cultural Resource Management in general, remain underdeveloped in Egypt although significant advances have been made the last decades. The combination of the over-whelming scale of historical remains, the development of mass tourism and massive expansion of urban and agricultural activities has led to today's distressing situation where a large number of sites are either lost or rapidly disintegrating. Traditionally, scientific research has focused on the large-scale exposure of cemeteries, and more rarely settlement remains, and the procurement of epigraphic material and texts. Little or no concern was usually given towards conservation and preservation of excavated remains. Luckily, conservation programmes are often developed today but often take second place in favour of excavation or epigraphic work.

A major problem is the lack of the establishment of proper buffer zones and control over site boundaries. Sites can be divided between several stakeholders with varying legal status, and there is often confusion between these stakeholders with outdated and conflicting legal documents. Illegal housing and the encroachment of agricultural land is often the cause of loss of archaeological material.

The development of proper channels of communication and dissemination of data between various stakeholders hinder adequate site protection and understanding of where archaeological remains are situated. Modern maps may not contain adequate information on the location of archaeological sites, or provide accurate site borders while maps used by the SCA may be outdated and not contain modern urban and agricultural development. Before the establishment of EAIS, the official GIS centre of the SCA in 2000, there was no collective source stakeholders and decision makers could turn to in order to get updated and verified site information (maps and historical information).

The access to reliable and up-to-date archaeological and historical information of sites in Egypt is problematic. Most information is published in foreign languages in specialised journals, making access to information problematic for Egyptians. Although 'the glory of ancient Egypt' is a source of pride and a focus in educational systems, this is often not coupled with modern information or any understanding that this extends to sites throughout the country, and not just to Giza and Luxor. Connected to the development of site management is the parallel development of modernising the museums in the country and disseminating information on the preservation of sites.

Recently, several site management projects in Egypt have attempted to tackle these issues and management plans are now in place for sites such as the temple of Madinet Habu in Luxor and Marina on the north coast. A major new site management plan has recently been published for the Valley of the Kings, including staff and visitors' surveys, structural stability and preservation of individual tombs and plans for a visitor's centre. It is hoped that this site management plan will set the standard for other sites in Egypt.



In order to develop site management in Egypt, there is a need to formulate clear strategies, increase communication between various stakeholders and increase collaboration with the foreign archaeological community who can bring in much needed finance and technical know-how. A key concern is the lack of awareness, training and education of both the local population who are in daily contact with the historical remains, and the managers responsible for their protection. These issues are all relevant to the preservation of the quarry landscape at Widan el-Faras and need to be properly evaluated.

6.2 The establishment of an official centre for quarries within the SCA.

An important new step in the preservation of the quarries in Egypt was taken by the Supreme Council of Antiquities during the spring of 2006. A new centre for the documentation, protection and management of quarries in the desert and the Nile valley has been created. Provided adequate funds are directed towards the centre, there is now a real chance of preserving these sites. Major problems today are the lack of awareness of both SCA personnel and other stakeholders of the archaeological importance of quarries. Many quarries are also currently being used and all historical remains quickly destroyed, for instance in the quarries around Cairo.

The centre plans to address these issues and strive for acknowledgement of the importance of industrial sites in the history of ancient Egypt. It also plans to improve documentation, mapping and legal recognition of quarry sites.



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ANNEX 2: REVIEW QUARRYSCAPES RISK ANALYSIS STUDY (WP5)



QuarryScapes WP5: Egypt risk and monitoring Assessing the threats

Per Storemyr, Geological Survey of Norway



Aswan West Bank, Nov. 2005: Building New Aswan City around a Graeco-Roman sandstone quarry

Objectives

Development of practical tools for:

- The analysis of human threats, natural hazards and weathering applicable to ancient quarry landscapes.
- Long-term systematic monitoring based on development of indicators and through field checks and satellite imagery



REPORT PROPE

EU-Project DEMOTEC-A Work package 2: Pilot GIS development Nemi

Monitoring and risk assessment of monuments and archaeological sites in the Nemi basin, Colli Albani, Italy

Volume 1: Report

26 May 2004















Part of the theoretical framework and practical methodologies will be based on results from the EU-Project "DEMOTEC"

Those interested: Contact me or

download from: www.niku.no/demotec

(Report by Storemyr, Küng & Bionda)

The main physical risks

- City and village development/expansion, house building
- Industrial development, including modern quarrying (large- and small-scale)
- Agricultural development
- Associated building of roads, canals and powerlines
- Theft and vandalism, tourism
- Natural hazards, structural deacy, erosion, weathering (in WP8-presentation)

The general driving forces are socio-political

- Why?
 - Large population growth
 - Huge pressure on land resources, desert areas now being developed
 - Lack of awareness of values related to "non-monumental" heritage resources, such as archaeological landscapes
 - Lack of legal registration/protection of archaeological landscapes

WP5 Risk work:

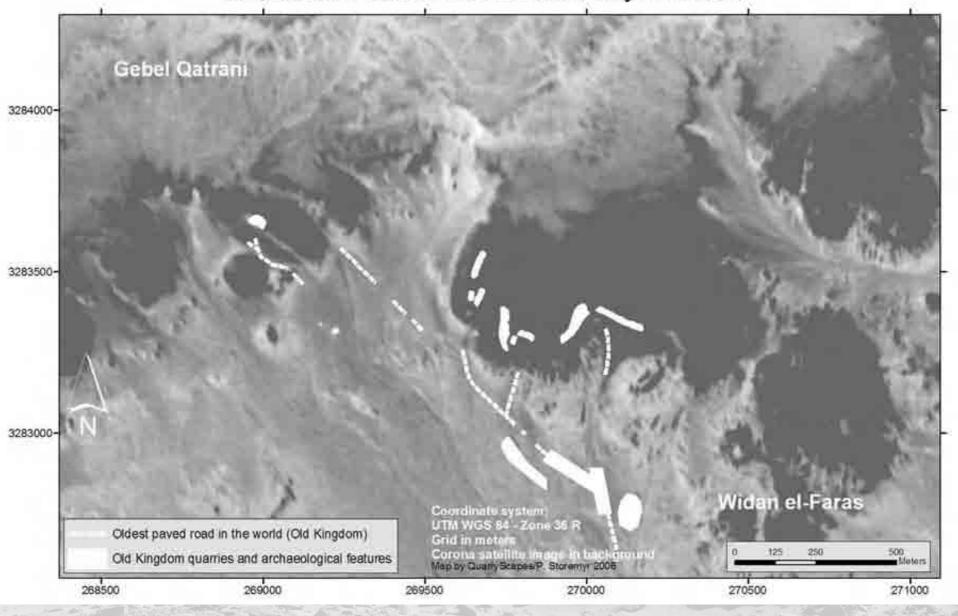
- Assessment of the physical risks with a view to the whole quarry landscape (and not only individual archaeological features)
- Detailed understanding of the "background risks" (part of the driving forces) with a view to protection and preservation of the quarry landscape (also cooperation with WP6)
- 3 case study areas (all have been under study by Bloxam, Heldal, Storemyr & Kelany since before 2001):
 - 1. The Aswan quarry landscape (most relevant, change of plans)
 - 2. The Northern Faiyum quarry landscape
 - 3. Chephren's Quarry
 - + Nile Valley & Eastern Desert

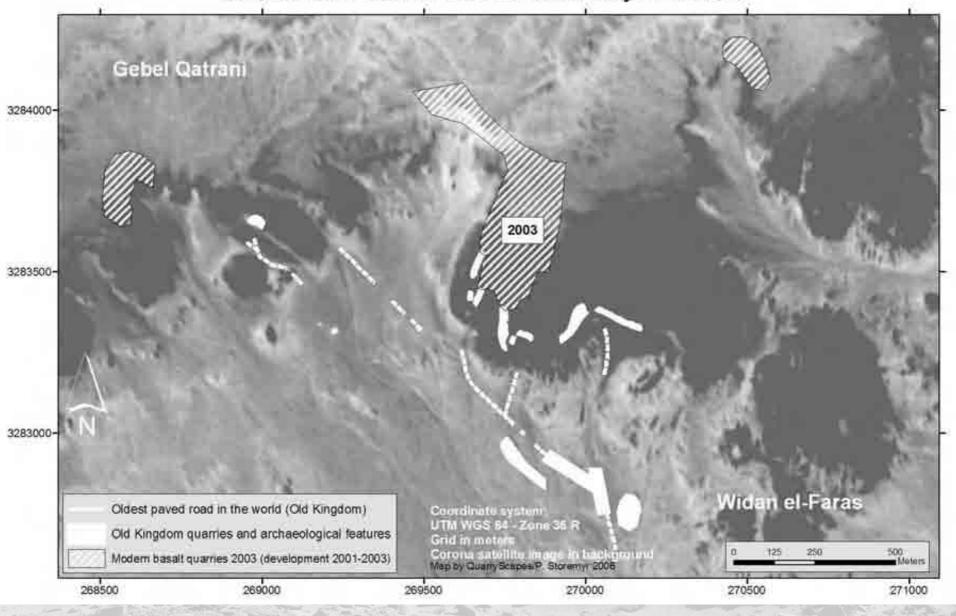
Chephren's Quarry (mainly Old Kingdom)

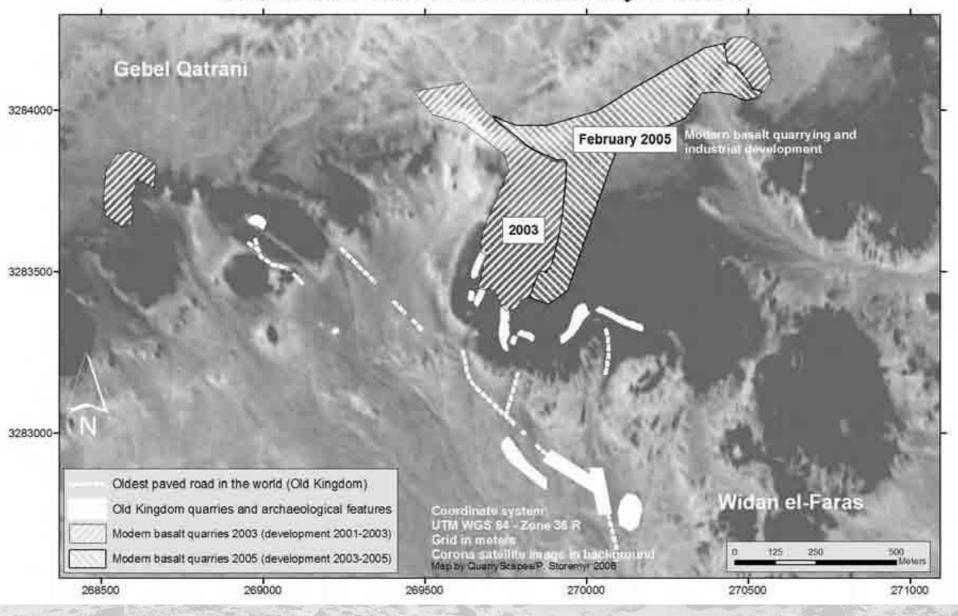


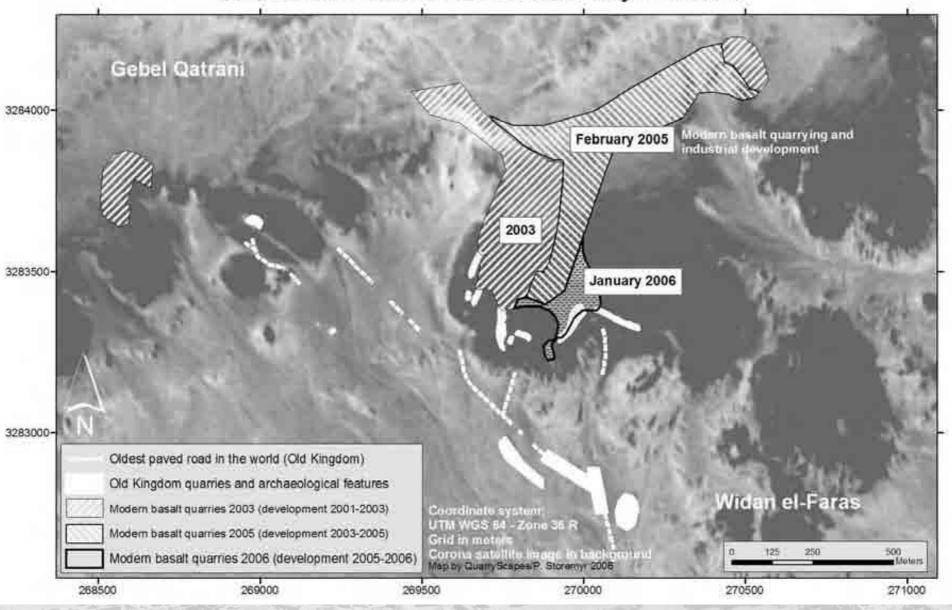
Widan el-Faras Old Kingdom basalt quarry







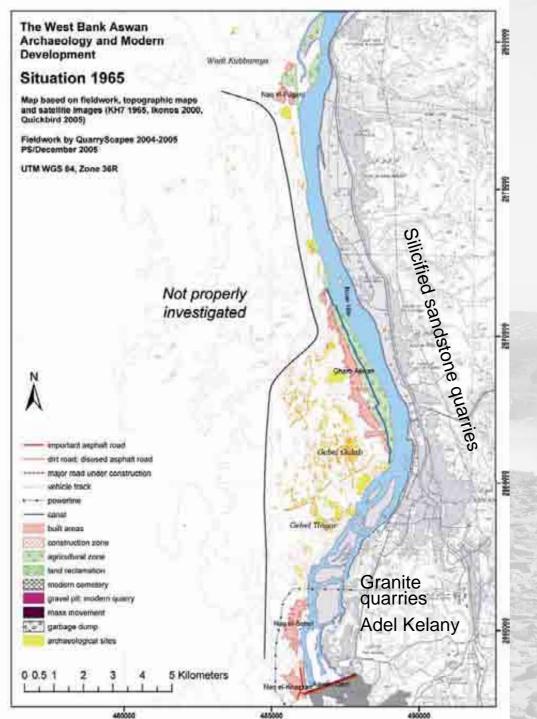








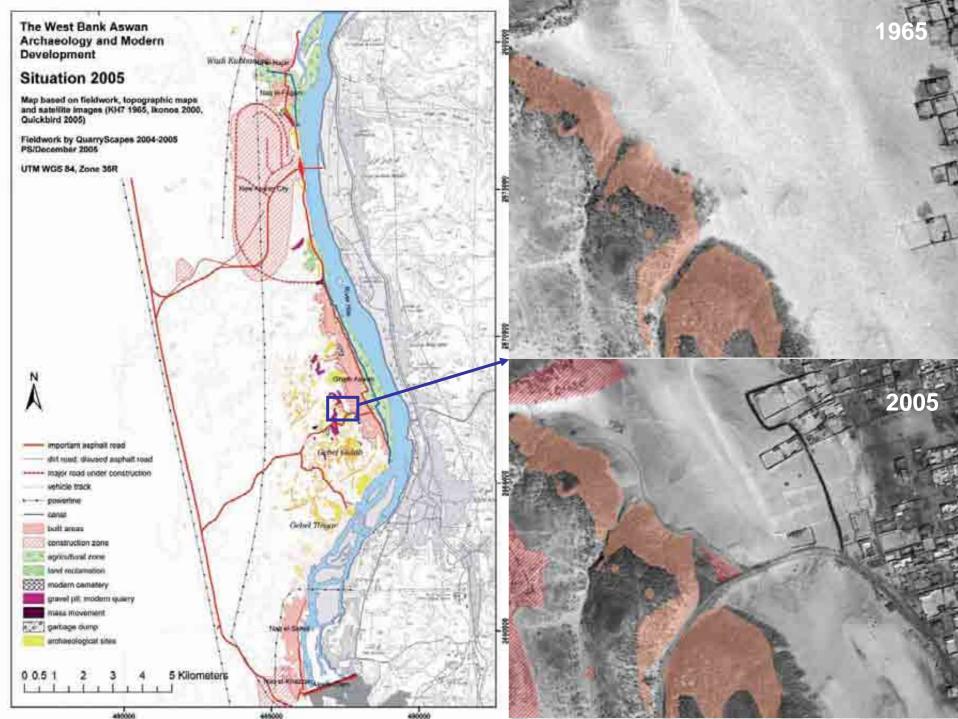




Physical risks - Methodology:

- Interdisciplinary fieldwork:
 Archaeological sites AND risk factors
- GPS/GIS/Databases
- Old and new satellite images
- Old and new Topographic maps
- Interviews, development plans

Example: West Bank Aswan

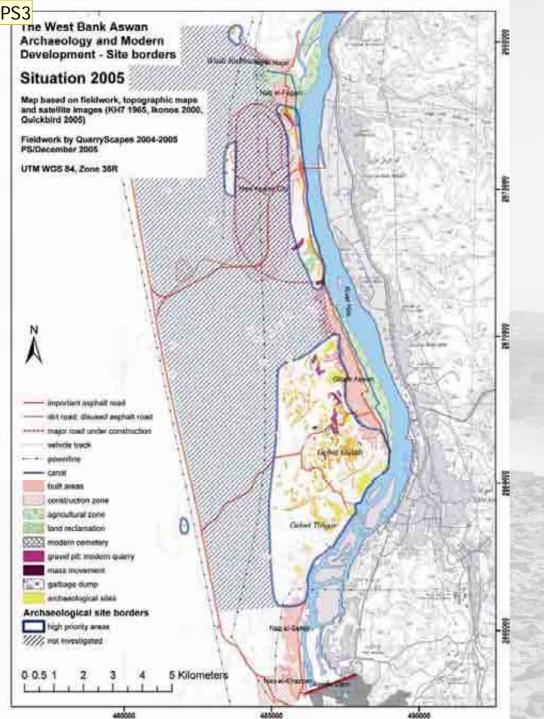


Understanding the "background risks" with a view to protection/preservation

- The legal aspects of the quarry landscape (e.g. ownership, legal registration/protection status. If not legally protected; what can be done? How to set the borders of the quarry landscape?)
- Interest groups (who are the "stakeholders"?)
- Development plans (local, regional, national) with a view to possible change (e.g. relocating modern quarrying away from ancient quarries)
- Awareness among residents, developers and governmental agencies with a view to preservation interests (e.g. for economical benefit/tourism)
- Results should serve the development of preservation/management plans (cf. WP6)

WP5: Monitoring

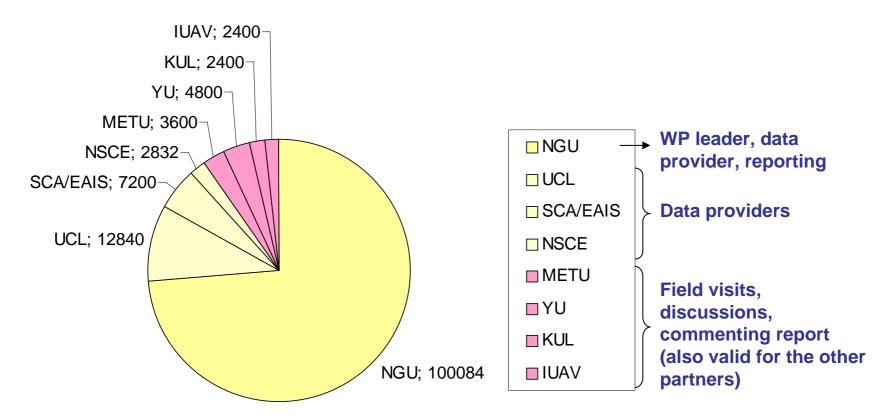
- Regular field recording check lists!
- Comparison of satellite images (which? how?)
- Indicator development (for whom, at which scale; national, regional, local?)
 - A pragmatic perspective will be taken
 there are very sophisticated systems, but they are not necessarily adapted to local circumstances.
 - Monitoring demands comparability in time and space.
 - E.g.: For national purposes: Number of quarry landscapes enjoying legal protection.
 - E.g.: For local purposes: Area of the quarry landscape influenced or destroyed by modern development



The border problem

- How to define the borders of the quarry landscapes.
- Must be done by interdisciplinary work within QuarryScapes and with authorities and residents, aiming at legal protection

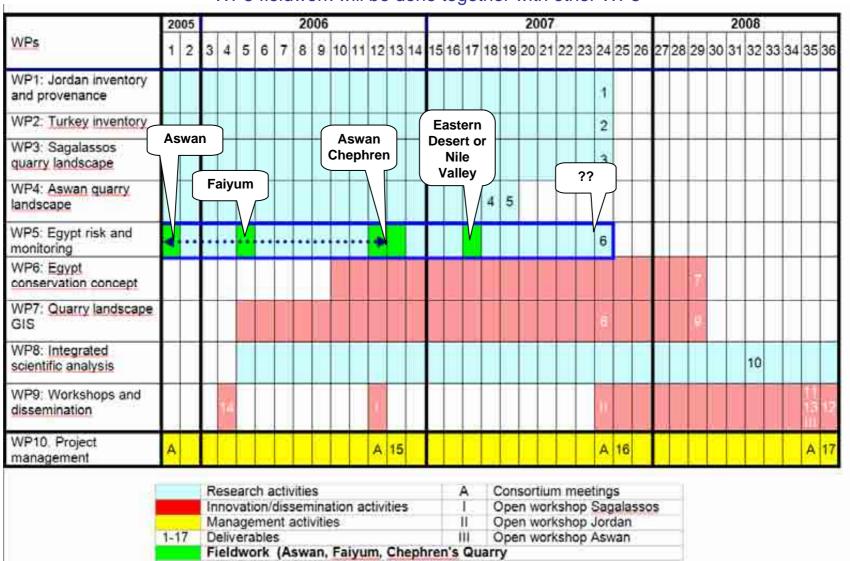
WP5: Budget and partner roles



- SCA/EAIS as data provider: Participant in fieldwork, definition of borders. Very important: Info on legal protection issues, development plans etc. (NB! there is an overlap with WP7!)
- NSCE as data provider: Participant in Faiyum fieldwork, otherwise as for SCA/EAIS, but with funding mainly from WP6
- UCL as data provider: Participant in all fieldwork, definition of significance and borders

WP5: Time schedule

NB! Earlier fieldwork has been done in all case study areas. WP5 fieldwork will be done together with other WPs



Reports and Publications: Plans

- WP Report to EU (October 2007)
- ASMOSIA 8, June 2006: "Difficulties in Preserving an Extensive Ancient Stone Quarry Landscape: The Aswan West Bank Quarries (Upper Egypt)"
- Journal of Cultural Heritage (after reporting to EU)
- More journals.....

 Cooperation among the partners for reporting and publication will be adressed by the WP-leader.

A simple risk assessment...

(never investigated, gone with the bulldozers; we obviously cannot preserve it all)



Socio-Economic Impact Assessment (SEIA) Report

Prepared by Dr. Nirvana Khadr Consultant

May –June, 2008

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Executive Summary

- 1. Introduction
 - 1.1 Profile of the Area
 - 1.2 Purpose of the Project
 - 1.3 Main Objective of the Assignment

2. Scope of Work (SEIA)

Baseline of the current Socio-Economic Environment of the Project Area (quarry landscape and the area in the Vicinity North and South of Lake Qarun.

3. Consultant's Main Terms of Reference (TOR)

A process from an overview of the current socio-economic context in the drawbacks and/or area. on to benefits. on to quarries' limitations/relocation. the identification of socio-economic on alternatives, and finally, on to a comparative study to assess accessible and possible economic activities to be implemented from another quarry location, i.e., the Aswan experience.

4. Potential SEIA Use

Manual providing through guidelines two conceptual models (Fig. 1 and Fig.2). Figure (1) represents the Integrated Sustainable Management Development Approach, and Figure (2) the Mechanism for Implementing a Project. Figure (3) is about the 'pyramid information' of indicators.

5. Methodologies and Definitions of Concepts

- 5.1 Analytical method of
 - (a) Field visits findings
 - (b) Content analysis for comparative purposes
 - (c) Conceptual model
- 5.2 Definition of Concepts

6. Conclusion

- 6.1 Lessons learnt from previous comparative quarry experiences
- 6.2 Suggestions and Recommendations

Appendices

Figures

Bibliography

Executive Summary

This report contains six chapters, a list of appendices, figures, and tables. As the title indicates the work is a Socio-Economic Impact Assessment

(SEIA) on Widan el Faras / Gabal Qatrani in the Norther Fayum Desert, and its surrounding areas. The whole project is called "Conservation of Ancient Stone Quarry Landscapes in the Eastern Mediterranean (QuarryScapes) at Widan Al Faras.

Chapter one consists in an introduction to the site and its link to Egyptian and World Heritage. The Profile of the area is then described in prehistorically, historical and current details.

The purpose of the study is to develop scientific and practical methodologies for the documentation and conservation of the ancient quarry landscapes reflecting promoted awareness of such vulnerable sites, reinforced legal measures and sustainable management of ancient quarry landscapes. The major aim was, thus, the development of a management conceptual model of the conservation of the quarry landscape with a socio-economic integrated context.

Before reaching the conclusion with lessons learnt and recommendations, the scope of work of SEIA needed baseline information to assess the current situation

The quarry landscape had undergone previous revision in 2006 ever since, suspension was harmful to the quarry landscape. In fact, in this report's chapters, model reaching a mitigation of sustainable management approach (fig.1) aiming at more significant benefits has been described.

Data collection techniques were introduced by the 'Pyramid Information' (fig. 3). Reciprocity and mitigation were operationally suggested by a proposed project (fig. 2) to bring two major effective stakeholders, both environmentally and economically, on sustainable socio-economic measures closer for a dynamic conservation.

Chapter 3 discusses the quarrying status in Fayum Governorate with emphasis on the current plans on Lake Qarun area and protectorate laws (mainly no. 943, 1989) and consulting background historical vulnerable on to modern quarries' situation. The Comparative case of Aswan quarries was brought up here as a successful national socio-economic experience.

In Chapter 4 the ecotourism is considered a-priori socio-economic source. A reflection on the management plan and its ten issues most commonly used as well as its set up have been mentioned in this chapter (e.g.: resource use patterns, i.e., activities on which people depend for living: food, income, etc.) to facilitate its operational implementation in a project framework. It is the Case of

'Shakshouk' fishermen's village and the geographic interplay between the South and the North of Lake Qarun. Special reference is made to socio-economic monitoring issues. The suggestion is for fishermen to use their boats for tourism other than mere fishing purposes. Alternative for a transport from the four wheel drive to the Site of Widan el Faras and Gabal Qatrani. Another suggested project is addressed to academic scholars and researchers at national, regional and international levels, interested scientifically in the mentioned site.

Finally, for awareness purposes for attitudinal change, another suggested project is to promote the use of Non-Formal Environmental Education.

Hearings from the target groups themselves, quarry people and companies will be added as a footnote or as an appendix.

Chapter 5 is on methodologies and definition of concepts. Apart from field research tools (mainly interviews), content analysis, conceptual models, webliography (websites), documents (primary and secondary resources) and maps have been used.

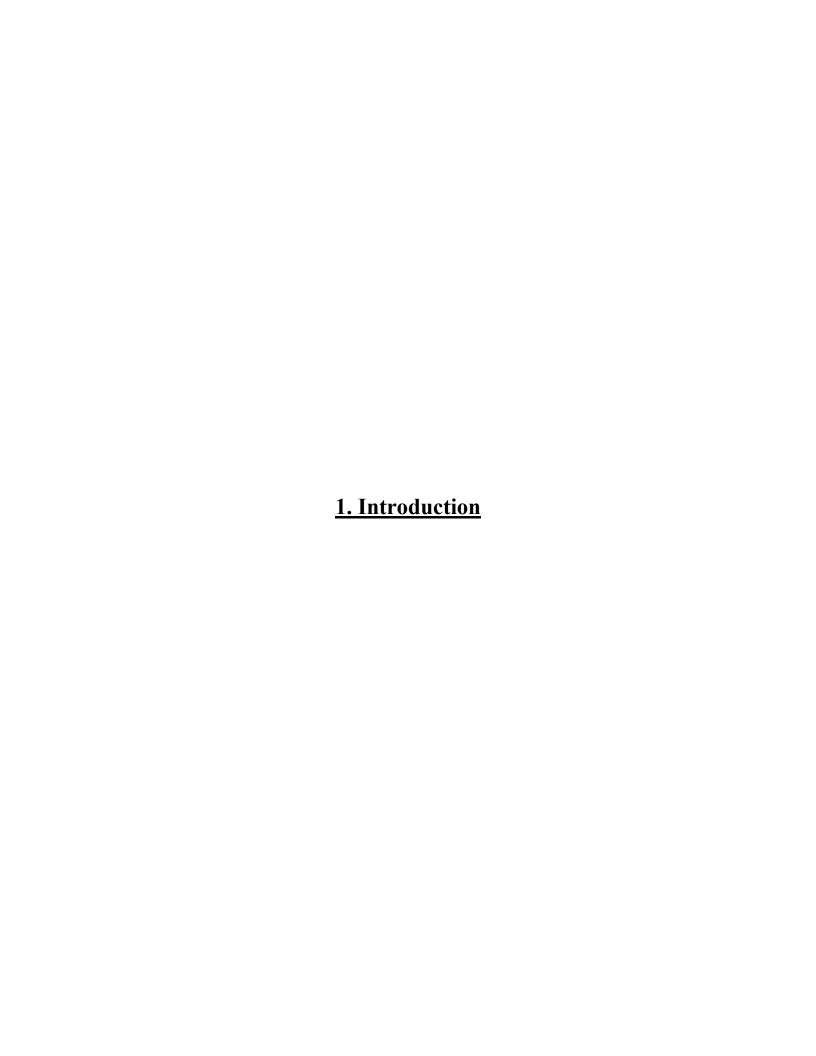
Also, this chapter is considered as a methodological guideline as certain concepts are defined in details to allow further research and/or assessment to be conducted more scientifically and easily. Among concepts defined are such as principles of SEIA, mitigation, use of GIS or the relevance of ISOTEIA, CADSES and SEA.

Chapter 6 is the report's conclusion with two parts:

Part 6.1 is on lessons learnt, and part 6.2 is on suggestions and recommendations into two phases, a short-term phase and a long-term phase.

Further expanded SEIA observations can be reported as a post analytical observation of current development plans, especially, on the site of Northern Lake Qarun shorelines by two mega investors, namely, the Kuwaiti Kharafi and the Egyptian Sawiris investors (see Appendix 6) Map of Fayum Investment Projects in the Northern Lake Qarun Shoreline). Environmentally, with a balanced integration with tourism, **ecotourism** can be the mitigating link between a least desired destructive future tourism investors' development of the rich North Lake Qarun Desert heritage site, also, with least involvement of local communities. The need of an awareness campaign among the various stakeholders involved, particularly in tourism and in environment, are highly recommended for short-term future perspective.

Attachments such as appendices, figures and tables have been used for clarification and further details. These last additions are not only useful for the current significance and relevance of this report but also for the long-term future comprehensive use by planners of the site.



1.1 Site Profile

The Quarry Scapes Project has been established for the identified ancient quarry landscapes in Widan Faras, Gabal Qatrani, Northern Qarun Lake in Fayum, one of the oldest cutting industries in the World. The Site would have been especially promoted if it was enhanced by a heritage management emphasizing the use of methodologies and models that can help at protecting and preserving the interplay between natural and cultural world heritage. The Site, North of Lake Qarun, lies on a desert mountain over 346 m high and with a shrinking Lake Qarun of 11 km. It was dried from original prehistoric Old Kingdom's Lake Moeris.

All of Lake Qarun has been announced a natural protectorate by presidential decree no. 943, year 1989, then 2954, 1987 for a total area of 1385 km2. The location of the lake is the Northwest direction of Wadi El Rayyan. It is among the oldest lakes in the world, of a surface of 250 km2 and a depth of 5:12 meters. The Gabal Qatrani is announced to be among the richest fossil sites in the world that go beyond 20 million years B.C. As an example, there are fossils of the most ancient monkey in the world (Aegyptuthecs) and other fossils such as the river horse, dolphins, sharks, several types of birds, and a petrified forest.

Gabal Qatrani, is a world of prehistoric most valuable fossils (oldest vertebrates monkey, horse evolution), with more than 300 petrified giant stems over 44 m long (lower Oligocene) as well as of fossil fruit trees. The Widan el Faras peaks (Horse's Ears) and the nearby plateau are capped by basalt flows from the Upper Oligocene period (25 million years). Ancient quarries from the Old Kingdom Period are found in the basalt, and below is the first paved road in the world, used for transporting the basalt blocks 12 km towards an ancient port close to the Kasr El Sagha Temple. The basalt blocks were shipped to the Pyramid Complexes, where they were used in the floor of mortuary temples.

Other scientific, geological, prehistoric and historical components are in abundance in the Northern Lake Qarun area. Also, "El Zohabi" island lies in the middle of the lake, with 1,5 km2 surface area which can be an ecotouristic spot to consider. Pharaonic, Greco Roman and Coptic monuments are found there too, e.g., the Churches area, Kasr El Sagha (Middle Kingdom), Kasr Qarun, Ihrit and Deir Abu Lifa.

Managing and protecting the whole area of Lake Qarun and its vicinities, belongs to the Nature Protectorate Sector, Ministry of State of Environmental Affairs (MSEA/EEAA), superseded only by the local Fayum Governor. Coordination is sought with various sectors such as the Supreme Council of

Antiquities (SCA), Ministry of Tourism (with Ecotourism context), Ministry of Agriculture & Fisheries and Ministry of Scientific Research & Technology.

The Supreme Council of Antiquities (SCA) is now looking into the possibilities of asking UNESCO to consider the site as a new world heritage recommended being included on Cultural and Natural World Heritage list.

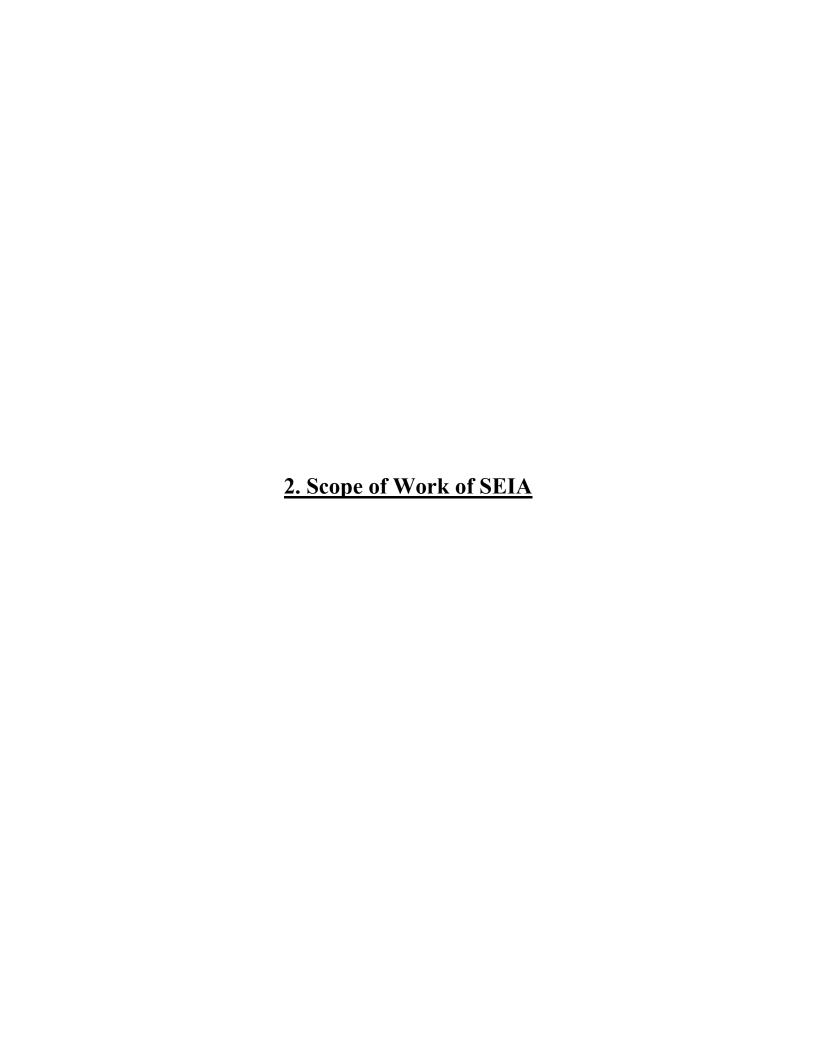
Widan el Faras is a unique site as it represents the finest and most durable ancient basalt quarries in the world. Also, the oldest basalt paved road (12 km directed towards the lake and Kasr el Sagha) was built by the Ancient Egyptians (Old Kingdom).

1.2 Purpose of the project:

The aim of the propject is 'to develop scientific, and practical methodologies for the documentation, characterization and conservation of ancient quarry landscapes, raise awareness of the significance and vulnerability of such sites and contribute to legal protection measures and sustainable management of ancient quarry landscapes' through case studies in Egypt, Jordan and Turkey. The project should contain the major steps in the process of conservation from its recognized inception on to its stage of monitoring with suggested mechanisms reinforcing sustainable management.

1.3 Main objective of the assignment:

The aim is the development of an appropriate conceptual model for the conservation management of a quarry landscape within a socio-economic integrated context. The site management concept will carry methodology, steps and recommendations for limitations of quarrying in the area.



A baseline of the current socio-economic environment of the Project Area (quarry landscape and the North and South Lake Qarun vicinity) was roughly and rapidly drawn. Fieldwork visits, semi-structured interviews and observations were used. Written items and studies were also consulted

Main field visit reference was made to the quarries responsible person at Giza Governorate to update the quarry situation. The quarry department in Giza is the official governmental body responsible for issuing licenses and permits after revising and assessing the quarrying maps, the volume of work, and clients of the companies (whether government or private). It is also used since 1980 as a profit centre in the governorate increasing its revenue source in addition to its annually located budget from the central government. The person in charge is the link to many actors in this process (Appendix 2). Giza governorate, with the Egyptian Survey Authority arbitration has reached the consensus of both governorates to manage 'Widan al Faras' quarries for Fayum in return of 25% as profit share.

As proper monitoring is required, a committee was established in May, 2006 in Giza Governorate's Quarry Department. Due to complaints against active modern quarrying companies causing hazardous damage to ancient quarry sites, the suspension of three companies' quarry activities was the result of the committee recommendation. At present, only two out of three companies proceed their active quarrying. However, such abrupt decisions had negative socio-economic impacts on the current quarrying business. No alternatives or substitutes were suggested and the companies had to go through several financial losses reaching 200,000 E.L each, in addition to fines to pay. Still, consensus has been reached with the active two quarry companies.

In order to avoid harm neither to the ancient sites nor to the business of the modern quarries, the SCA and MSEA/EEAA were requested to new locations to move modern quarry companies. Few days ago, a verbal statement was made by the SCA responsible person in Fayum Governorate who said that a new location, 11 km far away from the ancient basalt quarries, was finally given and allowed to the modern quarries.

Suspension periods, unclear stated official statements, many actors and least coordination, financial harms, unsettled situations, are all factors not in favor neither of the ancient historical sites nor of the modern business quarry sites.

A dynamic conservation of the site is recommended through a comprehensive integrated sustainable management development conceptual model that reaches a balanced status of sustained benefits for all parties. The best example here is of stakeholders/actors concerned about historical/ancient quarries, e.g., SCA, MSEA/EEAA, ECO-TOURISM, and stakeholders/actors involved with the modern business quarry sites, e.g.: the Quarry Departments at Governorates

and the Quarry Companies. It is an appropriate ecosystem approach reaching a balance of conservation and of use in the area by multiple resource users.

As for the North Lake Qarun's Fayum Desert at Widan el Faras, Gabal Qatrani the area is almost unpopulated. Its direct vicinity are mostly rural communities inhabiting 17 villages along Lake Qarun's shorelines in the East (Markaz Sennouris), South-West (part Markaz Sennouris and part Markaz Abshoy), South (Markaz Abshoy and the fishermen village "Shakshouk"), and South-West (Markaz Youssef el Seddik). People in these areas are mainly occupied with agriculture, except for the Southern part ("Shakshouk" village) who is engaged with both: agriculture and fishing. Ethnically, most of the inhabitants are originally Bedouins.

Only the South Lake Qarun (Markaz Abshoy) fishermen's village are originally from the Nile Valley, Saiidi (Upper Egyptian) people. Most of the South emphasis on Shakshouk (Markaz Abshoy) have living conditions which deteriorated because of several factors mainly due to environmental degradation, such as water pollution and lack of sanitation or sewage services, water salinity at imbalanced rates, unemployment, migration and especially pollution on the lake caused by drained irrigation water (now slowly treated by 17 inlets of agricultural drained waste water, ref. Fayum Information & Decision-making Centerr) and increased salt (from original not exceeding 12% on to now reaching over 36%). Apart from the drastic degrading environmental situation, fishermen are not allowed to fish for 4 months (from April to August,) because of the reproduction time. This is the dormant period or the time that can be used for other full cupation especially as economic alternative such as environmental artifact production, such as pottery, artistic use of palm leaves, or new ecotouristic initiatives and promotion for boats and camel tracks to transport people from the South of the lake to the North of the lake, This should be an alternative to the four wheel drive via the desert area. Ecotourism can be introduced and integrated to the environmental concern. At the northern end, no ecotourism projects would be allowed except for temporary services such as for visiting, training and advocacy purposes. These visiting centers should be built with environmental friendly building materials. Kiosks as the ones in Aswan should be also set at the Northern Qarun Lake but with environmental preconditions such as the use of waste baskets, mimic gifts of the area or hold stone artistic seminars, musical concerts, etc. Also, use of local teachers and pupils could promote environmental education* mostly in the non-formal approach in harmony with the environment surrounding it. Available schools are 12 in total: 8 primary schools, and 4 middle schools.

Governorate's total area covers 6068 km2, 6 cities, 61 rural local units annexed to 162 villages, of which 17 are South of Lake Qarun; and 1428 hamlets.

According to the Census, 22.5% live in urban areas and 77.5% in rural areas and the total population natural growth rate is over 22.1%. Total cultivated area is of 428 000 Feddans and two industrial zones in El Fath City, Kom Ousheem (1102 feddans) and in Outah (2000 feddans). The main industrial products are sunflowers oil, ceramics, refrigerators, paints. As the majority of people are in rural areas most of them are among, economically poorest community members.

Job Opportunities:

- Very restricted government job opportunities except with the Department of Education or the Adult Literacy Program with limited contracted periods;
- Excellent opportunities of micro enterprise funded projects especially addressed to poor families and female headed-households;
- Industrial labor opportunities in Kom Osheem industrial area;
- Small- and micro-enterprise project(s) opportunities for youth from various funding agencies.

The case of "Shakshouk" village (Markaz Basho) is located in the Southern part of Lake Quran. The total population number here is of 21471 persons (grand total of Faye is of 2,512,792 persons). Males are 11057 and females are 10413 and the average age of 20 years makes ups 14.6% of the population or 3134 persons. Male drop outs reach 39.4% or 4356 persons and among females the drop-outs are 79% or 8226 persons from 5 schools primary, preparatory and one-class schools. Peasant's male up 34%, farmers 16.5%, fishermen 20%, craftsmen 8.4%. Houses that have toilets make up 17.2% and those without any toilets make up 82.7%. Family planning is performed by only 35.4% or 7600 families, whereas those who do not pursue any family planning are 64.6% or 13870 families.

Most important problems facing the mentioned two villages:

- Fluctuation of the lake water and the decrease of fish production
- Unemployment
- Health problems
- Irregular irrigation and drainage system
- Fishermen immigration with negative social impact on families leading to family separations and increase of deviant behaviors
- Cultural and environmental unawareness

At the outskirts are spinning, weaving, fodders, porcelain, pottery, beet sugar, kleem (weaving, carpentry). Tourism is one of the most important activities in Fayum. But, unfortunately, the tourist sites are stated without reference to the significant link of tourism to ecology or to environment. **Ecotourism** is hardly mentioned in essential references such as the Description of Egypt 2007

prepared by the Cabinet of Ministers "Wasf Misr 2007". Tourism in Fayum combines natural, rural, coastal and desert environment yet the ecological synergy among environmental and tourist authorities and/or regulations is unclear. Tourism as such, hosts also monuments of various civilizations, such as Paraonic (e.g.: Kars el Saga in N-Lake Qarun), Greek, Roman, Coptic and Islamic. Tourist sites are Lake Qarun, Aryan Valley Falls, Ein el Selyeene Steps, Abgeeg Obelisk, Um el Borygat City, Qarun Palace, the ancient city of Madi, Virgin Mary Church, the Hanging Mosque, El Hadeer Water Wheels and the natural protectorates. Synergy and coordination is especially sought among tourism, environment and antiquities sectors. Good integrated management and monitoring should always accompany such a synergy to have effective sustainable development through such potential natural and cultural rich sites in Fayum.

| 3. T | e Quarrying Status in Fayoum Governorate |
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3. The Quarrying Status in Fayum Governorate.

In Chapter 1 and 2 of this report an overview and the profile of the environmental socio-economic current situation of Gabal Qatrani as well as of the North and South of Lake Qarun areas were presented.

According to Nature Protectorates' management, the approach is multidisciplinary as it involve environmental laws as well as indicators referring to appropriate disciplines: scientific, art, humanities type, geophysics, geology, archaeology, geography, and ecosystem in general with respect to flora and fauna. It involves also, economic, social, anthropological, behavioral and artistic disciplines. drawbacks and benefits are to be surveyed and listed after identifying them. Such a pre-requisite is useful for an operational process of a strategic development plan to be designed into periodical phases (immediate/short-term phase; medium-term phase and long-term phase).

A comprehensive conceptual management model is suggested in the following Chapter to facilitate and visualize assumptions made for the future, their pros and cons.

The following is the Fayum Quarries Department. reference with eight types of quarry stones but, unfortunately, with no mention of the basalt. This shows the lack of coordination between Fayum and Giza Governorates' Quarry Departments. The following table shows general information about the number of quarries, the volume of production in m3 and the preserved in m3 in Fayum:

Table.1: Fayum Mineral Production from 1/7/2004 to 30/6/2005 (ref. Cabinet of Ministers, Fayum Governorate Information & Decision Making Centre):

| Type of stone | No. of quarries | Production from 1/7/2004 to |
|----------------------|-----------------|-----------------------------|
| | | 30/6/2005 |
| Clay | 6 | 1815838 |
| Sand | 5 | 2427421 |
| Pebbles | | 20589 |
| Pebble soil | | 97941 |
| Dust & residues | | 780666 |
| Magadeel" | | 423 |
| Sin | | 50638 |
| Gypsum or | | |
| Limestone quarries 3 | 3 | 243906 |

This Chapter will mainly focus on the available future government plan of Lake Qarun area covering all of its directions North, South, S-East, and S-West relevant to our focus "Gabal Qatrani". The Northern part of Gabal Qatrani is

automatically included in the Lake Qarun area with little mention of it in the government plan. The whole area, by secular law, comes under the MSEA/EEAA Protectorate law no. 943, 1989 (Appendix.4). The available plan mentions almost no quarrying activities. Reference was made directly to responsible staff for the quarrying vicinities of the Northern Desert Lake Qarun areas, namely, to Giza Governorate, Quarry Department, Attached is a map (Appendix. 3) revealing the agreed upon boarders between modern and ancient quarries. This agreement is effective as of 2006 by a committee consent headed by the Executive Director of the Quarries Department at Giza Governorate who is also the Coordinator of the Fayum Governorate Quarries. Representatives attended were from the Nature Protectorate Sector of MSEA/EEAA, from the Supreme Council of Antiquities, from the Geology Museum, from the Centre of Ancient Egyptian Geographic Information Department, from UNESCO's Local Committee and Environmental Science Department.. The Agreement was signed by the Committee in 2006 to find alternatives to the three basalt guarries in Fayum Governorate. Names of the departments involved in 2006 committee were mentioned on purpose for future follow up. Giza Governorate's Quarry Department carries, by Egyptian Survey Authority arbitration, the Fayum quarry's management responsibility and, in return, it gets 25% share of income revenue.

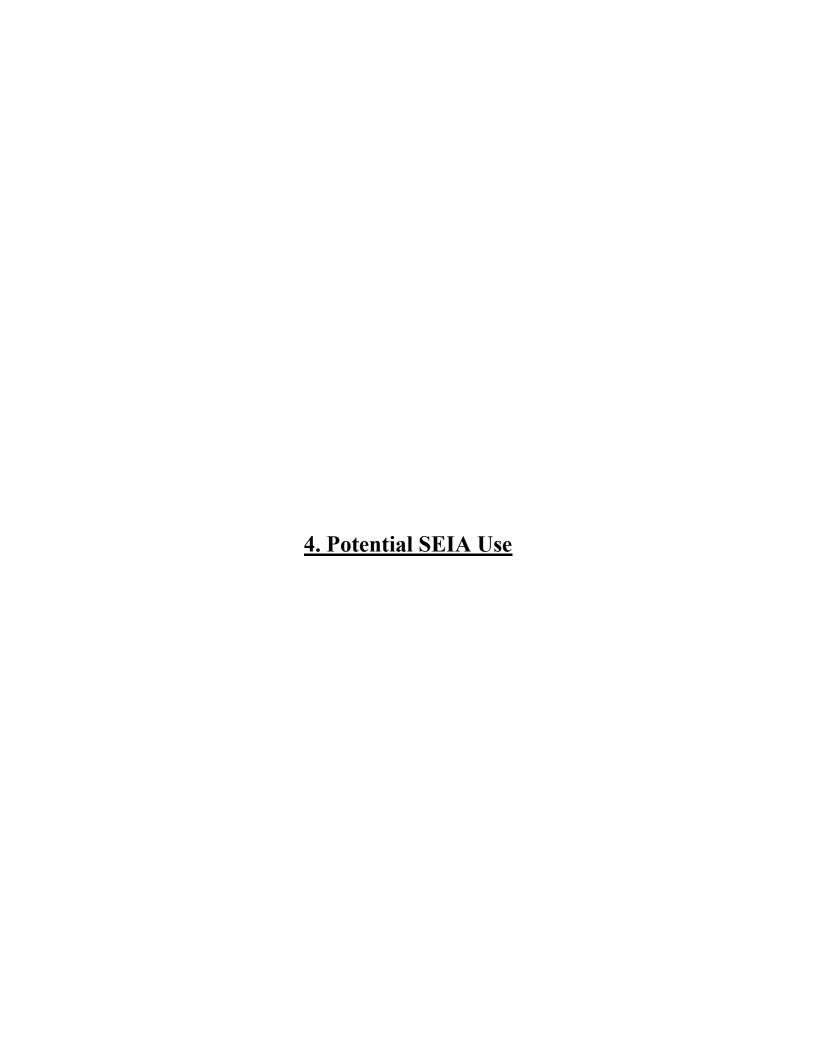
Currently, the three Fayum Governorate's quarries, belonging to three Companies (Karakat Pulic Company, Egyptian Private Company, and Nile Public Company) have been reduced to two companies, a public one and a private one, while the third Karakat Company has terminated its functions in Widan el Faras. The two other quarries are still active but committed to the Committee's 2006 restrictions (distant from the ancient by 500 meters) and the change of work directions also requiring borderline and guard to monitor the situation. As stated on the quarrying map in Appendix 5, the new entries and exit directions are via the 'Wahat Behereyya' road. In fact, Giza Governorate has other seven basalt modern quarries within its Governorate far away from Widan el Faras.

The ancient basalt quarries in Widan Faras, Gabal Qatrani, are to be protected from various challenges and threats to the ecosystem in the area and on the basis of sufficient scientific credibility. This approach is to be accompanied by policy significance and approach of mitigation. Comparative management case in Aswan has allowed increasing income revenue.

Within a socio-economic context the above mentioned dynamic approach will be further explained in Chapter 4 discussing the possibility of emphasizing sustainability of such vulnerable areas by a comprehensive integrative approach among various stakeholders especially Tourism's Ecotourism, the Nature Protectorate Department of MSEA/EEAA, and the SCA all under the auspices of Fayum Governorate.

With socio-economic context, environmental conservation can be still beneficiary for the quarry site of Widan el Faras. Aswan quarries management experience, when comparatively explored can be implemented in Fayum.

The Widan el Faras basalt quarries previous experience with the Egyptian Survey Authority arbitration was a long process needing about 12 stakeholders' consensus yet none of them neither directly nor indirectly benefited Widan el Faras Site. Other stakeholders, especially tourism in its ecotourism approach, together with SCA and MSEA/EEAA Nature Protectorate Department would agree on a comprehensive plan to develop and to improve the site harmoniously.



4. Potential SEIA Use

Within the **socio-economic assessment,** two conceptual models will be provided: figure (1) will represent the components needs for an Integrated Sustainable Management Development Approach, and figure (2) will be a practical model of a project mechanism, of a whole process of implementation of a Non-Formal Environment Education (**NFEE**) for tourism decision makers and/or of **Ecotourism** for environmentalist decision makers. It is a proposed communicative campaign to bring those two essential sectors in a socio-economic context closer to each other with improved mutual comprehension on basic credible scientific and legal grounds. This proposed communicative campaign can be effective at macro- and micro-levels. At the macro level officials and decision-makers, responsible for environmental and/or tourist activities will communicate more directly with each other on more comprehensive grounds. As for the micro level the Non-Formal Environmental Education package can be implemented among community members young and adult, literate and illiterate

Figure.1 is on Mitigation by reinforcing the integrated development management approach. It shows that a management development plan is sustainable only if local community members and local NGOs are involved in the process. Also, the model emphasizes integration, as today any environmental theme isn't appropriate or satisfactory if it is not comprehensive with other sectors involved by the local community members to make up the socio-economic policies, strategies and programs. Greatest positive impacts are reachable in a management plan with more ecological and environmental considerations and local community and/or local and international NGOs involvement. This comprehensive integrated management approach is further developed through GEF and UNESCO programs and projects.

The Information Pyramid (fig. 3) summarizes the need and types of indicators needed. Apart from baseline information (raw variables) and quantifiable statistical information, there are single or composite or complimentary indicators. These last provide a complete comprehensive picture and integrated information across sectors and themes.

Indicators are sensitive to change. They can show trends, for instance of species abundance or area size while ecosystem features are more static. Models enable scenario analyses and are basic to the comprehensive approach of ecosystem biodiversity. Also, composite (complimentary) indicators can provide a harmonious integrated picture. Composite indicators are recommended for long term programming. It is a monitoring strategy, called 'adaptive management'. Also, for the continuation of monitoring program you will need to develop a

strong sense of ownership and belongingness, important criteria for the continuation of the monitoring program and of sustainability, in general.

Apart from freshly field surveys, data can be based on analyzed documents, literature review and GIS techniques (satellite images..). The following is an analysis of Fayum Governorate documented data in the Egyptian General Survey Authority – Ministry of State of Local Development (1/1/2007). In the geographical indicator, for instance, there are 162 villages and only 6 cities in the whole Governorate. Also, the population in the social indicator is 1948.2 (2006) rural compared to only 564.6 (2006) urban. These are two clear indicators showing 3/4 of the community in rural areas with rural occupations. There are, also, 372 NGOs in rural areas, which represents 5.2 persons rural inhabitants per NGO. Subsidies in the social indicator among rural communities whether full subsidies, i.e., 274.7 or partial 52.7, with a total of 327.4 subsidies of a total rural population of 1948.2 is an indication that of the rural poor communities only approximately 1/10th of them get some help. As for the financial indicator, the loans, concerns about 50% of females who get an average micro-loan each of 1700 LE per female headed household. The social indicators of household expenditures are about 10000. LE per year per family (5000LE food, 801LE clothing& foot wear, 2000LE water, gas) are an indication of the standard of living. The sectoral indicator of tourism education reveals one school and one faculty. If future plans are intended to coordinate and integrate tourism and environment then ecotourism should be introduced in these specialized educational institutions. Environment is mentioned in this national census as a sectoral indicator but with no link to tourism nor to sanitation. It is only as a separate sectoral entity mainly on recycling of solid waste (1 recycling garbage factory, no land fills, one air observation station, 2 natural with none cultural protectorates). For instance, sanitation as a sectoral indicator should come under environment and tourism. With future perspectives increased amounts of water will be used. Another very significant sectoral indicator is energy. The documented is only electricity and natural gas. It is mostly electricity as natural gas represents only 46.0 per thousand subscribers. Electricity is yet low in its consumption. As an example, 1438 million k.w/h. yearly as total consumption of electricity; of which 818 into rural areas. Only 412.2 million k.w.h. yearly go for lighting. In comparison to the rural total population, the total consumption of electricity, accordingly, represents only half the consumption of the total population, although the rural population is about 3/4 of Fayumi people. Whereas the lighting is only 1/4 of the total population consumption. In this case of significant sectoral indicator of energy, it is recommended to use renewable energy (RE) in the Governorate especially solar energy (SE) in its twofold uses: heating and electricity. Such a RE will be ideal for Fayum Governorate where heritage, natural and cultural, is mainly in an open-air museum in need of controlled/monitored clean air all the time for the sake of Fayum's wealthy sites. Also, the sectoral indicator of communication has a telephone density in rural areas of only 6.7% per 100 persons. The IT clubs in rural areas are not even specified. Only a general total of 37 IT clubs are mentioned for the whole governorate (urban and rural with no specificity). GIS techniques have been recently introduced in Fayum as planning tools.

The following is a focus on socio-economic indicators, effective in principle, and should be carried out in the monitoring process parallel to the ecological monitoring because of the close link between the environment and its users. Areas of interest must be identified such as the quarry landscapes. The ten most commonly used (Bounce et al., 2003) and reflecting the management plans are:

- 1) Resource use patterns, such as activities on which people depend for food, income, their location, timing and seasonality, use rights.
- 2) Stakeholder characteristics and household characteristics (such as age, gender, education level, religion, literacy, food consumption, incomes)
- 3) Gender issues
- 4) Stakeholders' perceptions, understanding of management plan, its relevance to the impact on the environment, perceptions of other stakeholders, cultural and religious beliefs, willingness to cooperate
- 5) Organizations and resource governance, property rights, management efforts, administrative and political arrangements at community and government levels
- 6) Traditional knowledge, e.g.: in South Lake Qarun area most people refer to the Bedouin traditional law "tahkeem orfi", for community conflicts
- 7) Community services and facilities, e.g.: medical, education, transport, communications, public utilities
- 8) Market attributes for extractive uses: supply, demand, prices, and market structure such as fishing or mangrove harvest, or planting.
- 9) Market attributes for non-extractive uses for activities such as tourism and aquaculture.
- 10) Non-market and non-use values: storm protection and provision of fish habitat (very much needed by the villagers in 'Shakshouk').

Socio-economic indicators should be suitable and simple for monitoring programs especially needed at a later stage, in a complete assessment.

The process would need the above mentioned guided method, frequency of data, collection, personnel. A baseline survey sould be set first. Primary and secondary information should be identified and used. Primary information should be got from the field while the secondary information can be collected from literature sources.

| 5. Methodologies and Definition of Concepts |
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5. Methodologies and Definition of Concepts

5.1 Certain field trip tools such as semi-structured and open-ended interviews (with focused issues) have been used. Questions have been also addressed to local NGOs. Observations have been noted while on the various field visits: either among rural villagers in NGOs, or fishermen community members in 'Shakshouk' village.

Content analysis has been carried out during the readings materials on Aswan and its quarry experience. Conceptual models have been also used in this report.

Webliography (websites), documents sources, as well as maps, have been referred to.

5.2 Definition of Concepts

- Baseline survey: based on 1) data from project proposed; 2) records of previous experience with similar actions as represented in reference literature as well as other EIS (quarries in North Ireland; in South Wales; in Aswan; in Jordan, etc.); 3) census and vital statistics; 4) documents sources; 5) field research, including informant interviews, hearings, group meetings, and surveys of the general population in order to investigate the social impacts.
- **Mitigation:** reinforces compensation, modification, minimization of negative steps, and/or enhancement of positive impacts. It involves also monitoring as a joint agency-community responsibility.
- **Principles of SEIA:** 1) involve the diverse public. Identify and involve all potentially affected groups and individuals; 2) analyze impact equity. Clearly identify emphasize vulnerability of under-represented groups; 3) focus the assessment. Deal with issues and public concerns; 4) identify methods and assumptions and define significance. Describe how SEIA is conducted, what assumptions are used and how significance is determined; 5) provide feedback on social impacts to project planners; 6) identify data sources: used published scientific literature, secondary and primary data from the affected area; 7) plan for gaps in data, to evaluate the missing information, by more field work and develop a strategy for proceeding.



6. Conclusion

6.1 Lessons learnt from previous comparative quarry experiences

- *Integration and coordination:* In addition to SCA, Tourism and Police (Ministry of Interior Affairs), coordination is definitely needed with MSEA/EEAA to promote ecotourism.
- Reduction of bureaucracy and complex paper work: to simplify executive procedures.

Environmental awareness promotion by means of workshops, training, campaigns, formal and non-formal environmental education, seminars, lectures, and activities.

6.2 Suggestions and Recommendations

Phase One (short-term):

- Promote the coordination and integration of programs between ecotourism and the MSEA/EEAA Protectorates.
- Plan an advocacy and a training program once, on 'environmental issues' to be addressed to tourist staff and another time, on 'ecotourism' to be addressed to the environmental staff of MSEA/EEAA locally and nationally (see fig. (2) "A Practical Model of a Project Mechanism)
- Implement an awareness project with the adaptive management approach addressed to stakeholders.
- Ask a local NGO to prepare and to present its own project proposal after assessing the needs of its community.
- **Encourage new** initiative projects especially if they are environmentally friendly, with socio-economic positive impacts, such as, the promotion of the fishermen's role as boat captains and have them get directly involved with planned ecotouristic projects; also, artistic local quarry people can initiate a stone/rock art seminar.
- Improve the living conditions of fishermen and to seek appropriate economic activities as temporary additional alternative occupation during the four months cessation (fish reproduction period).
- Prepare a rock art symposium in the desert area a one day activity close in its theme to the surrounding environment. This one day event's income is to be kept for local MSEA/EEAA (rangers, researchers) fundraising –

- Empower families' socio-economic conditions especially by training women on environmental artifacts, weaving, and carpeting.
- Produce or mimic artifacts close to the ancestors' productions and arrange seasonal, occasional exhibitions and markets for the products (e.g.: pottery in various shapes and for various purposes...ornamental or for food; painting; basketry, etc.).
- Develop a one-shop-stop committee that would coordinate any administrative procedure related to Widan el Faras site the same should apply to a professional technical committee for better monitoring.
- Use multi-media to record Widan el Fars, Gabal Qatrani and develop a documentary film of the Site, best produced by investors in the area in order to promote sustainable development through ecotourism giving the quarry landscapes local (micro) and global (macro) significance that encapsules "a shared human project" (Owoc 2004 221).

Phase Two (long term):

The long term suggestion is related to the improvement of the income generating activities to participate to the improvements of local people live.

- 1. Ecotourism: Responsible ecotourism includes programs that minimize the negative aspects of conventional tourism on the environment. It enhances the cultural integrity of local people. Apart from evaluating environmental and cultural factors, an integral part of ecotourism is in the promotion of recycling, energy efficiency, water conservation, and the creation of economic opportunities for the local communities. It is not for large scale ecotourism that causes environmental degradation, loss of traditional culture and way of life, and exploitation of local labor. Ecotourism must go in this region for small scale, slow growth, locally based initiatives.
- 2. Visitor Centres (VCs): According to standard definitions, visitor centres are good for interpretation. They can affect the visitor's behavior so that he/she can contribute to the conservation. VCs have several components: meetings, talks, slide shows, children's activities, refreshments, souvenirs or education materials and any of the exhibits are to be well protected from the eating area. __ The Exhibits and displays include topics such as: -natural history; socio-cultural issues; a map of the surrounding area; ways (fund-raising) in which visitors can help with the management or the funding of the place. __ Issues to consider when designing a visitor's centre: type of visitor (adults, children, etc.); language of displays; protection from weather & from human contacts; -

durability, i.e. durable to survive time, for harsh environmental conditions; - portability, i.e., components of the exhibition that may be portable elsewhere; - multi-media; -safety and security from theft possibilities; - location, i.e., it is important that visitors are drawn to it easily and quickly.

Appendices

Figures

<u>Map</u>

List of Acronyms

Bibliography

APPENDICES

Appendix (1): List of Various Actors/Stakeholders

Appendix (2): Fayum Map of 'Marakez'

Appendix (3): Egyptian Environmental Laws vis a vis Natural Protectorates

Appendix (4): Fayum Quarrying Map

Appendix (5): List of People Met and/or Contacted

Appendix (6): Map of Fayoum Investment Projects in the Northen Lake Qarun

Shoreline.

FIGURES

Figure 1 Mitigation by Reinforcing the Integrated Sustainable Development Management

Figure 2 A Practical Model of a Project Mechanism

Figure 3 Information Pyramid

List of Acronyms

SEIA: Socio-Economic Impact Assessment

NSCE: North South Consultants Exchange office

TOR: Terms of Reference

B.C.: Before Christ

MSEA/EEAA: Ministry of State of Environmental Affairs/ Egyptian

Environmental Affairs Agency

SCA: Supreme Council of Antiquity

EU: European

NFEE: Non-Formal Environmental Education

GIS: Geographical Information System NGO = Non-Government Organization

ISOTEIA = Integrated system for the promotion of territorial & <u>Environment</u> Impact Assessment in the Framework of Special Planning http://www.isoteia.org

Appendice 1: List of various stakeholders

| Stakeholder | Sectors/Dept., Concerned | Acronym | Brief Description |
|--|---|---------|---|
| Ministry of State for Environmental Affairs | Egyptian Environmental Affairs Agency, | EEAA, | The main administrative body responsible for the enforcement of environmental protection. Northern Qarun Area is declared a protected area and Widan el Faras is an integral part of this area. |
| | Nature Conservation Sector | NCS | The body responsible for the protected areas |
| Ministry of Culture | Supreme Council of Antiquities – Regional Offices | SCA | The Egyptian governmental body in charge of protecting national heritage |
| | SCA Inspectorates | | The district offices responsible for the direct management of historical sites |
| | Egyptian Antiquities Information System Project | EAIS | The project started in 2000 to establish a Geographic Information System (GIS) for the management of historical sites in Egypt. This should turn into a tool to improve the SCA in mapping, documentation and registration of historical sites. |
| | SCA Information Center (MIS) and relevant departments | SCA/MIS | The center offers exposure and orientation to the use of advanced database technologies |
| Amlaak Central and District | | | |

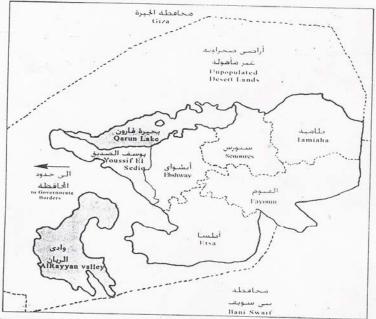
| Offices | | | |
|---|--|-------------------------|--|
| United Nations Educational Scientific and Cultural Organization | | UNESCO | UNESCO works to create the conditions for true dialogue, based upon respect for commonly shared values and the dignity of each civilization and culture. |
| Man And Biosphere Program | | MAB | UNESCO's Programme on MAB develops the basis encourages interdisciplinary research, demonstration and training in natural resource management. MAB was launched in 1971 to seek how humanity affects the biosphere and what can be done to avoid further degradation. |
| Ministry of Tourism, and Egyptian Tourism Development Authority | | | The governmental body concerned with promotion of tourism industry in Egypt. |
| Ministry of Petroleum | Egyptian Geological Survey and Mining Authority – Sector of Mining and Quarries | EGSMA | The Sector of Mines & Quarries is the Governmental body entrusted with the licensing of exploration and exploitation activities and the implementation of the Mining Code. It is concerned with the means by which to conserve the national mineral resources. |
| Governorates | Fayoum, Giza and Aswan | Quarrying Department | The governmental bodies responsible for facilitation of implementing the regional development plans and contribute with available resources. The quarries department in these governorates are responsible for issuing the licenses and permits to the quarrying companies to exploit part of the quarries |
| Military Survey Department | Fayoum and Giza | | Provider of official maps for remote areas in Egypt |

| Ministry of Planning | The ministry entitled to set plans of social and economic development and implementing them. |
|---------------------------------|--|
| Private Mining Companies | For the time being, these companies are considered as a serious threat on the quarries because of the unplanned mining activities they practice. These companies should realize that it is beneficial to all parties to retain the limited mineral resources of the country. |
| Private Tourism Companies | The random camping and touristic activities also endanger the existing quarries. The touristic companies could benefit from reservation of the ancient stones by integrating visits to these sites in their programs but on a more scheduled and organized basis. |
| Ministry of Civil Aviation | The ministry is implementing a plan to establish a new airport in the area of Gebel Qatrani behind Om Swan. Work should be coordinated in order not to expand the activities to an endangering extent |



محافظة الفيوم

Fayoum Governorate



العيد القومي للمحافظة: ١٥مارس بمناسبة نضال شعب الفيوم ضد الاحتلال الإنجليزي عام ١٩٦٩م.

The Governorate's national day: 15th March commemorating the strife of El Fayoum people against the British occupation in 1919.

وصف الشعار: يتكون من الساقية التي تشتهر بها الغيوم، وبحيرة قارون التي تقع في شمال الغيوم، يحيطها إطار أصفر يمثل المحراء التي تحيط بالمحافظة، والأرضية خضراء تمثّل أرض المحافظة، وفي الخلفية علم مصر.

Emblem: It displays the famous water wheel of Fayoum, and Qarun Lake in the North of the governorate, surrounded by a yellow frame representing the desert around the governorate. The green landscape refers to the land of the governorate and in the background appears Egypt's flag.

تقع محافظة الغيوم في الصحواء الغربية في الجنوب الغربي من محافظة القاهرة، ويُحدُّها من الشمال الغربي محافظة الجيزة، ومن الجنوب الشرقي محافظة بني سويف، وتُعدُّ مدينة الغيوم عاصمة المحافظة.

Fayoum Governorate lies in the Western desert, in the Western South of Cairo governorate. It is bordered in the Western North by Giza and in the South East by Bani Swaif. Fayoum city is the governorate's capital.

Appendix (2)



معاضلة الغيوء

المهد الأمتاط / مدير إحارة خنون البينة تحوة كوبة ووعد

بالإنسسارة إلى كتلب سيدتكم بقصوص صورة من خطة السسياحة بجهتيره منسارين الإنطار فرع القامرة الكبري والفيوم بعبياز شنون البيئة .

رحاء الإمامة وأن منظ السيامة تتعلق في الآدي .

1. استثمال العرجة الثانية تعريض سندن الجمود يتتلقف ٢٥ مليون چنيسة مسن واراز قليلة .

1. الناء قاشطن نقلف هذا القروشين مجهل بالشعات .

1. الناء قاشطن نقلف هذا القروشين مجهل بالشعات .

2. الناء الناء المحردي السلط بحيرة قرون .

3. استثمال إثرة خط السير السياحي في الداخل الشير متارة على المسلحل الهنوريس .

التجميرة .

التجدرة . - تقوم هيئة التنمية تسينعية بالشاء طريق عنى تسنطن للنمائي ليحيرة قارون تهسدا المرحلة الأولى من مسالة ١٢ كم من فرنة حتى كدم أو تنبع . - تطوير بحض المنشأة المسلمية على السلطل الميتوبي للبحيرة .

وتغضلوا يقبول واهر الثعية ...

- 1/11

تعریدا فی ۲۰۰۲/۱/۱۵ للسنون

المتراسم ال 1.6

101

حظر القيام أو تصرفات أو القانون ۱۰۲ لسنة ۸۲ رئيس الجمهورية أنشطة تضر بالبيئة القرار ٩٤٣ لسنة ٨٩ قرار رئيس الوزراء القرار ٢٦٩ لسنة ٨٩ اعتبار محميتي فارون والريان قرار محافظ الفيوم تشكيل الجلس التنفيذي لجهاز Appendix (7) By an Envital شئون البيئة بالفيوم القرار ٧١٤ لسنة ٨٩ بشأن حماية البيثة البحرية والبرية قرار محافظ الفيوم فى محميتى قارون والريان القران ٥٤ لسنة ١٩٩٠ حظر صيد الطيور بكافة أنواعها قرار محافظ الفيوم بشان تشكيل لجنة علميه القَرار ٢٥٥ لسنة ٩٠

كشف بأسماء القوانين والقرارات

الصادرة في شأن المحافظة على البيئة والمحميات

قرار محافظ الفيوم للمحميات الطبيعية فارون والريان القرار ٢٣ لسنة ٩١ بشأن تحديد نطاق محمية قارون قرار محافظ الفيوم بشأن ندب المندس نبيل الزيات القرار ٤٠ لسنة ٩١ قرار محافظ الفيوم رئيس لجهاز حماية البيئة بشأن حظر قطع التخيل بجمي القرار ٨٨ لسنة ٢٨ قرار محافظ الفيوم أنواعه بنطاق المحمية.

٨

Appendix (6)





Appendix (5) List of People Met and/or Contacted

1. Mr. Mohamed Hiwihi
Ranger
Education, Information, Communication
Wadi El Rayyan Protected Area
National Conservation Sector
MSEA/EEAA; also with experienceat the
Italian Cooperation Program
Wadi El Hitan World Heritage Site
Website: www.eielo.org
Email: hwihi@hotmail.com

Mobile: +20106556172

Co-founder and deputy president
Arabian Forum for Promoting Rights and Development

1.1. Mr. Nader Saleh General Secretary Arabian Forum for Promoting Rights and Development

Mr. Emad El Din Sayed Abdel Ma'boud
NGO president/ teacher
Community and Environmental Development NGO in Shakshouk village
Mobile: +201152535311

NGO representative
FAODA Fayum Agro Organic Development Association
(promoting organic cultivation)
El Mohafez building, entrance A,
Jamal Abdel Nasser St., in front of Cairo Station
Fayum
Website: www.faoda.4t.com
Email: faoda@gawab.com
Fax: +2084 330776

(CV and NGO profile attached)

Email: Gebely2006@yahoo.com

4. Eng. Gebely Abdel Maksoud Abul Kheir Ranger/ geologist Widan el Faras, Gabal Qatrani, N- L Qarun and Wadi Rayyan Mobile: +20104535453 Fax: +2084 6830535 5. Governor H.E. Dr. Galal Mostafa Saiid Fayum governorate Tel: +2084 633 6577

5.1. Governor's assistants Mr. Maged El Ghemri Mr. Abdel Baset Mobile: +20105527255 Fax: +20846337810

6. General Salah Tantawi General Manager Giza Governorate Quarry Department 6.1. Asst. Dina Tel: +2035865244 Mobile: +201225677955

7. Dr. Mahmoud El Kaissouni Environmental Advisor to the Minister of Tourism Tel/Fax: +20233047406 Email: melkaissouni@gmail.com

8. UNESCO Regional Office 8.1. Dr. Gerard de Pumege Director, Cultural Heritage

8.2. Dr. Mohamed El Awwa National Heritage

8.3. Mrs. Gehanne Abdel Malek Research assistant Culture program Email: gehanne@unesco-cairo.org

Tel: +202 27945599/ 27943036 Mobile: +20122105237 Website: www.unesco-cairo.org

9. Dr. Djahida Boukhalifa NSCE Officer, International Project Unit Tel: +44 1865 407572 Email: nsce@postpoxlane.com 10. Dr. Wafaa M. Amer
 Professor of botany, Ain Shams University Faculty of Science
 Deputy Head, Science Heritage Centre
 Mobile: +20101099445
 Tel: +20235675656
 Email: wafaa_amer@hotmail.com

11. Eng. Kamel Abdel Raouf General Manager Central Area of Protectorates, Fayum governorate Markaz Abshoy, Fayum

12. Mr. Taha MSEA/EEAA driver, Lake Qarun protectorate

13. Mr. Mohamed Abdel Rahman In charge of Wadi El Rayyan, Qarun and Fayum Mobile: +20120763880/ +0106943922

14. Mahmoud MokhtarRanger Lake QarunMobile: +20124099949Email: mahmoudm13@hotmail.com/ mahmoudmm13@yahoo.com

15. Mrs. Nahed Mostafa Non-formal environmental education, Ministry of Education Mobile: +20121176883 Tel: +2 24991660

16. Eng. Hassan Gouda Agricultural supervisor, Markaz Youssef El Siddiq Mobile: +20101830609

17. Agricultural engineer Mohamed Rabi' Consultant, Ministry of Agriculture Former first Deputy Minister of agriculture

 Mr. Karem Mahmoud, President
 Beni Saleh Friends of the Community and the Environment, Fayum Mobile: +20106476700

19. Eng. Dr. Mohamed Waly Deputy director, Information and Decision-Making Centre Cabinet of Ministers Tel/Fax: +2 0846345892 Mobile: +2010819035 Email: ybamates@yahoo.com

20. Eng. Ayman Seifel Nasr Tantawi Tourism Consultant Fayum governorate Tel: +20263425861/ 6901302 Mobile: +2 0104665181

21. Mr. Ahmed Abdel Aal Fayum antiquities department Mobile: +20105479182 Tel: +20846337339

22. Dr. Ragab Gom'aa Professor of economic agriculture, Fayum University Mobile: +20122445568 Tel" +20846372202

23. Eng. Eweiss Mokhtar MSEA/EEA representative, Fayum governorate Mobile: +20126868992

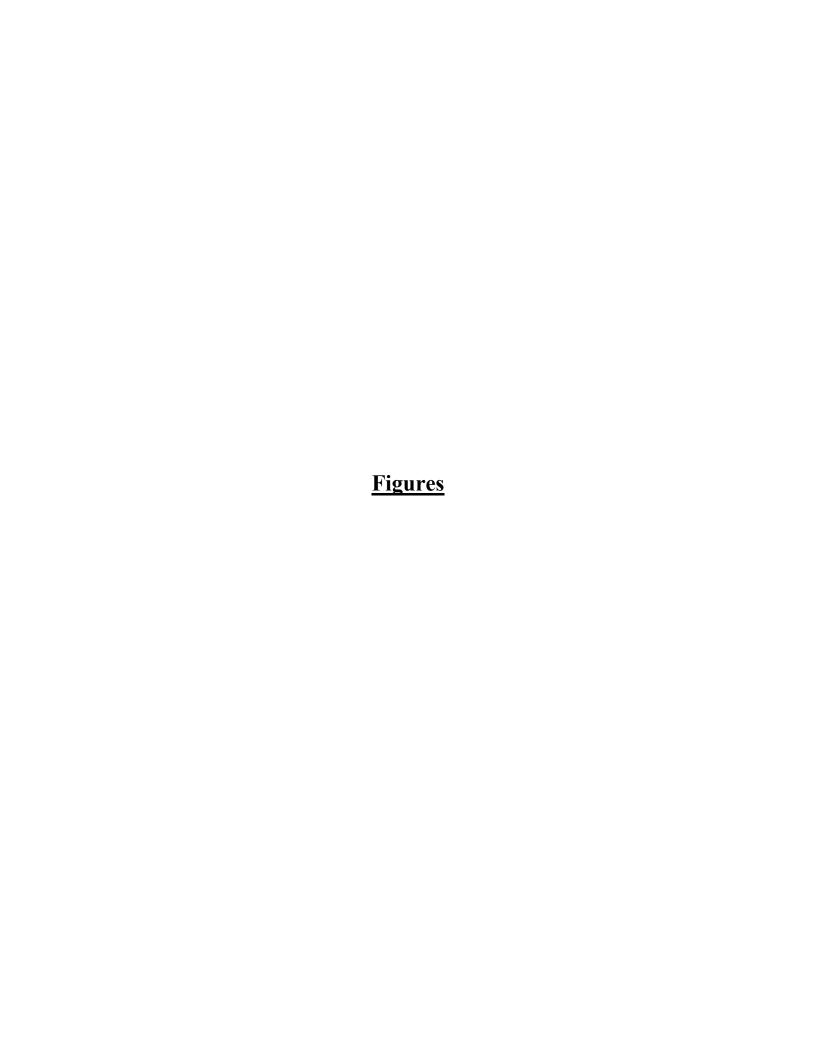
24. Mr. Kamel Waheed Fayum Pyramid Department Mobile: +20105346473

25. Dr. Hassan Abu Bakr NFEE Program Mobile: +20101070438

26. Dr. Mostafa Foda MSEA/EEAA Tel: +202 25271391/ 2548792 Mobile: +20122283890

26.1. Eng. Moheeb Tel: +20225256479/ 25256452

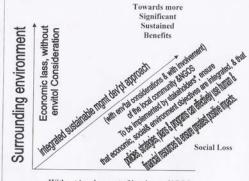
27. UN-AFICS NGO Tel.: Amr, Admn. 0105802300



MITIGATION BY REINFORCING THE INTEGRATED SUSTAINABLE DEVELOPMENT MANAGEMENT (MGMT) APPROACH VIS A VIS CONSERVATION CONCEPTUAL MODEL

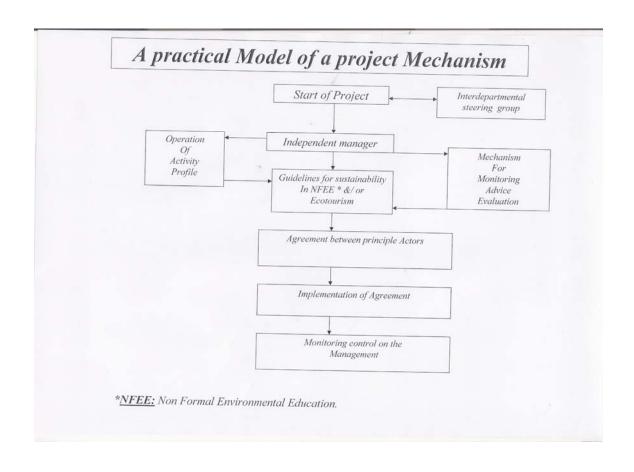
• STAKEHOLDERS FOCUS:

- local community members & NGO
- Public & private quarry sectors (e.g. customers, etc)
- Environment: local, national. regional & international levels.
- Coordinated partners local, national, regional & international
- Tourism(e.g. ecotourism)
- Education (e.g. environmental)
- Agriculture (e.g. ecological approach. food products)
- Irrigation &drainage: environmental approach.
 i.e. dripping &/ or water treatment
- Fishing packages: food, materials, tools.
- Transportation: roads; water surface.

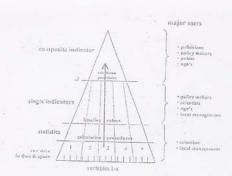


Without involvement of local com. NGOS Surrounding environment

Fig.2

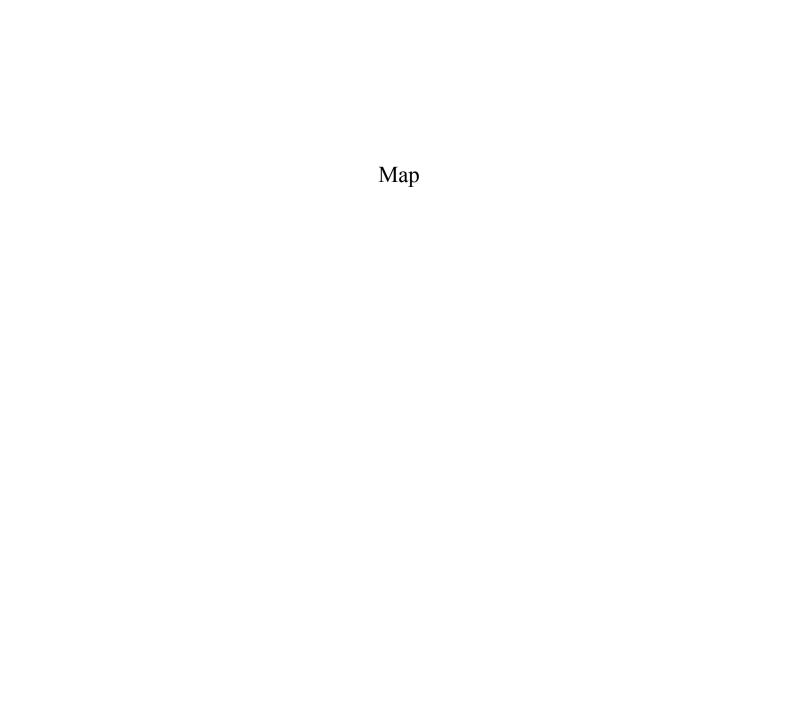


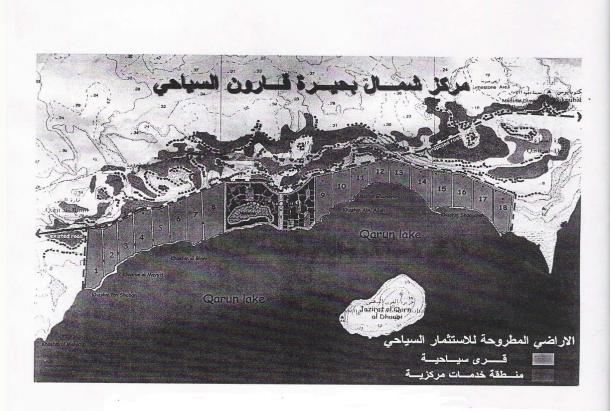




It would be cost-effective if countries would have a flexible indicator framework to cope with a wide range of – changing- questions for different reporting and end-users". Therefore, a list of single indicators is proposed which is useful in itself but also forms building blocks which allow the construction of numerous composite indicators if needed. A carefully chosen set of single indicators on (i) **ecosystem quantity**; (ii) ecosystem quality, and (iii) pressures (incl. a few uses) may generate such a flexible indicator framework. Figure shows a schematic overview of how these three types, quantity, quality and pressure indicators, serve as building blocks for numerous composite indicators. Possible composite indicators are presented in a second list.

See CBD document on the Implementation of the Convention and the Strategic plan: information for the future evaluation of progress (UNEP/CBD/MYPOW/3)





Shoreline.



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http://whc.unesco.org/en/activities

- (on conversation management)

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Environmental Affairs Agency

SCA: Supreme Council of Antiquity

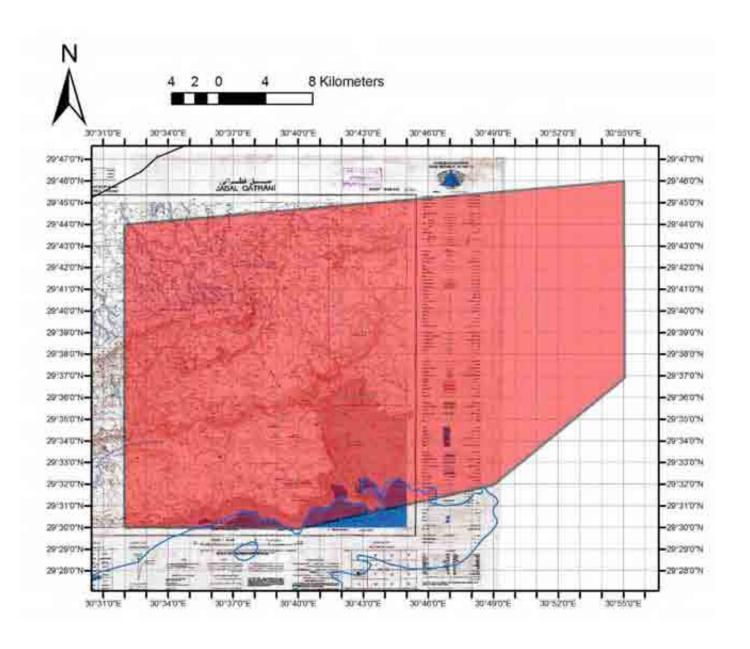
EU: European

NFEE: Non-Formal Environmental Education

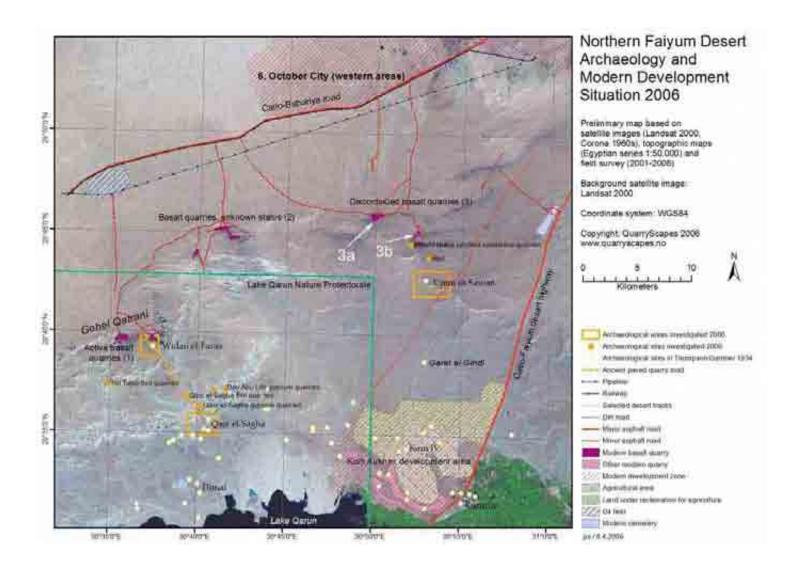
GIS: Geographical Information System NGO = Non-Government Organization

ANNEX 4:

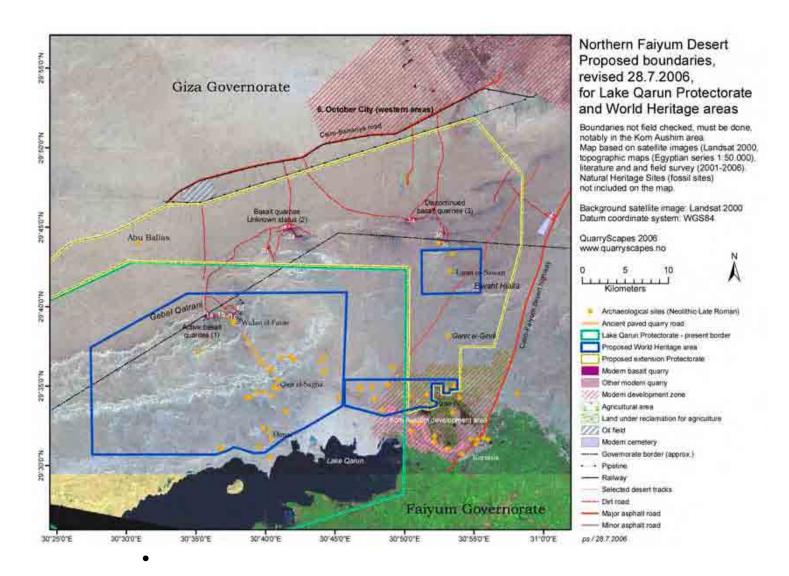
• MAP 1: BORDERS AND LIMITS AND FEATURES OF WIDAN AL FARAS 1:50000



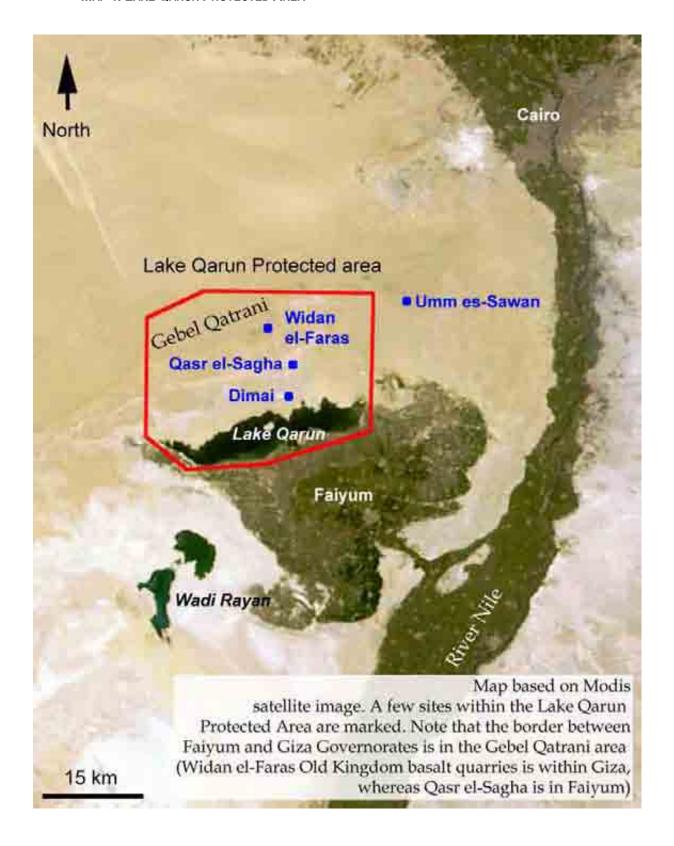
• MAP 2: DEVELOPMENT PLANS IN NORTH FAYOUM



MAP 3: PROPOSED BOUNDARIES FOR A WORLD HERITAGE SITE



MAP 4: LAKE QARUN PROTECTED AREA



ANNEX 5: PHOTOGRAPHIC ACCOUNT



Looking towards quarry area with work area in foreground



Widan faras, basalt work area in foreground.



Lower part ancient road



Last hill down towards loading docks.

ANNEX 6: EXAMPLES OF SITE MANAGEMENT PLANS

Site Management Plan

"A strategy for the future to balance conservation needs with economic, social and other needs"

Basic guidelines

- Connection between natural and cultural landscapes
- Sites are multi-period
- Problems of urban growth and expanding agriculture
- Idea of targeted tourism

Avebury, England



Avebury, England



- Multi-period site, six large monuments, 383 sites total
- Largest stone circle in Europe



- World Heritage site since 1986
- 350 000 visitors annually



- Agricultural land, central village
- National Trust owns 1/3 of the land

- Main issues of SMP:
- land use and condition of monuments and their immediate setting
- current planning and policy framework
- transportation issues
- public access and sustainability
- potential of archaeological research

• Results:



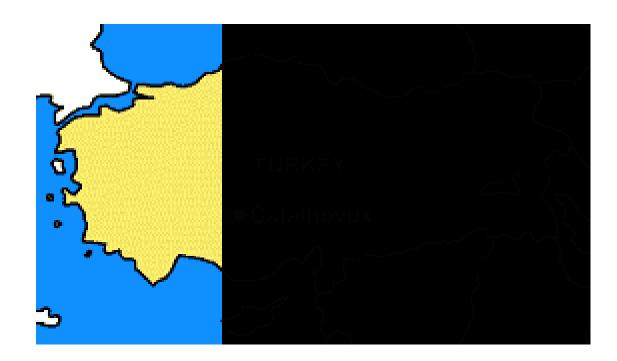
 Agricultural land turned into grassland (now 5 % of the World Heritage Site)

- Results:
- Background: landscape assessment, visitor and traffic assessment, GIS database
- Development of alternative itineraries and tourist routes

Results:



 Visual sensitivity – signing, protecting views from and to the sites, garbage collection





- Famous early agricultural village (c. 7000 BC)
- Turkish identity, Mother Goddess groups

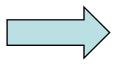


- Site Management Plan developed in 2005, first of its kind in Turkey
- 7000 visitors per year



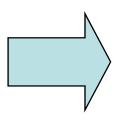
- Surrounded by agricultural land
- First degree archaeological site

- Main issues of SMP:
- 1. Integrate archaeology with the natural, social and built environment



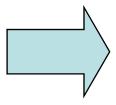
- Wider regional landscape, national park
- Buffer zone area, protective fences, new legislation
- Awareness among farmers and locals

- Main issues of SMP:
- 2. Identify sustainable management practices



- Village wardens responsible for buffer zones
- Develop roads to the site and tourist infrastructure
- SMP should be recognized by the Municipality of Cumra as planning guidance
- Database available on the web

- Main issues of SMP:
- 3. Propose relevant practices that can also be used for other regions



- Work with the national media and educational institutions
 - Training courses and the establishment of a scientific center at the site

• Results:

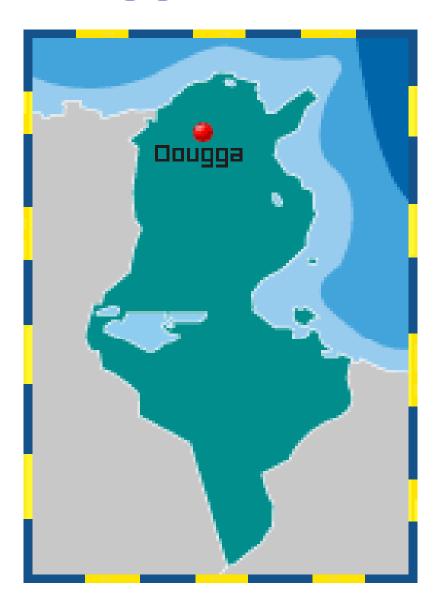


 On-site museum, reconstructed Neolithic house, signing

• Results:



 Community involvement with locals – school classes, slide shows for adults, excavation training and construction expertise





- Continuous human settlement from 5th century BC-1960
- •The best preserved example in the Maghreb of rise and development of an indigenous city 21



- World Heritage Site in 1997
- •65, 000 visitors per year, majority foreign



- agricultural landscape, 20 km from nearest town
- National park in 1991, but protected area only 10 %, the rest private property

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- Main issues of SMP:
 - solve legal problems
 - marketing and promotion needs
 - conflict with the local community
 - lack of proper archaeological documentation

Results:

- Buy land to protect the site and buffer zone
- Develop guidebooks, cafes and parking areas
- encourage tourists to stay longer and explore the landscape (olive groves)
- Economic integration with the local community (local guides, handicraft activities, tourism services)
- Continue to develop a database

Summary of basic guidelines

- Interplay between landscape and cultural monuments
- Background studies
- Importance of local community involvement
- Targeted tourism

- Successful points in site management plans
 - has a limited time span
 - has sufficient background studies
 - involves the local community
 - utilizes simple and cost-effective means to spread knowledge and encourage tourism
 - leaves space for revision and new studies

"Management plans are not constraints but identify opportunities"

Lessons learned that are useful for Egypt site management

- Need for reliable statistics and background studies (GIS, maps, archaeological information)
- Community control of buffer zones
- Alternative sights and itineraries
- Sites as part of landscapes and timescapes
- Community participation in active site management
- Control of surrounding activities
- Raising awareness and education

How do we do this in Luxor?

- Appropriate signing
- Site information for tourists and locals
- Buffer zone protection and treatment
- Walking tours vs. Buses
- Marketing aspects leaflets, brochures and maps
- River views and mountain views
- Environmentally friendly architecture
- Eco-tourism
- Light pollution
- Garbage
- Agriculture adapted to the site's needs
- Open-air museums
- Traffic control
- Landscape protection and value enhancement

SITE MANAGEMENT OF THE GIZA PLATEAU (Case Study)

Introduction

The pyramids of Giza and other monuments on the Giza Plateau are among the great world treasures. In fact, the pyramids are the icons of world heritage in general and are widely pictured as such.

The site covers an area of 2 x 2 km. It includes the three pyramids of Khufu, Chephren and Menkaure, private tombs, and the Sphinx. The pyramid complexes belong to three rulers of the 4th Dynasty. These pyramids are not the oldest monuments, built on the plateau; the history of the site goes back to at least to the reign of King Ninetjer of the 2nd Dynasty, whose name occurs on some jar sealings found in a tomb in the southern part of the site. An even earlier tomb of the reign of King Djet (Wadjet) of the 1st Dynasty was located at the southern part of the plateau. With the end of the Old kingdom, nothing of significance took place for the next 600 years. During the New Kingdom, the site was revitalized because of the renewed importance of Memphis. King Amenhotep II of the 18th Dynasty built a small brick temple in the precinct of the Sphinx. Seti I later enlarged this temple. The site became a place of pilgrimage as documented by numerous stelae and votive offerings by kings and pious individuals.



The Tourist Experience

An account of the tourist experience at the Giza Plateau has been given by Evans and Fielding (2000), which provides the basis for this section. According to Evans and Fielding, tourists about to see the Giza Plateau anticipate visiting one of the Seven Wonders of the World, the pyramids. However, the Giza Plateau offers much more, it contains mastabas of the Old Kingdom nobles, and the city of the pyramid builders. The small structures on the plateau revealing much about the order of Old Kingdom society, and depicting everyday life on their walls, as well as ritual practices, remain largely unexplained to the tourists. These smaller tombs are rarely visited by tourists, indeed are unknown to the majority of people that visit the site. The majority of visitors to the site spend a total of 90 minutes there (Evans & Fielding 2000: 86).

There is no overall plan for visitor flow, and there are many ways in which visitors to the site can arrive, by bus, by local taxis or in an organised tour. Once on the site many of the tourists are offered camel and horse rides over the sand Thankfully the animals are no longer allowed to gallop over the monuments, but must stay out in the desert just to the west of the archaeology. However, the coaches and taxis try and park as close as they can to the monuments. Curiously, information about the site is totally lacking, although tour guides, maps and the like are available in the centre of Cairo and elsewhere. Amenities on site are also virtually non-existent. There are no plaques or maps, or visitor centre with virtual reality reconstructions of how the site once looked. There is no pyramid experience, showing the evolution of the pyramid complex from its beginnings in the Pre-dynastic through the Middle Kingdom and Meroe. Therefore, there is no incentive after seeing the pyramids, or even entering the Great Pyramid, to stay at the site, and ultimately no encouragement for the visitors to spend money. The visitors confronted with this lack of visitor flow management have contributed to a lack of understanding of the site and a lack of orientation as they walk, drive or ride over the site.

The major problems (Evans & Fielding 2000: 88) to be highlighted in these events are:

- 1. Pollution and uncontrolled access by coaches, taxis trail bikes and private cars.
- 2. The growth of new settlements at the base of the plateau, such as Nazlet Al-Simman and Kafret Al Gabal, to feed the souvenir market, but which also seeps sewage onto the plateau.
- 3. The dumping of litter, sewage and horse dung in the area.
- 4. Unofficial guides who turn a blind-eye to inappropriate behaviour, such as climbing the monuments.

Prelude to a Management Plan: 1968-1988

In 1968, at the request of the Egyptian government, the UNESCO provided the following recommendations to improve the conditions and appearance of the Pyramids Plateau. The recommendations were as follows:

- Removal of all new buildings on the plateau, which disfigure the appearance of the plateau and its monuments.
- Preservation of the harmony and integrity of the monuments, the desert, and the greenery of the floodplain.
- Establishment of much needed visitor centers to provide visitors with basic services, and construction of facilities for archaeologists and conservators. However, such installations must enhance the appearance of the area rather than spoil its appearance.
- Creation of a recreational area for Cairns.
- Prevention of vehicular traffic from the plateau.
- Establishment of a site museum in a distant area. The museum should be hidden from view.

In 1988, the Minister of Culture (Decree 117/1988) began measures to protect the site from the encroachment of the squatter settlement of Nazlet Al-Simman by constructing a protective wall with due consideration to its aesthetic appearance, integrity with the materials and style of monuments in the area, environmental impact (wind and sun reflections). In October 1989, the advisor to the Minister of Culture drafted a working document outlining some measures toward the management of the pyramids plateau. The measures included:

- Removal of all new constructions disfiguring the archaeological zone and its buffer (e.g., guard kiosks, magazines and store-rooms, work shops, guard houses, gates, rest-houses).
- Removal of all asphalt roads and pavements, especially the road passing on top of the funerary temple of Khufu.
- Reconfiguration of the lighting system so that lamp posts and other sources of illumination are in harmony with the landscape.
- Reconfiguration of all the lighting and sound installations of the Sound and Light to avoid the current visual pollution.
- Prevention of all vehicular traffic to preserve the tranquility and dignity of the place and to prevent it from assuming a "commercial" aspect.
- Prevention of traffic by camels and horses, with the creation of a distant area for them away from the archaeological area along specified trails.

- Replacement of the current arrangements of Sound and Light to eliminate the
 present additions that distract from the proper appreciation of the Sphinx and
 its temple and the general view of the area.
- Provision of the necessary services to visitors (post office, telephones, bathrooms, cafeteria, first aid, information, etc.)
- Provision of a Visitors Cultural Heritage Center equipped with exhibit halls, orientation charts, maps, photographs, brochures for the monuments of the area, a mock-up of the area as it might have been during the Old Kingdom in order to provide visitors with an understanding of the cultural significance of the plateau and its role in world civilization. In this respect, the Rest-house of King Farouk may be re-adapted to serve as a cultural center.
- Installation of signs to designate trails, paths, viewpoints, and area of services in a manner compatible with the integrity of the area.

All concerned parties offered the proposed measures as a working proposal for consideration.

Management Plans: 1989-2001

Zahi Hawass, the energetic official in charge of the pyramids of Giza since 1987, has been one of the first Egyptologists to realize the benefits and importance of managing sites, and has been active in developing a strategy for the site management of the Giza Plateau and bears the responsibility for overseeing the management of the monuments of the Giza Plateau.

Hawass is in a position to develop a strong site management program in Giza with an unprecedented public education and training component. His wide contacts in the media and the Egyptological community also qualify him to play a leading role in establishing "The Pyramids of Giza Fund" with the active participation of Egyptians and the local community both to strengthen the institutionalisation of site management policy and to serve as a model for the management of other sites.

In 1999, he was interviewed by Jill Kamil who reported on that interview in *Al-Ahram Weekly* (8-14 April, Issue No. 424). In this interview, Hawass stated that a plan has been in effect since 1988. He referred to four phases of that plan (see also A Masterplan for the Management and Conservation of the Giza Plateau by Zahi Hawass, The Plateau-Official Website of Dr. Zahi Hawass).

Phase 1 consisted of designing the management strategy.

Phase 2 defined a conservation and archaeological plan for the east side of the Great Pyramid and the Queen's pyramids.

Phase 3, which is still underway, encompasses conservation of the three main pyramids and a tourist management plan.

Phase 4 over 10-15 years is envisioned as a continuation of archaeological research and conservation, protection and infrastructure development, and formulation of a visitor management program.

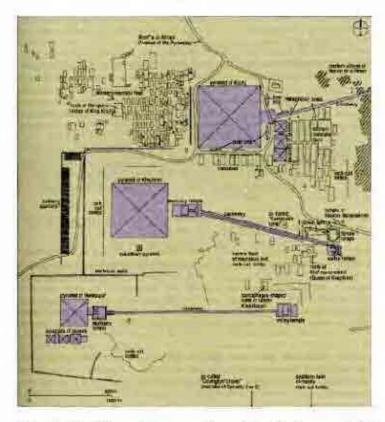
Hawass notes that the site is under threat from the village of Nazlet Al-Simman, which already infringes on the enclosure of the Sphinx and is built over the causeway leading to the Great Pyramid. Hawass realizes that a buffer zone does not exist and that all what could be done was to prevent any more violations and to dismantle the storage buildings and rest houses used by archaeologists. Vehicular traffic has also been banned from most of the site and horse and camel rides were moved in October 1998 to an area south of Menkaure's third pyramid. A new stable is already complete and a nearby tourist police office will be established there. A parking area and a picnic lot will be provided to isolate such activities from the immediate vicinity of the pyramids and its core area (for more information see Z. Hawass, Site Management and Tourism, The Plateau-Official Website of Hawass and Hawass 1995, 1996, 1997).

Plans for a ring road that crosses the pyramids plateau caused a great deal of alarm. On the behest of UNESCO this plan was scrapped.

In order to reduce traffic on the plateau, Hawass states that there is a plan to restrict access to a ring road, which will encircle the plateau with outlets at the Mena House, at the foot of the Sphinx, and at the beginning of the Fayoum Road (see below). Although chance discoveries are anticipated, Hawass states that excavations prior to construction are unlikely, and there is an appeal for professionally qualified people to collaborate in applying international criteria, especially in developing two visitor centers and the entrance facades of the main gates.

Hawass is continuing to re-excavate east of the pyramid and subsidiary tombs applying restoration measures as needed. He notes that careful work is needed south and west of the pyramid of Menkaure, which is full of sand and has never been excavated. He expects to find part of the pyramid's construction ramp and additional boat pits.

Hawass also maintains that the restoration of the exterior of the three pyramids will require a photogrammetric map for each, appropriate tools and equipment and documentation. The interior of the pyramids is subject to cleaning in a rotational pattern. In April, 2000 (http://guardians. Net/spotlite-Hawass-2000.htm), the pyramid of Khafre was closed. Once clean it will be reopened and cleaning of the third pyramid will commence. Needed also is a documentation for the entire tomb walls, paintings and artifacts using a computer database. Plans also include the development of a conservation laboratory for the site.



Plan of the Giza Plateau showing pyramids, mastabas, the Sphinx, and other structures.

Plan of the Giza Plateau showing pyramids, mastabas, the Sphinx, and other structures.

The UNESCO 1992 Giza Masterplan

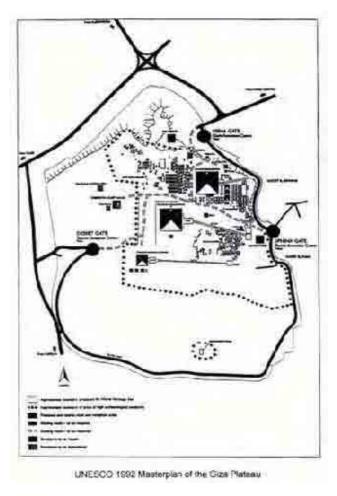
In the early 1990s, UNESCO raised concerns relating to the impacts caused by tourism and urbanisation to the monuments on the Giza Plateau. Inspectors had noticed distinct deterioration, despite efforts by (SCA) to preserve the monuments by improving the management of tourism. Therefore, UNESCO commissioned The Conservation Practice (TCP), a British based team of conservation architects, to conduct a preliminary study and prepare a report for the sustainable management of the World Heritage Site - The masterplan for the Giza Pyramid Plateau and its Buffer Zone. The TCP duly conducted their initial research of the Giza Plateau and surrounding area, including studying existing studies, which were discussed with the SCA and other relevant organisations. The TCP developed an initial outline of the management plan, which throughout the early 1990s was followed by progress reports of the developments taking place at the Giza Plateau. The aim of the masterplan is to conserve the remaining archaeology and prevent or control further

deterioration of the site, through whatever cause - tourism, pollution or inappropriate development projects in the area.

Some of the proposals in the masterplan are in response to problems that were identified, and are intended to change the ways in which tourists experience the site and therefore the nature of tourism at the Giza Plateau. Some of the proposals restrict and control access to the site and limit the modern structures within the site. Other proposals are to improve the visitor facilities and provide more information about the archaeology, by placing visitor centres at the edges of the site. The general plans are:

- Improve the visitor experience.
- Reduce the impact of tourists on the site and monuments.
- Provide a sustainable framework for the conservation and further study of the archaeological remains.

The masterplan also highlights the need to remove the tarmac roads that run through the pyramid area and the removal of some of the unnecessary modern structures. The construction of a ring road around the Giza Plateau (already constructed as part of the masterplan), defining the boundary of the site was also deemed necessary. To improve the visitor experience the construction of three visitor centres, the Khufu Gate, the Sphinx Gate and the Desert Gate was recommended. These gates would relate to key themes on the Giza Plateau and act to organise the tours, for the sale of guidebooks and other themed goods (Mabbit 1992).



UNESCO 1992 Masterplan of the Giza Plateau

The Khufu Gate Centre

This gate would be situated near to the Great Pyramid of Khufu, but away from the sensitive areas of archaeology. The theme of this visitor centre would be the construction of the pyramids, the dynastic genealogy of the 4th Dynasty and on the spiritual dimension of the monuments. The masterplan proposes that the Sun Boat, and possibly the Night Boat, be relocated here as part of the Pharaoh's journey with the gods. That the boat will form part of a themed display coupled with the fact that only 10% of visitors to the plateau enter the Boat Museum at present, and the deterioration of the Sun Boat itself in its present location, were the catalysts for this move (Mabbit 1992). All these issues can be addressed by moving the sun boat to a new location in a visitor centre with better environmental control. The visitor centre will also have the usual visitor amenities of toilets, rest areas, food and car parking away from the archaeology. This, and based on past visitor patterns, will be the main entrance to the site (Mabbit 1992).





MINISTRY OF CULTURE DIRECTORATE FOR GREECE - EUROPEAN UNION RELATIONS

HELLENIC RESEARCH TEAM – PILOT CASE STUDY:
ARCHAEOLOGICAL AREA OF "PELLAIA CHORA"
PELLA – MACEDONIA - GREECE

PHASE FINAL REPORT GREECE



ARCHAEOLOGICAL RECEIPTS FUND DIRECTORATE OF PROTRACTIONS

Project National Coordinator

17th EPHORATE
OF PREHISTORIC AND CLASSICAL ANTIQUITIES
EXECUTIVE SUMMARY

Pellaia Chora Archaeological Area Responsible Authority

Description of the archaeological siteⁱ

Pella, one of the three points on the archaeological triangle of Macedonia - Pella, Vergina, Dion - is one of the most important archaeological sites in Greece. It has been very heavily excavated, is in fact the most extensively excavated city in Macedonia, and gives us the fullest picture of a late classical and Hellenistic city, while also featuring all the characteristic elements of a Greek city of ancient times.

Both the ancient city of Pella and the contemporary settlement of the same name are located in the Prefecture of Pella, in a largely agricultural region, to the north-west of the now drained marsh of Yannitsa, once at the heart of a narrow gulf which was transformed into a lake by the silting up of the neighbouring rivers. The town of Pella is very close to Thessaloniki, just 39 kilometres (ca. 15.5 miles), and connected to the city by the old national highway which leads to Edessa. The archaeological site, extending over the southern feet of Mt. Paiko, looks out over the fertile Macedonian plain, bordered to the south by Pieria and to the west by Vermio.

There is a small museum at the site, of just 400 square metres (3,600 square feet), and a workshop/storage complex of some 1,000 square metres (9,000 square feet). The excavations and finds have been made widely known to the academic world through a series of publications in the form of monographs, articles, excavation journals and presentations at seminars and symposia.

The overall "Pellaia Chora Site" includesⁱⁱ:

- 1. The core of that extended archaeological site is Hellenistic-era Pella, capital of the Macedonian Kingdom from the early 5th century BC (when it was moved there from Aiges by King Archelaos) till the mid-2nd century BC. Pella was built using the Hippodamian road system (a rationally laid out urban design system based on the logic of roads set perpendicular to each other that create building squares of a standard rectangular plan). It was fortified by strong walls, while the two cemeteries of the city, the eastern and the western, could be found beyond the city walls. Although the city was active only for about three centuries (between 400 BC to 90 BC) it was the starting point for Alexander the Great's Eastern Campaign.
- 2. On the west of Hellenistic Pella, very close to it, the remains of the Roman colony of Pella can be found, that was the settlement that was built in the place of the destroyed Hellenistic city, after the latter's destruction in the early 1st century BC.
- 3. In the eastern and western cemeteries, very interesting funerary memorials and buildings have been excavated that formed part of those two cemeteries. There are twelve of them, that are mostly located along the Egnatia superhighway.
- 4. Finally, 3 km north of Egnatia and on the north-west of Hellenistic Pella, the Archontico Tumulus is located. It is a typical "tumulus-trapeza" as it is called. Excavations that have been carried out in the tree-topped hill have shown that the area was continuously occupied from the middle Later Stone Age until the post-Byzantine (post-medieval) years.

The archaeological sites that together form the «Pellaia Chora» archaeological site are of great variety both with regards to the historical period to which they belong as well as their uses. They cover a period from the prehistoric years to the post-Byzantine ones and include palaces, villas, fortifications, workshops and shops, funerary monuments, vernacular houses, temples etc.

The visitable site

The ancient city, as we know it today, covers some 4,000,000 square metres, but only a small area is actually open to visitors. The archaeological site is intersected by two public roads, dividing it into four sections. Thus the visitor is unfortunately denied a single, unified vision of the site, his overall impression is fragmented. At present, a visit begins at the Museum (originally built to function as a tourist kiosk and quite unable to meet the needs of a contemporary museum), located in one of the blocks of the city's central section.

From here, obliged to risk the traffic on a busy public highway, the visitor crosses to that part of the archaeological site open to the public. He has received no methodical preparation for what he is about to see, beyond the information given inside the museum (map of the city, aerial photographs, texts, a guide, printed matter) and the explanatory material provided at special stands installed at selected points around the site.

The mosaic floors, which have been left in their original positions, are protected by permanent wooden shelters; the mosaics can be inspected from an elevated construction, also of timber. Permanent metal coverings protect other areas, while more makeshift shelters have been erected to cover all areas containing particularly vulnerable archaeological remains.

THE ECONOMIC AND PRODUCTIVE TERRITORY OF THE SITE

In examining the Pella Site, one cannot avoid considering the particular characteristics of the surrounding area both in the "immediate" as well as in the "greater area" contexts. In this sense it is important to consider the position of the Pella Site in the economic context of the area:

- i. the organisation of the local economic system, as is described further on, at present, is developing independently of the management of the site and for practical purposes one can identify few relationships (positive or negative)
- ii. at the present time, as in the past, the site has functioned based on the legislative structure which keeps it apart from the surrounding area (see Phase 1 Report) and the local economic system in reality has no links with the site and the management of the site; however, while in theory, for the future, there are a number of areas for potential collaborations and joint activities, there are few, if any, that can be realistically expected to be transformed in the medium term and practically none in the short term
- iii. based on the interviews and contacts with representatives of a number of local authorities and organisations, it is evident that, except for the site's immediate area (see explanation of territory definitions below), the presence of the site has not influenced the economic system, and will be the cause of little influence on the development of the economic system;
- iv. finally, both in the past and the present, there cannot be changes or influences that can be ascribed to the site that have had an effect on the economic system, although the surrounding area's private actors voice an interest in making something out of the existence of the site, but even they believe little will be achieved.

ECONOMIC ACTIVITY IN THE AREAⁱⁱⁱ

The distances within the Prefecture of Pella are sufficiently short that there is no need and no incentive to the visitor to stop at any other location after a visit to Pella site, (such as the Pella settlement or the nearby town of Giannitsa) and normally moves on. It is noteworthy that Edessa, the Prefecture capital and center for the leisure and other visitor activities is only at a distance of 50 kms from the Pella site, being reached easily within 45 minutes by car (half of the distance is by 4-lane national road, the other being a two lane adequate country road).

The relationships, therefore, between the economic structure of the surrounding area and the site (and its management) are at present very low or nil, and both the representatives of the economic sector (public and private) and the site management, see few possibilities for change, given the present facilities and site layout. Thus, in terms of "short term" and "medium term", which are the periods under review, we can expect little, and see "bleak" prospects.

Leisure activity

Leisure activity is an element supporting the attraction of visitors. As an introductory remark it should be pointed out that at the present time no cultural or spare time activity being undertaken or organized in the Pella Prefecture has any relation to the archaeological site. However, there are a number of leisure facilities in the Prefecture.

It is noted that the town of Edessa, the Prefecture capital, only about 45 minutes drive from Pella site, not only has very attractive natural resources, but also sufficient accommodation and leisure facilities which attract the visitors.

Employment activity

As a general comment it should be pointed out that the market structure of the area develops independently from the site and has little direct relation to the site, with the exception of the job openings that the site management can fill from local residents (these are basically labourers, maintenance workers, and other of non-specialised skills).

In evaluation the present situation, we can identify the following strengths and weaknesses, as regards employment:

| STRENGTHS | Easiness, due to proximity, in integrating site employment needs with local inhabitants | h |
|------------|--|----|
| | Certain maintenance and preservation skills can be "trained on site" with the benefit of offering "technical skills" to locals | |
| | Use of locals for seasonal and part time personnel and re-employment of locals for seasonal jobs (year-after-year) | ıt |
| WEAKNESSES | Few educated people and few professionals in the immediate area | |
| | Area of site has low economic and business significance compared | |
| | with neighbouring areas of Giannitsa, Edessa (further on), and | |
| | Thessaloniki | |
| | Demographic structure of population is "ageing" | |

Touristic impact considerations

We have already seen from the earlier description that the Pella Site has basically only "travel tourist visitors" either for "the experience" or for the "learning" process. Actually, since the extent of the visitable site is limited, the visitor has a short visit both in terms of <u>time</u> and in terms of <u>object</u> of the visit.

We can present the main elements of a SWOT analysis for the Pella Site:

| STRENGTHS | Promotion of archaeological/ historic/ cultural sites in Macedonia being developed as a "group" Site being promoted individually through area events (i.e. Olympic Flame route in region, passed through Pella and local event took place) Relative close proximity to main transport infrastructure (airport, port, railway) |
|------------|---|
| WEAKNESSES | Present site visitor facilities (parking, lack of "covered" visitor paths, insufficient information panels, etc.) Immediate area "void" of other attractions Institutions (government, education, culture, etc located in other towns in Prefecture or outside Prefecture |

Potential and proposed future actions

In Pella, the biggest problem is the fragmentation of the archaeological site into parts that are not interconnected and thus, it is often the case, that following a visit to the main archaeological site of the Hellenistic era Pella, the visitor will not follow that up with a visit to the excavation site, the palace, the roman colony and the Macedonian tombs.

A further problem is that the main road connecting Nea Chalkidona to Yannitsa (two rather big towns) passes right between the site and the Museum further adding to the isolation of those two sites.

It is evident that to succeed in a general objective – to achieve an effective use of the site for tourist, educational and scholarly visits - we must concentrate in our efforts to make the site of Pella as accessible and attractive as possible to the visitor. Thus, in terms of the site itself, the proposed actions are:

- a. The unification of the site by modifications to the existing network of roads and, in particular, the closing of the two roads which cross the site.
- b. The delineation of the road axes of the Hippodamean plan throughout the whole area (including that not yet excavated) of the site open to visitors.
- c. The discreet signposting of the ground plans of the buildings and their functions.
- d. The conservation and restoration of the architectural remains, where possible, avoiding any attempt to disguise the contemporary modifications as features of the original structures.
- e. The creation of an infrastructure providing information and refreshment for visitors, which will employ contemporary constructions, on a scale commensurate with the ancient remains, with unobtrusive designs.
- f. The construction of a new Museum, of a size commensurate with the extent and importance of the site.
- g. Within the protection intervention, and wherever possible, the recreation of the site should be in three dimensions and the presentation of the ruined walls in such a way as to make them more appealing to the visitor.

From the above we can now state the potential and proposed future actions with respect to the economic and touristic impact of the site:

- Develop area promotion within "surrounding area" context
- Plan new printed material for site and area
- Expand and create new relationships (such as visitor participatory approaches) of site with educational and cultural events or live animations

- Creation of visitor center and reception facility
- Development of new and larger museum Improvement to road crossing aspect
- Possibility to develop site visit as a "through visit" for travelers going to other attractions in the Prefecture
- Provision of tourist services in the immediate and surrounding area

Based on the above, we can then identify the following potentials for the "job market" in the surrounding area, in relation to the Pella Site:

- Prefecture and surrounding area cultural, athletic, etc. clubs can involve site in their activities
- Expansion of "educational" activities with the facilities of the new Museum
- Valorise the advantage of the many sub-sites (which should be selectively opened to the public)
- Expand local skills by further developing the "museum copies" production
- Effect "events" to improve "local acceptance" already assisted by the indirect impact employment and income.

-

¹ Material drawn from the Pella Site Presentation by Mrs. Maria Akamati, PhD, Director of 17th Ephorate

ii Material drawn from the text in the Thessaloniki Atelier Preliminary Report, by Mrs. Ifigenia Georgopoulou – D'Amico, Director Archaeological Receipts Fund Technical Service

iii Material drawn from Pella site Phase Three Reports

RESEARCH-ACTION

THE FINAL REPORT

1. Presentation of the site

Description of the archaeological siteⁱ

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There is a small museum at the site, of just 400 square metres (3,600 square feet), and a workshop/storage complex of some 1,000 square metres (9,000 square feet). The excavations and finds have been made widely known to the academic world through a series of publications in the form of monographs, articles, excavation journals and presentations at seminars and symposia. The Museum offers a variety of cards and slides, a guide to the Museum and site (in Greek and English), educational material under various subject headings connected with the archaeological site, as well as publications on archaeological, historical matters and traditional folklore in various areas of Macedonia.

The finds from the Pella excavations have been exhibited abroad, at exhibitions of archaeological finds from Macedonia and in more specialised exhibitions in cities in America, Europe, Australia and India. The finds have been included in special catalogues.

Historical outline

Pella, a small city in the hinterland of the Thermaikos Gulf, known to both Herodotus and Thucydides, became the capital of the Macedonian state in the late 5th or early 4th century BC. The removal of the capital of the Macedonian kingdom from Aiges (Vergina) to Pella was due to strategic, political and commercial reasons, such as the need to secure the borders from the north, the opportunity for eastward expansion, sea communication and the control of trade.

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE FINAL PHASE – REPORT

During the time of Philip II, Alexander III and the Successors, Pella was a major city, centre of the political, economic and cultural life of Greece in late Classical and Hellenistic times. The city survived and continued to flourish after the Roman conquest of Greece (168 BC, 148 BC) and was probably finally destroyed by earthquake at the beginning of first decade of the first century BC.

Barbarian raids in the first half of the first century BC drove those who had survived the earthquake to desert the city. In about 30 BC the Roman colony of Pella was founded a little to the west of the old city of the same name. The new colony was to prosper during the Roman and Byzantine periods. On the site of the ancient city there remained always a small settlement, mentioned in various written sources and in travellers' accounts, and which evolved into the present community of Pella (Municipality of Pella).

The site is spread along the Thessaloniki-Yannitsa-Edessa highway on a 12 km stretch (from Chalkidona to right outside Yannitsa) while another stretch of 3 km north of the Egnatia superhighway axis close to the Archontico village, also forms part of the site.

The first excavation of Pella took place in 1914, but was interrupted by the First World War; systematic excavation began in 1957 after the chance finding of archaeological remains during the excavation of the basement of a house in the contemporary settlement.

During the first period of systematic excavation (1957-1963), financed by the Archaeological Association, some of the most significant finds were uncovered, such as the private residences with their mosaic floors. In the second phase of systematic investigation, which began in 1976 and continues today, the excavation and almost all the archaeological work has been financed by the Ministry of Culture, while recently the regional programmes of the EU have begun to provide funds for projects involving conservation of the site and work to enhance its appeal to visitors.

It is work in these latter areas that has been the focus of the activities of the Ministry of Culture at Pella over the last decade, rather than the extension of the excavations. These have been confined to three key sections of the city (palace, agora, sanctuaries) and care is being taken to conduct the work in such a way as to facilitate study of the three areas while also incorporating them into the plans to promote the site and maximise its attraction and accessibility to visitors.

The overall "Pellaia Chora Site" includesⁱⁱ:

1. The core of that extended archaeological site is Hellenistic-era Pella, capital of the Macedonian Kingdom from the early 5th century BC (when it was moved there from Aiges by King Archelaos) till the mid-2nd century BC. Pella was built using the Hippodamian road system (a rationally laid out urban design system based on the logic of roads set

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perpendicular to each other that create building squares of a standard rectangular plan). It was fortified by strong walls, while the two cemeteries of the city, the eastern and the western, could be found beyond the city walls. Although the city was active only for about three centuries (between 400 BC to 90 BC) it was the starting point for Alexander the Great's Eastern Campaign.

- 2. On the west of Hellenistic Pella, very close to it, the remains of the Roman colony of Pella can be found, that was the settlement that was built in the place of the destroyed Hellenistic city, after the latter's destruction in the early 1st century BC.
- 3. In the eastern and western cemeteries, very interesting funerary memorials and buildings have been excavated that formed part of those two cemeteries. There are twelve of them, that are mostly located along the Egnatia superhighway.
- 4. Finally, 3 km north of Egnatia and on the north-west of Hellenistic Pella, the Archontico Tumulus is located. It is a typical "tumulus-trapeza" as it is called. Excavations that have been carried out in the tree-topped hill have shown that the area was continuously occupied from the middle Later Stone Age until the post-Byzantine (post-medieval) years.

The archaeological sites that together form the «Pellaia Chora» archaeological site are of great variety both with regards to the historical period to which they belong as well as their uses. They cover a period from the prehistoric years to the post-Byzantine ones and include palaces, villas, fortifications, workshops and shops, funerary monuments, vernacular houses, temples etc. In the Archontico Tumulus there is a big variety within the archaeological site.

The common characteristics of the rules for the protection and listing of archaeological sites and monuments are:

- In most cases the listing is done through a reference to the Ministry of Agriculture's Land Registry codices of 1929, therefore it is very difficult to transcribe the limits of the archaeological sites to later maps or on the ground.
- A status of complete protection and absolute building prohibition, as well, as road creation, on a 500 m. (1,500 ft) wide area of protection around the monuments and sites.
- The lack of special building laws or use prohibitions in the cases where modern-day settlements can be found adjacent to archaeological sites or where isolated monuments are located within settlements.

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With regards to the tumuli and the Roman colony of Pella, the requisitions cover limited areas and in some cases they are clearly evident. In the Archontico Tumulus the complete area on the hill together with the triangular one on its foot has been calculated to cover an area of around 20 acres.

Most of the requisitions cover the area of Hellenistic Pella. According to data provided by the Archaeological Receipts Fund and the local Ephorate of Antiquities:

- 31 acres have been requisitioned
- 63 acres are about to be requisitioned
- 108 acres are considered for requisition

The area of Hellenistic Pella includes:

- 31 acres of requisitioned lands while a further 800 square metres (7,200 square feet) are left outside the protected area
- 56 acres are about to be requisitioned, while seven acres are left outside the protected zone
- 92 acres are considered for requisition, while seven acres are left outside the protected zone

In order to create the «Pellaia Chora» archaeological site, a further 60 acres will be needed, of which six acres is land that belongs to the local municipality, another six is land that belongs to the central government (according to the Ministry of Agriculture's survey map) and the remaining 48 acres is private land that will have to be requisitioned.

In the following site area map the principal sub-sites are identifiedⁱⁱⁱ.

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Pellaia Chora sub sites

- 1. Hellenistic Pella
- 3. The Archontico Tumulus
- 2. Roman Pella
- 4. Funerary monuments

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The monuments

The enormous variety of finds uncovered by excavation permits us to trace the growth of the city from the end of the 5th Century BC up until the early 1st century BC. Investigation has yielded an abundance of information on fortifications, town planning, residential, palace, religious and burial architecture, as well as on the manufacturing activities of the Hellenistic period.

We now know the original extent of the city - some 4,000,000 square metres. Its southern boundary has not yet been determined, since we cannot be certain of the coastline of the Thermaikos Gulf in ancient times, and it was to this coastline that the ancient city extended.

References in ancient writers to the sturdy fortifications of Pella are confirmed by the sections of wall with towers and gates. The town plan in accordance with which the city was laid out (the Hippodamean plan), with its regular blocks of buildings and streets of a specified width, made it possible for the city to expand freely throughout the course of its life. Monumental thoroughfares, paved with stone and lined with pavements, ran from the harbour to the central avenue, which cut across the agora and the city, facilitating the bustling traffic in commercial goods.

Carefully planned water and drainage systems provided sanitary living conditions for the citizens, and the residential architecture confirms that the general standard of living was high. Most of the houses had a central peristyle courtyard with Doric or lonic columns. The living areas were arranged at the rear of the colonnades, often on an upper floor as well, in such a way as to serve all the everyday needs of the family, but also to provide religious and social amenities in the shape of areas for symposia and small domestic shrines. The mosaic floors of the houses, with their wide variety of subject matter and technical perfection, indicate the existence of well-organised mosaic workshops. The painted decoration of the walls, which in one case has been restored to a height of 5 metres, is also extremely impressive.

The palace complex, in a commanding position on the northern hill of the city, covers an area of some 60.000 square metres. Its architectural organisation is based on the regular repetition of units linked by a peristyle courtyard. A monumental gateway stands in the centre of a long colonnade on the southern side, while on the northern side excavation has revealed an area of public amenities: places of worship, exercise facilities, workshops, etc.

At the heart of the city plan stood the agora, occupying a space equivalent to ten blocks of buildings, an area of some 70,000 square metres (630,000 square feet). It consisted of a large square lined with colonnades, behind which stood workshops and retail premises dealing in a variety of goods (earthenware, figurines, metal artefacts, food) which were distributed by trade throughout Western Macedonia and the wider region of the southern

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Balkans. That the agora served as an administrative as well as commercial centre can be seen from the finds bearing inscriptions and from the sculptural monuments along the northern wing and from the public archives in the south-western comer of the complex.

Valuable information on the religious life of the inhabitants of the Macedonian capital has been yielded by excavation of three sanctuaries. Two of these are located in the centre of the city, one dedicated to the Mother of the Gods and to Aphrodite, the other to the local healing god Darron. The third - a thesmophorion or shrine to Demeter - is at the city's north-eastern edge. Equally valuable evidence has been found in the shape of portable finds, statuettes, religious images and inscriptions.

Finally, the cemeteries contain representative examples of all the different kinds of burial architecture: rectangular graves cut into rock or built of brick, underground chamber tombs, either built with masonry or carved out of the natural rock, with vaulted roofs, some marked above ground by a tumulus, others with a simple covering of tiles.

It goes without saying that Pella and the region around it are, as the capital of the Macedonian kingdom, of enormous historical significance. But the great variety of its monuments also gives us the opportunity to develop a comprehensive approach to all those problems involved in the protection and promotion of large archaeological sites of comparable importance in the area of Greece. It also presents us with the opportunity to exploit the historic significance of the site in order to provide the visitor with a truly educational experience; with the assistance of suitably prepared explanatory literature and visual aids, as well as a properly organised series of routes through the site, the visitor should be able to extract the maximum of archaeological information in order to feel an intimate familiarity with the finds. Instead of viewing them with the detached gaze of a mere spectator, he should be encouraged to feel more like a participant and collaborator in the process of archaeological discovery.

The visitable site

The ancient city, as we know it today, covers some 4,000,000 square metres, but only a small area is actually open to visitors. The archaeological site is intersected by two public roads, dividing it into four sections. Thus the visitor is unfortunately denied a single, unified vision of the site, his overall impression is fragmented. At present, a visit begins at the Museum (originally built to function as a tourist kiosk and quite unable to meet the needs of a contemporary museum), located in one of the blocks of the city's central section.

From here, obliged to risk the traffic on a busy public highway, the visitor crosses to that part of the archaeological site open to the public. He has received no methodical preparation for what he is about to see, beyond the information given inside the museum (map of the city, aerial photographs, texts, a guide, printed matter) and the explanatory material provided at special stands installed at selected points around the site. An effort

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has been made to mark out the outlines of the city's blocks of buildings using lightweight railings, and to mark the surface of the roads with fine gravel in order to distinguish them from the floor surfaces within the buildings and to make walking easier in wet weather.

The mosaic floors, which have been left in their original positions, are protected by permanent wooden shelters; the mosaics can be inspected from an elevated construction, also of timber. Permanent metal coverings protect other areas, while more makeshift shelters have been erected to cover all areas containing particularly vulnerable archaeological remains.

The soft chalky stone used in the construction of all the walls and architectural structures is the main cause of the poor state of preservation of the architectural remains of Pella. It is a stone which begins to decay as soon as it is exposed to external conditions and very quickly crumbles. Although various methods have been tried from time to time (e.g. water-sealing) they have proved fruitless, owing to the advanced state of decay in most of the remains and to the very large area requiring attention. Only the use of protective shelters can go some way at least to combating the problem.

The ancient walls are usually to be identified by their lowest foundation levels or by the points where they have been cut into the natural rock. Centuries of quarrying and continuous cultivation of the land for farming (only prohibited over the last two decades, and that only in a limited area because of the great difficulty of obtaining compulsory purchase orders) are another two factors which have contributed to the decay of the ancient remains.

2. Chart and description of functioning of the management permanent structure and of its decisional and operational processes

The staff potential of the Ephorate of Pella (permanent and seasonal staff, external collaborators) is distinguished in:

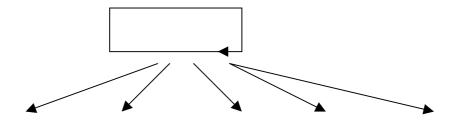
- 1. **Scientific staff.** which consists of:
 - 1.1 Archaeologists (2 permanents, 1 external collaborator and 2-3 seasonal anticipated)
 - 1.2 Architects (1part-time, 2 seasonal anticipated)
 - 1.3 Preservers (4 permanent -6 8 seasonal anticipated)
 - 1.4 Designers (1permanent with occupation in other areas of the Ephorate, too.)
- 2. **Administration staff**, which consists of secretaries, and account employees (3 permanent)
- 3. **Guarding staff**, which consists of a chief-guardian, daily guardians and night guardians (14 permanent)

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- 4. **Technicians** (3 permanent) and
- 5. **Workers** (40-50 for excavation, restoration etc.).

Organizational Plan of the staff:

In the top of the hierarchy is the Director (archaeologist), who administers the below categories:



| Scientific staff | Administration staff | Guarding staff | Technicians | Workers |
|---|-----------------------------------|-------------------------------------|-------------------|-------------------|
| (Archaeologists, Architects, Restorers) | (Secretaries, Office Accounts) | (Morning and night guardians) | (Permanent staff) | (Part time staff) |

The decision-making authorities with respect to archaeological sites are the Ministry of Culture through the Central Archaeological Council, and through the "responsible" decentralized 17th Ephorate of Prehistoric and Classical Antiquities (see Phase 1 Site presentation S8d).

The "managing institution" for the Pella site is the 17th Ephorate, which has responsibility for all other sites in the Pella Prefecture and another four other Prefectures.

The "local government" decision-making, both the Municipality of Pella and the Prefecture Council, can intervene in the surrounding area and to the extent that it does not include potential archaeological finds. In their decisions, local politics have a direct relationship.

The Ephorate covers its needs of personnel by using permanent staff and seasonally employed staff. However, additional to these are students who come during the summer vacation period to work as trainees in different capacities; these students cannot be considered personnel, nevertheless they do productive work that would not be performed if they were not on site.

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The Ephorate's official employment list for the current year includes the following personnel (the seasonal numbers are provisional estimates since they depend on budgetary allocations, approvals and work to be done):

| Type / responsibility | Permanent | Seasonal anticipated |
|-------------------------------|-------------|--|
| Archaeologists | 2 | 3-4 |
| Conservators | 2 | 2-4 |
| Architects | 1 part time | 2 |
| Draughtsmen – designers | 1 | |
| Administrative personnel | 3 | |
| Guardians (site and museum) | 14 | 10 May to October |
| Cleaning personnel | 1 | 2 |
| Site maintenance and ordering | 2 | |
| Site area cleaning | | 4 |
| Gardens upkeep | 1 | |
| General workers | 3 | 40-50 for excavation, restoration and archaeological maintenance work |
| Students | | Up to 20-30 depending on particular year and work planned |

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3. Crisis areas, successes and potentialities in the site management and identification of short-period intervention actions.

PHASE ONE EVALUATION

In accordance with the first phase Report the effects identified have to be summarised and an early hierarchy has to be provided. In other words, positive or negative effects, just as potentialities, identified for each crossing examined, should be divided into two sets:

- a) in the first set are to be included effects significantly affecting (HIGH) each management activity;
- b) in the second set are to be included all other effects whose value can be considered MEDIUM, except for those deemed poorly affecting.

We propose to present the results of the research first phase and the hierarchy of effects in the following three tables, to make them more immediately evident.

As it has been already stressed in the first part of the Research, the Ephorate of Antiquities of Pella, which is a regional service of Ministry of Culture, is mainly responsible for the appropriate function of the archaeological site. The general strategy however, as well the policy regarding the management of the archaeological site, is determined and ruled by the competent organs of the Ministry (Central Services, Central Archaeological Council).

So a determinative factor for the application (by the Ephorate) of the short – time actions, is the level of the existing funds, which are approved and given (or not, depending mainly on the current budget policy) by the Ministry, after the corresponding request of the Ephorate.

Under this concept, the Ephorate, though directly responsible for the perfect function of the site, has only a part of the responsibility for the existing crises, successes and potentialities in the actions of improvement of the management of the archaeological site.

This remark is considered as quite necessary in order to avoid any misunderstandings during the reading and evaluation of our Report, made by others, when an explanation or interpretation seems to be unusual.

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PHASE ONE Crisis areas, successes and potentialities in the site management and identification of short-period intervention actions.

| crisis areas: constraints and policies περιοχές κρίσης: περιορισμοί και πολιτικές | regulatory system constraints / | συστή-ματα ρυθμιστικώ νπεριορισμ ών (A) | ownership constrains | Ιδιοκτησιακ οίπεριορισμ ο (Β)ί | uses | πολιτικες χρήσεων (C) | Resarch policies | ερευνιτικές πολιτές (D) | management policies | πολείτης διαχείρισης (E) | Budget | πολιτικές προϋπολο- γισμού (F) | suppry services policies | πολιτικές παροχής υπηρεσίων G | disseminatio n and promotion policies | πολιτικές προβολής και διάχυσης πληροφορίω ν (H) | admission fee policies πολιτικές | τιμολόγησης εισόδου (Ι) |
|---|---------------------------------------|--|-------------------------|--------------------------------------|------|-----------------------------|------------------|----------------------------|------------------------|--------------------------------|--------|--------------------------------------|--------------------------------|--|--|---|--|----------------------------|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | | | 1 | | 1 | | 1 | | 1 | 1 | | | 1 | | | | |
| Protection and conservation Προστασία και συντήρηση | | 1 | 1 | 1 | | 1 | | 1 | | 1 | 1 | | | | | 1 | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | | | |
| Promotion policies Πολιτικές προβολής | | 1 | | | | | | | | | | 1 | | 1 | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | 1 | | 1 | | 1 | | 1 | | | | 1 | | 1 | | | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | 1 | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | 1 | | | | | | 1 | | 1 | | 1 | | | | 1 | | |
| Budget policies Πολιτικές προϋπολογισμών | | 1 | | 1 | | | | 1 | | 1 | | 1 | | 1 | | 1 | | |

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| Successes: constraints and policies επιτυχίας: περιορισμοί και πολιτικές | regulatory system constraints / | ρυθμιστικών περιορισμών (A) | ownership constrains Boerneageof | περιορισμο (Β)ί | uses constrains | χρήσεων (C) | Resarch policies | ερευνιτικές πολιτές (D) | management policies | πολείνκες διαχείρισης (E) | budget policies πολιτικές | προϋπολο- γισμού (F) | supply services policies | παροχής υπηρεσίων (G) | dissemination and promotion | ponetes πολιτικές προβολής και διάχυσης πληροφορίων (H) | admission fee policies πολιτικές | τιμολόγησης εισόδου (Ι) |
|--|---------------------------------------|-----------------------------------|--|--------------------|--------------------|----------------|------------------|----------------------------|------------------------|---------------------------------|---------------------------------|-------------------------|--------------------------------|-----------------------------|-----------------------------|--|--|----------------------------|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | | | 1 | | 1 | | 1 | | | | | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | | | | | | | | | | | | | | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | | | | | | | | | | | | | | | 1 | | |
| Promotion policies Πολιτικές προβολής | | | | | | | | | 1 | | | | | | | 1 | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | 1 | | 1 | | | | | | | | | | 1 | | 1 | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | 1 | | | | | | | | | | |
| Budget policies Πολιτικές προϋπολογισμών | | | | | | | | | | | | | | | | 1 | | |

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| Potentialities: constraints and policies Προοπτικές: περιορισμοί και πολιτικές | regulatory system constraints / | συστή-ματα ρυθμιστικών περιορισμών | ownership constrains | Ιδιοκτησιακοι περιορισμο (Β)ί | uses | πολιτικες χρήσεων (C) | Resarch policies | ερευνιτικές πολιτές (D) | management policies | πολιτικες διαχείρισης (E) | budget policies πολιτικές | προϋπολο- γισμού (F) | supply services policies | πολιτικές παροχής υπηρεσίων (G) | dissemination and promotion policies πολιτικές | προρολης και διάχυσης πληροφορίων (H) | admission fee policies πολιτικές | τιμολόγησης εισόδου (Ι) |
|--|---------------------------------------|--|-------------------------|-------------------------------------|------|-----------------------------|------------------|----------------------------|------------------------|---------------------------------|---------------------------------|-------------------------|--------------------------------|--|---|--|--|----------------------------|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | 1 | | | | | | 1 | | 1 | | 1 | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | | | | | 1 | | 1 | | 1 | | | | 1 | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | 1 | | | | | | 1 | | 1 | | 1 | | 1 | | 1 | | |
| Promotion policies Πολιτικές προβολής | | | | | | | | 1 | | 1 | | 1 | | 1 | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | 1 | | | | 1 | | 1 | | 1 | | 1 | | 1 | | | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | | | 1 | | 1 | | 1 | | 1 | | |
| Budget policies Πολιτικές προϋπολογισμών | | 1 | | | | | | | | 1 | | | | | | 1 | | |

⁽A) Cf. point 1 of the phase 1 Report; (B) Cf. point 2 of the Report 1; (C) Cf. point 5 of the Report 1; (D) Cf. point 3 of the Report 1; (E) Cf. point 4 of the Report 1; (F) Cf. point 6 of the Report 1; (G) Cf. point 7 of the Report 1; (H) Cf. point 8 of the Report 1; (I) Cf. point 9 of the Report 1

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As a commentary of the above-mentioned tables, the cause determining that given effect is specified, on one hand (for example as to regulatory system constraints specify if the effect depends on protection regulatory system, on that of the archaeological park, on that concerning restoration interventions, etc.) and, on the other hand, the hierarchy of effects is made clear (meaning the reasons for which some are considered high-impact effects and others medium impact).

As a conclusion, it is a matter of identifying short-period and feasible intervention actions with reference to the effects previously described, both to eliminate crisis areas (the most urgent) and to create new development possibilities making use of the potentialities identified.

Intervention action (or actions) identified will be indicated in each line by means of a key-word. As a commentary to the table the summarised action in its key-word has to be illustrated, on one hand, and the hierarchy of actions, on the other hand, should be made clear (meaning the reasons for which actions were identified as a priority). The text should not be more than seven pages long as for the analytic part one has to refer to the specific points of phase 1 Report.

A commentary on the specific grading is provided below, in correspondence with each line.

1. As to "Research"

- The high degree of crisis is mainly due to the shortage of the appropriate funds required for a policy of systematic research and for a right management policy of the archaeological site. The limitations existing in the owner system have a minor influence on the possibilities for research.
- The low success in the sector of research resulted from the above reasons is thus understandable and self-explanatory.
- As to the potentialities they are limited, insofar the required funds for the research cannot be found. There is however the possibility of drawing out a systematic and well organized management policy, which would include the promotion of the research through some institutional modifications.

2. As to "Protection and conservation"

The high degree of crisis is due to same reasons as above (shortage of funds, weaknesses in the management policy of the archaeological site). Moreover the weaknesses in the institutional frame due to its centralized character (studies drawing up and working-out of works by private individual or by the Services of the State themselves, issue of verdicts of judgment and approving) as well as the limits prevailing in the owner system (although there is the possibility in a private ownership for a research to be done, there is however on possibility for a

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restoration work to be done in the same place) are making the situation even worse.

- The success is for the above reasons extremely low.
- Finally the potentialities are limited insofar there are no funds available. There are however possibilities for the modernization and simplification of the institutional framework providing for a decentralization, as well of the management policy through the programming of imminent targets that can be actually implemented.

3. As to "Policies for site development"

- The high degree of crisis is here partly due to the management and promotion policy of the archaeological site as well to the limitations in the ownerships, since wherever no expropriation has been made (e. g. Macedonian Tombs), there cannot be the site visitable and bring thus straight away funds.
- The success here does rarely exist. There are however some attempts for the promotion of the site being made though fragmentary aiming to the implementation and issue of archaeological publications.
- There are some potentialities, insofar there can a promotion policy be exercised, making the site attracting to the visitors. This could be through a reasonable budget, moderate cost and the right programming.

4. As to "Promotion policies"

- There is no great crisis and where there are problems they are relatively limited due to the shortage of funds (based in the regulator system) as well to the promotion policy.
- Obeying the same framework the success is generally vestigial.
- The potentialities can generally be unlimited under the presupposition that there are
 - i. the appropriate funds
 - ii. a management policy referring to the promotion and

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- iii. under the condition of sufficient substructure infrastructure and the possibility of the appropriate coverage of the visitors needs (provision of services).
- 5. As to "Policies regarding the supply of users services"
 - The crisis here is not so high. It is reasonably limited and referring more or less to all policies and limitations.
 - The success is due to actions for providing for the places in concern through expropriations, to the disposal of funds referring to the promotion policy.
 - The potentialities and possibilities are high enough and have to do with the central programming (management policy) and the appropriate policies of users services supply, research and promotion. They can be implemented through the existence of a reasonable budget.
- 6. As to "Entrance fee policies"
 - There is no matter of crisis, success or potentialities, since the entrance fee policies are a subject-matter concerning only the Central Services of the Ministry of Culture and not the corresponding Ephorate, is namely independent of the occupations of the service responsible for the administration, supervision and management of each archaeological site.
- 7. As to "Management and organization of human resources"
 - The relevant high degree of crisis is mainly due to the central policy of management and users services supply as to the seasonable disposition of the adequate budgets for the employment of human resources (permanent, seasonal personnel, under contract or free-lance working people etc.) and to the regulatory system.
 - No success referring to the organization of the human resources can be detected.
 - Finally the potentialities are mostly referring to the operation of the Central Services and their budget policies and less to the Service responsible for the archaeological site.

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8. As to "Budget policies"

- There is a crisis existing, due mainly to the limitations in the regulatory system, e.g. the fact that the incomings of the archaeological site (entrance fees, souvenirs from the site) are independent from the annual budget, the expenditure and the needs of the archaeological site. So every action or attempt of a management policy for increase of incomings by the manager of the site does not bring directly about profit since is not designated for the use of the site itself. Moreover the research required as also the supply of users services, which are directly dependent of the disposition of the appropriate funds, are in crisis.
- The success is limited and refers to a vestigial promotion policy through the appropriate printed matter.
- Finally the potentialities for a different budget policy according to the current data by the management of the site are extremely limited. There is probably the possibility for a vestigial ensuring of funds through donations and grants for the promotion of the site.

It seems to be essential that the determinative factors for the application of the short – time actions are the existing funds as well as the budget policies. Thus the crisis as well the success or the potentialities in the budget policies have imminent and decisive consequences almost to all the actions. Therefore:

- 1. When there is a crisis in the budget, then that means consequently a corresponding crisis also in the application of the functions.
- 2. When there are small successes and not great possibilities of finding funds, then correspondingly we will have also slim possibilities in the application of the functions.

According to the up to now data the possibility of finding and using funds in the short run – especially for functions, which are directly «not rendering » and «unprofitable» – seems to be extremely limited. That is the characteristic case in functions such as Research, Protection and conservation, or Management and organization of human resources.

In reverse for actions that could have «rendering» benefits and be directly profitable for the management of the site as well as for actions that could meet instantly the needs of the visitors (refreshment bars, toilets, museum shops, conducted tours) and have a direct impact on the reputation of the site – and consequently on visitors mobility – there are possibilities of finding funds. Such actions are detected in the functions of Policies regarding the supply of users services, as well as in the Promotion policies.

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In presenting "Proposed Actions" in the following table, the following concepts have been considered:

- (a) the actions proposed are those that can realistically be undertaken, in the short term (one to two years)
- (b) the actions proposed relate to actions that can be initiated either directly or indirectly by the site management (and its interventions)
- (c) the actions have been presented in the particular Phase (1-2-3) where it seemed most appropriate, even though a number of the proposed actions actually may be referred to in more than one table
- (d) the proposals for the integrated actions have been based on the same above principles, considering, in addition, only those that will enhance the site's integration in its area (both in terms of territory as well as of economic activity).

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PROPOSED ACTIONS

| Short – term Actions | Integrated planning in the archaeological sites. |
|---|--|
| | 1. The archaeological site by itself |
| Functions | (key words in bold characters) |
| Research | The delineation of the road axes of the Hippodamean plan throughout the whole area (including that not yet excavated) of the site open to visitors. iv |
| Protection and conservation | the conservation and restoration of the architectural remains, where possible. |
| Policies for site development | The unification of the site by modifications to the existing network of roads. vi |
| | Improvement of the site physical layout and landscaping of the site. vii |
| Promotion policies | The discreet signposting of the ground plans of the buildings and their functions. viii |
| | The creation of newer guidebooks . ix |
| Policies regarding the supply of users services | The establishment of an infrastructure providing information and refreshment for visitors. ^x |
| Entrance fee policies | |
| Management and organization of human resources | Expansion of the production of true and legitimate replicas (copies) of findings of the archaeological site for sale to the public. |
| Budget policies | |

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EXPLANATION OF SHORT TERM ACTIONS PROPOSED

Research

The excavational research for the integration of the revelation of the palaces constructions in the Agora and in the temples is, on the one hand a possible and necessary convention for the research and the interpretation of the particular site, but on the other hand it's a laborious, time-consuming and expensive procedure. However, it is suggested as a first priority; a direct and short-term action.

The revelation of the axle-road netting of the Hippodamean system which is located can directly come to exceptional and spectacular results regarding the concept, understanding and representation of the structure, function and form of the archaeological site.

Protection and conservation

The state of conservation of the structural remains is bad. It is obvious that for their correct conservation the first attempt is the scientific study of the historical and climatological factors, which have caused damages.

Even small repairs should be made by specialists (and according to specific plans) so that bad empiric actions- interventions that could have a negative effect on the structure and appearance of the monument should be avoided. That is the reason why initially and directly (in short term) studies have to be elaborated, which, once approved, will form the guidance even for the daily, small-scale repairs.

Policies for site development and implementation of the archaeological resources

The re-establishment of the unified character of Hellenistic Pella through the creation of a 2,5 km long (1,5 mile long) detour and the abolition of the present design of Egnatia that fragments the Hellenistic Pella archaeological site.

The landscaping of the site (tree planting and land forming) for the aesthetic improvement of the highway and the archaeological sites as well as its demarcation.

Promotion policies

Those interventions (stated in above paragraph) can help to demarcate the entry points to the «Pellaia Chora» archaeological site and to give a particular character to the part of the highway that will connect the archaeological sites.

The improved signage within the archaeological sites will help the visitors better orientate within the sites

The setting of modern informative signs with graphic depictions is needed for the (informative and educational) needs of the visitors in order to become easily understandable the reference of the existing situation in relevance with the function of the site.

The following could also be done: the printing of brochures, guidebooks (which will help and make the guidance understandable), maps, graphic depictions and partly linking of spaces and findings with events and people.

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Policies regarding the supply of user services

The site development should include with urgency the establishment of visitor facilities primarily for information (already partially covered) and also for refreshments and short relaxation stop (presently non existent).

Entrance fee policies

No interventions, since policy for admission fees is set centrally and nationally.

Management and organization of human resources

The production of replicas - articles for sale, already provides local employment and its expansion would constitute an economically profitable activity which would indirectly also help the implementation of the archaeological resource.

Budget policies

No interventions allowed by the present system.

PRIORITY COMMENTARY

The priorities of the <u>short-term</u> actions proposed may be set in the following order:

- 1. The interventions required for protection and preservation of the site, caused by the morphology and extent of the site itself
- 2. The interventions required for the development of the site and the provision of user services, caused again by the non-congruity of the site and the lack of facilities at present.

Of course, many other actions can and should be undertaken, but these cannot be considered short-term.

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4) Crisis areas, successes and potentialities in the relations among functions of site management and those of the territory and identification of short-term intervention actions.

Consistently with the second phase Report, effects identified should be summarised and an early hierarchy should be provided. In other words, positive or negative effects, just as potentialities, identified for each crossing examined, should be divided into two sets:

- a) in the first set are to be included effects significantly affecting (HIGH) each management activity and vice-versa;
- b) in the second set are to be included all other effects whose value can be considered MEDIUM, except for those deemed poorly affecting.

We propose to present the results of the research second phase and the hierarchy of effects in the following three tables, to make them more immediately evident.

As has been already discussed in Phase 1 and Phase 2 Reports, the main territorial characteristics affecting the Pella site are:

- the non-continuous site which extends over a large territory and is interspersed with other ownerships
- the lack of any other attraction in the immediate area
- the proximity of the site to the major urban center of Thessaloniki and to the attractions of the western part of the Pella Prefecture.

In the above context, the effects are identified in the following impact tables, considering, that a number of the implications have been already noted in the previous set of tables, because the overall site is directly related to its territory.

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PHASE TWO

Crisis areas, successes and potentialities in the relations among functions of site management those of the territory and identification of short-term intervention actions.

| crisis areas: constraints and policies περιοχές κρίσης: περιορισμοί και πολιτικές | Territ. and environm. resources and facilities | Χωρικοί και περιιβαλοντικοί πόροι και διευκολυνσεις (A) | Territ. facilities and equipment Διευκολυνσεις και | εξοπλισμός του Χώρου (Β) | Constraints of territorial uses Περιορισμόι χωρικών | χρησεών (C) | Regulatory system constraints / Περιοοισμοί του | ρυθμιστικου συστήματος (D) | Territorial development policies Πολιτικές αναπυξης | της περιοιχής (Ε) | Human capital Ανθρώπινο δυναμικό | (F) |
|--|--|--|--|-----------------------------|---|----------------|---|----------------------------------|---|----------------------|-------------------------------------|-----|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | 1 | | | | | 1 | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | | | 1 | | 1 | | | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | | | | 1 | | | 1 | | | | |
| Promotion policies Πολιτικές προβολής | | | | | | | | | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | | | | | | | | | | | 1 |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | | | | | |
| Budget policies Πολιτικές προϋπολογισμών | | 1 | | | | | | | | | | 1 |

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| Successes: constraints and policies επιτυχίας: περιορισμοί και πολιτικές | Territ. and environm. resources and acilities Xωρικοί και | περιιβαλοντικοί πόροι και διευκολυνσεις (A) | Territ. facilities and equipment Διευκολυνσεις και | εξοπλισμός του Χώρου (B) | Constraints of territorial uses Περιορισμόι χωρικών | χρησεων (C) | Regulatory system constraints / Περιορισμοί του ρυθμιστικου | συστήματος (D) | Territorial development policies Πολιτικές αναπτυξης της | περιοιχής (E) | Human capital Ανθρώπινο δυναμικό | (F) |
|--|--|---|--|-----------------------------|---|-------------|---|-------------------|--|------------------|-------------------------------------|-----|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | | | | | 1 | | | | | | 1 |
| Protection and conservation Προστασία και συντήρηση | | | | 1 | | 1 | | | | | | 1 |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | | | | | | | | | | | 1 |
| Promotion policies Πολιτικές προβολής | | | | | | | | | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | | | | | | | | | | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | | | | | |
| Budget policies Πολιτικές προϋπολογισμών | | | | | | | | | | | | |

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| Potentialities: constraints and policies Προοπτικές: περιορισμοί και πολιτικές | Territ. and environm. resources and facilities Χωοικοί και | περιιβαλοντικοί πόροι και διευκολυνσεις (A) | Territ. facilities and equipment Διευκολυνσεις και | εξοπλισμός του Χώρου (Β) | Constraints of territorial uses Περιορισμόι χωρικών | (C) Χρησεων (C) | Regulatory system constraints / Περιορισμοί του ρυθμιστικου | συστήματος (D) | Territorial development policies Πολιτικές αναπτυξης της | περιοιχής (E) | Human capital Ανθρώπινο δυναμικό | (F) |
|--|--|---|--|-----------------------------|---|-----------------------|---|-------------------|---|------------------|-------------------------------------|-----|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | 1 | | | | | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | 1 | | | | | | | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | | | | | 1 | | | | | | |
| Promotion policies Πολιτικές προβολής | | 1 | | 1 | | | | | | 1 | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | | | | | | | | | | | 1 |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | | | 1 | | 1 |
| Budget policies Πολιτικές προϋπολογισμών | | | | | | | | | | 1 | | |

Legend: (A) Cf. point 1 of the phase 2 Report; (B) Cf. point 2 of the Report 2; (C) Cf. point 3 of the Report 2; (D)-(E) Cf. point 4 of the Report 2; (F) Cf. point 5 of the Report 2;

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As a commentary of the above-mentioned tables, the cause determining that given effect has to be specified, on one hand (for example as to territorial and environmental resources and facilities, specify if the effect depends on landscape characteristics, on settling systems, on infrastructural networks, etc.) and, on the other hand, the hierarchy of effects has to be made clear (meaning the reasons for which some are considered high-impact effects and others medium impact).

As a conclusion, it is a matter of identifying short-term and feasible intervention actions with reference to the effects previously described, both to eliminate crisis areas (the most urgent) and to create new development possibilities making use of the potentialities identified.

Intervention action (or actions) identified will be indicated in each line by means of a key-word. As a commentary to the table the summarised action in its key-word has to be illustrated, on one hand, and the hierarchy of actions, on the other hand, should be made clear (meaning the reasons for which actions were identified as a priority). The text should not be more than seven pages long as for the analytic part one has to refer to the specific points of phase 2 Report.

In evaluating the situation of the territorial parameters the main "causes" are the extent and non-congruity of the site and the regulatory restrictions imposed, both positively and negatively, on the relationship between site and surrounding territory; more particularly, the following points can be made.

Research

The territorial environment affects the conditions for research since it hinders the ability of the archaeologists to implement the process.

Protection and conservation

The territorial environment also affects the conditions for protection and conservation since it hinders the ability of the archaeologists to implement relevant procedures and makes difficult the security of the overall site.

Policies for site development

The territorial environment also affects the conditions for site development due to the non-continuous site.

Promotion policies

Promotion of the site is only indirectly affected by the territorial situation, and indeed, as can be seen in the proposed actions, can give rise to potentialities.

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Policies regarding the supply of users services

Here the effect (as regards short term implications) is very low and relates to the lack of personnel with relevant training in the skills needed for the various functions of the site.

Entrance fee policies

The is no relationships or effect with the entrance fees policies, since these policies are determined centrally independent of the site management.

Management and organization of human resources

No relationships are identified, since those that exist are the result of other causes, which have been identified in the relevant sections (such as "budget" below). The effect of inability of the site management to employ more personnel is the effect from the insufficient budget (see below).

Budget policies

The present policies for budget allocations (see also Phase 1 and Phase 3 Reports) restrict the ability of ther Site Management to expand the use of local labor force for different jobs on the site, since few positions are available that match local labor expertise.

The budget restictions also prevent site management from expropriating more land for wachaeological use and thus better development of the research process; however, budget approvals and appropriations for expropriations are determined by the Central Archaeological Council (that is centrally).

The primary and most critical implications therefore, are those that affect the site development and related parameters (research and protection and conservation).

As we can see n the analysis of the Table below, the most impact is noted in the items of "Research", "Protection and Conservation" and "Site Development" which are indeed affected by the territorial situation, in that these functions are hindered in their execution by the territorial characteristics, described in Phase 2.

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PHASE TWO IMPACT MATRICES

| FUNCTION | CRISES | SUCCESSES | POTENTIALS | TOTALS |
|---|--------|-----------|------------|--------|
| Research | 4 | 2 | 1 | 7 |
| Protection and conservation | 2 | 3 | 1 | 6 |
| Policies for site development | 4 | 1 | 1 | 6 |
| Promotion policies | 0 | 0 | 3 | 3 |
| Policies regarding the supply of users services | 1 | 0 | 1 | 1 |
| Entrance fee policies | 0 | 0 | 0 | 0 |
| Management and organization of human resources | 0 | 0 | 2 | 2 |
| Budget policies | 2 | 0 | 1 | 3 |

In presenting "Proposed Actions" in the following table, the concepts that have been described as having been considered, in Phase 1 (page 18 of this report) should be kept in mind.

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PROPOSED ACTIONS

| Short – term Actions | Integrated planning in the archaeological sites. |
|---|---|
| | 2. The territory of the archaeological site. |
| Functions | (key words in bold characters) |
| Research | |
| Protection and conservation | removal of the traffic annoyance – trouble sources (construction of bypass of the national highway).xi |
| | Creation of a special zone for the inclusion of all the undesirable uses and incentives for their immediate move there. |
| Policies for site development | The demarcation of new entry points to the archaeological sites. xiii |
| | The signposting of the car parks with a better visualisation of each position. xiv |
| Promotion policies | Unified road–signaling , of and for, the archaeological site. |
| Policies regarding the supply of users services | |
| Entrance fee policies | |
| Management and organization of human resources | |
| Budget policies | |

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EXPLANATION OF SHORT TERM ACTIONS PROPOSED

Research

There are no short-term actions proposed.

Protection and conservation

There could directly begin actions for the removal of annoyance sources (noises, fumes, unpleasant view), which are caused by the National Highway, which crosses the archaeological site.

The actions can be:

- the cutting off of the National Highway (about two kilometers long) with the construction of a short detour coming through the south part and outside the cut off of the archaeological site and
- the planting (with green zones) which will make up filters-barriers (against fumes, noise and unpleasant view) in front of disagreeable parts of the road and of industrial areas.

Additionally, certain undesirable for the archaeological site land uses ay be directed to a specific "zone" which would bring them together. This has a relation with certain agricultural activities, use of pesticides, storing of produce, etc.

Policies for site development and implementation of archaeological resources

The demarcation of new entry points to the archaeological sites (Hellenistic and Roman Pella) and the better use of the access roads that already exist (as the ones to the tumuli) are the xactions proposed.

The sign posting of the car parks with a better visualisation of each position and the movement of the cars will also add to the appeal of the sites. These actions will assist the visitors.

Promotion policies

For the harmonious function of the archaeological sites network and for its evident promotion and recognition, additions to the existing directional sign-posting for the sufficient and united marking, according to special signals (sign-logo of the network), following the European standards, are needed.

Policies regarding the supply of users services

There are no short term actions proposed; there are no practical interventions territorially, that can apply in the short term. Some have been proposed already in the "site itself" actions and others refer to the economic system and will be referred to later.

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Entrance fee policies

There are no short term actions proposed; as has been explained, the policy is set centrally.

Management and organization of human resources

There are no short term actions proposed; site management will continue to have the relationships it has with local labor for its normal functions.

Budget policies

There are no short term actions proposed; any budget action rests with the decision of the central bodies, as has been previously explained.

PRIORITY COMMENTARY

In terms of priorities for implementation of these actions, it is evident that the territorial aspects (road bypass, site entry points demarcations) are the most important, even though the sign posting is more easily done.

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5) Crisis areas, successes and potentialities in the relations between functions of site management and structure of the local economic system and identification of short-term intervention actions.

PHASE THREE EVALUATION

Consistently with the third phase Report effects identified should be summarised and an early hierarchy should be provided. In other words, positive or negative effects, just as potentialities, identified for each crossing examined, should be divided into two sets:

- a) in the first set are to be included effects significantly affecting (HIGH) each management activity and vice-versa;
- b) in the second set are to be included all other effects whose value can be considered MEDIUM, except for those deemed poorly affecting.

We propose to present the results of the research third phase and the hierarchy of effects in the following three tables, to make them more immediately evident.

In evaluating the impact with respect to the economic context, it is important that we start by considering the particular characteristics of the surrounding area both in the "immediate" as well as in the "greater area" contexts (described analytically in Phase 3 Report). In this sense it is important to consider the position of the Pella Site in the economic context of the area.

In Phase 3 Report, among the other items, the following aspects were identified as most representative of the economic developmental situation and potential in Pella Prefecture; here, we will only refer to those considered important for the impact on the archaeological site functions:

- a. absence of integrated policy and co-ordinated initiatives in the tertiary sector services, tourism and culture
- b. slow development and promotion of the cultural heritage and resources
- c. absence of initiatives for information, and sensitisation of local population
- d. ineffective policies in the sector of vocational training

With respect to the analysis of the economic system, the following main points havge already been made:

- i. The organisation of the local economic system, as is described in Phase 3 Report, at present, has been developing independently of the management of the site
- ii. Up to now, the site has functioned based on the legislative structure which keeps it apart from the surrounding area, and the local economic system in reality has no effective links with the site and the management of the site;

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iii. As a general comment it should be pointed out that the market structure of the area develops independently from the site and has little direct relation to the site, with the exception of the job openings that the site management can fill from local residents (these are basically labourers, maintenance workers, and other of non-specialised skills).

Based on the above points we have the option to indicate lack of impact in the relationship between the site and the local economic system. In the tables, we are pointing out those crises and successes situations where the relationships have a more or less direct bearing on the management of the site, and subsequently, indicate potentialities, which will be translated into possible short-term actions.

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PHASE THREE

Crisis areas, successes and potentialities in the relations between functions of site management and structure of the local economic system and identification of short-term intervention actions.

| crisis areas: constraints and policies περιοχές κρίσης: περιορισμοί και πολιτικές | Productive structure | Παραγογική δομή (Α) | Cultural and leisure-time activities | Πολιτιστικές και ψυχαγογικές δραστηριοτήτες (Β) | Structure of the labour market | Δομή της αγοράς εργασίας (C) | Training supply Εκαπαιδευτική | προσφορά (D) | Regulatory system constraints | Περιορισμοί του ρυθμιστικου συστήματος (Ε) | Sectorial development | policies Πολιτικές κλαδικής αναπτυζης (F) |
|--|----------------------|------------------------|--|--|--------------------------------|------------------------------------|----------------------------------|-----------------|-------------------------------|--|-----------------------|--|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | | | | | | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | | | | | 1 | | | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | | | | | 1 | | | | | | 1 |
| Promotion policies Πολιτικές προβολής | | | | | | | | | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | | 1 | | | | | 1 | | | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | | | | | |
| Budget policies Πολιτικές προϋπολογισμών | | | | | | | | | | | | |

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| Successes: constraints and policies επιτυχίες: περιορισμοί και πολιτικές | Productive structure | Παραγογική δομή (Α) | Cultural and leisure-time activities | ψυχαγογικές δραστηριοτήτες (Β) | Structure of the labour market | Δομή της αγοράς εργασίας (C) | Training supply Εκαπαιδευτική | προσφορά (D) | Regulatory system constraints | Περιορισμοί του ρυθμιστικου συστήματος (Ε) | Sectorial development | policies Πολιτικές κλαδικής αναπτυξης (F) |
|--|----------------------|------------------------|--------------------------------------|--------------------------------------|--------------------------------|------------------------------------|----------------------------------|-----------------|-------------------------------|--|-----------------------|--|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | | | | | | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | | | 1 | | | | | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | | | | | | | | | | | | |
| Promotion policies Πολιτικές προβολής | | | | | | | | | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | | | | | | | | | | | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | 1 | | 1 | | 1 | | |
| Budget policies Πολιτικές προϋπολογισμών | | | | | | | | | | | | |

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| Potentialities: constraints and policies Προοπτικές: περιορισμοί και πολιτικές | Productive structure | Παραγογική δομή (A) | Cultural and leisure-time | activities Πολιτιστικές και ψυχαγογικές δραστηριοτήτες (B) | Structure of the labour market | Δομή της αγοράς εργασίας (C) | Training supply Εκαπαιδευτική | προσφορά (D) | Regulatory system constraints | Περιορισμοί του ρυθμιστικου συστήματος (Ε) | Sectorial development | policies Πολιτικές κλαδικής αναπτυζής (F) |
|--|----------------------|------------------------|------------------------------|--|--------------------------------|------------------------------------|----------------------------------|-----------------|-------------------------------|--|-----------------------|--|
| Functions / Λειτουργίες | Н | M | Н | M | Н | M | Н | M | Н | M | Н | M |
| Research / Έρευνα | | | | | | 1 | | | | | | |
| Protection and conservation Προστασία και συντήρηση | | | | | | 1 | | | | | | |
| Policies for site develop.and implementation of the archaeological Resource Πολιτικές για την ανάπτυξη και υλοποίηση αρχαιολογικών Πόρων | 1 | | 1 | | | | | | | | | 1 |
| Promotion policies Πολιτικές προβολής | | 1 | | | | | | | | | | |
| Policies regarding the supply of user services Πολιτικές σχετικά με την παροχή υπηρεσίων στους χρήστες του χώρου | 1 | | | | | 1 | | 1 | | | | |
| Entrance fee policies Πολιτικές τιμολόγησης εισητηρίων | | | | | | | | | | | | _ |
| Management and organisation of human resources Διαχείρηση και οργάνωση ανθρωπίνων πόρων | | | | | | | | | | | | |
| Budget policies Πολιτικές προϋπολογισμών | | | | | | | | | | | | 1 |

(A) Cf. point 1 of the phase 3 Report; (B) Cf. point 2 of the Report 3; (C)-(D) Cf. point 3 of the Report 3; (E)- (F) Cf. point 4 of the Report 3.

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE FINAL PHASE – REPORT

As a commentary of the above-mentioned tables, the cause determining that given effect has to be specified, on one hand (for example as to productive structure, specify if the effect depends on research sector characteristics, on planning sector, on crafts sector for restoration, etc.) and, on the other hand, the hierarchy of effects has to be made clear (meaning the reasons for which some are considered high-impact effects and others medium impact).

As a conclusion, it is a matter of identifying short-term and feasible intervention actions with reference to the effects previously described, both to eliminate crisis areas (the most urgent) and to create new development possibilities making use of the potentialities identified.

Intervention action (or actions) identified will be indicated in each line by means of a key-word. As a commentary to the table the summarised action in its key-word has to be illustrated, on one hand, and the hierarchy of actions, on the other hand, should be made clear (meaning the reasons for which actions were identified as a priority).

The text should not be more than seven pages long as for the analytic part one has to refer to the specific points of phase 3 Report.

The discussion which follows is based on the findings and descriptions included in the Phase 3 Report.

Research

Research is undertaken within the site itself and in relation with university students not from the immediate area (no such schooling exists), so no relationship is identified.

Protection and conservation

There are some relationships identified, since local labour force is used for the maintenance and conservation work on the site.

Policies for site development

This is considered an important criticality (second most important) because as sson as the sie is further developed it will affect and be affeced by the interraction with the economic environment, in taht its visitors will either spend more time in the area, or move around in the area more, or both.

Promotion policies

Nothing has been done so far with respect to the promotion of the site in the immediate area. The relationships are quite loose, but there is potential.

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Policies regarding the supply of users services

As can be seen from the Impact criticalities, this is the most important area, since, as has been explained in Phase 3 Report, there is no relationship at present, between the site and the local economic system.

The visitors are transient visitors; the services are for all practical purposes non-existent.

Entrance fee policies

No relationship can be assessed since the entrance fees policies are centrally determined.

Management and organization of human resources

Here is the only area of interraction between the site and its economic system, and this is reflected in the criticalities in the impact matrix. Explanation of the reasons for this situation are given in Phase 3 Report.

Budget policies

There is no relationship since the budget is centrally determined for a number of sites and not individually for each site; a potential is identified with respect to collaboration particularly in either training of local labour force (see also proposed actions) or promotional efforts.

As can be seen from the above analysis, the most impact in the relationship between the site and the economic system is in the aspects of the supply of user services and the site development, which were logically deriving from the preceding evaluations of the impacts.

Then, the analysis, shows criticality in the functions of protection and conservation and human resources, and indeed the two functions have an internal inter-relationship as has been explained in the Phase 3 Report in the section on employment.

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PHASE THREE IMPACT MATRICES - SUMMARY

| FUNCTION | CRISES | SUCCESSES | POTENTIALS | TOTALS |
|---|--------|-----------|------------|--------|
| Research | 0 | 0 | 1 | 1 |
| Protection and conservation | 1 | 1 | 1 | 3 |
| Policies for site development | 2 | 0 | 5 | 7 |
| Promotion policies | 0 | 0 | 1 | 1 |
| Policies regarding the supply of users services | 4 | 0 | 5 | 9 |
| Entrance fee policies | 0 | 0 | 0 | 0 |
| Management and organization of human resources | 0 | 3 | 0 | 3 |
| Budget policies | 0 | 0 | 1 | 1 |

In presenting "Proposed Actions" in the following table, the concepts that have been described as having been considered, in Phase 1 (page 18 of this report) should be kept in mind.

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE FINAL PHASE – REPORT

PROPOSED ACTIONS

| Short – term Actions | Integrated planning in the archaeological sites. |
|---|--|
| | 3. Local economic system |
| Functions | (key words in bold characters) |
| Research | |
| Protection and conservation | |
| Policies for site development | Annual questionnaire for the recording of the requirements and scope of the visitors. |
| | Development of a "visitor" circuit, expanding the present short visit. xv |
| Promotion policies | Advertisement / promotion by the mass media with collaboration with local entities. xvi |
| Policies regarding the supply of users services | Incentives for the creation of catering and recreational facilities. xvii |
| | Planning and implementation of events. xviii |
| Entrance fee policies | |
| Management and organization of human resources | Educational / training projects for the local workforce. xix |
| Budget policies | |

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EXPLANATION OF SHORT TERM ACTIONS PROPOSED

Research and Protection and conservation

The relationships of the functions of Research and Protection and Conservation have been adequately described in the relevant Phase 1 and Phase 3 Reports, as to their relationships with the economic system. Their criticality cannot be faced in the short-term, it more of a longer term planning aspect, so it can be understood that no short-term actions can be proposed for these functions.

Policies for site development

To be approached with right scientific right manner, the issue of the archaeological site's function and organizing, it can be useful to be formed and completed a questionnaire.

Its content will concern the market research and more specifically the visitors' and residents' point of view, such as demands and intentions regarding the topics of the region of the archaeological site (i.e. the relation with adjacent areas, identification of courses between archaeological sites, inter-supplying of functions, organization).

In order to expand the time the visitor spends on the site area, it is proposed to enhance and develop further the visit, both by creating a suggested visitor circuit, and by indicating specific locations that can add to the experience of the visit. Even though this action could be included in the Phase 1 proposed actions, it is presented here, in the context that it will further develop the relationship between the site and the local economic area, because the longer and more complete the visit, the longer the visitor will interract with the site's surrounding area.

Promotion policies

The presentation of the site can create the need for new media that will specifically help solidify the presentation.

Policies regarding the supply of users services

Promotion of incentives for the creation of accommodation and recreation units for the visitors. According to E.U. regulation 23/28 there is a possibility to finance such enterprises up to 40 million drachmas (ca. €117,000).

While these actions are not per say short-term, in view of the implementation of the Program of Structural Funds III, it is considered logical to refer to them as short-term, in the sense that they can be included in this planning stage.

Development and dimplementation of events, such as exhibitions, including photographic ones of finds or the archaeological results of each excavation season, is an action that can help the user better understand the site, expand the site visit offering and the economic impact of the visit; it will also assist the promotion of the site.

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Entrance fee policies

As has been previously explained, the admission fee policy is centrally decided.

Management and organization of human resources

The development of educational/ training projects for the local workforce that will be hired for the maintenance and security of the archaeological sites, will assist the integration of the site with the economic system. This is in a way already donewith the training of the seasonal labour force; in this proposed action, it is recommended to implement pre-hiring educational / training projects.

There could be an expression of interest for the promotion of the procedures - with the initiative of a sponsor (possibly a municipal enterprise) for the securing and financing of such programs and to increase the local potential over matters of tourist interest.

Budget policies

There are no short term actions proposed; any budget action rests with the decision of the central bodies, as has been previously explained.

PRIORITY COMMENTARY

As can be seen fron the Analysis Table of the Impact Criticalities the first actions to be undertaken must be directed to alleviating the criticalities of user services and site development.

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6) Identification of crisis areas, successes and potentialities in the relations of integration between the site and its surroundings and identification of short-period intervention actions.

INTEGRATION ASPECTS EVALUATION

As a conclusion, it is a matter of identifying crisis areas, successes and potentialities resulting from integration relations among site, territory and local economic system.

In conformity with previous paragraphs, the integration relations examined should be divided into two sets:

- a) in the first set are to be included integration relations significantly affecting (HIGH) each management activity and vice-versa;
- b) in the second set are to be included all other integration relations whose value can be considered MEDIUM, except for those deemed poorly affecting

We propose to present the results of this critical analysis of integration relations between the site and its surroundings and the hierarchy of their effects in the following three tables, to make them more immediately evident.

The integration aspect of the Pella site, can be examined from three view points:

- (e) the aspect of integration within the other archaeological attractions of the area
- (f) the aspect of integration within its own territory the rest of the Pella Prefecture and its neighbouring Thessaloniki Prefecture
- (g) the aspect of integration of the site visit within the context of other economic, cultural, touristic, productive, etc. activities on the surrounding area.

The main characteristics of the site of Pella, as have been identified in the Phase Reports (Phase 1 - 2 - 3) are:

- Of the ancient city, as we know it today, which covers some 4,000,000 square metres, only a small area is actually open to visitors
- The most interesting item of find on the site is the mosaic floors, which have been left in their original positions, protected by permanent wooden shelters
- There is a small museum at the site, of just 400 square metres (3,600 square feet), which was originally built as an information center

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• The site is non-continuous, split in many sub-sites (not visitable), while the main site is divided by the national highway, a hazardous crossing for the visitor.

The site is located within an economic and productive area characterized by:

- a. the inability of the secondary sector to adapt to the new market realities due to lack of the needed structures
- b. the absence of integrated policy and co-ordinated initiatives in the tertiary sector services, tourism and culture
- c. little integration in the policies for the valorisation of the natural environment and resources
- d. a slow development and promotion of the cultural heritage and resources
- e. the absence of initiatives for information, and sensitisation of local population

These above characteristics have been described in details in the Phase Reports 1-2-3.

Here we now have to look to the process of integration among the three phases. The process of integration must focus on both the host and the guest, as well as on the interaction between the two. The interaction is the element that produces the impact and the results, whether they are on the economy, on the employment, on the social structure, and on the productive environment. We should consider the implications as "economic impacts" and "people impacts".

The archaeological site is an attraction physically located within the area of a tourist destination, but its existence there, does not facilitate the visitor to enjoy it. This is even more true of an archaeological site, which is usually a collection of ruins and has practically no monumental presentations, as is Pella.

The integration impact criticalities, therefore, are derived from the above and the analytical discussion in the Phase Reports.

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| Crisis areas of integration relations | Integration among site management, functions of the terriand local economic system | | | | | |
|---|--|---|--|--|--|--|
| Functions | Н | M | | | | |
| Research | | | | | | |
| Protection and conservation | 1 | | | | | |
| Policies for site development | | 1 | | | | |
| Promotion policies | | 1 | | | | |
| Policies regarding the supply of users services | 1 | | | | | |
| Entrance fee policies | | | | | | |
| Management and organization of human resources | | | | | | |
| Budget policies | | | | | | |

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| Successes of integration relations | Integration among site management, functions of the territor and local economic system | | | | | |
|---|--|---|--|--|--|--|
| Functions | Н | М | | | | |
| Research | | | | | | |
| Protection and conservation | | | | | | |
| Policies for site development | | | | | | |
| Promotion policies | | | | | | |
| Policies regarding the supply of users services | | | | | | |
| Entrance fee policies | | | | | | |
| Management and organization of human resources | | 1 | | | | |
| Budget policies | | | | | | |

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE

| Potentialities of integration relations | Integration among site management, functions of the territ and local economic system | | | | | |
|---|--|---|--|--|--|--|
| Functions | Н | M | | | | |
| Research | | | | | | |
| Protection and conservation | | | | | | |
| Policies for site development | 1 | | | | | |
| Promotion policies | | 1 | | | | |
| Policies regarding the supply of users services | 1 | | | | | |
| Entrance fee policies | | | | | | |
| Management and organization of human resources | | 1 | | | | |
| Budget policies | | | | | | |

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As a commentary of the above-mentioned tables, the nature of the relation giving birth to that given datum has to be specified, on one hand and, on the other hand, the hierarchy of effects has to be made clear (meaning the reasons for which some are considered high-impact effects and others medium impact).

Finally, it is a matter of identifying short-period and feasible intervention actions with reference to the effects previously described, both to eliminate crisis areas (the most urgent) and to create new development possibilities making use of the potentialities identified.

As has been adequately explained on the Phase reports there is very little integration between the site and its environment, thus few criticalities can be identified.

From the above tables of criticalities we see that the most important "crises" criticalities, as can be expected from the previous discussion, are on *Protection and Conservation* and on *Supply of User Services*, followed with the *Site Development* and *Promotion Policies*. These are easily explained since there is little effective collaboration (although it is the result of the regulatory structure that imposes it), and the fact that the aspects of the site are at present (or up to the present) not conducive to development.

With respect to successes, we can only identify the use of local labour force, under *Human Resources*.

In the process of establishing actions based on the "integrated" approach we may consider the following principal (of both positive and negative impact criticality) issues (already described in the Phase Reports and in the Preliminary Atelier Document):

- 1. the advantage of the site as an attraction locally and as "named" reference for the whole Prefecture
- 2. the discretionary authority of the site Management to employ locals as seasonal workers to execute various annually repetitive tasks (i.e. maintenance)
- 3. the absence of other attractions for visitors and tourists in the immediate and in the local area
- 4. the proximity of the site (and the area in general) to the Thessaloniki metropolitan area
- 5. the fact that the Prefecture of Pella has many interesting attractions, practically all of which are located in the northern and western section of the Prefecture
- 6. the potential underlying the recent cultural emphasis given on the Macedonian civilization and the Macedonian archaeological sites.

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In presenting "Proposed Actions" in the following table, the concepts that have been described as having been considered, in Phase 1 (page 18 of this report) should be kept in mind.

PROPOSED ACTIONS

| Short-period Actions | Integration among site management, functions of the territory and local economic system |
|---|--|
| Functions | (key words in bold characters) |
| Research | |
| Protection and conservation | |
| Policies for site development | The construction of a new Museum .xx |
| Promotion policies | Drawing up of archaeological sites network thematic routes. xxi |
| | Signposting of the archaeological sites network – "Archaeological Triangle" (Pella – Dion – Vergina). xxii |
| | The publishing of printed media for the network. |
| Policies regarding the supply of users services | Organization of recurring events. *xxiv |
| Entrance fee policies | Discounted tickets of the "Archaeological Triangle" and of specific thematic routes. |
| Management and organization of human resources | |
| Budget policies | Additional financing (the European 3 rd C. F. S. etc). |

Intervention action (or actions) identified will be indicated in each line by means of a key-word (for example protection/restoration sector, research/training, etc..).

As a commentary to the table the summarised action in its key-word has to be illustrated, on one hand, and the hierarchy of actions, on the other hand, should be made clear (meaning the reasons for which actions were identified as a priority).

The text should not be more than eight pages long as for the analytic part one has to refer to the preceding paragraphs and/or to the specific points of the phase Reports.

EXPLANATION OF SHORT TERM ACTIONS PROPOSED

Research and Protection and conservation

These are functions more internal to the site and whose impact can only be considered on an individual effect basis, under the present regulatory structure and projections. So no proposed action can be or is included for the short-term.

Policies for site development

The construction of a **new Museum**, of a size commensurate with the extent and importance of the site is the most important short-term action.

Normlly the construction of a Museum would not be considered a short-term action, but in the particular case we inclue it both because it has already been approved by the Ministry of Culture and we present it in the "integrated" actions list, since one cannot consider a Museum just an element internal to a site.

In particular, the Pella new Museum, is planned to have multi-purpose hall facility which it is palnned to be used for events, presentations and other uses, directly affecting the integration of the site with its territorial and economic environment.

Promotion policies

The primary reason for the inclusion of proposed actions in this category is the relationship of Pella to the other archeological Macedonian sites network. Thus, the actions proposed here, really are not of Pella but for Pella, in its relation to the "network" being promoted by the Ministry of Culture.

For the viable promotion of an archaeological site, its placing to the social life is essential; this can be supported with the placing of the site within an archaeological network.

Pella as well as Vergina and Dion are the peaks of a triangle (archaeological triangle) which can form the core of a network of historical regions which can be directly designed so that it can encourage the creation of a stream of visitors in the region and thus to contribute and supply an economic activity and furthermore implementation of the archaeological resources.

In order to achieve the full benefits of the network and for it to reach its full potential it is necessary to put signs all across the routes, as well as the nodes, using specific signs (network

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logo) according to the E.U. norms. It is also proposed (in some localities done already) to put in specific locations large signs with an overview of the map of the whole network.

The signage will be implemented in close accordance and collaboration with the Ministry of Environment and Public Works and the Ministry of Transport. Funds for it can be found through the Hellenic National Tourism Organisation and the Prefectures, through funds available for projects for the presentation of local tourist attractions.

The publication of archaeological network books and tourist guides will help the integrated presentation of the network as well as media for each specific route

Policies regarding the supply of users services

Provision of user services has been included in the proposed actions of the Phase 3 impact evaluation, and, in keeping with the principles defined in page 18, is not repeated here.

In the "integrated" evaluation we include in the proposed actions the "recurring" events, whih can also relate to other Macedonian sites.

Events that are connected to each other, take part close to the archaeological sites and their long-term aim is to create events that have the ability to be a recurring event. They will take place once every a set number of years and can be specifically related to the Macedonia Archaeological Triangle.

Entrance fee policies

Even though in all previous sections we have noted that the admission fees policy, being centrally decided, prevents any short-term proposed actions, we feel that in the context of integration, we can offer suggestions.

There could be a program for the edition of a single economic admission ticket in archaeological sites and museums based on a subject- course, which concerns broader areas of archaeological sites.

For example there could be three types of ticket that would apply to tree different types of courses;

- 1) A course into historical times 1000 kilometers length which will pass from at least 15 archaeological sites.
- 2) A course through the Egnatia road 320 kilometers length which will concern 6 archaeological sites and 3) A route through the archaeological triangle of Dion, Pella and Vergina.

Management and organization of human resources

Actions on this function have been proposed in the individual Phase Impact Analyses (specifically in Phase 1 and Phase3) and are considered covering the potentials for the short-term.

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Budget policies

In difference to all the individual Phase Impact analyses, where (as is true and has been explained in the Phases 1-2 Reports as well) the budgetary function is independent because it is set for a number of sites and it is approved centrally, here we do make a particular exception.

The exception is justified from the fact that in view of the developmental planning being undertaken by the State and the Regional Authorities based on the application of the European Structural Funds III, it would be considered inappropriate not to refer to the possibilities for improving the overall situation by finding and applying other funding sources. Indeed it is true that both at regional and at prefectural level it has been reported that such interest and proposals are active.

While, directly this is not under the authority of the site management, its involvement and support is logical and justifiable, and therefore the action is proposed in the "integrated" analysis.

ⁱ Material drawn from the Pella Site Presentation by Mrs. Maria Akamati, PhD, Director of 17th Ephorate

ii Material drawn from the text in the Thessaloniki Atelier Preliminary Report, by Mrs. Ifigenia Georgopoulou – D'Amico, Director Archaeological Receipts Fund Technical Service

iii Site area map provided from 17th Ephorate and Archaeological Receipts Fund

iv See also Phase 1 Report and Preliminary Report p11

^v See also Phase 1 Report and Preliminary Report p12

vi See also Phase 1 Report and Preliminary Report p11

vii See also Phase 1 Report and Preliminary Report p38

viii See also Phase 1 Report and Preliminary Report p11

ix See also Phase 1 Report and Preliminary Report p30

P.I.S.A. EURO-MEDITERRANEAN NETWORK

HELLENIC RESEARCH TEAM

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^x See also Phase 1 Report and Preliminary Report p12

xi See also Phase 2 Report and Preliminary Report p38

xii See also Phase 2 Report and Preliminary Report p40

xiii See also Phase 2 Report and Preliminary Report p38

xiv See also Phase 2 Report and Preliminary Report p30

xv See also Phase 3 Report and Preliminary Report p37

xvi See also Phase 3 Report and Preliminary Report p29

xvii See also Phase 3 Report and Preliminary Report p38

xviii See also Phase 3 Report and Preliminary Report p30

xix See also Phase 3 Report and Preliminary Report p38

xx See also Phases 1-2-3 Reports and Preliminary Report p12

xxi See also Phases 1-2-3 Reports and Preliminary Report p37

xxii See also Phases 1-2-3 Reports and Preliminary Report p29

xxiii See also Phases 1-2-3 Reports and Preliminary Report p30

xxiv See also Phases 2-3 Reports and Preliminary Report p30



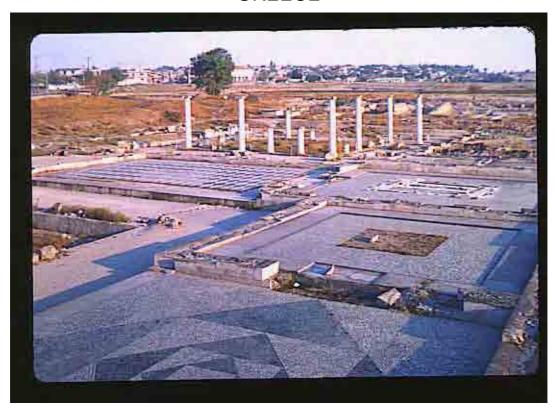
MINISTRY OF CULTURE DIRECTORATE FOR GREECE - EUROPEAN UNION RELATIONS

HELLENIC RESEARCH TEAM - PILOT CASE STUDY:
ARCHAEOLOGICAL AREA OF "PELLAIA CHORA"
PELLA - MACEDONIA - GREECE

PHASE 1 - SUMMARY REPORT - REVISED

PELLA SITE REPORT

GREECE



Project Partner

ARCHAEOLOGICAL RECEIPTS FUND

DIRECTORATE OF PROTRACTIONS

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17th EPHORATE

OF PREHISTORIC AND CLASSICAL ANTIQUITIES

Pellaia Chora Archaeological Area Responsible Authority

ATHENS - 2001

HELLENIC RESEARCH TEAM – PILOT CASE STUDY: ARCHAEOLOGICAL AREA OF "PELLAIA CHORA" PELLA – MACEDONIA - GREECE

FIRST PHASE REPORT ON THE STUDY CASE OF PELLA

REVISED

A) PELLA SITE PRESENTATION

1) Location

Pella <u>is located</u> in the homonymous Prefecture, in a largely agricultural region of Northern Greece. It was once at the heart of a narrow gulf, the extension of the today named Thermaic gulf, where Thessalonica is located, and was transformed gradually, through the centuries, into a lake by the alluviums of its rivers.

Pella is about 40 Km far from Thessalonica, the second largest city of Greece, and is connected to the city by a national highway, which leads to Edessa. (About site's location see also the *topographical map* of the whole region).

2) History of research and surveys

About <u>the history of research and surveys in the region</u> see in <u>S2b</u> the chapter "<u>History of Excavations</u>", where there is a report of the excavation's chronicle in the area of Pella beginning from the first excavations by the professor T. Oikonomou, a little before the first World War, and continuing till now, with the excavations held by the 17th Ephorate of Prehistoric and Classical Antiquities, as well as the <u>S1c -Decisional processes of a political nature</u>, where we can see the powers that played a determinative role in this history.

<u>Decisional processes</u> of a political nature

The state has supported a lot the effort of research and survey of Pella beginning with the Prime Minister K. Karamanlis, who first gave his unstinting help for the systematic excavations at Pella.

Around 1996 the former Minister of Culture, Thanos Mikroutsikos, announced, expressing the political will of the then Prime Minister A. Papandreou, the desire for interventions at Pella, aiming to the pilot, systematic and integrated planning of the archaeological site of its wider area. Further to, the following Prime Minister K. Simitis and the responsible ministers adopted the same political will.

History of excavations

Two years after the liberation of Macedonia from the Turks in 1912 began the first excavations in the area of Pella by the professor T. Oikonomou, which a little later were interrupted because of the facts of the First World War.

The systematic excavations at Pella were inaugurated in1957 by the professor F. Petsas and afterwards by X. Makaronas, who undertook excavations in a big way (period 1957-1963), with the complete support of the state, by the then Prime Minister K. Karamanlis. Since then the excavations proceed in an intensive way mainly since 1976 till today. The excavations are being held by the 17th Ephorate of Prehistoric and Classical Antiquities with responsible the director of the Ephorate, Archaeologist ms. Maria Lilibaki - Akamati.

The publication of the data from the excavations is confined since 1914 in the annual reports at the Chroniki of the Archaeological Report, the Work and the Practica of the Archaeological Society, while important elements about the historical and archaeological research at Pella and its area offer the rich existing scientific bibliography, mainly of the last two decades. (See pages: 27-31)

The planning of the 17th Ephorate for the directly following years, as it is defined by those who are responsible for the excavations, includes the consummation of the excavations at the following areas:

- 1. Palace
- 2. Agora (Market)
- 3. Public buildings sanctuaries of the area of the canal
- 4. Private residences inside the central archaeological site that can be visited

It is also continued the special scientific research that is being held, concerning the preservation of the mobile finds, by the **conservation laboratories** of the <u>ceramic and metal objects</u> that operate under the responsibility of the 17th Ephorate.

3) History of the site

The region of Pella, the famous capital of Macedonian kingdom and starting-point of Alexander's the Great expeditions (a summarized <u>historical report of the site</u> is included in <u>S2a</u> <u>-Historic-documentary studies</u>) covers a great range of historical phases and periods within its four basic and highly connected sub- territories, the Hellenistic city, the Roman colony, the group of Macedonian tombs and the excavations at Archondico. From these sites only a very small area (the Hellenistic city without the palace) can be today visited.

The wider area of Pella is inhabited, from the up to now elements, for the first time during the Neolithic period (around sixteen settlements have been detected), and the period of the Copper. Further to, in the historic years, the city of Pella, which is already known from Herodotus, becomes the second capital of the Macedonian Kingdom in the early 4th cent, by decision of Archelaos (413-399 B.C.), a great innovator who also oversaw the reform of the administration of the kingdom and the reorganization of the army and the fleet. During his reign Pella and the whole Macedonia enjoyed great prosperity and peaceful relations with Greeks of southern Greece were cultivated. Artists and philosophers, the tragedian Euripides and Agathon, the painter Zeuxis, the musician Timotheos, the epic poet Choirilos and other members of the intellectual and artistic world of that era were invited and have worked to his court (Euripides spent, according to the tradition, his last years and wrote some of his works there).

Pella, the native town of <u>Philip II</u> (360-336 B.C.), who followed Archelaos in governing, is expanded by him and decorated with great palaces. Phillip continued the work of Archelaos with main concern however the expansion of Macedonian political power. At that era Pella reached the pinnacle of her prosperity, becoming the "greatest of the cities of Macedonia" (*Xenophon*,

Hellenika V, 2,13) and her fame was spread throughout the entire known world by the conquests of Alexander the Great (336-323 B.C.).

In the years of <u>Kassandros</u> the city expands according to the **Hippodamean system** and acquires bright public buildings and luxurious private residences, with mosaics floors and wall paintings, occupying a land of about 250 hectares. While at first it was a seaside town, from the classical years lies at the cove of the lake that was created by the alluviums of the Loudia, mainly continuing to be the basic port of the area. Thanks to the Egnatia road that passes by there, it continues, even after the abolition of the Macedonian Kingdom, to be, in the roman years along with Veroia, one of the most important cities of Macedonia. The town definitely declines when beside it is founded the *Colonia Pellensis*, the Roman colony of New Pella.

4) Type of archaeological resource

More specific about the type of archaeological resource at Pella see: <u>S1a Ownership</u> in comparison with the appropriate map, where the limits of public and private property are defined, <u>S1b -Regulatory system - legal boundaries</u>, where the limits of regulations for its protection are described and drawn, <u>S2b - Physical studies</u>, where the visitable areas as well as the areas that are undergoing or going to be under archaeological survey in the next years are reported (see also the planning of the 17th Ephorate for the directly following years) parallel with the conservation laboratories existing today at Pella.

About them is also reported in <u>S4b</u> (preservation and first-aid laboratories). Information about the areas involved today in restoration and maintenance projects are given in <u>S3a</u>—<u>Planning and S3b</u>—<u>Carrying out of restoration work</u>, as well as in <u>S3c</u>—<u>Maintenance programme</u>, and in <u>S8c</u>—<u>Financing</u>, budgets, monitoring and evaluation, where is referred about the future prospects of restoration. Finally fencing and areas equipped with visitors routes (routes-way for visitors and exhibition areas) are to see and in <u>S4c</u>—<u>Site</u> and <u>personnel protection systems</u> and in <u>S5a</u>—<u>Site</u> presentation procedures correspondingly.

Ownership

Pella is included in the Constant List of Declared Archaeological Sites and Monuments of Greece (s. 38 P. of Pella).

In the wider area of "Pellaia Chora" there are elements of the Ministry of Agriculture since 1929, on the basis of which the private and public lands is possible to be initially distinguished.

Another category of lands is those, which are expropriated by the Archaeological Receipts Fund for the protection and enhancement of the Archaeological Sites.

At the tumuli and the Roman Pella, the expropriated lands are limited and in several cases they are profound through the fencing of the sites. At the Tomb of Archondico the total expropriated land at the hill along with the fenced triangle at its feet, is calculated graphically in about 8,2 hectares.

The greatest proportion of the expropriated lands is collected at the area of the Hellenistic Pella. According to the elements from the qualified Ephorate and the Archaeological Receipts Fund results that in Hellenistic Pella (*tot.*: *ha* 81.07)

- 12,44 hectares are expropriated (*corresponding to 15%*)
- 25,37 hectares are in the final stage of being expropriated (*corresponding to 31%*)

• 43,26 hectares are requested to be expropriated (*corresponding to 53%*)

At this moment there is not a detailed land-cadastral survey with indication and pointing out of boundaries neither a complete land survey planning.

<u>Regulatory system - legal boundaries</u>

The archaeological law 5951/32 and 736/77 protects all the archaeological sites in Greece while any intervention in monuments is subjected to the restrictions of the regarding monuments international provisions ("Venice Charter", etc).

Especially in the case of "Pellaia Chora" there are declarations of solitary monuments and corresponding protection zones. Until now there is not a total declaration and marking out of boundaries of the zones, with escalating protection meters.

To be exact is legislated:

- The declaration of the area of the community of the old Pella (Hellenistic Pella) as an archaeological site (FEK 214B/2-8-1957)
- The declaration of all the tumuli of the area of the Old and New Pella, Messianos, Koufalia and N. Halkidona (235B/24-1957)
- The declaration as an archaeological site of the area at the west of the ancient Pella, which extends in 500 m. around the spring which is called "the Baths of Alexander the Great" (FEK 372/22-10-1959)
- The characterization of the reforested area around the ancient fountain as an archaeological site, at the area of New Pella at the Baths of Alexander the Great (FEK 653/6-10-1969)
- The declaration of the area of the ancient Pella as an archaeological site and specifically of the area 750 m. east and 750 m. west of the crossing of the National road of Edessa Thessalonica and the road towards the Old Pella, in front of the Museum, 750 m. north of the hill of the Citadel, down to the Tomb of Fakos towards the South.
- Also the determination of a 3km protection zone with center the crossing of the National road of Edessa Thessalonica and the road towards Old Pella (FEK 549B/9-8-1984)
- The characterization of the Roman colony of Pella and its cemeteries as an archaeological site (FEK 661B/1-11-1985)

Common characteristics of the legislated regulations for the protection and declaration of the archaeological sites and monuments are:

- In most cases the declaration of the sites is done by reference to the codes of the parcels of the distribution of the Ministry of Agriculture of 1929, and as a result it is quite difficult and insecure the transportation of the boundaries of the archaeological sites to subsequent ordnance imprinting or even on the ground.
- It is valid the absolute protection and prohibition of building, as well as the prohibition of road cutting, in the limits of the archaeological sites protection that occupy wider zones 500m, around the monuments.

• It is distinguished the non-existence of special structure provisions or even restriction of uses in the cases of direct contact of settlements with the archaeological sites or in the cases of solitary monuments within the bounds of settlements.

Physical studies

The archaeological site of Pella, in the way that it exists today, it concerns mainly the Hellenistic city of Kassandros, with the blocks (**urban design**), the **fortifications**, the buildings as well as the central **square of the Agora** (**Market**), which with the arcades and the stores that surrounded it, forms a very impressive group. The big and luxurious houses (private residences) with the fine mosaics show the wealth that had flown into Macedonia after the expedition to Asia and are, somehow a prototype for the architecture of the later years. To its north a **sanctuary** dedicated to the cult of Aphrodite and the Mother of the Gods was discovered, which occupies the entire 47 m. width of a building block. Other **sanctuaries** were also found like those in the north -east section of the city or in the region of the modern irrigation canal, dedicated probably to Darron, etc.

In direct vicinity to the city there is **the Palace** who's the central part is one of the few constructions that survived from the years of Phillip's II. The rest parts of the palace, that occupies in total 6 hectares, is a product of successive building phases, which makes difficult their exact chronological identification. In direct relation to the urban and royal group, the wider archaeological site includes, on one hand the **Roman colony** of Pella and on the other hand a group of **Macedonian tombs** both in the city's cemetery and in the road axis and a land pretty much from the city of Giannitsa to Halkidona. **The twelve tumuli** that have been excavated, form by themselves a unique outdoor museum, to which the visitor, specialized or not, may have a picture of the differences of the Macedonian tombs, the phases of their construction but also the results of their pillage from the ancient grave robbers. Finally, in the wider area are also included the two excavations that are being held in the area of the village **Archondico**, a prehistorical one, held by the University of Thessalonica and a classical one, held by the Ephorate of Antiquities of Pella.

The total extension of the archaeological area is of 1.067.310 m² and is divided as follows:

Hellenistic Pella: 960.000 m^2 Roman Pella: 1.450 m^2 Archontiko area: 62.000 m^2 Tombs: 43.860 m^2

Moreover the territory of the area surrounding the site is designated in two types of protected zones (Zone A, Zone B) in relation to the proximity and potential archaeological importance.

Today the archaeological site that can be visited includes the Hellenistic town. Both the palace and the Roman Colony are fenced areas, independent from the main site and do not form a part of the usual sightseeing tour of the visitors at Pella. The tombs with the burial monuments, either fenced (and covered) or not, as well as the excavations at the Archondico cannot be visited. This whole area A of the archaeological site (of 1.067.310 m² is going, according to the future plans, to be visited and fenced.

Planning of restoration work

About the area of our interest, meaning the archaeological sites of Pella, it doesn't exist until now, a general planning of restoration work but only partial studies for monuments or parts of monuments. Thus, in the frames of the preservation programme of the "fragile" architectural material of limestone, a study by the University of Thessalonica for the consolidation – restoration of the walls of he south wing of Agora has been done in 1997, under the responsibility of the 17th Ephorate, while a study for repair works is being prepared.

Carrying out of restoration work

In 1998 has been realized, after a completed documentation of the existing situation, with land planning, architectural and photographical survey, under the responsibility of the 17the Ephorate and financing from European programmes (P.E.P. = Peripheral Enterprising Programmes), the preservation — restoration work of part of the agora, which is planned to be continued and expanded, aiming to the protection of the sensitive architectural remains and the achievement of their ability to be easily recognized. Furthermore, solitary until today, (and not general, systematic) preservation work and work of mostly indirect protection (e.g. in Macedonian tombs) has been realized.

Maintenance programmes

Totally and completed maintenance programmes of the site do not exist. But it has been taken concern for the direct preservation and the indirect protection of the archaeological site in certain important positions of the site (mosaics: preservation and shelters, Macedonian tombs: shelters).

Networks and installations

As for the **road network**, the archaeological site is accessible and visitable through road axis of the ancient Hippodamean system.

Specifically, concerning the road axis:

The archaeological site of Pella is outside the village Pella and is about 10 km far from Giannitsa, which is the closest town to the site. The road of the secondary national road network "Thessaloniki - Giannitsa - Edessa" (E 86) is crossing the area of "Pellaia Chora" in its south part. This road concentrates all the traffic, passing and local, and splinters off the image of the archaeological areas of Pella.

Serious realignments at the road network of the area and all the Region of Northern Greece will be done after the year 2000, when the under construction Egnatia road will come into use.

The motorway Egnatia road will cross the road passage of the Region of Northern Greece and will connect it with the western gate of the country towards and from the rest European community, through the connection with ferry boats between Greece - Italy. It is estimated that its role will be very important for the unification of the areas of "Pellaia Chora", and that it will decisively contribute to the improvement of the access to the archaeological roads of the country, the harmonization of the traffic connections of important archaeological sites of the area (mainly of the triangle Pella - Dion - Vergina) but also of archaeological sites along with the near urban centers, while it will, finally, contribute to the reduction of road accident danger at the "Pellaia"

Chora" region, because of the traffic decongestion of the road "Thessalonica - Giannitsa - Edessa" that will come as a result.

The existing ancient <u>draining system</u> of the archaeological site, where it is preserved, is almost not used. Today the rainwater of the site is removed through the surface and not with a central system of drain, which does not exist.

The archaeological site is generally connected to the networks of common utility of the modern settlement except the draining system.

Specifically:

The archaeological site is connected with an aerial **network of electric power**, placed at the boundaries and outside the archaeological site. Its image, where the network is in the view, of the visitor does not effect positively

The archaeological site is connected with the <u>water-supply system</u> of the modern settlement, while from oral information the water supply is hardly sufficient.

The **waste collection** is part of the garbage collection system of the settlement, which is a local authority service.

Buildings for site functioning

The following are the site support buildings:

- The **storage rooms** that are placed near the archaeological museum of Pella, are connected to the common utility networks
- The <u>garage (for cars and buses)</u> is placed at an outdoor area near the today's entrance of the archaeological site and the museum, and has lightening.
- The <u>offices for the administration services</u> are incorporated in the building of the museum and are also connected with all the networks of common utility, while concerning the drainage they have a cesspool.
- The <u>small guardhouse</u>, at the entrance of the archaeological site of the Hellenistic Pella as a box office and control room, connected to the common utility network (telephone and electric power).
- The <u>preservation and first-aid laboratories</u> of the mobile findings are connected to the common utility networks.

The connections to the common utility networks at the other sub-territories of "Pellaia Chora" are rudimentary or non-existent.

Site and personnel protection systems

Concerning the **security systems**, the archaeological site of Hellenistic Pella is protected with the system Star XL 4600 in the area of the museum, the system ADEMCO 4140 XMPT at the storehouses and the SIGMA M G03* in the areas of the offices.

At the same time, they have been already placed respectively **fire-protection systems** and specifically the fire detection systems OLYMPIA ELECTRONICS for the museum and UNIVEL 9000 for the storehouses and the offices.

There isn't however an **alarm system** at the showcases of the museum and the free findings.

Concerning the excavation sections at the archaeological site and the important architectural parts, those are protected with **railings**, while there are **wooden floors** for the protection of the visitors during the access to certain places of special interest. Protection of the findings is achieved either with temporary, mostly, construction of protection shelters, either, if it is about mobile findings, with the recording (with the traditional but also the continuously developing electronic way) and their guard in the new storehouses constructed in 1998.

Concerning the **guard of the boundaries** of the archaeological sites this is being done with a simple fencing (wire-netting on metal columns). In some cases (e.g. southern boundaries of Hellenistic Pella) these boundaries are going to be altered in the future including also the new revealed part of the archaeological site.

A significant problem, connected with the security aspect is moreover the one concerning the visitors mobility, due to a fast - flowing route crossing the archaeological site of Hellenistic Pella, considered as highly hazardous and as so a permanent threat for the visitors mobility. What is proposed as solution to that problem - and is agreed both by the Hellenic Ministry of Culture and by the Ministry of the Environment, Regional Planning and Public Works - is the construction of a national road by-pass, which would practically safeguard the protection of the visitors, while at the same time would allow the integration of the site. Other solutions, which had been though as short term ones, are no more valid, since the construction of the road by-pass is now constantly on the way to be done.

Site presentation procedures

Inside the sightseeing archaeological site there are today in a rudimentary way though formatted **routes-ways for visitors** and a wooden elevated stand – observation post in a significant position.

There is a future prospect for the creation of united ways in the frames of the unification and enhancement of the archaeological site of Pella, of the Macedonian tombs, the Hellenistic Pella, the roman colony and the Tomb of the Archaeological.

Concerning the exhibition areas at this moment, except the <u>areas</u> (specially those with mosaics) <u>inside the archaeological site</u>, the main such place is inside <u>the museum</u>. The small museum (area: 400 m.²), which was built as a national tourist kiosk about thirty years ago, is divided in three rooms and houses finds from the various sectors of the archaeological site. In this exhibition area one can find useful information about the prehistory of the surrounding area, the history and urban design of Hellenistic Pella – with a special care for the private dwelling in Pella – as well as about the Agora, the sanctuaries and cemeteries of the site. Moreover one can see some of the most famous mosaic floors of Pella, detached from the archaeological site as well as architectural members, sculpture and a plan of the palace. The finds are accompanied by extended photographic and designing documentation (e.g. aerial photography of vestibule, land planning survey of the site, plates with maps of development of the Macedonian Kingdom) but also two models with reproductions of private residences.

At the same time it has been already put on the future construction of a new, bigger museum with financing from a European programme (3rd C.F.S.).

Concluding we must say as a general remark, that at present, the budget approvals relate to <u>all</u> the sites under the Ephorate's jurisdiction, and are earmarked on a per site basis, making it

difficult to plan for the future, as well as to suggest interventions, which would mean changing a system applicable to a multiplicity of sites.

Particular recommendations for changes/ additions/ modifications to the existing legislative context are noted in the text. However, it is pointed out that the issue of modifications to regulations for the archaeological sites in Greece is considerably difficult.

It is estimated that of relevant importance would be an area of about 2.600.000 m².

Cartography showing the total area is included in the maps provided under Phase 2 Report.

As regards visiting pathways within the archaeological site, these are only a short pathway, not specifically marked and include a small wooden construction, which allows a visitor approach without damage to the underlying finds.

B. FIRST PHASE REPORT ON THE CASE STUDY OF PELLA

1. Effects of the regulatory system on decision-making processes and on the single site management activities (distribution of powers, etc.)

Common characteristics of the legislated regulations for the protection and declaration of the archaeological sites and monuments are described hereunder.

In most cases the declaration of the sites is done by reference to the codes of the parcels of the distribution of the Ministry of Agriculture of 1929, and as a result it is quite difficult and insecure the transportation of the boundaries of the archaeological sites to subsequent ordnance imprinting or even on the ground.

It is valid the absolute protection and prohibition of building, as well as the prohibition of road cutting, in the limits of the archaeological sites protection that occupy wider zones 500m., around the monuments.

It is distinguished the non-existence of special structure provisions or even restriction of uses in the cases of direct contact of settlements with the archaeological sites or in the cases of solitary monuments within the bounds of settlements.

The decisions of legal nature for archaeological subjects of enhancement seem to have in our case little or not a political dimension. Political interventions do not happen in legal procedures since the courts act independently, autonomously.

There is a weakness of access to recent unpublished information.

It is advisable an adjustment of legal status so that the publications will be done in a short time and the permissions for excavations won't be renewed, the publications of which are in abeyance for a long time.

The specifications, the rules, the authorities and the laws, which rule the elaboration of restoration planning, are not clear, which consist a sovereign problem. With other words: There are not national rules and specific legislation for the restoration studies. On the other hand there are still international principles, maps and conventions in which Greece is also a party. But there are interpretation problems of terms for these principles accordingly to the differences of profits and roles of judges (concerning what is beneficial and what is harmful, what is distinguished, what is insulting, etc.).

There is a need for re-examination - modernization (theoretical and practical) of the Map of Venice and others in the future.

When we do not want to choose the procedure of self-supervision, problems arise since there is lack of special legislation for the execution of public works (restoration category). The consequences that are provoked are the weakness of choosing a specialized and experienced contractor in subjects of restoration. The more economic offer prevails. Thus the difficulty of executing restoration works by the procedure of public works guides to be preferred the execution by self-supervising.

For the future **a formation of a record of constructors**, specialized in restorations, is required.

There is not a simultaneous and therefore active **collaboration and joint action of those that operate in networks and installation section.** The transformation of an aerial network to subterranean is examined and is executed only by the Public Company of Electricity according to the valid legal status. That means that the planning of any organization must coincide with the

planning of the proprietor or manager of the archaeological site for the execution of the work. With this status are noticed delays or even cancellation of the execution of the network job.

What needs to be done is the **modernization of the legal status**.

There is a crucial problem regarding the **building license** for the construction **of buildings for site functioning** into a characteristic area (non -structured zone) of the archaeological site. There is now however **legislate** which exceptionally permits (with common decision of the Minister of Culture and the Minister of Environment) the legal structure for auxiliary services of the site.

In any case the **definition of strict and documented protection zones** and the **construction of auxiliary buildings at their boundaries** would be helpful.

There is not a **united presentation way** of the archaeological sites (there is another marking at the Macedonian tombs and another at the Hellenistic Pella).

For the future a **regulation of the statutory frame** is required for the transmission of responsibility concerning the way of a unified presentation in a central carrier of the YP.PO (Ministry of Culture) and the content at the regional services.

The conditions and the legal status that rule the **concession of uses** (lease of refreshment room) of an archaeological site to an individual foresee generally special conditions for the lesser. Although in our case such a concession does not exist, it will maybe in the future.

our case it would also be useful **the legal status to be expanded**, maybe in other functions, too (ex. bookshop).

There is a need for **legislative regulation** for the consolidation **of the rights for special categories of visitors** (persons with kinetic problems).

There is a **legal status for the issue of tickets** accordingly to the visitor's type. There are special legal regulations for tickets accordingly to the different visitors categories (ex. free entrance for the employees of the YP.PO., 50% reduction for persons over the age of 75). The matter of the free entrance because of citizenship is complicated and although it was applied in Greece (in the decade of '80) today isn't valid (it is considered to violate the principle of equality).

For the future it is proposed a **creation - legislation of motives for often visiting** (ex. season ticket, enactment of periodical exhibitions, annual demonstrations, etc.).

It turned up that the legal function of the archaeological site beyond the classical time-table would be perhaps advisable under some circumstances (operation of archaeological sites during the last full moon of the August, which was combined with parallel music performances), especially a future perspective for the function of the site at night.

The **material** that is **disposed in the museum shop** of Pella is reliable and controlled, since there is a legislative frame according to which all the material that is disposed by the shops of the A.R.F. has been approved by the authorized organs of the YP.PO.

The **systematic examination and the control** of the advertising material, which is disposed for selling at the bookshops, should be also expanded in other categories of commercial products and computerized material.

A probable modernization of the legal status should include and foresee the **potentiality of production and disposal of products by individuals** with presupposition the certification from the YP.PO.

The **legal status that rules the work relation of the employees** means the double problem of the strong status of non-removal of the permanency, which rules the permanent employees and the status of the seasonal occupation of employees. It is problematic and maybe long gone by the status that rules the labor relations of the human potential concerning the above.

A modernization of the state of the occupation of the human potentiality is needed.

There are no serious problems in the legal status that conditions the way of the **equipment supplying** and in its implementation.

There are difficulties in the **smooth performance of the actions of financing**, regarding cases of financing **backwardness** and their effects for the administrative authority and the beneficiary (ex. extraordinary employee).

A **prompt and more proper planning** by the responsible authority is needed.

Decisional processes of a political nature

Many times the **political will** may function as a **decisive parameter** for elaborating historic-documentary studies and the political interference is often proved to be crucial and especially useful for the preservation and enhancement of our cultural inheritance (as in case of Pella).

Specially as refers to the decision-making processes flow-chart, since it is difficult to be shown as a "decision making" flowchart, one should take into consideration the following three important elements:

- a. Responsibility on archaeological sites in Greece is under the sole jurisdiction of the Ministry of Culture and is administered through the particular responsible Ephorate.
- b. As regards any sort of intervention on an archaeological site, relevant information and studies are submitted for approval at the "highest" body of the Ministry of Culture, the "Central Archaeological Council" whose decision is for all intents and purposes final; the Council also makes the final decisions on the expropriations needed to protect a site or a potential site area.
- c. All other authorities, including other Ministries, interventions come "second" as long as there is in effect a previous decision of the Central Archeological Council; of course collaboration is practiced but only on matters that refer to the sites surrounding area, promotion, facilitation of visitors, etc. not on matters relating to the site itself.

2. Effects of the system of ownership on the decision-making process and single site management activities

Especially in the case of "Pellaia Chora" there are declarations of solitary monuments and corresponding protection zones. Until now there is not a total declaration and marking out of boundaries of the zones, with escalating protection meters.

The present condition of **property-legal status relation** in Pella is dealt with opportunistically and on a case-by-case basis. It is defined as problematic and must be clarified in respect to its limits and content.

As regard **to the future** there are **possibilities for optimization** by general and systematically programmed interventions. More specific it is necessary to:

a. Prepare a cadastral for the precise identification of properties with their associated legal status.

B. PRECISELY DETERMINE THE EXPANSES-BOUNDARIES OF ARCHAEOLOGICAL SITES (PREPARATION OF ARCHAEOLOGICAL MAP)

- c. Determine land uses, protected zones, building terms.
- d. Reform the archaeological laws.

[Responsible ministries: Ministry of the Environment, Regional Planning and Public Works $(Y\Pi EX\Omega\Delta E)$ and Ministry of Culture $(Y\Pi\Pi O)$.]

The **decision** –**making** by the state **regarding property use** (whether it is to be appropriated or not, included within an archaeological zone or not) incorporates a political dimension, which is however **indeterminate** and seems to be uncontrolled.

The **undertaking of historical –documentation studies** for private spaces intended for non-archaeological use funded by the property owner causes problems when significant data derive of it (i.e. discovery antiquities in private property during excavation for building foundations placement). In such cases there is a controversy arising from the financial interests of property owners and the scientific integrity of the researchers: the individual – property owner – sponsor desires an expeditious action, i.e. quick completion of the investigation and designation of the space, for understandable financial reasons, while the researcher desires a slow pace of inquiry in order to conduct a secure investigation and evaluation of the space.

The **long-term prospect** for that problem is the generation of an archaeological map in order to locate, to an adequate measure, the archaeological islets and to be appropriated or exchanged. In **mid-term**: the financial programming, in order for the historical investigation of spaces to be conducted immediately with funding by the Ministry of Culture services and avoidance of the financial restrains.

When **no publication** has taken place after a historical- documentation research there are problems concerning intellectual property.

For the future there is a need for adjustment of the established rules for publications.

Regarding possible **disagreements between site's owner and site's manager** there cannot be problems between them, when the space owner does not have the right of refusal or intervention, as it is in our case.

If the auxiliary buildings of an archaeological site exist only wherever appropriation has already taken place and are as usual in the boarders then they are legitimate and no problems exist, as occurs in the case of the broader area of Pella as well as of the remaining archaeological sites in Greece.

The **precise boundaries** of the archaeological sites of Pella fairly frequently cannot be determined with clarity due to ownership problems. Also, large distances among the various parts of the archaeological site of Pella are observed, in between which sections of private land properties intervene. Consequently there is a sharp problem of **general supervision and control of the site.** Thus, the achievement of its protection and security is hindered.

A unification of spaces with a single location to serve both as entrance and exit could solve the problem.

When the **presentation of the site** as well as all the activities connected with it **presupposes its prior declaration as an archaeological site** then the emergence of ownership procedures problems is precluded.

The archaeological sites of Pella concern an area able to absorb the number of visitors. However, **the interference of private properties** between two or more sections of the archaeological site (i.e. in between the agora and the palace) creates problems in the smooth flow, transportation and channeling of visitors (the visitor of Pella seldom completes his image of the site with the excavation space, the Roman palace, or the Macedonian tombs). Thus the completion of the picture of the archaeological site is impeded resulting in hindering its comprehension by and generating hardship for the visitor. This fact (in connection with additional factors) leads to the decrease of interest for the site that results, in turn, in the reduction of visitor flow.

What is required for the future is the functional unification of the archaeological sites.

The **established conditions of intellectual property** of the information supplied by the excavations influences the access/disposal of information. More specific the relationship between intellectual property and information is problematic, because of the delay (of an order of 5-10 years) in publishing the information after the research, which is nevertheless necessary both for securing the intellectual property of the excavators as well as the further use of the information. That means that the immediate release and, concurrently, control and verification of information (the possibility of keeping information current and timely) are hindered.

What should be done is the **immediate announcement /publication of the work produced,** which is deemed as significant.

Problems arise from the uncontrollable production and disposal of non-authentic copies of ancient objects by individual merchants while the Ministry of Culture has the exclusive right and monopoly, i.e. their legally protected ownership. A deception and confusion of the public arises from the production and disposal of products that are of doubtful and unreliable qualitative as well as aesthetic value. Moreover revenue loss is caused to the Ministry of Culture.

The **controlled involvement of individual merchants** in the production and disposal of copies appears expedient.

There is a problem of **inadequacy of the budget** of an organization to cover the value of the land to be appropriated, which is **hard to be solved**.

It is appreciated as exceptionally important for the absorbing of economic resources, **the on time programming for the enhancement** because the not opportune programming and planning (not in time and due time action) by the owner of the site results in the loss of economic resources.

There arises thereby a need for greater sensitization in the subject, which has been understood and realized in last years. The planning in case of Pella is already incorporated for realization in the 3rd Communal Frame of Support, while appropriations have been absorbed and are being absorbed for excavations and preservation from communal programmes, as the *Interreg* and the *PEP* of Central Macedonia.

The **presence of persons-counselors** with knowledge in the participation in programmes of economic supporting aiming to the promotion of the cultural inheritance would be extremely helpful.

When there is in general a predominating climate of collaboration and good co-ordination between different institutions of the state, which are responsible for the ownership and

management of the archaeological site, as it more or less occurs in our case, then no special bureaucratic problems arise.

Moreover the following interventions could be proposed:

- Regulations to clarify the extent and scope of archaeological studies for private owners
- Adjustment of the rules for publications
- Effort to find and allocate funding to "unify" the sub-sites
- Increase the site's operational budget

However, it is noted that all these interventions are not necessarily realistic in that the putting them into place would entail a different overall operational strategy than is presently applicable within the Ministry of Culture.

3. Effects of research activity (subjects, organization and distribution of levels of knowledge) on the single site management activities

<u>Historic</u> – <u>documentary</u> <u>studies</u>

In our case the physical studies, in the degree that they exist, step with the historic – documentary studies (ex. excavations, land-planning survey, and historic research – source research). So the **physical studies** are directly **connected and necessary for the valid and correct documentation** of an archaeological site.

In our case there are **positions and uses of the archaeological site** that have **not definitely interpreted** (at the palace, the market, the Archaeological).

Useful would probably be: a probable **existence of alternative suppositions and versions** - **interpretations** by researchers (scientific pluralism) as well as a **collaboration and cooperation between researchers** for the production of more reliable interpretations.

When the **documentation** is **not sufficient** (either it is underestimated, or there is no access to it, or does not exist, **then** there are **problems in the planning and carrying out of restoration work**. In these cases is getting difficult the planning of restoration, the questioning are more intense and the arbitrariness more probable.

The solution regarding the future is the **possibility of co-operation of those who are involved** in the documentation and restoration planning for the restriction of arbitrariness.

The satisfying **documentation of** the **ancient networks**, in our case the road network (Hippodamean) and the draining system creates the possibility of **their activation by the modern restoration planning**, which thus is helped and protected.

What is actually required is a **mild restoration planning** which is **based on and exhausts the data of the documentation**.

The documentation concerning the typology and the morphology of the ancient constructions is necessary and efficient element for the planning of new buildings and the harmonious incorporation in the direct surrounding area.

There is a **necessity of creative planning** and not only of mechanical transcription of forms.

There is a weakness of documentation of the out of the today's boundaries archaeological site (in our case the archaeological site is expanded under the adjoining settlement and the public -secondary national road) with the entailing results.

There is a **need for programming**, as far as this is possible, in the spirit of future release achievement.

The degree of **documentation in combination with the competent and suitable way of its presentation** (sketch depictions which are based in the sufficient and satisfying documentation and avoiding of reconstructions) helps and supports the comprehension of the archaeological site without decreasing the authenticity of the site.

Useful would be the **use of modern (technology) means** for the improvement and reinforcement of the presentation way of the archaeological site, without negative consequences for the site and by extension for its visitor.

The documentation indicates the prevalent and without problems position/positions for the construction of auxiliary buildings. With other words the documentation forms a decisive parameter in the planning and the placement of the service functions.

The **documentation must form a presupposition** for the placement of the service functions.

The **reliability of the information offered at the products,** which are related to the information and the promotion of the archaeological site, is not always examined. Only the products, which are disposed at the official shops of the YP.PO, are examined.

We need a future **campaign for the information of the public** about the value of the reliability certifications of the products.

The **human potentiality**, which is **related to the documentation**, with or without problems of frictions, finally collaborates effectively under the instructions of the director.

The **common inter-scientific training of the staff** through programmes, seminars, etc., is required.

When there isn't any **tactic financing**, this entails the delay and the slow-down at the composition of produced documentation studies.

Is needed a **systematic finding of various appropriations**, coming from various sources for the documentation.

Physical Studies

The bound of the archaeological site cannot be an anonymous-indefinite line, without coordinates, but has to be arranged with certain points and coordinates (specialized land-planning). When the **boundaries of the archaeological site** are not **arranged by a land- planning,** then unfavorable effects and arguments arise.

What is needed in long-term is the **composition of a cadastral and an archaeological map.**

Restoration planning is problematic (questionable) and dangerous **without** the information and the knowledge, which come from the **physical studies** (chemical analysis, mechanical characteristics, material durability etc.).

The **infrastructure physical studies** are a necessary and efficient **convention for** the perfect planning **of the monuments restoration**.

The establishment of the **physical studies** must be considered as a **presupposition for the planning**.

The enrichment of the site presentation with elements or data from the physical studies would be good for the future and especially for the case of Pella, the exploitation of data such as stratigraphy of the Macedonian Tombs, material durability, quality composition of plasters.

The lack of updating with results and new data, which turns up from the evolution of the physical studies (excavation progress, etc.), can cause to inopportune (not seasonable), stagnant and maybe played-out information.

Helpful would be the **insertion and use of new technology** (computerized) aiming to the faster and more reliable information.

The lack of appropriation (allocations) for the execution of physical studies and especially excavations entails a restriction of the research and production of knowledge and history.

The **pursuit of resources and finance sources**, specific for the subject, is the appropriate policy for the future.

Interpretation data, potential, meanings and uses

Where an **interpretation for the reconstruction of the site** does not exist the planning is in mid-air and problematic. Moreover any times there is a misunderstanding of the boundaries concerning the problem where the data end and the supposition starts and a difference of interpretation that the rules of the "Venice Charter", accordingly to the profits and the role of the user or the judge.

The solution to the problem would be the **joint action of the involved in the interpretation and the restoration planning** for the restriction of arbitrariness.

When during the **execution of restoration work** in the basis of an existing study some unexpected matters arise, then a direct **and in situ interpretation** and taking of a decision for action is demanded, which should be taken after mutual agreement and unanimity between the involved persons. In case of disagreements the director has to see to the matter.

The co-operation, discipline and final consent of the involved persons and responsibilities in every phase of the work are necessary for the existence of effectiveness.

The image of the new interventions (ex. electricity pylons, shelters, fencing etc.) disturbs some times the attention of the visitor and distracts him violently from the meanings and the importance that the site transmits. So the **image and the form of the new interventions must be compatible with the meanings that the site transmits** so that it doesn't betray them (ex. the lightening of the interior of the Macedonian Tombs to reinforce their meaning sub-lightening suitably and not shatter it by extravagant lightening etc.).

The lack of interpretation or the **presence of obscure points** concerning their interpretation **has negative effects to the site presentation** and decreases its value and attractiveness.

There is the possibility and the perspective the lack of a defined and agreed interpretation to function beneficially in the presentation way, through the **appropriate display of the contradictory views**. In particular, the more inclining they are the more irritating they can become.

The **crowds of people**, that is intensified in areas of limited surface (ex. museum), **influences the understanding** of the area and its meanings, because it distracts the attention and creates an atmosphere incompatible with the interpretation of the site.

A control of the visitors flow per groups and time spaces is needed.

It is possible that the **time of visiting** of a site **can reinforce its interpretation**, supporting and facilitating it (ex. the night visit is

Probably appropriate for ancient places used for the execution of mysteries and for sanctuaries that were connected to night functions).

There are **dangers of overestimation and** generally of **incorrect evaluation** of values and meanings of the site included, **because of interpretation**, which is being **done by exclusively one person** (usually the excavator who is the most qualified, because of the nature of the subject, too).

Voluntary (not obligatory) and simultaneous joint action and collaboration of researchers for the same subject is advisable, aiming to more reliable interpretations.

There is collaboration and a smooth relation, as a rule, between involved carriers in the management concerning the matter of the interpretation of the archaeological site (ex. excavations of the Ephorate and excavations of the University).

The archaeological **findings** that come from the area of Pella:

1. Are **recorded**, taking a rising number per annum with the indication

BE (= Book of Insertion) 1999 (1,2,3,etc.). There are books of recording for every year, while the electronic elaboration of the recordings (programmes D Base, Excel) has also begun.

2. <u>Are classified</u>, per areas (e.g. Agora, Palace, etc.) and per species (vessels, statuettes, metal, etc.) in storehouses. Every place has its own storing, meaning storehouses of the Agora, the Palace, etc.

The **interpretation** of the archaeological data that come from the area of Pella is placed in the study and publication of the archeological findings according to the group to which they belong, e.g.:

- 1. Study of architectural buildings tombs etc.
- 2. Study of the context of the findings (ex. ceramic from the Aphrodite's sanctuary)
- 3. Study of solitary findings.

In detail, concerning the publications:

- There is a regular (annual) publication of scientific material about Pella in the Works and the Praktica of the Archaeological Bulletin of the Archaeological Society since 1914.
- There is also an extensive scientific bibliography which includes monographs about findings and excavations of the archaeological sites of Pella, studies and announcements in conventions as well as scientific guides, catalogues, etc.

As regards the budget policies about the above described actions referring to the historical or other documentation, the physical studies, the interpretation, cataloguing and publications of data etc. (see S2), what is considered by the managers of the archaeological site, as more important and what is taken into consideration in the annual programming is described by the following table, while the future potential shows hardly to differ from the today condition. Items such as physical or chemical analyses do not seem to be taken into consideration for the time being or the offing, at least in a stable base.

| Type of activity (items in S2) | Client | Financing | Potential |
|--|---------------------|---|-----------|
| Excavations | Ministry of Culture | 20.000.000 – 30.000.000 dr. (about 60.000 – | - |
| Documentation | | 90.000 Ecu) annually | |
| Physical, chemical, mechanical analyses, diagnosis, etc. | - | - | - |
| Cataloguing Publications of data | Ministry of Culture | 10.000.000 dr. (about 30.000 Ecu) annually | - |

The potential dimension was not written up, since the research had not access to certain elements approved by the appropriate Ephorate available about the future possibilities on that section.

The table shows only public managed activities for two reasons:

- a. the only authority with responsibility on the site is the Ministry and it exercises this responsibility through the appropriate Ephorate (in this case the 17th Ephorate of Paleontological and Classical Antiquities)
- b. at the present time there is no activity by other authorities or by the private sector in the site surrounding area

As is explained in other parts of the report the operational functions of the Ephorate and as a result, of the site, as well, are carried out for the whole range of the Ephorate's responsibilities and not for individual sites.

Some of the above mentioned activities, such as publications, are indeed prepared and financed by the Ministry of Culture, through the operations of the Archaeological Receipts Fund, the body responsible (among others) for the preparation of museum and site guide books.

These publications, as well as "copies" of various archaeological finds are sold at various sites (and of course Pella as well), but the resulting revenue (as indeed the expenses to prepare them) are not included in the Ephorate's operations.

The Ephorate has income arising from the Ministry allocations, and, occasionally, some other European Union financed programs.

The "potential" element for the budget is not relevant or applicable since there is no possibility for the Ephorate to engage in income producing activities, or to set its own budget specifically for a single site (see also "additional input" sections at other comments).

4. Effect of organization of the management process (structure, subjects, policies) on the single site management activities

Planning of restoration work

About the area of our interest, meaning the archaeological sites of Pella, it doesn't exist until now, a general planning of restoration work but only partial studies for monuments or parts of monuments.

When the work - team responsible for the planning has also the responsibility of the carrying out of the restoration work, like it is in our case, then the problem is solved regularly through deviation from the inside.

Entire (complete) and total planning, namely **co-operation between the various categories of studies** (physical, historical etc.) is needed, so that any contingent data are reduced.

The protection and conservation plans should be in the long run expanded to individual sub-sites. Partial planning for each subsection that appears a relative autonomy should be however preferred.

Restoration work can and has to take to consideration the **integration of the existing networks**, as occurs in our case with the activation of the existing networks (roads and sewage system), which is taken seriously under consideration

The **consideration of networks and installations system** is an important factor for the successful planning of a restoration study, while its ignorance or overlook, and a bad use of the site, leads to an unwise application or to the overturn of the study.

The activation of existing networks and installations, wherever it is possible, turns to be very supportive, since through this way the smallest possible aggravation with new interventions in the archaeological site can be achieved.

Complete planning is needed for the future with a foresight for appropriate networks.

The limited boundaries of the archaeological site obstruct the planning of restoration work, in our case the contemporary settlement of Pella, which constitutes the east boundaries of the archaeological site, constitutes an obstacle and will cause probably problems during the completion of restoration's researches and studies.

It is possible that the elementary procedures of site presentation, that will at least, ensure visitor access, can occur simultaneously or even precede restoration studies. [Restoration studies are usually made partially and mainly for hazard raising reasons in the excavated areas. The lack of complete restoration programmes, because -above all- of the extremely time-consuming procedures for site research and interpretation, causes the need of an elementary presentation of the archaeological site, at least of the existing one (at the present situation)].

The presentation procedures have therefore to be compatible and flexible, so that it can be adapted (slightly changed etc) according to new data.

The lack of completed planning and execution of restoration work reinforces the absence of unitary effect in Pella and stress the detachment's status of information, which leads to the lack of attractiveness for users.

Site management should develop even more the collaboration with educational institutions, to promote research work.

We need for the future the completion of planning of restoration work with a purpose of facilitation and improvement of visitor flows.

There must be a clear definition of roles and jurisdictions between scientific and human resources, who take part in planning of restoration work for the shake of the validity of the outcome.

The lack of the appropriate financing leads to the avoidance of complete or total planning of restoration work (difficulties in financing of expenditures for whole packages of restoration planning lead to the preference of partial studies with relatively little expenditure).

Carrying out of restoration work

The maintenance - conservation work in a section of an archaeological site is confused or rather coincides with its restoration work.

There is a prospect that restoration work and its planning foresees so that a great and regular maintenance care of appropriate materials.

In some cases the activation of old networks is very difficult or even impossible because of formation's changes in soil (namely what in past was superficial, what was seen on the surface of the ground, today is buried and underground). So networks have to be compatible with the whole restoration planning and providence about these has to be taken in time.

Essential for the future is the prospect that networks are organic integrated into restoration planning.

Maintenance programmes

Since visitable site area is small (only part of the site) flow of visitors does not damage finds. However the protection of sensitive site areas should be ensured (where it is not).

The lack or absence of a good network function in the archaeological site deteriorates to a great extent its maintenance condition and thus its conservations requirements.

The Ephorate plans an annual maintenance programme; however, the programme execution depends on the budget finally available and also on possible urgent needs of the site.

As regards the <u>maintenance function</u>, this can be seen from the list of budgetary categories of the Ephorate's budget and by the distribution of the Ephorate's site personnel (both are itemized under other comments' "additional input").

As has been explained in other sections, the Ephorate's activities are planned and budgeted for the whole area of Ephorate's responsibility and not on an individual site basis; therefore, some of the actual execution aspects of the planned maintenance are dependent on a number of factors such as:

- the approvals for positions of seasonal staff,
- the urgencies or requirements of other sites, (under the Ephorate's responsibility)
- the assessment of the "relative" needs among the sites and
- the resulting deterioration or maintenance required as a result of the effect of the vulnerability factors of the sites.

As a future prospect networks care should be organic included into the maintenance programmes of the archaeological site.

Maintenance programmes of protection systems are specially one from the very few cases when a regular maintenance care can be easily taken. Moreover, e disposal of European financing programmes (for maintenance, too) has brought significant changes in archaeological site's management in comparison with past years. There are now appropriate budget allocations at our (Ephorate's) disposal concerning the carrying out of maintenance programmes (Regional Enterprising Programmes for Central Macedonia).

Site presentation procedures

A weak point of the site is its present visitor facilities (parking, lack of "covered" visitors paths, insufficient information panels).

In particular the limited signposts system in the archaeological site has a crucial effect on its presentation.

There is a prospect of creation of a complete and appropriate signpost system and visitor awareness programme for the greatest possible facilitation of visit.

The placement of visitor services buildings regarding visiting routes and entrance-exit system of the archaeological site is essential issue because the placement of visitor services buildings is directly connected with the presentation modes of the archaeological site.

The visiting route from the museum to the archaeological site of Hellenistic Pella (Agora-palace) is violently interrupted by a national highway as well as privately owned fields, so there is a poor quality of visit.

Unitary between the archaeological sites of Pella is crucial factor for its proper presentation.

There is a special provision made (to some degree) for users with minor difficulties.

A future prospect for confronting with other specific categories of visitors such as school children etc. is required.

Ticket's price is related to the value and the spectacular of the archaeological site.

Ticket's price has to be valued in common with other parameters (factors), like services, infrastructures etc.

The support of presentation modes by a new compatible informational and promotional material seems to be very significant and is in our case under evolution and susceptible to improvements.

In our case financing is a ruling parameter for the planning and carrying our of presentation's activities. The latter is highly dependent on the first.

Site and personnel protection systems

Concerning the **security systems**, the archaeological site of Hellenistic Pella is protected with the system Star XL 4600 in the area of the museum, the system ADEMCO 4140 XMPT at the storehouses and the SIGMA M G03* in the areas of the offices.

At the same time, they have been already placed respectively **fire-protection systems** and specifically the fire detection systems OLYMPIA ELECTRONICS for the museum and UNIVEL 9000 for the storehouses and the offices.

There isn't however an **alarm system** at the showcases of the museum and the free findings.

Concerning the excavation sections at the archaeological site and the important architectural parts, those are protected with **railings**, while there are **wooden floors** for the protection of the visitors during the access to certain places of special interest. Protection of the findings is achieved either with temporary, mostly, construction of protection shelters, either, if it is about mobile findings, with the recording (with the traditional but also the continuously developing electronic way) and their guard in the new storehouses constructed in 1998.

Concerning the **guard of the boundaries** of the archaeological sites this is being done with a simple fencing (wire-netting on metal columns). In some cases (e.g. southern boundaries of Hellenistic Pella) these boundaries are going to be altered in the future including also the new revealed part of the archaeological site.

A factor of high risk with reference to the mobility of visitors between site and museum is considered to be the road of the secondary national road network "Thessaloniki - Giannitsa - Edessa" (E 86), which is crossing the area of "Pellaia Chora" in its south part concentrating all the traffic, passing and local.

Serious realignments at the road network of the area and all the Region of Northern Greece will be done after the year 2000, when the under construction Egnatia road will come into use. This is regarded to be the appropriate solution to that problem of security, since it is estimated that it will contribute to the reduction of road accident danger at the "Pellaia Chora" region, because of the traffic decongestion of the road "Thessalonica - Giannitsa - Edessa" that will come as a result. More specifically, it is estimated that the road bypass of the Hellenistic Pella, where is the problem area, will be under construction within 2001.

In any other case it has been suggested that the problem of safety of visitors in the crossing may be solved by either incorporating the Museum area into the overall site, or by any one of the following:

- (a) creating a "national road bypass" (an aspect being considered by the relevant Ministry of Environment and Public Works)
- (b) building a temporary structure overpass to connect the Museum area and the present site, possibly no the best solution, since visitors cannot be "forced" to select the overpass
- (c) by setting up pedestrian traffic light at the crossing point; however, another traffic light is located just a few yards from the "crossing location"
- (d) by evaluating alternative solutions to the problem in the context of the building of the new Museum.

As has been noted earlier in this report, at this time, the solution most likely to be executed is the road by-pass, which also allows for the "integration" of the site itself; the only problem is that this solution does not alleviate the immediate problem, which, more than likely, will continue until the by-pass is completed.

Management, decision-making process and planning

The responsible for the supervision of the archaeological site 17th Ephorate of Prehistoric and Classical Antiquities consists a decentralized Service with directive authority the Direction of Prehistoric and Classical Antiquities.

Other Central Services that are involved in the management of the area is the Direction of Restoration, the Direction of Conservation and the Archaeological Receipts Fund, which through its administration's services has the responsibility of the economic management of the area (collection of tickets and selling items, lease services, etc.).

Plans have been drawn for the development of the site, the integration of the sections divided by the national road and building of a new Museum.

Site management investigates the possibility to change the organizational structure of the site operation into two departments, one dealing with the site area and the other dealing with the new Museum operation. This "new" structure is still under examination

Human resources and training activities

When there is a lack or negligence of equipment conservation and some times bad use of it, then the results are damages or even its destruction.

The solution here is difficult to define, because is strictly connected with education problems of each person involved.

The jurisdictions and responsibilities of the staff and the respective to them staff wages is a problem, that in our case has been confronted through the united wages system. So an employee's wages (or perhaps his/her additional allowances) are paid according to his/her professional branch and typical qualifications.

Site management is not free to arrange organizationally the individual site operation, because the categories of employees are under union regulations for all archaeological sites

Site management has a certain amount of freedom in the selection and employment of seasonal personnel for completing particular site jobs; this in parallel with the student trainees that come to the site, allows site management to execute certain projects for the benefit of the site, which might not be possible if personnel were only full time.

The staff potential of the Ephorate of Pella (permanent and seasonal staff, external collaborators) is distinguished in:

- 1. **Scientific staff**, which consists of:
 - 1.1 Archaeologists (2 permanents, 1 external collaborator and 2-3 part- time)
 - 1.2 Architects (2 part-time)
 - 1.3 Preservers (3 permanent 4 part-time)
 - 1.4 Designers (1permanent with occupation in other areas of the Ephorate, too.)
- 2. Administration staff, which consists of secretaries, and account employees.
- 3. **Guarding staff**, which consists of a chief-guardian, daily guardians and night guardians.
- 4. **Technicians** (4 permanent) and
- 5. **Workers** (30-40 part-time).

Organizational Plan of the staff:

In the top of the hierarchy is the Director (archaeologist), who administers the below categories:

| Scientific staff | Administration staff | Guarding staff | Technicians | Workers |
|---|--------------------------------|-------------------------------------|-------------------|-------------------|
| (Archaeologists, Architects, Restorers) | (Secretaries, Office Accounts) | (Morning and night guardians) | (Permanent staff) | (Part time staff) |

The decision-making authorities with respect to archaeological sites are the Ministry of Culture through the Central Archaeological Council, and through the "responsible" decentralized 17th Ephorate of Prehistoric and Classical Antiquities (see Phase 1 Site presentation S8d).

The "managing institution" for the Pella site is the 17th Ephorate, which has responsibility for all other sites in the Pella Prefecture and another four other Prefectures.

The "local government" decision-making, both the Municipality of Pella and the Prefecture Council, can intervene in the surrounding area and to the extent that it does not include potential archaeological finds. In their decisions, local politics have a direct relationship.

The Ephorate covers its needs of personnel by using permanent staff and seasonally employed staff. However, additional to these are students who come during the summer vacation period to work as trainees in different capacities; these students cannot be considered personnel, nevertheless they do productive work that would not be performed if they were not on site.

The Ephorate's official employment list for the current year includes the following personnel (the seasonal numbers are provisional estimates since they depend on budgetary allocations, approvals and work to be done):

| Type / responsibility | Permanent | Seasonal anticipated |
|-------------------------------|-------------|----------------------|
| Archaeologists | 2 | 3-4 |
| Conservators | 2 | 2-4 |
| Architects | 1 part time | 2 |
| Draughtsmen – designers | 1 | |
| Administrative personnel | 3 | |
| Guardians (site and museum) | 14 | 10 May to October |
| Cleaning personnel | 1 | 2 |
| Site maintenance and ordering | 2 | |
| Site area cleaning | | 4 |

| Gardens upkeep | 1 | |
|-----------------|---|---|
| General workers | 3 | 40-50 for excavation, restoration and archaeological maintenance work |
| Students | | Up to 20-30 depending on particular year and work planned |

5. Effect of the degree of physical vulnerability and capacity of the site on the single site management activities

Networks and installations

The existing ancient <u>draining system</u> of the archaeological site, where it is preserved, is almost not used.

The archaeological site is connected with an aerial **network of electric power**, placed at the boundaries and outside the archaeological site. Its image, where the network is in the view, of the visitor does not effect positively

In our case a problem seem to appear in the networks connection modes in buildings for site function and specially the connection with electricity regarding the aerial connections of electricity network due to the aggravation on site's image that is caused through this way.

The future prospect is the providence for an underground connection.

Primary urbanization infrastructures such as fast main roads, when they are near or in the archaeological site:

- 1. Hide serious risks regarding visitor's protection (by crossing the road in their way from the museum and the parking area to the archaeological site.)
- 2. Cause visual aggravation and a negative environmental impact to the maintenance condition and the image of the monument.

There is a prospect for deviation of the road, so that in the future it passes for away from the archaeological site.

Regarding the role of networks and mainly electronic networks by the assistance and support of monument's presentation modes, there is the prospect of future installations of visitor services units (for reception and information) with electronic conducted tour systems inside.

Visitor's moving inside the archaeological area is being and should always be —when possible-facilitated through the re-use and re-activation of ancient roads. Thus the understanding of site's meanings and values is strongly rein forced. (In our case a complete system of itineraries and paths for managing and visiting the site, a system of regular building blocks defined by straight horizontal and vertical streets, namely a chess-board pattern of streets, offering by the ancient Hippodamean system according which Pella is built, is gradually revealed and re-used for presentation's sake).

The presentation, enhancement and exploitation's degree of an archaeological site as well as the quality of visitor's services is proportional to the construction's technical installations.

The special designing regulations regarding the easy, without obstacles, moving of users with motor difficulties is nowadays and should be more respected.

For the future the extension of the specific designing regulations for the improvement of access possibility of specific visitors categories is demanded (e.g. avoidance of steep inclines, pedestrianized street network with proportional planning, etc.).

Buildings for site function

It is essential for auxiliary buildings to take and observe security and protection measures.

Typology and placement of buildings for site function influences as a catalyst site's image.

Those buildings typology should follow in a free manner the spirit of ancient building structures.

Their placement should be carefully researched and documented and located near the boundaries of the site, for not destroying site's image.

The quality of services offered is directly connected with the sufficiency of rooms for staff and equipment, that is buildings for site function (offices, warehouses, store rooms, laboratories).

There is a prospect and a need in Pella for future construction of new, modern and well-equipped laboratories.

There is a short –term prospect of expansion of site area network system with the building of a new Museum and the re-location of site support buildings.

Site and personal protection systems

Regarding the future installations of security and protection systems, it is rather better to be selected those protections modes that are as much as possible compatible with the archaeological site's image Thus the site can be protected by the visual aggravation caused by the electronic installations of security and protection systems and by the impact of the advanced technology products next of ancient finds on the visitors.

Since there is a lack of qualified and sufficient in number personnel for control and protection of the archaeological site, especially during heavy periods in summer, the problem is solved through the coverage of needs by part - time staff.

Vulnerability

What concerns the **degree of physical vulnerability** of the site of Pella, we note that only a general description of it can be deduced from the existing data, considering that no specific studies about the vulnerability of the site have been executed till now.

| Factors of risk | High degree | Medium degree | Low degree |
|---------------------------|-------------|------------------------------|------------|
| Hydro- geological factors | | | Yes |
| Climatic factors | | | Yes |
| Seismic factors | | | Yes |
| Pollution factors | | Yes | |
| Urban and local decay | | Yes (only the national road) | |
| Demographic dynamics | | | Yes |
| Tourist uses | | | Yes |
| Other uses | | | Yes |

| Failure to take conservative action | Yes (because of architectural material) | |
|-------------------------------------|---|-----|
| Incorrect conservative action | | Yes |
| Architectural material (limestone) | Yes | |

As appears from the table above, in the case of Pella the <u>vulnerability degree</u> is deduced to be rather <u>low</u> as regards the general hydro-geological, climatic and seismic factors, since there are not particular unfortunate environmental factors (except of course the normal decay which suffers every archaeological site exposed to the wind) or <u>medium</u> as in the case of urban and local decay, where the potential vulnerability of the place is located in the serious problem of the existence of a national road, which splits it up and burdens it rather heavily, but consist on the other hand the only problem of this kind (there is no heavy industry or other congenial problems).

The most serious risk for the site itself, except from the national road, is the problem of the "fragile" architectural material of limestone, which is extremely difficult to be properly conserved and maintained.

The above elements are a common and apparent qualitative estimation.

The **site "image" vulnerability** is at present not an important concern, in view of the proposal for integrating the two parts of the main site, which are divided by the main thoroughfare, with the proposed by-pass. Image issues are probably going to be raised at a later time, while the by-pass construction is being implemented. Image is also affected by the direct interrelationship of the site to the present day settlement.

The primary **specific** vulnerability factors of the Pella site (beyond usual aspects of vulnerability in archaeological sites in general) are the following:

- The proximity of the main road and the fairly heavy traffic that passes through, causes both atmospheric pollution and noise
- The agricultural cultivation in the surrounding area (the non visitable area around the actual site) can destroy finds at a short depth, even though officially it is not allowed to do deep cultivation
- The material remains limestone consistency of archaeological finds which is calcite, deteriorates with exposure to air and calcifies; some spray treatment is being done on exposed structures but cannot be applied to large surface areas

Further to the references made above, it is noted that the effect of the vulnerability factors, results in adjustments to the "Planned Maintenance" execution in the site area, in response to the "urgency" of needs that may arise.

6. Effect of the system of financial resources (type and amount) and related financing channels on the single site management activities

Financing, budgets, monitoring and evaluation

The annual budget of the 17th Ephorate mainly concerns:

- 1. Payment of staff (regulated expenditure)
- 2. Supply of material and equipment
- 3. Works

The procedure of budget planning includes proposals of the staff to the curator, according to existing necessities, budget proposal to the Ministry of Culture by the curator of Antiquities and, in case of approval of the budget, composition of action programme of the service. (Problems may turn up here from the not in time arrival of the money or the bad estimation of readiness or size of works, that leads to the incapability of the money absorbing).

The annual financial resources for the covering of the expenditure of the Ephorate are the state's budget and the sponsoring (A.R.F., LOTTO) but lastly the E.U. Programmes, too. In such programmes are incorporated in Pella:

- 1.The preservation enhancement of the Macedonian tombs with financing 100 million drs. and time of absorption within the 1999 and
- 2. The preservation restoration enhancement of the architectural remains of Pella with financing 120 million drs. and absorption within the 1999. In any case the funding is independent from the revenue of entrance fees of the archaeological site.

Local authorities and players have no direct involvement in site operation. Site management has an overall budget though which it must cover needs at different archaeological sites – and decides on a need basis for the allocations.

Site management is practicing a policy to participate in programs and projects that enhance the site's operational characteristics. Site management should continue with its budgetary policy in terms of participation in programs and initiatives.

While the overall budget is set and approved centrally (at the Ministry) the Ephorate has the ability from year to year to differentiate allocations among sites under its authority to take advantage or to give emphasis to specific opportunities for excavations, promotion, user services, etc.

The discretionary powers of the site management to allocate differently and not to be restricted allow it to look for funding (or co-funding) opportunities through participation in programmes for both economic benefits and production of results for the

In the table below are described, in figures, the costs required for the archaeological site of Pella per year, according to the data given by the competent Ephorate. The main corpus of the costs amount consist of those spend for the staff, the operating and the actions needs, while the income (not to see in the table) determinate the Central Services of the Ministry of Culture usually according to the budget proposal of the curator of Antiquities, according namely to the usual costs of the Ephorate (see also: S8c Financing, budgets, monitoring and evaluation).

In the table is also to see the suggestively income coming from the tickets entrance of the archaeological site of Pella (concerning the three last years). Noticeable is however that this income of the Ministry of Culture neither goes directly to the competent Ephorate of Pella nor affects its income.

As regards the <u>budget policies</u> about the actions referring to the historical or other documentation, the physical studies, the interpretation, cataloguing and publications of data etc. (see S2), what is considered by the managers of the archaeological site, as more important and what is taken into consideration in the annual programming is described by the table at paragraph B3, while the future potential shows hardly to differ from the today condition. Items such as physical or chemical analyses do not seem to be taken into consideration for the time being or the offing, at least in a stable base.

There is potential for employing personnel only if in relation to third party Projects, where the site is participating in some way, and compensation for personnel involvement is envisaged (i.e. such is not the case in the PISA Project).

As concern the <u>dissemination activity</u>, observed at the archaeological site of Pella and the wider region, this is not high enough to be described.

Concerning the <u>promotional activity</u> there is as well no periodical exhibitions or other events that would promote the image of the site in a stable or constant base, but we can only speak of exceptional events as those described above (see S7b).

| | | | AMOUNT | | |
|--------|--------------------------------------|--|---|---|-----------|
| | BALANCE SHEET ITEMS | (annual | breakdown o average) | r annual | POTENTIAL |
| | | 1997 | 1998 | 1999 | (notes) |
| | Staff costs | 20.000.000 annually | dr. (about 6 | 0.000 Ecu) | |
| COSTS | Operating expenses | 20.000.000 annually | dr. (about 6 | 0.000 Ecu) | |
| 22 | Investement, actions and development | 10.000.000 annually | dr. (about 3 | 0.000 Ecu) | |
| | Etc. | | | | |
| Æ | Entrance tickets | 9.000.000 dr.(about 27.000 Ecu) | 8.500.000 dr. (about 25.500 Ecu) | 8.000.000 dr. (about 24.000 Ecu) | |
| INCOME | Services | - | - | - | |
| Ž | Public grants | - | - | - | |
| | Private sponsoring | - | - | - | |
| | Etc. | | | | |

It should be understood, as mentioned also elsewhere, that the budget for the site is incorporated in the budget for the activities of the Ephorate in general, and not specific to the Pella site.

The 17th Ephorate covers five Prefectures and many sites; it proposes to the Ministry an annual budget, (usually requested in the first quarter of each year) which is approved (after possible reductions) while the fiscal year is already going on; the allocations are by the specified categories and refer to all the Ephorate's site and other activities, and cannot be apportioned to individual sites.

If we want to describe the various activities in terms of their budgetary categories, we can divide them as follows:

- (2) Operational expenses
- **Excavations**
- Site area maintenance
- Archaeological finds maintenance
- Restoration works
- Museum works
- > Various supplies
- **Equipment**

As the fiscal year progresses, allocations are made available in installments, usually at bimonthly intervals, after budget approval, such as:

- April to May
- June to July
- August to September
- etc.

After receipt of the allocation, the Ephorate's Direction proceeds with execution of various budgeted activities, according to funds availability, local needs, unforeseen requirements and individual priorities.

Since a major portion of the budget is allocated to personnel costs, and an important number of the staff are seasonally employed, certain activities depend on the timing of the hiring (which cannot be effected before specific approvals for staff are authorized), and the potential scheduling of these activities.

Therefore, the figures noted in the budget are obtained, as "expended" not budgeted. In this sense the overall annual expenditures for the Pella site are in the region of 50 million drachmae.

The expenditures on the site bear no relevance to the receipts from the tickets, since the latter are collected by the Archaeological Receipts Fund (an independent Authority of the Ministry of Culture which among other responsibilities, manages the archaeological sites and museums).

As noted the Ephorate's budget is separate and not related to the receipts. In this sense, there should be no scope for "balancing" income and expenditures.

For purposes of completion, it should also be noted that it is possible for an Ephorate to obtain funding from participation in European Union financed programs. This participation, however, is only allowed through the Ministry, and not directly (or independently by an Ephorate).

The 17th Ephorate and particularly the Pella site, has benefited over the last two years from such a program for maintenance of archaeological artifacts, which was administered through the Regional Government.

7. Effect of the system of services (ordinary and additional) on the single site management activities

Additional services

No facilities are provided related to, within of deriving from the management of the site.

Site manager is however aware of need to facilitate the overall visit and is willing to support efforts to this effect.

Site management is restricted from the lack of large numbers of visitors to justify any effort being directed to making serious changes in the user services.

The museum shop inside the museum, near the today's entrance of the archaeological site of Hellenistic Pella, is limited to a bench, where cards, slides and guides of the site are sold, while for the public there are free information leaflets of the Ministry of Culture. There is however an approved study for the new site Museum, which is going to be constructed. That will mean an expansion of "educational" activities.

On the other hand in developing the new Museum and the re-organisation of the site area, it is projected that the Archaeological Receipts Fund, through the 17th Ephorate will put out, to public tender, the operation of the refreshment services

Other additional services for the public (cafeteria, etc.) as well as recreation activities are not offered. To our knowledge no research is or has been undertaken to identify needs for facilities at the site.

With the initiative of the schools and the army, after communication with the Ephorate, group visits and sightseeing tours are held. However an effort should be made to increase the skill or knowledge level of personnel of the site in order to be able to facilitate better the visitors.

Auxiliary for the research is appreciated the questionnaire of general nature, which was made in 1996 in the frame of an exploratory action about the network of the archaeological site in Macedonia including Pella and other sites and was promoted to be completed by the public. Thus, we have in our disposal an indicative sample of what is expected and desired by a visitor of an archaeological site.

Specifically at the question "What do you expect in order to consider satisfying the visit to an archaeological site?" we have as a first choice the explanatory plates and the original findings and as a second one the reconstructive and audio-visual material as well as the existence of a guide.

At the question "what would you buy in an archaeological site - museum?" the first position in the preference of the public have the books and the second one the posters, cards, slides, maps as well as the certificated reproductions of ancient objects.

At the question "Which archaeological sites have you visited?" the majority, although of N. Greek origin (20 of the 26 Greeks) have visited sites of Peloponnese, Crete and Athens, while less are those who have visited Vergina and Dion, with only two visitors of Pella.

Finally, they are pointed out by the questioned, as necessary improvements, at first the explanatory material, then the situation of the sites, in third position the organization of the visits, the prices of the tickets and the auxiliary areas and in fourth position the access to the site, the parking and the quality of the offered services.

What regards the **presentation of the site and the services offered to the public** in general, in comparison with their quantitative and qualitative supply, the following table describes the today condition, which should rather be colored as limited, since there are only the basic services offered and the staff responsible for them belongs to the guardians. There should be underlined that the local authorities are not officially competent to intervene in the development of human resources for the site

An effort could be undertaken to measure the sufficiency level of the existing and potentially desirable user services.

| SERVICE | ACTIV E | NOT ACTIV E | DIRECT MANAGEMENT | Number of re-sources | Full time | Part time |
|---------------------------|------------|-------------------|----------------------|----------------------|--------------|-----------|
| Ticket office | Yes | | Ministry of Culture | 2 (guardians) | Yes | - |
| Teaching | Yes | | Ministry of Culture | 1 | - | Yes |
| Publications- Bookshop | Yes | | Ministry of Culture | 2 (guardians) | Yes | - |
| Catering | | No | | | | |
| Merchandising | | No | | | | |
| Event organizing | | No | | | | |

The permanent staff as well as the seasonal staff, that is the "designated period" are directly managed by the Ministry of Culture. In general the activities carried out by the Ephorate are supported by permanent and seasonal personnel and some activities are supported or assisted by students from various institutions and universities coming as trainees.

There is no regular activity, which is performed by subcontracting, such as, for example, the case of letting out the "refreshment stand". The Ephorate does not "outsource" any work since there is no such work and since the process of execution of the works allows for better control with the management of the seasonal staff.

There is no on-site catering and no event organizing at present; these may be future activities, in that the new museum design includes a "multi-purpose" conference hall where such activities could be staged.

Additional services

The size of visitor services installations in relation to the number of visitors is an existing problem, regarding the future visitor services installations in Pella, and is under research. Here turns up the following contradiction: While minimization of visitor services installations is required, according to international principles and with purposes of the smallest possible aggravation to the site, there is, at the same time, the desire for maximisation of visitor flows.

There is gradually consideration of supporting of visitor services (e.g. in the bookshop) with the appropriate material adapted to the various types of visitors (children etc.).

The definition of roles and jurisdictions as regards the operation's modes (hours and conditions) of the refreshment bar is connected with the future possibility of a refreshment bar in Pella (for which the regulations in force assent to the leasing by individuals), which will probably create problems of responsibilities between the internal and external personal of the site.

Informational and promotional material

An appropriate and efficient providing and promotion of the valid existing informational material is required in our case for the future.

Equipment

The equipment and the materials belong to the ownership of the Ministry of Culture and are bought by the Ephorate, on the basis of the provisions regulations with money from its annual budget. As for the provisions, today are in force the following: direct purchase (for an amount till 4 million drs.), impromptu allocation to the lowest tender (for amounts of 4 to 8 million drs.) and public competition (from 8 millions and more), while there are no certain suppliers.

Equipment is highly dependent from the financing. So in our case it is being gradually improved and renewed (e.g. P.C.) within the frames of limited respecting annual budgets.

Excavations

The responsible Ephorate plans an annual excavation programme for all the areas under its jurisdiction (which includes a total of five Prefectures, among which the Prefecture of Pella). The actual excavations performed also depend on the finally available funds since funds are not earmarked per site.

It should be, however, noted that in the Pella site lately, excavations are rather restricted, because emphasis is being placed on maintenance and exhibition of finds, basically that is, on the completion of previous excavations and not in the starting of new ones.

Nevertheless, some specific excavation projects are coming-up as a result of the following two conditions:

- (1) part of the existing site has been earmarked for the construction of the new Site Museum; in preparation for the breaking of the ground, excavations were (and are as required) undertaken in the particular site sector
- (2) occasionally in Zone B areas (Zone A cannot be built), someone wishes to build; approval of the Ephorate is a prerequisite, and the Ephorate, in order to give its approval must undertake on-site investigations/excavations, which may or may not, bring to light some new finds.

8. Effects of the system of dissemination and promotion policies on the single site management activities

The site undertakes little promotional activity, since it is not one of its direct responsibilities.

There is no interest for visitors (no opportunities for "visitors nights" or other) except for the site itself.

There is a future prospect (made by the A.R.F) for the creation of united ways in the frames of the unification and enhancement of the archaeological site of Pella.

At the same time it has been already put on the future construction of a new, bigger museum with financing from a European programme (3rd C.F.S.).

User assistance

Additional services and user assistance are obviously extremely interdependent if they are not identical.

The rendering of systematic assistance is a significant and high valued factor in user's opinion. Consequently sufficient user assistance contributes to the increase of visitor flows.

Ticket's price relation to the assistance offered is in our case still vestigial (elementary).

There is a prospect for improvements in this sector (users assistance) in the frames of the general improvements of the presentation modes of the side.

Most visitors come in organised groups, which already have a professional guide to accompany them; these are guides licensed by the state

The <u>didactic assistance for the public</u> of the archaeological site during the visit are limited and exhausted in **information plates** which present the ground plan of the area with an informative memorandum for the identification and interpretation of the parts of the archaeological site. Moreover, there is, a wooden, elevated platform in a key position of the site used as a vista point to the area.

In general, the existing assistance's provisions for the public are characterized rather insufficient, concerning the absence of a **complete memorandum** system inside the archaeological site, the absence of the mobile findings (originals or reproductions) and any other supervisory support.

It is characteristic that in the winter months the visitor cannot see the mosaics, because they are covered for being protected. Such a deficiency intends to cover the directly neighboring museum. Despite however their geographic closeness, the direct relation of the exhibits to the site and the effort for a museological exploitation of the findings, the museum and the site continue to function relatively in an autonomous way without an organic functional interaction. Moreover, the national road that connects the N. Halkidona to Giannitsa passes between the site and the museum and except for the dangers of an accident, for those who try to cross it; it intensifies the functional division of the museum and the archaeological site.

As for the **educational and didactic programmes** at Pella it is applied the <u>programme</u> <u>MELINA</u>, a programme that concerns the children of the 4^{th} and 5^{th} class of the primary school.

There are no other organized programmes of informational assistance to the public.

Site management could effect a program to train or inform persons involved with the site visit as to the interesting aspects of the site (which now is being done only casually and voluntary).

<u>Informational</u> <u>and promotional</u> <u>material</u>

The production of informational and promotional material includes **archaeological guides** and **leaflets of the Ministry of Culture** in Greek and in English, **cards** and **reproductions of ancient** findings from the certain area, the range of which could be expanded.

It is also systematically produced informational and promotional **material from the Greek Organization of Tourism** and concerns Pella as one of the tourist poles of interest in Macedonia with a special promotion of the archaeological triangle Pella - Dion - Vergina which is tightly connected to the name of Alexander the Great).

Finally, there is a large number of **Greek and foreign guides** which include the archaeological site of Pella (usually limited mainly in the area of Hellenistic Pella) as one of the basic sights of the area of Macedonia.

At the present audiovisual information or presentation of the site is not available.

The use of audiovisual material complemented with an actual site visit can be put in place when the new site Museum will have been built. The completion of the new site Museum, within its multi-purpose hall could provide a basis for scientific and cultural events to take place in the environment of the archaeological area.

Particular information to be available on Internet should be enhanced and developed.

Informational procedure

From time to time, in the local but also in the national journal, information and announcements are published concerning the progress either of the excavations (new findings-interpretations), or the planned auxiliary works of infrastructure and enhancement of the area from the local Ephorate of Antiquities and the local but also the central authorities.

Every year scientific announcements are presented in a convention that takes place in Thessalonica relevant to the Archaeological Work in Macedonia and in Thrace, and are afterwards published in a volume.

In May of 1999 a meeting took place in Athens with the purpose to inform the public about the progress of the planning for the total enhancement of "Pellaia Chora". Its presentation by the director of Technical Services of the Archaeological Receipts Fund (ARF), Mrs. Ifigenia Georgopoulou-D'Amico, was made in the presence of the Minister of Culture, the Minister - counselor of the Prime Minister, the local authorities, the president of the A.R.F. and the directors in charge of the Ministry of Culture, and was covered by the media.

The auxiliary visual material (plates, leaflets) of the presentation was also promoted by the kiosk of the A.R.F. in the frames of this year's international exhibition Philoxenia which was held in Thessalonica.

Table 1: Dissemination activity

| DISSEMINATION ACTIVITY | PRESENT | NOT PRESENT | PERSON IN CHARGE |
|---------------------------|---------|-------------|---------------------|
| Guided tours | | | |
| Seminars, meetings | | | |
| Etc. | | | |

Table 2: Promotional activity

| TYPE OF EVENT | ORGANISE R | PERIOD OF OCCURRENCE | NUMBER OF USERS | FEES | FUNDING AND COSTS |
|--------------------|---------------|----------------------|--------------------|------|----------------------|
| Exhibitions | | | | | |
| Entertain- ment | | | | | |
| Other events | | | | | |
| Etc. | | | | | |

The tables were left blank due to inability to complete them (because there is absence of relevant data). While it is true, however, that no data are available or are being collected on these activities, it is nevertheless a fact that 3 to 4 times every year some form of open day seminar presentation of material, findings, or descriptions on the site, takes place (originating from different reasons) either in Pella Municipality, or in other locations in the Prefecture (of Pella), or in Thessaloniki and also in Athens.

Events taking place in Pella, are usually attended by up to 100 persons - audience.

In the previous year such events have, indicatively, taken place in the Athens Archaeological Museum, the Prefecture of Pella, the Municipality of Pella, the Goethe Institut in Athens, and other locations.

9. Effects of the system of entrance fee policies, current demand and its composition on single site management activities

Number of visitors

The educational value of the archaeological site of Pella is very significant, while, on the other side, it is not so highly advertised or enough to attract schools and other types of visitors from remote cities of Greece (e.g. Athens) or abroad.

Shortcomings of informational material, instead of timely production and providing of informational material as well as provision for quick consumption due to heavy periods (summer time), cause adverse and unpleased consequences for visitors, even if the existing visitors flow is not extremely great, as it occurs in Pella's case.

What is needed for the future is a timely programming/planning.

The existence of adequate auxiliary staff for visitor's shake, particularly during heavy periods (e.g. summer time), is judged as elementary.

It is obvious that the equipment has to be proportional to visitor flows.

There are no budgets according to the number of visitors, since the expenditure(s) are not connected with visitor numbers and revenues from entrance tickets.

Concerning **the number of visitors**, in the basis of visitors movement elements from the A.R.F. and the E.S.Y.E. (National Statistic Service of Greece), we are informed that at Pella there has been a stable flow of visitors, around 15.000 persons per year from 1992 until 1994, while in 1995 a decreasing tendency at the visitors movement is noticed.

We also remark that the number of the museum visitors slightly inclines from that of the archaeological site, while especially concerning the months, the visitors do not surpass the 500 persons per months from November till March, are calculated in 1.000-1.500 at the months April and October and from May till September they reach the 2.000-2.500 persons.

According now to the official elements, given by the competent Ephorate of Antiquities concerning last years and specially the years 1996 (counting the half year) to 1999, visitors flow is as follows:

Table 1: Current demand and related composition (original table based on PISA methodology)

| YEARS | | BER OF ERS | PAYING | FREE | FEES | ORIGIN | US: CATEG | |
|-------|-------|---------------|--------|------|------|--------|--------------|---|
| | Site | Mus. | | | | | Type | % |
| 1992 | 15700 | 15800 | | | | | | |
| 1993 | 15100 | 15610 | ? | ? | ? | ? | ? | ? |
| 1994 | 15620 | 17550 | ? | ? | ? | ? | ? | ? |
| 1995 | 13225 | 13335 | ? | ? | ? | ? | ? | ? |
| 1996* | 5600 | 7900 | ? | ? | ? | ? | ? | ? |

| 1996** | 13.415 | 7.359 | 6.056 | ? | ? | ? | ? |
|--------|--------|--------|--------|---|---|---|---|
| 1997 | 38.755 | 17.927 | 20.828 | ? | ? | ? | ? |
| 1998 | 31.561 | 17.088 | 14.473 | ? | ? | ? | ? |
| 1999 | 30.295 | 16.190 | 14.105 | ? | ? | ? | ? |

Notes to Table:

(*We must notice that the count of the year 1996 ends at the month July)

The following data are given as explanatory to the above points:

- a. It is not deduced from the available data if it is the same visitors that access both to the museum and to the archaeological area.
- b. The entrance ticket to Pella site numbers 500 drachmae, the entrance ticket to Museum 500 drachmae and the common ticket for both, which is in operation since 1999, 800 drachmae
- c. There is two different tickets between the museum and the archaeological area
- d. It is not possible to estimate the visitors of the museum from those of the archaeological area.

| Type of Ticket | 1996 | 1997 | 1998 | 1999 |
|----------------------|--------|--------|--------|--------|
| General @ 500 | 27.500 | 37.100 | 33.400 | 15.800 |
| Reduced @ 300 | 400 | 4.000 | 3.400 | 3.400 |
| With reduction @ 400 | 612 | | | |
| Free entrance | 2.600 | 4.600 | 5.600 | 5.200 |
| Common @ 800 | | | | 7.100 |
| TOTALS | 31.112 | 45.700 | 42.400 | 31.500 |

^{(**}We must notice that the count of the year 1996 starts from the month June).

Revenues obtained:

| Year | Revenue (drachmae) |
|------|--------------------|
| 1997 | 19.570.000 |
| 1998 | 17.720.000 |
| 1999 | 14.600.000 |

Source: data provided by Ephorate

It should be noted that up until recently only two different tickets were being issued (as is the case in other sites as well) for the site area and for the museum.

Recently "common tickets" for both areas were instituted and since they are at a reduced price, may provide for the future, better indications as to real attendance.

No data are kept as to the number of tickets being obtained by the same persons, sine tickets are issued at different locations for each area and today these areas are physically separate from each other (divided by the main road – which cuts the site area in two).

On the other hand, it is not correct to add the number of tickets because it is obvious that many visitors go both to the museum and the archaeological site, since the numbers of the tickets @ 500 over both the site and the museum tickets.

In order to get an estimate as to the real number of visitors we questioned guardians and the supervisory staff and were told that even though even they, (due to the locations) cannot check who goes where, they estimate that approximately 2/3 of the site visitors also went to the Museum.

Specific data obtained for 1999 are as follows, and from these an estimate of visitor's numbers is presented:

| Ticket Type | Area | Museum | Total tickets | Estimated total visitors |
|---------------|--------|--------|---------------|---------------------------|
| General @ 500 | 7.700 | 8.100 | 15.800 | 8.100 +1/3 of 7.700 |
| Reduced @ 300 | 1.700 | 1.700 | 3.400 | 1.700 |
| Common @ 800 | 5.000 | 2.100 | 7.100 | 7.100 |
| Free entrance | | | 14.105 | 14.105 |
| Totals | 14.400 | 11.900 | 40.405 | 33.571 |

Source: 17th Ephorate (May 2000)

Note: Cannot reconcile differences from above tables

Deduced from the above table is that the annual amount of the visitors (*paganti*) at the archaeological site of Pella runs approximately into 17.000 people, while there are quite so many visitors (elderly people and students mainly) who do not pay entrance (see below).

We feel that the above sentence should be adjusted to reflect the numbers of the previous table at as total number of visitors of slightly over 30.000 with a distribution of about 50% paid and 50% free entrances (primarily schools).

Type of visitors

There is a differentiation of ticket's price according to the type of visitors including reduced price as well as free entrance according to the various categories of visitors. Consequently there is a large majority, including teachers, some organised groups, official visitors soldiers and others, Greek or foreigners, sometimes reaching the 50% or more of the whole number of visitors, who have free entrance.

Advisable for the future is a creation of incentives through packages of offers for the various categories of visitors (students, natives etc.).

The informational and promotional material should be strong connected with the various existing types of visitors and adjusted to their differences.

There is the prospect for future extension of educational programmes (such as those for children in Pella, named «MELINA») for other types of visitors too.

In basis of the same elements for the movement of the visitors we notice in general that the percentage of free tickets reaches, and in some cases exceeds, the 50% of the total amount of tickets.

The existence of free tickets is connected with certain categories of visitors, which are Greek and foreigners, students, undergraduates, archaeologists, officials and militaries. From them, the schools, meaning the groups of students from all Greece, possess the greater portion in the free visits of the site during almost all the year (e.g. middle number of students in May: 8.000 persons).

From them the most come from Thessalonica and less from the Northern Greece, while from Attica very few schools visit the site. Furthermore, the site visit tourist groups, mostly from abroad, groups of undergraduates from abroad (mainly France, England, Germany and United States of America) but also special groups of Greek visitors, e.g. "KAPI" (clubs for the elderly), and clubs in general.

Admission fee policy and hours

There is a lack of information as regards the tickets price and the hours of function in the informational and promotional material for the site.

The Ministry of Culture collects the entrance tickets in the archaeological site and the museum of Pella, which means that the fee policy is not related to specific requirements of the site but at national level.

There is an establishment of common ticket for visit to both site and Museum (since 1999).

There is a common treatment concerning the ticket for the visitors in general, Greeks and foreigners, which plans reductions for special kinds (e.g. the elderly) and free entrance for schools, undergraduates, etc. (educational visits).

The daily visitors hours of the site (except Monday) are in the mornings (8.30'a.m-3.00'p.m.), with prolongation of the schedule, during the summer months, till 7.00'p.m. This adjustment between winter and summer site opening hours is allowing for more time and responding to visitor flows.

Improvement and up-date of this material as well as completion with practical informational for users would be extremely helpful for the visitors.

Locally additional ticket statistics for analysis of site visitors should be maintained and systematized. Data should be collected on visitors' details.

The completion of the new site Museum, may give the opportunity to create specific exhibitions with different admission fee policy, directed to enhance the public's awareness and acceptance of the site.

TOT USERS **YEAR MONTHS PELLA SITE MUSEUM** 120 160 January **February** 170 190 395 477 March ? 970 1360 April 2400 2400 ? May ? June 1862 1895 Average 1992 –7/1996 1955 July 1975 9 2525 2503 August 2598 2600 September October 1303 1310

Table 2: Monthly distribution

The total number of visitors cannot be exactly filled-in since it is not possible to know them.

We know the total of the tickets, for the museum and for the site, but not the total of the visitors.

363

153

363

228

The Research Team estimate, from the numbers and from the opinion of the competent people, that many visitors go to both.

Lately there is also a "common ticket" to cover both visits (site and museum).

November

December

See detailed analysis and discussion of estimate of visitor numbers (last comments in Section "Number of Visitors").

PHASE 1 REPORT CARTOGRAPHIC MATERIALS AND OTHER SITE DIAGRAMS

| Description of Material | Source or Copyright | |
|---|--|--|
| 1. Geophysical map of the Macedonia | | |
| 2. Network of archaeological sites in Macedonia Scale 1 1:785.000 | Archaeological Receipts Fund (A.R. F.) | |
| 3. Hellenistic Pella region. Scale 1: 2000 | 17 th Ephorate of Antiquities | |
| 4. Hellenistic Pella region with the palace. Scale 1:3000 | 17 th Ephorate of Antiquities | |
| 5. Pellaia Chora. Scale 1: 75000. Sub – sections of the case study. | A.R. F. | |

PHASE 1 REPORT LIST OF INTERVIEWS AND CONTACTS

| NAME | Title / Function | Scope of Communication | |
|----------------------|--|--|--|
| Ifigenia Georgopulou | Director of Technical Services of Archaeological Receipts Fund (Ministry of Culture) | | |
| Maria Akamati | Responsible of the site archaeologist and Director of the 17 th Ephorate of Classical and Prehistorical Antiquities | To collect information about specific points of my research as also about the general policy of the Regional Service of the Ministry of Culture. | |
| Xeonophon Giannakis | Architect of Archaeological Receipts Fund (Ministry of Culture), supervisor of the Distinction's Case Study of Pella as well as of other studies of Distinction throughout Greece. | To collect information about specific points of my research as also about the general or more specific problems of practice and communication, between the different specialties that co — exist and cooperate inside the archaeological site. | |

Moreover, elements were used from the outcome of a questionnaire regarding the evaluation of an archeological site by the visitor according to his need, applied in Pella, taken from the Enhancement Study of Pella of the Archaeological Receipts Fund, in which Junior Research member collaborated.

PELLA SITE

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MINISTRY OF CULTURE DIRECTORATE FOR GREECE - EUROPEAN UNION RELATIONS

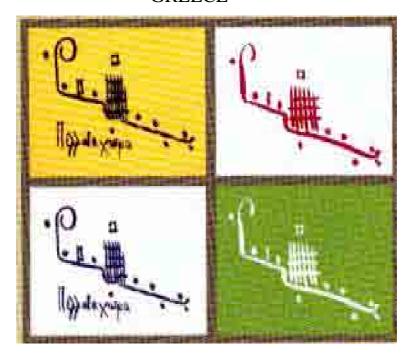
HELLENIC RESEARCH TEAM - PILOT CASE STUDY:
ARCHAEOLOGICAL AREA OF "PELLAIA CHORA"
PELLA - MACEDONIA - GREECE

PHASE 2 – SUMMARY REPORT

WITH RESPONSES TO IMED TECHNICAL TEAM REVIEW COMMENTS

PELLA SITE REPORT

GREECE



DIRECTORATE FOR GREECE - EUROPEAN RELATIONS

Project Partner

ARCHAEOLOGICAL RECEIPTS FUND DIRECTORATE OF PROTRACTIONS

Project National Coordinator

17th EPHORATE

OF PREHISTORIC AND CLASSICAL ANTIQUITIES

Pellaia Chora Archaeological Area Responsible Authority

PHASE 2 – SUMMARY REPORT

INTRODUCTION

Instructions:

On the basis of the matrix analysis performed in the four dimensions, the Phase 2 Report, like the Phase 1, should achieve the following:

- a) identify, in the present situation, how the functions of the territory impede (crisis areas) or assist (successes) management of the site;
- b) at the same time, provide preliminary indications about future potential. In other words, the Report must state what critical functions of the territory can realistically be transformed in the short-tomedium term:
- indicate, on the contrary, what changes the territory has undergone (in all the aspects analysed) that can be directly ascribed to the site.

The proposed plan for the Phase 2 Report is described below.



Prefecture of Pella

The Prefecture of Pella is situated in the northernmost part of Greece, bordering with Former Yugoslavian Republic of Macedonia, and is one of the seven (7) prefectures of the Central Macedonian Region.

The population of the area is about 130,000 inhabitants.

The Prefecture is characterized by worthy natural and tourist resources that are gathered mainly in the western part. Big differences in altitude exist in the area since large plains coexist with high mountains culminating at 2524 m.

The climate is typical continental with cool winters and warm summers with bigger differences in temperature in the higher altitude areas, which are covered with snow from early October up to late March.

The leading economic activity is agriculture followed by livestock. The area is dominated by cultivation of fruit trees with important production of peaches, apples and cherries as well as the cultivation of cereals. The main livestock production consists of milk (mainly from sheep and goats and secondly from cattle) as well as cattle meat that reinforce the local economy.

The Prefecture's location within the map of Greece is shown below.



PELLAIA CHORA ARCHAEOLOGICAL SITE

We consider, as the territory under examination the area of the Municipality of Pella, which comprises of a number of Communities and is part of the Prefecture of Pella, in the Region of Central Macedonia.

In particular, the Municipality of Pella belongs to the Province of Giannitsa (one of the three provinces of the Prefecture), with the town of Giannitsa (population apprx. 40,000) being the largest urban area in the province, at a distance of approximately 10 kms from Pella.

Pella Municipality includes the following communities with their respective populations:

| Community | Population |
|-----------|------------|
| Pella | 2300 |
| Nea Pella | 1650 |
| Agrosykia | 450 |
| Dytiko | 480 |
| Athyra | 1613 |
| Rachona | 750 |

For purposes of understanding it is necessary to define the particular levels of the territory; as such we consider:

- "immediate area" the so called "Pellaia Chora" which has been described in the Phase 1 Report
- "local area" the area within the boundaries of the Pella Municipality, which is the competent local government authority for the archaeological site
- "surrounding area" the greater Pella site area, without regard to specific administrative boundaries, because due to its geographic position, this area, draws from territory of neighboring municipalities and Prefectures (Giannitsa in Pella Prefecture and Chalkidona and Koufalia, in Thessaloniki Prefecture)

It should be noted that the Pellaia Chora definition of the site area implicates <u>two</u> Municipalities, since the Tomb at Archontiko actually lies at the edge (but within) the boundary of the Municipality of Giannitsa.

We consider, however, that the relevance of the analysis is best served by studying the Pellaia Chora within the context of the Pella Municipality, both because the Municipality of Giannitsa does not consider itself an "archaeological" municipality, and because by far the largest part of the Pellaia Chora (including the main site) is part of the Pella Municipality.

TERRITORIAL AND ENVIRONMENTAL RESOURCES

1. Size and effects of territorial and environmental resources and facilities on the single activities of the site manager

Instructions:

1.a – Brief description (2-3 pages) of territorial and environmental resources and facilities (Item T2: landscape, settlement, infrastructure networks, monumental resources, other cultural and environmental resources) that have a direct effect on site management. This part should also include an evaluation of the quality of the networks and whether they satisfy existing demand.

The descriptive section is completed by:

- a map showing the area of gravitation and location (with legend) of the main elements of the infrastructure network (motorways, main roads, railway lines and stations, airports, etc.), and the monumental and environmental resources (parks, protected areas, etc.);
- a calendar of the main artistic, religious and other events with details of their importance (audience, places of origin, etc.).

The Prefecture of Pella is 46% plains, 38,6% mountain regions and the rest 15.4% semi-mountainous.

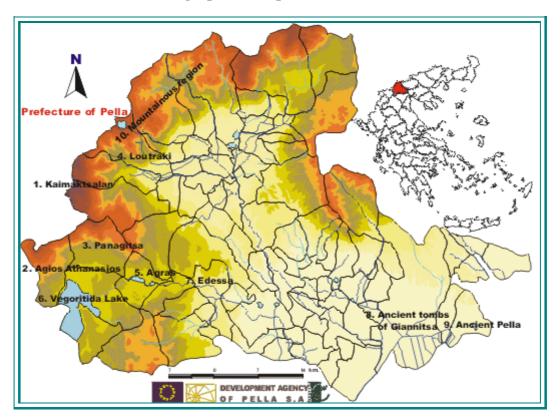
The plains area is the one where the Municipality of Pella is located, although within the boundary of the Municipality are included some small hills.

The landscape is agricultural (see pictures) with typical farmland delineations and rather scarcely populated.

The main areas and natural beauty resources are relatively far from the Pella Municipality towards the western end of the Prefecture, where the mountainous regions are also located. Through those mountains the European Path E4 also crosses.

It is noteworthy that neither in the "immediate area" nor in the "local" area there are particular landmarks.

Geographical Map of the Prefecture



It is important to remember that the "immediate area" of the Pellaia Chora site, as we have defined it, is not a "continuous" territory, and in view of this the Municipality has authority over the intervening areas of the "local area".

The main point that should be made for the Pella site is that it is located in an area, which has \underline{it} as the only attraction.

Most natural resources of the Prefecture are located in the western part of the Prefecture.

These resources include:

- famous waterfalls at Edessa, the Prefecture capital
- the hydroelectric dam and power plant at Agra, with many wild bird species in the Agra Lake
 - the Almopia mountain environment, frequented by climbers
- the ski resort at Mount Voras (2050-2480 altitude), with a recently created "Snowboard Fun Park"
- the hot springs "Pozar Loutra" at Loutraki, with the neighboring ravine, of high natural beauty, and nearby prehistoric caves
- part of the Lake Vegoritida, one of the largest Greek natural lakes, with a refuge for birds, and a local sailing club

Most monumental resources of the Prefecture are located in the western part of the Prefecture and in the larger settlements.

These monumental resources include:

- the hydroelectric dam and power plant at Agra, with many wild bird species in the Agra Lake
 - the traditional settlement of Edessa
 - the historic Monastery of Archangel Michael, near the village of Archangel
 - Archaeological site of Logos, Edessa
 - Folklore Museum, Edessa
 - Folklore Museum at Giannitsa
 - Physiographical Folklore Museum of Almopia Baths
 - Open Air Water and Industrial Museum at Edessa

In the attached Pella Prefecture Tourism map, are indicated the various natural sites of interest, as well as the other archaeological and historical monuments.

The mountainous part of the Prefecture (Pinovo, Tzena, Paiko as well as Voras) where many areas that have been hardly disturbed by people activities exist, dispose important variety of fauna and flora that is characterized by the existence of rare Greek as well as European species.

A large number of species - 143 important plants and 137 different bird species (some of them in the edge of extinction) - were the reason for the inclusion of the larger part of the described area in the Natura 2000 Network.

The level landscape actually makes the site both easily accessible, easily visitable, good for visits by disabled persons, and even the views are good in that they are not blocked by high elevations (the surrounding area includes only small mounds – the Tombs, and some fairly low altitude hills.

Pella Municipality is located on the main thoroughfare between Thessaloniki and Edessa (the Prefecture capital) at approximately 35 kms from Thessaloniki.

Within the Municipality, the road network is adequate but at a level of "country road" that is a two-lane road. The surface condition is good and the road network is not in need of repairs.

PREFECTURE OF PELLA MAIN ROAD NETWORK MAP

The other infrastructures of the area can be considered adequate, noting that a sewerage treatment plant is under construction, which will primarily serve the Community of Pella, as the other communities of the Municipality are at a distance making it impractical to connect to a "central" system.

Electricity is provided from the national grid and so are telephone services.

Intra-community transport is by the local bus authority and can be considered just barely adequate, but suffers from the thinness of the population and the low demand.

The surrounding area road network is also adequate, and links the various economic centers with the Municipality and with the site, particularly since the site is located on the "national road" (which, as has been said, divides it into two parts).

Details on the road network have also been discussed in Phase 1 Reportts.

The present and proposed road network affecting the site area can be seen in the attached cartographic attachment, showing the individual sub-sites and their relationship to the main site.

The situation can be seen in the following Pella site area map, showing nearby settlements.

PELLA SITE/MUNICIPALITY LOCATIONAL MAP

CELEBRATIONS - EVENTS

The categories and individual events taking place in the Municipality of Pella include, as in other parts of Greece, certain national and religious celebrations and holidays which are taking place, but are not of a size or importance to be considered "resources" able to attract visitors to Pella.

However, there are some events (religious, commercial, traditional) which are taking place with a certain reguliarity in different locations of the Prefecture and which could be exploited for the promotion of the site.

In this sense, while we are referencing below, some such resources within the Prefecture of Pella, it must be understood that their location is to far from the site, to be able to be examined as part of the site territory.

| Locality | Period | Event | |
|-----------|-----------------------------|---|--|
| Edessa | End May | Cultural events "Loundemia" | |
| | July-August | Series of cultural events | |
| Agra | Spring | Cherry Festival | |
| | May | Religious Festival of "Zoodochos Pigi" (Virgin Mary) | |
| | Holy Friday (before Easter) | Religious Festival | |
| Aridaia | End August | Series of cultural events | |
| | 15-25 September | Commercial Fair | |
| Arnissa | September | Apple Festival | |
| | 15 August | Religious and Cultural Festival (celebration of Virgin Mary) | |
| Pella | 30 June | Religious Festival (celebration of Apostoles Peter and Paul) | |
| Galatades | Early September | Asparagus Festival | |
| Giannitsa | 20 October | Historic Celebration of the Freedom from Turkish Occupation | |
| | 6-12 September | Commercial Fair | |
| Skydra | 28 August to 4 September | Commercial Fair | |
| Foustani | 23 August | Religious Festival (celebration of Virgin Mary) | |

In the following pages are included:

- a map showing the main archaeological sites / monuments, and
- various pictures relevant to the above text.

GENERAL VIEW OF APPROACH TO PELLA SITE

MUNICIPALITY OF PELLA ROAD ENTRANCE PICTURE

SITE AREA NATIONAL ROAD CROSSING

SITE AREA PROTECTIVE AWNING

DELINEATION OF ANCIENT PELLA STREET BLOCKS

TOMB SUB-SITE DEMARKATIONS

TOMB SUB-SITE DETAILS

Instructions:

1.b – On the basis of the matrix analysis of Item T2, identify and describe (in 3-4 pages) the following:

- Crisis areas
- Successes
- Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
- Research
- Protection and conservation
- Site development policies and implementation of the archaeological resource
- Promotion policies
- Policies for the supply of user services
- Admission fee policies
- Management and organisation of human resources
- Budget policies

The general aspects of the evaluation of the SWO(T) analysis are listed below.

| WEAKNESSES | No tourist services or accommodation in the site immediate area |
|---------------|--|
| | Site area is divided by main thoroughfare |
| | • Insufficient provision of visitor information in the surrounding area |
| | • Archaeological finds located <u>under</u> present day settlement |
| STRENGHTS | Site is very close to Thessaloniki area |
| | • Site area is located on main thoroughfare (easiness of acess from all travelling on main road) |
| | • Prefecture undertakes promotion for tourism resources including site |
| | Site is being linked to Vergina and Dion sites (forming a "triangle") |
| | Promotion of archaeological/ historic/ cultural sites in Macedonia being developed as a "group" |
| | Site being promoted individually through area events (i.e. Olympic Flame route in region, passed through Pella and local event took place) |
| OPPORTUNITIES | Creation of visitor center and reception facility |
| | Development of new and larger museum Improvement to road crossing aspect |
| | • Possibility to develop site visit as a "through visit" for travelers going to other attractions in the Prefecture |
| | • Provision of tourist services in the immediate and surrounding area |

- Expand and create new relationships of site with educational and cultural events
- Expansion of "educational" activities with the facilities of the new Museum
- Valorize the advantage of the many sub-sites (which should be selectively opened to the public) to allow for "other" views of ancient lifestyles in the territory

In the matrix table, which follows, individual items that relate to the site management functions are noted. These comments should be considered additional or complementary to the above table.

| | Crisis areas | Successes | Potential |
|-----------------------------|--|--|--|
| Research | The non-continuous siteSuperimposition of present | Morphology of landscape (level area) | Plan to undertake additional excavation work inareas not completed |
| | settlement onto site area Need to facilitate settlement | Control by site management of network installation locations | 1 |
| | networks over area with archaeological finds | In the site surrounding area there is a lack of other monumental resources, so there are none to conflict with site (such as a byzantine church which would be another monument) | |
| Protection and conservation | Need to facilitate settlement networks over area with archaeological finds | Morphology of landscape (level area) | |
| | aremacorogrem minus | Control by site management of network installation locations | |
| | | Lack of other monumental resources in the site surrounding area facilitates the conservation process, in that it is exclusively dedicated to the site | |
| | | Single entity that has authority to decide is directly responsible for site and can assess protection and conservation priorities | |

| Site development policies and implementation of the archaeological resource | The non-continuous site Superimposition of present settlement onto site area | Morphology of landscape (level area) | |
|---|---|---|---|
| Promotion policies | > Few other cultural events to assist with site promotion. | Morphology of landscape (level area) Prefecture efforts to promote resources of the Prefecture include the Pella site Locational characteristic in that the Pella site is "on the way" to other resources and attractions in the Prefecture Promotion of network of macedonian sites is undertaken by a new program of the Ministry of Culture | Expand visitation interest with development of sub-sites Effort to commbine site visit with visit or attendance to other resources and events in Prefecture Enact special events or celebrations which would promote the image of the Pella Municipality and make the site more known (see example of relation to Olympic Flame, possibility of arranging conferences at new Museum facility, etc) Visibility from sub-site to sub-site could be exploited in expanding the visitation circuit |
| Policies for the supply of user services | | Close proximity (bordering site) of present settlement allows utilisation of settlement services (networks, public utilities, etc) Proximity of site to national | The completion of the new site Museum, within its multipurpose hall could provide a basis for scientific and cultural events to take place in the environment of the |

| | | road network Proximity of local settlement make available to the site visitor the opportunity to use commercial services available at the Municipality area | archaeological area. |
|--|---|--|--|
| Admission fee policies | | | The completion of the new site Museum, may give the opportunity to create specific exhibitions with different admission fee policy, directed to enhave the public's awareness and acceptance of the site |
| Management and organisation of human resources | There are no relationships of particular emphasis (the surrounding area does have individual items that affect site management functions) | | |
| Budget policies | Budgeting done for all of Ephorate's sites and not for specific site | No particular relationships or potential | that affect site management functions |

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

TRIANGLE OF MACEDONIAN CITIES SIGN See Pella images

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

TERRITORIAL FACILITIES AND EQUIPMENT

2. Size and effects of territorial facilities and equipment on the single activities of the site manager

Instructions:

2.a – Brief description (2-3 pages) of territorial facilities and equipment (item T3: accessibility of the site for people, hospitality, infrastructures for leisure time, cultural, educational and training equipment, accessibility of information and network services) that provide direct support for site use.

The description is completed by two tables.

Pella site is easily accessible since it is located on the main thoroughfare between Thessaloniki (second largest town of Greece) and Edessa (capital of the Prefecture of Pella).

The main site is practically on the crossing of the national road leading from Thessaloniki to Edessa at the intersection with the road entrance to Pella Community, of Pella Municipality.

The position of these roads can be easily seen in the map following.

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

ROAD NETWORK POSITION OF SITE AREA See Pella images

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

Most visitors to Pella site come by organized tour (coach services) or by private motorcar; other forms of transport available, being the bus line, are very little used.

Pella main site is located at approximately:

Table 2a-Distance of the site from access points

| Туре | Category | Distance in km from the site |
|------------------------------|---|------------------------------------|
| Thessaloniki Town | Capital of Macedonia and Northern Greece | 40 kms |
| Thessaloniki Airport | International | 50 kms |
| Thessaloniki Railway station | International | 38 kms |
| Thessaloniki Port | International | 38 kms |
| Edessa Town | Prefecture capital | 40 kms |
| Giannitsa Town | Nearest largest town | 10 kms |
| Athens | Capital of Greece | 540 kms |
| Florina Town | Capital city of neighboring Prefecture | 120 kms |

The approach to the site starting from the Thessaloniki area is adequately sign-posted although at certain points the direction that should be followed is marked, understandably, as Edessa (the Prefecture capital), and not specifically as Pella.

The location of the Pella Municipality with respect to Thessaloniki and the other locations is shown in the following general area map.

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

GENERAL LOCATIONAL AREA MAP See Pella images

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

As has already been noted the local area of the site encompasses a few small settlements = communities which form part of the Municipality of Pella. In those settlement the main occupational sector is agriculture.

Pellaia Chora sub-sites boarder either on a settlement (as is the case with Hellenistic Pella) or onto farmland (as is the case for the Tomb sub-sites).

The residents of the Municipality have been brought together by the formation of the Municipality as a result of the implementation of "Program Kapodistrias" an initiative of the Ministry of the Interior to consolidate a total of more than 6000 Municipalities and Communities in Greece into about 900 Municipalities, each with a greater land area and a more populous base.

The implementation of the scheme, however, has met with some problems, one type of which is applicable to the case of Pella.

In Pella, the Communities existing before the new Municipality (formed in 1997 by Law 2601 for Local Government) had established economic and social relationships with the larger settlements nearer to them. The new Pella Municipality does not include any of these larger settlements, which lie outside its boundaries, and indeed one of them in the neighboring Prefecture of Thessaloniki.

The case, therefore, is that local government is resting with Pella Municipality and is headquartered in Pella Community, which is also the largest of the communities (see T1above). However, the economic, social, educational, ties of the individual communities are with the larger settlements, namely:

- Giannitsa in the West
- Koufalia in the North-East
- Chalkidon in the South-East

It is also noteworthy that the latter two settlements belong to the Thessaloniki Prefecture, and as such follow a different political and governmental direction.

This particuliarity results in a non-cohesive Municipality and places a heavy burden on the local Municipal government to try and create a cohesive unit, based principally on the Pellaia Chora site area attraction, since, as will be noted further below, the "local" area doeas not have any other attractions, and competes with the rest of the Prefecture which has many.

The locational distribution of the various Prefecture resources can be seen in the attached Pella Prefecture Tourism map. The various facilities are described subsequently.

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

TERRITORIAL FACILITIES

As has been already explained the Municipality of Pella is not a tourist or urbanized area, which lacks within its own boundaries such facilities (see also T1a in Matrix Report).

The area does not have any information centers or other similar facilities.

While the Municipality is in the process of constructing a small Conference and Public Events Center (apprx. 200 seats capacity) the population numbers in the area cannot support the noted facilities.

However, these facilities and services can be found at neighboring towns with larger populations, particularly Giannitsa which is the largest settlement in the area (approx. 40.000 inhabitants), and at Chalkidon, a town of the Prefecture of Thessaloniki, just at the Prefecture boarder, at 10 kms. from Pella.

Within the Municipality of Pella there is a <u>Municipal Library</u> (lending library) for local residents.

Also, the Municipality has established a <u>Municipal Agency for Tourism and Cultural Development</u>, which has started being active in relation to the Pella site.

There is also the <u>Municipal Center for the Aged</u> which offers a social program for the Senior Citizens. The main "reception" area for Pella, must be considered the twon of Thessaloniki, (over 1.000.000 inhabitants with its suburbs) at a distance of about 50 kms.

Tourist/ visitor services are basically located in Thessaloniki (travel agencies, many hotels, restaurants and bars, entertainment, conference and fair facilities).

The various attractions and facilities available in other locations of the Prefecture of Pella, are noted below:

Health facilities:

- General Prefectoral Hospital of Edessa
- General Prefectoral Hospital of Giannitsa
- Health Centre of Krya Vrysi
- Health Centre of Skydra
- Health Centre of Aridaia
- Health Centre of Arnissa

Stadiums and Gymnasiums:

- National Gym of Aridaia
- National Gym of Krya Vrysi
- National Stadium of Giannitsa
- National Stadium of Edessa
- National Stadium of Skyndra
- National Sports Centre of Edessa

Activity organizations:

• Mountain Climbing Field Club of Gannitsa

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

- Field Club of Edessa "Gavaliotissa"
- "Megalos Alexandros" Sailing Club at Giannitsa
- Sailing Club of Giannitsa
- Sailing Club of Giannitsa "Loudias"
- Sailing Club of Edessa Arnissa "Nearchos"
- Ski Club of Almopia
- Skiers Club of Edesa
- Ski Club of Skydra
- Flying Centre of Macedonia Thrace at Edessa
- Horse Riding Club
- Motorcycle Club of Edessa

Hotels and other accommodation are available in the Pella Prefecture, not in the Municipality of Pella, but at other towns primarily in the west area of the Prefecture.

We should mention certain tourist activities taking place in the Prefecture, because the visitors coming for these activities, if they travel by car, they pass by the Pella site.

The activities include, in addition, to others mentioned under the other "resource" headings above, the following:

- the Flying Club at Edessa (gliders, parapente and kites)
- rafting on the Moglenitsa river
- horse riding at Kaisariana village

Cultural Groups in the form of Associations exist and are active in a number of the communities of the Municipality, both providing social services and opportunities for youth activities, among which traditional dancing is a popular activity.

There are no universities, research centers or laboratories in the immediate area, but the proximity to Thessaloniki covers all these aspects.

The Prefecture of Pella as a whole does have two higher level educational institutions:

- Institute of Vocational Training under the administration of the Ministry of Education (established 1993) closest Branch at Giannitsa;
- Prefectural Center for Vocational Training (established 1995) with facilities also at Giannitsa

The Prefecture of Pella as a whole also has four research institutes:

- Institute for Trees
- Institute for Cattle Raising
- State Fish Reproduction Station

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

• Center for Professional Agricultural Education

Of course each smaller community has some leisure infrastructure but this is basically either some sort of local gymnasium or track or football stadium, or a community cultural association meeting room or hall (see pictures following).

Cinemas are located in the larger towns, mainly Giannitsa and Edessa in the Prefecture of Pella and, of course, in Thessaloniki, where, due to the proximity, the local residents can easily go (distance of about one hour by car).

While the current situation indeed is as described above, potential for the future would be the selection of Pella site and its immediate area for the location of events, which would allow for the promotion or making known the site more widely.

A particular mention should be made to the promotion undertaken by the Ministry of Culture for the "triangle" of Macedonia sites: DION – PELLA – VERGINA, a network of three "royal macedonian" cities.

But this promotion is not directly related to the educational or cultural institutions of the area; the relationship may be considered incidental, in that some schools may visit more than one of the three sites, within the context of their educational visits.

The signs marking these "routes" are shown in the pictures following.

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

MACEDONIAN NETWORK ROAD SIGN

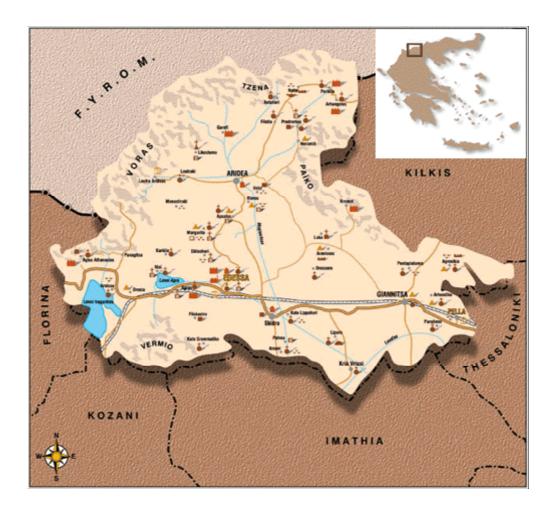
HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

As a general comment, two elements arise for consideration:

- (a) the lack of particular interest of the site other than the present archaeological finds in the way it is presently presented
- (b) the fact that the Pella site will not change from being a "through visit" site and not a "destination visit" site.

The location of motorways, main roads, railways, and major towns is shown in the map below.



HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

Noted here, just for general information purposes, are a number of "Macedonian" cultural and scientific institutions which are located in the area of Thessaloniki, which are active in a variety of cultural and educational aspects, some related to archaeology, but not specifically to the Pella site.

They are mentioned here, in order to get an understanding of the typoe of activities that go on in the Thessaloniki metropolitan area, which is the place that most visits for Pella are organized.

- Patriarchal Institute for Patristic Studies
- Institute for Balkan Studies
- Society for Macedonian Studies
- Greek Historical Society
- Centre for Byzantine Research
- Hellenic Association for Slavic Studies
- Association for the Study of Greek Jewry
- Greek Psychology Association
- Institute for Modern Greek Studies Manolis Triandafyllidis Foundation
- Hellenic Association for Applied Linguistics
- Hellenic Semiotics Association
- Centre for Greek Language
- Institute for International Public Law and International Relations
- Centre for International and European Economic Law
- Centre for the History of Thessaloniki
- Centre for Research into Macedonian History and Documentation

The existence of all these institutions is an indication of the potential that could be exploited, but obviously, cannot be examined in the context of the Pella site, but in the context of a general archaeological – Macedonian promotion.

The tertiary uses around the site can support the dissemination of information, thus a positive relationship exists, but little to nothing is in place at present.

The present experience of some (but according to the researchers, inadequate) provision of information is likely to continue in the immediate future.

An improvement is envisaged with the building of the new Pella Archaeological Museum, which will have facilities for presentations, and potential for better informational services.

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

In the following tables information on the most important, facilities and services available in Pella Prefecture, are identified.

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE

PHASE 2 - REPORT SUMMARY

Table 2b- Territorial facilities

PELLA PREFECTURE MUSEUMS

(Excluding Pellaia Chora Site Museum)

| Facilities | Description | Opening Hours & Entrance Fees | Annual quantities n° visitors |
|------------|--|----------------------------------|--------------------------------|
| Museums | Archaeological site of Logos, Edessa | All year long (free) | ~ 4.000 |
| | Folklore Museum, Edessa | All year long (500 Drx) | 4.000 - 5.000 |
| | Folklore Museum at Giannitsa | All year long (free) | ~ 2.000 |
| | Physiographical – Folklore Museum of Almopia Baths | All year long (free) | 22.000-25.000 |
| | Open Air Water and Industrial Museum at Edessa | Not open for public yet | |

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE

PHASE 2 - REPORT SUMMARY

PELLA PREFECTURE ACCOMMODATION FACILITIES

| Town | Hotels | Category | # Rooms | n° Beds |
|------------------|-------------|----------|---------|---------|
| <u>Edessa</u> | | | | |
| | Xenia | A | - | - |
| | Katarraktes | В | 44 | 83 |
| | Alfa | С | 36 | 64 |
| | Ellena | D | 36 | 79 |
| | Pella | D | 27 | 50 |
| | Olympia | D | - | - |
| <u>Giannitsa</u> | | | | |
| | Alexandros | С | 30 | 58 |
| <u>Skydra</u> | | | | |
| | Adonis | С | 30 | 51 |
| | Iro | С | 17 | 31 |

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| <u>Aridaia</u> | | | | |
|----------------|---------|---|----|-----|
| | Avra | С | 51 | 125 |
| | Neon | С | 15 | 35 |
| | Lidra | D | 34 | 65 |
| | Aktaeon | Е | 19 | 57 |

| Other accommodation | | | |
|------------------------------------|----------|--|--|
| Town Rooms and Others Guest Houses | | | |
| Loutraki | 7 units | | |
| Paleos Ag. Athanasios | 18 units | | |
| Neos Agios Athanasios | 9 units | | |
| Panagitsa | 12 units | | |
| Arnissa | 4 units | | |

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

PELLA PREFECTURE CULTURAL ESTABLISHMENTS

| Theatres | Township | n° audience |
|---|--|-----------------------|
| | - Open Air Theater of Skydra | No details available |
| | - Gavaliotissa Theater, Edessa | |
| | - Municipal Theater of Giannitsa | |
| Universities and other higher learning institutions | Faculties | n° students |
| mgner learning institutions | Institute of Vocational Training – under the administration of the Ministry of Education (established 1993) closest Branch at Giannitsa | No details available |
| | Prefectural Center for Vocational Training (established 1995) with facilities also at Giannitsa | |
| | | |
| Public Libraries | -Edessa-Giannitsa-Pella-Skydra | No details available |
| Conference centres | type | Capacity/ n° users |
| | Multi-function Centre at Giannitsa | |
| | Municipal Conference Hall of Pella | 200 seats |

Source: Information obtained from Prefecture of Pella 2000.

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ROAD APPROACH TO PELLA SITE – DIRECTION SIGNS See Pella images

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

PELLA PREFECTURE BOUNDARY SIGN See Pella images

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

ROAD SIDE TRAVELLERS REST AREA See Pella images

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

PELLA MUNICIPALITY TOWN HALL See Pella images

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

COMMUNITY FACILITIES IN PELLA MUNICIPALITY See Pella images

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

MUSEUM ENTRANCE SERVICES

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

MUSEUM PARKING

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

VISITOR FACILITIES AT SITE

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

COMPUTER INFORMATION TERMINAL

HELLENIC RESEARCH TEAM ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

INFORMATION PANEL AT SITE

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

Instructions:

2.b – On the basis of the matrix analysis of Item T3, identify and describe (in 3-4 pages) the following:

- Crisis areas
- Successes
- Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
- Research
- Protection and conservation
- Site development policies and implementation of the archaeological resource
- Promotion policies
- Policies for the supply of user services
- Admission fee policies
- Management and organisation of human resources
- Budget policies

The general aspects of the evaluation of the SWO(T) analysis are listed below.

| WEAKNESSES | • | • Immediate area "void" of other attractions | |
|---------------|---|--|--|
| | • | Institutions (government, education, culture, etc located in other towns In Prefecture or outside Prefecture | |
| STRENGHTS | • | Relative close proximity to main transport infrastructure (airport, port, railway) | |
| OPPORTUNITIES | • | Develop area promotion within "surrounding area" context | |
| | • | New site Museum will have a positive impact on the area and become an attraction to promote visitations | |

In the matrix table, which follows, individual items that relate to the site management functions are noted. These comments should be considered additional or complementary to the above table.

HELLENIC RESEARCH TEAM

ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE

| | Crisis areas | Successes | Potential |
|-----------------------------|--|---|---|
| Research | The site management is not involved in any facilities research activities outside the specific site area The surrounding area is noted for the absence of cultural and educational institutions; this creates a scientific and educational "void" in the immediate vicinity of the site, and thus the site management cannot rely on the surrounding area institutions for support of its functions | The site management would, as a policy, be willing to collaborate or support (and within reason) assist research work done by third parties, so long as this research work has a scope to support the site development We consider that the administrative discretionary authority given to the site management to enter into agreements or in actual terms, collaborate with educational institutions for training, site work, etc., is a positive aspect, and indeed this is in place (although not at the level which would be desired) | |
| Protection and conservation | | We consider an "advantage" the on-going activity of higher education level students (of disciplines related to archaeology and site management functions), to doing summer or vacation work, in areas of protection and conservation | Possibility of collaboration of site management with educational institutions abroad, for "joint" projects related to site protection and conservation matters, possibly implemented with the assistance of local actors (Prefecture, Municipality, etc.); an example would be a EU co- |

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE

| | | | financed Volonteer Service initiative |
|--|---|--|--|
| Site development policies and implementation of the archaeological resource | Site development does not have any relation to the work done by others outside the site area Site split in two by national road Inadequate sign posting on road approaches | Projected work is to develop the site visitation with the building of the new Museum, which will better display the characteristics and finds of the site | Plans to effect a road bypass to integrate the site Collaborate with Prefecture and Municipality for the improvement of sign posting to site Creation of specialist visitor center |
| Promotion policies | | The Ephorate's Director and staff do undertake to respond to invitations to make presentations about the site and its finds, in scientific and other events (conferences, colloquia) either locally or more generally. Promotional material about Prefecture attractions includes the site of Pella and is distributed on different occasions, by other parties. Some information on Pella site can be found at internet sites of the prefecture, etc. (see Matrix Report) | ➤ The new Museum facilities will give the opportunity for a specific program for site promotion and information dissemination |

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| Policies for the supply of user services | No tourist services in the immediate area | Site management would not hinder the development of visiotr services in the immediate area, (provided there is no conflict with the protection regulations) Easiness to build user facilities on level land | Sign post at site directions to immediate area user facilities |
|--|--|--|---|
| Admission fee policies | The admission fee policy is determined functions without the latter's involvent | d independently from site management nent | No recommendation may be made because the policy is not particular to the site |
| Management and organisation of human resources | Site management cannot influence availability or quality in third parties (outside site) which may be offering a service or product to site visitors Site management has no authority to permit a private sector services facility development on the site, because this is state property and the only non-ministry produced service or product is (actually will be in the future) the operation of a site snack and coffee shop. | | See at left here, the operation by private sector of the coffee house – snack concession. |

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| Budget policies | The budget is not specific to the site, but covers all sites under the Ephorate's management. |
|------------------------|---|
| | No budgetary allocations have been provided (or may in the future be provided) for user services at site area, other than those attributed to site modifying visit facilitation (for coaches, drivers, group movements, guides personnel, etc), allocations which fall under the site management's authority for protection, conservation and development of the site itself. |

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

TERRITORIAL USES

3. Representation and effects of uses of the territory on the single activities of the site manager

Instructions:

3.a – Brief description (with map) of the uses of the territory (Item T5: agricultural uses, industrial and craft uses, other uses or uses by third parties) that directly affect the management and use of the site.

Zoning for uses of territory is a responsibility of the Ministry for the Environment and Public Works, a function executed through regional an local Planning Offices.

Prefectural and Municipal Authorities have the power to instigate additional or more restrictive uses, within the overall scheme.

Archaeologically designated sites, or sites of potential interest for excavations, are so declared by the relevant local Ephorate of the Ministry of Culture, and may or may not (depending on the importance of the site's potential) be permanently restricted, or temporarily restricted until a physical excavation investigation is undertaken.

It is necessary here to explain the system in force for the protection of archaeological sites.

The Ephorate (as an arm of the Ministry) regulates all building and land uses activities in the area around the actual (expropriated) sites and sub-sites for protection purposes.

- Zone A covers an area at a radius of approximately 1000 meters from the Museum (as regards the main site) and from the center of the other sub-sites (Tombs, etc.). Within this area no building or construction is permitted and as for agricultural activities, the cultivation of only certain crops, such as cotton. The building and construction restriction excludes the buildings of the present settlement, existing at time the zone was established.
- Zone B covers an area around Zone A delineated according to the discretion of the responsible Ephorate as to potential archaeological sites. Within this area the Ephorate has the discretionary authority to allow small buildings, subject to permit and approval; the buildings should be on plots of land at least 4000 m² and up to 100 square meters. The Ephorate will allow only buildings for services necessary for the existing settlement, such as for supermarket, pharmacy, etc.
- Outside the established zones, around specific other archaeological finds or monuments there is a protection perimeter of 500 meters within which all activity is monitored.

A description of the zones was presented at Rabat Meeting Phase 2 Presentation and the relevant map is shown in the following page.

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ARCHAEOLOGICAL PROTECTIVE ZONING MAP See Pella images

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

The existing zoning is unlikely to change in the future; according to Ephorate Director since the boundaries of the archaeological settlements are by now fairly definitely established, it is unlikely that the existing zoning boundaries will be subject to substantial change in the future.

In particular, the areas between different sections of the site (which includes the various Macedonian tombs) include farmland and agricultural installations (see area pictures). The map of the overall archaeological area is shown in the following page and attached separately.

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PELLA ARCHAEOLOGICAL AREA MAP See Pella images

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Expropriation has been of negative impact in the area, not only because of long delays, but also because the local residents feel they are been prevented from valorizing their properties.

The agricultural use of the land has a relationship in that activities of soil tilling are likely to damage possible finds.

While the protective zoning is expected to prevent this, in practice, actual tilling does have a negative effect.

Since monitoring and policing agricultural cultivation in the whole area is very difficult and resources to do such a job are not available to the Ephorate, studies may be hindered from possible damages to finds.

We might consider positive relationship the agricultural use of the land particularly around the sub-sites, since they allow for easy viewing from afar and are unlikely to make access to the sub-site difficult (as compared to their being within a built up area).

As regards the main Pella site, the settlement is boardering it and the site is large enough that it is not hindered by the settlement buildings.

The existence of agricultural activity could be considered as helpful to the site since there are locally available labour personnel, which is not very busy in the summer, when restoration or maintenance work needs be undertaken and executed by seasonal personnel.

Additionally, since the seasonal personnel of the site, actually is occupied with its agricultural activities for the rest of the year, this could be considered positive relationship (otherwise the seasonal personnel would be unemployed for the rest of the year).

With the exception of light agricultural processing for the collection of the crops, the site area does not include industrial land uses and none are envisaged.

The Prefecture area does include two delineated "Industrial Parks" the first, in full operation at Drosia and the second, already zoned, in Petria, both very far from the site area to be of any relevance to this examination.

In the surrounding area there are only a couple of light manufactures, but these are located in other than the Pella community, within the Municipality boundaries, also too far to merit consideration.

There is some more activity in the town of Giannitsa, the largest town of the area, but this cannot be considered as having a direct relationship on the site.

The area has tertiary and other uses only within the boundaries of the existing community settlements. As such, only the Community of Pella itself bears relevance to the site area, particularly since, as has been described in the Phase 1 Site Presentation, the archaeological interests lie over an extended area, which includes the present settlement boundaries (see proximity pictures).

IIndicative of this interaction is the existence of excavated locations such as the "Thesmoforion" within the settlement itself (see picture). Site protection in areas bordering the present day settlement is adequate with fencing. Individual sub-sites within the settlement suffer in terms of their protection: an example is the case of the Thesmophorion (see relevant picture).

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SITE – SETTLEMENT PROXIMITY PICTURES
See Pella images

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THESMOPHORION SUB-SITE PICTURES
See Pella images

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Instructions:

- 3.b On the basis of the matrix analysis of Item T5, identify and describe (in 3-4 pages) the following:
 - Crisis areas
 - Successes
 - Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
 - Research
 - Protection and conservation
 - Site development policies and implementation of the archaeological resource
 - Promotion policies
 - Policies for the supply of user services
 - Admission fee policies
 - Management and organisation of human resources
 - Budget policies

The general aspects of the evaluation of the SWO(T) analysis are listed below.

| WEAKNESSES | Continuous conflict with locals due to "building and construction" restrictions imposed by archaeological environment |
|---------------|---|
| | • Land is not freely negotiable due to "expropriations" or excavation works |
| STRENGTHS | • Protective zoning in the immediate area with 3 zones has been established |
| | • Compensation given to locals for non-use of agricultural land, due to excavations |
| OPPORTUNITIES | • In "Protection Zone 2" light uses permits locals to develop visitor facilities and services |

In the matrix table, which follows, individual items that relate to the site management functions are noted. These comments should be considered additional or complementary to the above table.

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| | Crisis areas | Successes | Potential |
|--|--|--|--|
| Research | Agricultural cultivation may damage the archaeological finds | Agricultural cultivation is restricted to certain crops and depths, in areas of potential archaeological interest | Not applicable |
| Protection and conservation | Agricultural cultivation may damage or destroy the archaeological finds | Archaeological Protective Zoning System protects interventions in areas of archaeological interest | |
| | Monitoring the extended area under protection regulations is impractical and occasionally ineffective | Compensation is given to local owners for the "restriction" to use their land, when it is subject to archaeological investigation (not under expropriation proceedings). | |
| | | Sub-sites make it difficult to maintain the area; most sub-sites are covered and closed for protection. | |
| | | Lack of industry in the area does not create pollution for site. | |
| Site development policies and implementation of the archaeological resource | As said in par.1& 2 : Non continuity of site makes it very difficult to create a "visitable package" | Archaeological Protective Zoning system guards areas for future investigation | Select one or two sub-sites and create a bigger area for visitors to circulate |
| 1 course | Site management has to rely onto | Expropriation of additional area will allow better integration of | |

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| | the surrounding area networks for the services to the site | visitable site area | |
|--|---|---|--|
| Promotion policies | > There is no secondary or tertiary land use to provide alternative or complementary promotion of the area | Level landscape and agricultural environment is pleasing to the approaching visitor | As said in par.2 : New site Museum will display more and better finds. |
| Policies for the supply of user services | Lack of demand (i.e. small visitor numbers) does not provide (justification for) an inducement for investment in the development of user services and facilities | Ephorate has the discretionary authority to approve light land uses in the zoned areas to assist the provision of user services | If the site integration and further development is successful (which would result if integrated development plans are implemented), then the area could easily support new visitor services, particularly for short term visits (not overnight). |
| Admission fee policies | Not applicable Decision making on fees done independently from site particulars | Not applicable | Not applicable |
| Management and organisation of human resources | Site management is not involved (no responsibily or authority in the determination of land uses, other than for the protection of the finds under specific understanding (see Part 3a further above with respect to Zoning) | | |
| Budget policies | Not applicable | Not applicable | Not applicable |

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TERRITORIAL SUBJECTS AND AUTHORITIES

4. Identification of subjects and authorities that help to define: a) territorial and environmental resources and facilities (Item T2); b) territorial facilities and equipment (Item T3); uses of the territory (Item T5).

Instructions:

4.a – Brief description (1-2 pages) of the (public and private) players involved.

Particularly for the sites of archaeological or historic interest, the relevant authority is the Ministry of Culture through the Central Archaeological Council, a body that rules on all matters pertaining to the historic and archaeological localities in Greece.

Regulations applicable to the archaeological sites in Greece include the Constitution, the Laws protecting archaeological sites of 1932 and 1977 and various specific applicable regulations (a detailed list is provided in Phase 1 Summary Report under S1b).

The players that may influence directly or indirectly site operations are:

| Ministry of Culture | | |
|--|--|--|
| Central Archaeological Council | | |
| 17 th Ephorate of Paleontological and Classical Archaeology | | |
| Archaeological Receipts Fund | | |
| Ministry of Interior | | |
| Ministry of Environment and Public Works | | |
| Regional Government | | |
| Prefectural Authority | | |
| Municipal Authority | | |

There are no private players that have authority such that can influence site managements and its operations with respect to the development and enhancement of the site.

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Instructions:

4.b – Brief description (1-2 pages) of legislation.

A brief description of relevant regulations is provided (for more details see also references in Phase 1 Report).

All the archaeological sites in Greece are protected by the archaeological law 5951/32 and 736/77 while any intervention in monuments is subjected to the restrictions of the regarding monuments international provisions ("Venich Charter", etc).

In Greece territorial planning is a function exercised by the Ministry of the Environment and Public Works within the context of the "Town Plans" for each area; these delineate the land uses and relevant zoning.

Town planning regulations are subject to the more generally applicable General Building Regulation, the provisions of which are designated by the Ministry of Environment and Public Works.

Municipalities have certain limited powers to regulate zoning in areas of their responsibility.

They also have the competent power to give license for the operation of businesses with public service (cafés, restaurants, bars, etc.).

Especially in the case of "Pellaia Chora" there are declarations of solitary monuments and corresponding protection zones.

Until now there is not a total declaration and marking out of boundaries of the zones, with escalating protection meters.

The national legislation regarding the protection and use of archaeological heritage in Greece is applicable for the determination of land uses (specific mention of the individual laws has been made and is referenced in Phase 1 Summary Report).

We note the following common characteristics of the legislated regulations for the protection and declaration of the archaeological sites and monuments:

- In most cases the declaration of the sites is done by reference to the codes of the parcels of the distribution of the Ministry of Agriculture of 1929, and as a result it is quite difficult and insecure as to the transposition of the boundaries of the archaeological sites to subsequent ordnance imprintings or even on the ground.
- There is in force regulations for the absolute protection and prohibition of building, as well as the prohibition of road cutting, in the limits of the archaeological sites protection that occupy wider zones 500m., around the monuments.
- It is distinguished that there are in force non-existence of special structure provisions or even restriction of uses, in the cases of direct contact of settlements with the archaeological sites or in the cases of solitary monuments within the bounds of settlements.

As regards the Pellaia Chora site area, we note that around 1996 the former Minister of Culture, Thanos Mikroutsikos, announced, expressing the political will of the then Prime Minister A. Papandreou, the desire for interventions at Pella. The scope of the interventions was stated to be aiming to the systematic and integrated planning of the

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archaeological site and its wider area. Within this context we can include the research work of the PISA team which is being carried out.

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Instructions:

4.c – Brief description (2-3 pages) of territorial planning and management tools.

Territorial planning and management are effected at three levels:

| At national level | By the responsible Ministries |
|--------------------------|--|
| At regional level | By the Regional Government which acts on the instructions of the Ministries and implements regionally the government policy |
| At the prefectural level | By the elected Prefectural Council |
| At the municipal level | By the elected Mayor |

With the involvement in the European Union, at the national level, in addition to the national budget, which is prepared on an annual basis, a proposal is made to reflect the projected utilization of European Structural Funds and funds from other European sources.

This budget is approved as to the main guidelines on a national level, and itemized by the Regional Governments, which also prepare "technical descriptions" for all included projects and activities.

The Regional Governments must follow the priorities set by the National Government. The Regional Governments have authority to disburse funds and have authority to include or exclude certain projects, works, and activities depending on their execution or on their viability.

The Regional Governments are supported by a Technical Team organized by the Unit for Management of the Structural Funds, which supervises, monitors, and controls the execution of the approved projects. Additions or modifications to the so-called Regional Business Programme (P.E.P.) must be presented and approved by the Regional Council. The Regional Council meets officially twice per year and in it sit representatives from all categories of governmental, public and private sector players, in the Region.

At the Prefectural level, the Prefectural Council proposes and approves, in its turn, a Prefectural Budget, which gives emphasis in the priorities of interest to the Prefecture. The Prefecture has the authority even to execute or implement some projects in its budget, on its own, or by public tender.

The Prefecture is able to receive funding from the Ministries, from the Region, or to participate in European programs. It is envisaged that the Prefectures will also establish and collect their own taxes.

Finally, at the Municipal level, the Mayor proposes and the Municipal Council approves and puts into implementation, a Municipal Budget, serving the priorities of the Municipality.

The Municipality also is able to receive funding from the Ministries, from the Region, from the Prefecture, or to participate in European programs. The Municipality also raises certain types of local taxes.

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As far as local territorial planning is concerned, each Municipality has a "Town Plan" which is developed according to the settlement needs, and is eventually approved by the Ministry of Environment and Public Works. The Municipality may adjust certain uses set at the Town Plan (usually restrict rather than allow) according to particular needs or requirements.

The Municipality has a "Town Planning" Office, whose function is to study the plans for building and construction within the limits of the township and to issue relevant permits.

The Town Planning Office has to take into consideration the Protective Zoning Restrictions that may have been imposed in the area, and where applicable must direct the interested party to approach the Ephorate and obtain their approval for a multiplicity of activities.

For a particular construction, building or site arrangement, plans of course, must be drawn. Depending on the particular project at hand different studies must be executed, among which are:

- Topographical study, showing/studying the layout of the area
- Traffic or road loads study, showing/studying the vehicle and person flows
- Geotechnical study, investigating and evaluation the ground conditions
- Structural study, which calculates the weights, loads, etc. of the building frame
- Electro-mechanical study, which provides the required specifications for the various networks of the project.

The statistical measurements and data for the area are obtained by regular surveys undertaken by the responsible Ministrerial Departments. In particular, the local branch of the Organization for Employment of Human Resources of the Ministry of Labour and Social Welfare, also monitors employment related data and statistics.

The Ministry of Agriculture, through the Prefectural Office for Agriculture monitors and regulates crop production, cultivation priorities and recommendations, and keeps data on cultivation acreages.

The Archaeological Receipts Fund of the Ministry of Culture monitors the data for site visitations, through the monitoring of the number of tickets issued.

Hotel and other tourism statistics are reported through the various police departments, to the National Statistical Service.

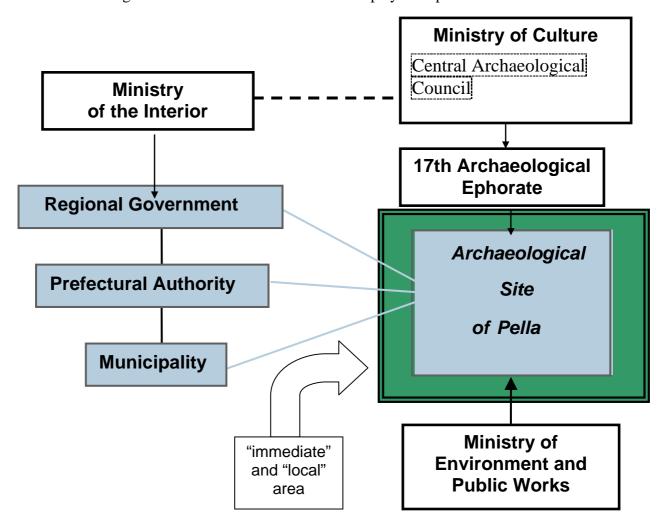
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Instructions:

4.d – Brief description (1-2 pages) of players and decision-making processes that define Items T2, T3 and T5 and so influence site management.

A functional diagram of the interraction of the various players is presented below.



The functions of the various players are identified further on.

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PHASE 2 - REPORT SUMMARY

FUNCTIONAL ANALYSIS OF INVOLVED PLAYERS

| PLAYER | MAIN FUNCTION | DECISION MAKING AUTHORITY | TYPE OF INFLUENCE |
|-----------------------------------|---|---|---|
| Ministry of Culture | Responsible for all matters relating to archaeological, historic, cultural, affairs. | Authority for all decisions and supervisory role. | Highest authority for all matters relating to sites through bodies mentioned below. Additionally, it may enhance site management ability to implement site development plans or site presentation and other works and services, by facilitating site participation in various national or European programs, with potentially additional funding for site. |
| Central Archaeological Council | Highest Advisory authority of Ministry of Culture to decide on protection, restoration, etc. matters of archaeological sites and finds. | Evaluates proposals of Ephorate and others as to site boundaries, area designations, priorities of archaeological policy, all protective zoning and all "exceptions" to protective regulations. Its decisions are implemented through Ministerial Decrees. | Approvals of all protective zoning and approvals of all "exceptions" to protective regulations. |

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| 17 th Ephorate of Paleontological and Classical Archaeology | Main site administrator. | Main site administrator with financial and management responsibility and authority. Implements site development plans. | Direct and effective influence on site development and all site works, plans and policy. Authority for approvals of land uses through protective zoning scheme. Selects priorities for execution of site works approved by supervising Ministry. |
|--|---|--|--|
| Archaeological Receipts Fund | Financial administrator of archaeological sites and museums for the Ministry of Culture | Implements decisions for entrance fees, salaries of personnel particularly seasonal personnel. | Indirectly can influence funds flows to Site Management |
| | Financial administrator for expropriation disbursements | Implements decisions of Central Archaeological Council for expropriations | Indirectly affects public acceptance of site by assisting with speedy payments of expropriations. |
| Ministry of Interior | Responsible for all matters relating to local government. | Establishes policy for functioning of regional, prefectural, municipal authorities. Implements decisions arising from its policy formulation. | Affects directly and indirectly ability of local government (prefectural and municipal) to effect site accessibility facilitation and services. |

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| Ministry of Environment and Public Works | Responsible for all matters relating to environmental protection, land uses (excluding archaeological protection designation) all public works. | Establishes policy for environment protection, natural resources, land uses, road networks, building codes, etc. Implements decisions arising from its policy formulation. | Highest authority for designation of immediate and surrounding area land uses, road, road networks design. Influences the local area land uses, provides funding to Prefectural and Municipal Authorities for local works and may assist with land arrangements around the site. Also responsible for approval of national road bypass project. |
|--|---|---|--|
| Regional Government | Government appointed authority for implementation of government policy at regional level | Locally (region) implements government policy and liaises with Ministries. | Its decisions can have an influence on the site area. Its policies, although not directly related to the site, can influence directly or indirectly affect site presentation, user services and promotion. Additionally, it may enhance site management ability to implement site development plans or site presentation and other works and services, by facilitating site participation in various national or European programs, with potentially additional funding for site. |

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| Prefectural Authority | Elected authority interested to develop potential of Prefecture area. | Locally (prefecture) implements government policy passed on through and liaises with Regional Government and Ministries. Also able to initiate own (at prefecture level) policy particularly for development and promotion of local (prefecture) resources. | Its decisions have an indirect influence on the site area, and its policies, although not affecting "site" management, indirectly affect site presentation, user services and promotion. |
|-----------------------|---|--|--|
| Municipal Authority | Elected authority interested to develop potential of municipality area. | Locally (municipality) implements government policy passed on through and liaises with Prefecture and Ministries. Also able to initiate own (at municipal level) policy particularly for development and promotion of local (municipal) resources. | Its decisions have a direct influence on the site area, and its policies, although not regulating "within site" works, directly affect site presentation, user services and promotion. |

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Instructions:

- 4.e On the basis of the matrix analysis of Item T1 and description under point 4.d identify and describe (in 3-4 pages) the following:
 - Crisis areas
 - Successes
 - Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
 - Research
 - Protection and conservation
 - Site development policies and implementation of the archaeological resource
 - Promotion policies
 - Policies for the supply of user services
 - Admission fee policies
 - Management and organisation of human resources
 - Budget policies

The general aspects of the evaluation of the SWO(T) analysis are listed below.

| WEAKNESSES | • | Lack of interest of involvement of other Authorities and of the private sector |
|---------------|---|--|
| | • | Regional and Prefectural Authority have little or no vested interest to assist financially the development of the site |
| | • | Site Administration "controls" land use |
| STRENGTHS | • | Single Authority for site = Ministry |
| | • | Site Administration does not need to rely on surrounding area and locals for financial support |
| | • | Initial efforts for collaboration with institutions for "educational projects" |
| | • | Non-Ministry Authorities start to intervene to enhance the site surrounding area (i.e. new Municipal multiple-uses Cultural Center |
| OPPORTUNITIES | • | Potential for collaboration with institutions for "on-the-job" training in "archaeological type" jobs |
| | • | Further development of educational material and methodology in relation to site history, findings, etc. |
| | • | Open opportunity for local authorities and for private sector to |

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| | offer support services (but not intervene on the site) |
|---|--|
| • | Opportunity (in collaboration with Prefecture) to promote Pella Site in other attraction-locations of the Prefecture |

In the matrix table, which follows, individual items that relate to the site management functions are noted. These comments should be considered additional or complementary to the above table.

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| | Crisis areas | Successes | Potential |
|--|--|--|---|
| Research | None to little involvement of local players for the positive execution of the work. | Site management has authority to initiate research projects for site and to collaborate with area entities, at its discretion Collaboration with institutional players for the execution of ongoing archaeological research | Site management to collaborate with local entities to research aspects of site integration within surrounding territory Collaboration with other entities to measure needs and use of facilities (such as parking and other) and peak demand |
| Protection and conservation | Pellaia Chora site consists of a number of sub-sites (see Phase 1 Summary Report) which are non-continuous (they are separate properties of the Ephorate); therefore the actual site area being made up of separate plots, hinders the execution of protection and conservation functions of the site management | | Improve liaison with area local authorities in order to monitor security of the various sub-sites |
| Site development policies and implementation of the archaeological resource | Problem arises from the fact that local ownership of much land among the sub-sites, may cause potential damage or even loss (or stealing) of site archaeological artifacts, which may be buried on the private ownership | Existing and planned surrounding area networks seem adequate for settlement and site needs. | Try to develop site approaches in collaboration with local players |

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| Promotion policies | As site management does not have responsibility or budget for promotion of site (and only does some minor actions in this area) the material available and the actions undertaken by other entities (such as local and prefectural government) are not sufficient to result in a substantial increase in visitor flows. Generally in Greece and in Pella in particular, there are no "visitor loyatly" programs, for which in any case, there is doubt as to their potential success in making site more extensively known, or creating increase in number of visitors) Difficulty to co-promote with Municipal Authorities because there is no other promotable resources in the Municipality | Prefectural Authority and Municipality feel positive about the promotion of the site within the Macedonian concept and have implemented promotion activities to this end (Prefectural Authority promotes the site indirectly and directly). | Site management to propose further development of site visitation and to organise with local entities a visit to include other attractions Collaboration of site management with entities promoting site in order to ensure scientifically correct promotion (organise events, conferences, colloquia etc.) |
|--|--|---|--|
| Policies for the supply of user services | Local public players seem to have no interest to support the development of user services The immediate and local area Protection Zoning system acts as a detriment for construction or | | By a concerted effort, the private sector could find an untaped opportunity to explore and at the same offer the needed services. There is a potential for the area cultural and other organizations to |

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| | development of major facilities for visitors. | | incorporate the site cultural element in their activities. |
|--|---|--|---|
| Admission fee policies | | The admission policy is determined centrally at the Ministry of Culture and follows a national policy, thus keeping some balance among sites all over Greece. | ➤ Local authorities may take advantage of existing policy to allow free educational visits, to increase and develop the educational visitors to the site. |
| Management and organisation of human resources | | The Prefecture and the Regional Government can help develop expertise useful for the archaeological site, through their direct and indirect influence of the vocational training programs Site management is responsible for hiring of personnel for temporary (or seasonal) site jobs, and in executing this function, site management implements policy of preference in locals | Since there are few potential employers in the area, site management can assist in the creation and support of the types pof skills needed fro the operation of an archaeological site. |
| Budget policies | | | Local authorities and players have no direct involvement in site operation but can support, if they want, site management activities Effort to co-develop with |
| | | | Municipality and Prefecture some site sourrounding area facilities (in order to provide new |

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

TERRITORIAL POTENTIAL DEMAND

5. Assessment of potential local demand

Instructions:

5.a – Defining the territorial reference area and assessing potential local demand (Item T4) on the basis of: a) the demographic structure; b) levels of education; c) the school population; d) categories of activity, employment and income groups.

Identification and acceptance of the site by the local population: description of the tools (questionnaires, interviews, etc.) and evaluation parameters used.

.....

The descriptive part is completed by a illustration of the data in the form of the following type of tables

In view of the particular characteristics of the Pella site, it should be noted that the demographic structure of the immediate area (being Pella Municipality), is not related to the development of the site. This has been explained in the Matrix Report.

The numbers of employees drawn from the area of the Municipality, is not such that can affect the demographic structure of the area.

The demographic dynamics are guided by other factors, than the existence of the archaeological site.

It could even be argued (see also Matrix Report T4e) that the existence of the site (and the resulting protective zoning) affects negatively the demographic potential of the area, since they preclude other economic activities in the area.

While in theory there should be some relationship between the personnel empoyed at the site and the demographic structure (whether it provides the needed ages, sexes, etc.), in practical terms, the numbers employed from the local area, and the seasonality of the largest number of the jobs is such, that there is no relevance to the demographics.

It is unlikely that the situation will change in the future.

Otherwise, there exists a preference in the selection of seasonal personnel, in terms of "locality", but this is not compulsory.

The statistical data available do not offer a breakdown of level of education by Municipality, but only at a Prefecture level.

Detailed data are given in the tables following this section.

The lack of a Municipal Upper High School, effectively causes a dispersion of the students, after their ninth year, to the east and west urban centers of the Municipality: the larger towns there (being Giannitsa and Koufalia), which have more educational and recreational facilities (see also T3d introduction).

The Prefecture of Pella, as has been noted, has few educational institutions, but its proximity to Thessaloniki more than covers this absence.

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Therefore, relevance of the level of education of the local residents is basically non-existent with respect to the Pella site.

The details of the distribution of school population are shown in the tables that follow.

It is already mentioned (see also T2b introduction above) that Pella Municipality was formed from the "forced" integration of a number of small Communities which had established educational and socio-economic links with towns in their vicinities, irrespective of the provisions of the "Kapodistrias Program" for consolidation of small local government units.

As with other aspects of daily life, provision of school services in the upper grades is at the localities with sufficient local population to warrant the maintaining of such schools.

Actually, it ended up that the Pella Municipality has no upper secondary school within its boundaries and, also, no other educational institution at the intermediate or the University level.

Therefore, the school population within the Municipality is very small. The school population in neighboring municipalities cannot be considered as part of an integral greater total, because the system does provide for such views.

The applicability and eventual "relationship" of the school population on the site parameters, is thus non-existent to very limited at best.

The awareness and interaction of the visitors with the local population could be examined as having a direct relationship with the educational level of the local residents. However, in view of the type of visit (coach mainly and from afar) there is practically no relationship between these aspects.

The population of the Pella Municipality is primarily involved in agricultural activities, with main crops being cotton (80%), and, vineyards, fruits and some tobacco, being the rest of the products of the cultivated areas.

Even after site integration proposals are implemented, it is anticipated that sufficient areas between sub-sites will be left untouched (and not expropriated) to allow for continuation of existing economic activities.

The local population's jobs and income will be directly affected by the reduction of farmland and compensating offerings are expected.

There is a direct relationship to the employment needs and private sector activity to the number of visitors. However, the present level of visitor flows need to be substantially increased for the effect to be "felt" in the immediate area (see visitor flows in Phase 1 Site Presentation S6a-S6c).

Note also the differences between paid and "free" visitors (in the visitors tables also in Phase 1 Report).

In sections of this report various issues relating to the interraction between the site and the local population are noted.

For easiness of examining the relationships of this section, here we should briefly refer to the various individual characteristics of the site, as have been discussed in other Reports, i.e.:

• the discretionary authority of the site Management to employ locals as seasonal workers to execute various annually repetitive tasks (i.e. maintenance)

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• the fact that the Municipality of Pella was formed as a result of a local government consolidation program and is not a cohesive unit

In general it can be argued that the local population, residents of the Municipality, have little interest on the site at present, consider it more as a hindrance rather than a benefit, and "suffer" from it.

The system of procedures that exist with the operation of all archaeological sites in Greece, under the management of the responsible Ephorates, by its own nature sets itself apart from the local residents.

Finally, the fact that local residents must obtain the permission (or approval) of the responsible Ephorate in order to execute building or construction works, is a continuous source of friction.

There is a direct relationship of conflict with the local population, to the extent that certain areas are designated for "expropriation", and due to unavailability of funding, there is a delay in changing the ownership.

The regulations in force prevent the local owners to exploit the land, and the compensation given for non-exploitation may be generous but still remains a source of conflict.

The potential for the future is to expropriate <u>as soon as possible</u> whatever land area is planned, under and within the context of creating an integrated site, and stop (or at least minimize) the friction with the locals, in this respect.

At present the only area of positive relationship is that these site works provide for local employment.

The potential is to develop local skills, and create, to the extent possible, trainers from the locals that have the experience, in order to train personnel for the future or for other sites (if job openings, not covered locally, are available).

An effort is being done with representatives of the Ephorate making relevant presentations to the locals about the archaeological finds, programs for the site, etc.

This helps, but the potential for the future is to establish a periodic means for communication with the local population, such as a Newsletter by the Ephorate (if feasible) or an Internet Site (too advanced for the local population), and to increase the interraction between local schools and the site.

At present the visitors are day visitors, stay little time more than their visit and practically come and go before really they can be "exploited".

Potential collaboration between site Management and Municipality would hopefully develop other attractions allowing or inducing the visitors to stay extra time, and to benefit economically the area.

A weak relationship exists in the availability and training of personnel particularly in the non-directly archaeological activities of the site.

The same is true for the immediate area vocational training. We do note here, however, the direct relationship with the selection of training subjects offered by the Prefecture Centre for Vocational Education (headquartered in Edessa); a particular example is the training for "mosaic maintenance". Examples of the technical work being carried out on the site premises is shown in the pictures following.

The statistical data are presented in the following tables.

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SITE AREA SUPPORT BUILDINGS
See Pella images

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PELLA SITE CONSERVATION LABORATORIES – TECHNICIANS AT WORK ANCIENT COIN RESTORATION

JEWELRY CLEANING

See Pella images

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POTTERY RECONSTRUCTION

See Pella images

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

STATISTICAL DATA TABLES

Table 5a

| Prefecture of Pella | | | |
|---------------------|--------|---------|--|
| Resident population | | | |
| Men Women Total | | | |
| 69.266 | 69.495 | 138.761 | |

Table 5b (part 1)

| Prefecture of Pella | | | | |
|--|--------|--------|--------|--|
| % Composition of population by age group | | | | |
| > 14 | 15-24 | 25-64 | < 65 | |
| 27.983 | 20.114 | 74.601 | 16.063 | |

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Table 5b (part 2)

| Level and type of Education | | | | |
|---|---------|--------|--|--|
| Total residents (over 10 years old) | 120.928 | 100% | | |
| Education by category | | | | |
| Post graduate degree | 91 | 0,08% | | |
| First level university degree | 4.125 | 3,41% | | |
| Graduates of technical universities | 1.206 | 1,00% | | |
| Graduates of technical schools | 332 | 0,27% | | |
| Studying at universities or higher institutions | 1.579 | 1,31% | | |
| Graduates of Secondary education | 16.638 | 13,76% | | |
| Graduates of middle education (3/6 years) | 11.562 | 9,56% | | |
| Graduates of Elementary education | 57.250 | 47,34% | | |
| Have not completed elementary education | 18.145 | 15,00% | | |
| Illiterates (not able to read or write) | 10.000 | 8,27% | | |

Note: Statistics are not broken down by age grouipd.

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PHASE 2 - REPORT SUMMARY

ANALYSIS OF EDUCATIONAL ESTABLISHMENTS

| PELLA PREFECTURE Type & Number of Schools / Number of Students | | | | | | | | |
|--|----------------------|-------------------|----------------------|----------------|----------------------|----------------|----------------------|----------------|
| Pre-School Elementary School Middle School Upper School Kindergarten Dimotiko Gymnasio Lykio | | | | | | | | |
| | | | Grades 1-6 | | Grades 7-9 | | Grades 10-12 | |
| Town | No of establishments | No of Children | No of establishments | No of students | No of establishments | No of students | No of establishments | No of students |
| Pella | 7 | 12 | 6 | 400 | 3 | 625 | 0 | 0 |
| Giannitsa | 27 | 677 | 18 | 2.383 | 5 | 1.420 | 6 | 1.917 |

Note: Information from Kapodistria 1997 Local Government consolidation Program (based on 1991 census data).

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PHASE 2 - REPORT SUMMARY

Table 5c

| Towns | % composition of population | | | | | | | |
|-------|---|--|--|--|--|--|--|-----------------|
| | | Position in occupation ¹ | | | | | | Potential |
| | Entre-preneurs and free-lance professionals | and free-lance and admin. wives employed | | | | | | local demand |
| A | | | | | | | | |
| В | | | | | | | | |
| | | | | | | | | |

σελίς/page 91

¹ The position within an occupation is purely indicative and should be defined for each site according to locally available information (census surveys).

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ARCHAEOLOGICAL SITE OF PELLAIA CHORA – MACEDONIA – GREECE PHASE 2 – REPORT SUMMARY

Table 5c

| Prefecture of Pella | | | | |
|---|--------|--------|--|--|
| Employment Distribution of population | | | | |
| Number employed by economic | sector | | | |
| | | | | |
| Total employed | 52.321 | 100% | | |
| Employment by economic sector | | | | |
| Agriculture, forestry, fishing | 25.850 | 49,41% | | |
| Mining and quarrying | 67 | 0,13% | | |
| Manufacturing and handicrafts | 6.624 | 12,66% | | |
| Provision of electricity, natural gas, water supply | 335 | 0,64% | | |
| Construction | 2.288 | 4,37% | | |
| Commerce, Hotels, Restaurants | 6.061 | 11,58% | | |
| Transport, Storage, Communication | 1.965 | 3,76% | | |
| Intermediate financial institutions | 493 | 0,94% | | |
| Real estate management, | 750 | 1,43% | | |
| Public sector, defence, social security | 2.359 | 4,51% | | |
| Education | 1.742 | 3,33% | | |
| Health and social welfare | 1.248 | 2,39% | | |
| Provision of services and domestics | 923 | 1,76% | | |
| Other organizations and institutions | 0 | 0,00% | | |
| Did not declare sector of economic activity | 1.616 | 3,09% | | |

Note: The occupational distribution of the population is indicated based on the 1991 census surveys and is not available at the Municipality level, due to the ro-organization of the local government authorities in 1997.

According to the researchers, the distribution shown above is <u>not</u> indicative of the situation in Municipality of Pella.

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Instructions:

5.b – On the basis of the matrix analysis of Item T4, identify and describe (in 3-4 pages) the following:

- Crisis areas
- Successes
- Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
 - Research
 - Protection and conservation
 - Site development policies and implementation of the archaeological resource
 - Promotion policies
 - Policies for the supply of user services
 - Admission fee policies
 - Management and organisation of human resources
 - Budget policies

The general aspects of the evaluation of the SWO(T) analysis are listed below.

| WEAKNESSES | • | Few educated people and few professionals in the immediate area |
|---------------|---|--|
| | • | Demographic structure of population is "ageing" |
| STRENGTHS | • | Easiness, due to proximity, in integrating site employment needs with local inhabitants |
| OPPORTUNITIES | • | Effect "events" to improve "local acceptance" already assisted by the indirect impact employment and income. |
| | • | Expand local skills by further developing the "museum copies" production |

In the matrix table, which follows, individual items that relate to the site management functions are noted. These comments should be considered additional or complementary to the above table.

| | Crisis areas | Successes | Potential |
|--|---|---|--|
| Research | The immediate area of the site cannot cover the technical specialities needed for site jobs | ➤ The site management collaborates with educational institutions through which students come for "on-site" job training every year | Site management should continue this practice of collaboration with educational institutions, but should also make en effort to liaise more with the institutions in the Prefecture (i.e. that they find some common ground for collaboration) |
| Protection and conservation | | The immediate area can provide personnel for seasonal employment and there is a "repetition" of hiring by site management The local availability of personnel helps develop better site to surrounding area relationship | It should be investigated whether the repetitive process can be organised in a form of annual "training camp" for certain specialities, as to train a few new people every year (who may cover nneds at other archaeological locations) Good relationships with the locals would provide support and keep site management informed if any finds are located in the sourrounding area. |
| Site development policies and implementation of the archaeological resource | Site management has to rely to personnel living further away or originating from further away, in order to cover specialist needs. Of the types of jobs categories required to be covered by a site, there are few that can be satisfied | The proximity to Thessaloniki provides a big pool of potential employees from which to draw for the needs of the site. | |

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| | by the local expertise | | |
|--|--|--|--|
| Promotion policies | The activities undertaken for site presentation are of a "global" type nature, and are not directed to the local population, to make it supportive and knowledgeable for the site. | Site management participates in a particular program to familiarize elementary school children with life in ancient times | |
| Policies for the supply of user services | Activities with informational scope for the residents of the local area are generally few Site personnel by and large are not "tuned" to enhancing the understanding and acceptance of the site by local residents, and may even contribute occasionally to negative responses | In general, site management participates and responds positevely to invitations to improve the quality of services offered and to assist visitors; these invitations originate from a variety of sources: national and local government, educational institutions, and other professional bodies (such as for the cases of many day-long conferences, roundtables, etc.) | An effort should be made to increase the skill or knowledge level of personnel of the site in order to be able to facilitate better the visitors to the site |
| Admission fee policies | Admission policy does not differentiate with local residents | | Provide special fees for local residents |
| Management and organisation of human resources | Site management is not bound to select personnel from the immediate area and the selection is really at its discretionary authority Lack of highly technical or scientif personnel in the area. Absence of secondary sector and substantial tertiary sector, results in low technical expertise of | Site management has a certain amount of freedom in the selection and employment of seasonal personnel for completing particular site jobs. This, in parallel with the student trainees originating from different educational institutions, that come to the site, allows site management to execute certain projects for the benefit of the | Site management can expand the series of collaborations with institutions and even volontary organizations; by initiating collaboration with local authorities, it can take advantage of opportunities for both site development and development of skills useful in site operations. Continue effort to inform local |

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| | potential workers and site management must "import" specialist workers | site. These projects might not be possible if personnel were only full time in which case the number of persons occupied would be much less. | residents of site personnel needs and to give priority to local labor |
|-----------------|--|--|---|
| | | Ability of site to management ot hire seasonal employees locally | |
| Budget policies | individual sites (see also Phase 1 Repor | is no relationship of the budgetary function b t), and its implementation does not result from out under and by the Ephorate's jurisdiction (o | n a per site allocation, specifically |



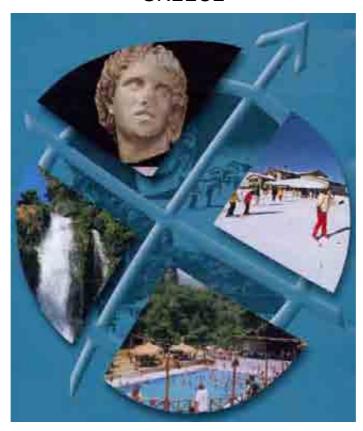
MINISTRY OF CULTURE DIRECTORATE FOR GREECE - EUROPEAN UNION RELATIONS

HELLENIC RESEARCH TEAM - PILOT CASE STUDY:
ARCHAEOLOGICAL AREA OF "PELLAIA CHORA"
PELLA - MACEDONIA - GREECE

PHASE 3 - SUMMARY REPORT - REVISED

PELLA SITE REPORT

GREECE



DIRECTORATE FOR GREECE – EUROPEAN UNION RELATIONS

Project Partner

ARCHAEOLOGICAL RECEIPTS FUND DIRECTORATE OF PROTRACTIONS

Project National Coordinator

PHASE 3 – SUMMARY REPORT

REVISED WITH IMED COMMENTS

PHASE REPORT

On the basis of the matrix analysis performed in the four dimensions, the Phase Report, as in the preceding phases, should achieve the following:

identify, in the present situation, how the organisation of the local economic system hinders (crisis areas) or assists (success areas) management of the site;

at the same time, provide preliminary indications about future potential. In other words, the Report must state what critical situation of the local economic system can realistically be transformed in the short-to-medium term;

indicate, on the contrary, what changes the economic system has undergone (in all the aspects analysed) that can be directly ascribed to the site.

INTRODUCTION

With respect to the analysis of the economic system the following main points may be made:

- i. the organisation of the local economic system, as is described further on, at present, is developing independently of the management of the site and for practical purposes one can identify few relationships (positive or negative)
- ii. at the present time, as in the past, the site has functioned based on the legislative structure which keeps it apart from the surrounding area (see Phase 1 Report) and the local economic system in reality has no links with the site and the management of the site; however, while in theory, for the future, there are a number of areas for potential collaborations and joint activities, there are few, if any, that can be realistically expected to be transformed in the medium term and practically none in the short term
- iii. based on the interviews and contacts with representatives of a number of local authorities and organisations, it is evident that, except for the site's immediate area (see explanation of territory definitions below), the presence of the site has not influenced the economic system, and will be the cause of little influence on the development of the economic system;
- iv. finally, both in the past and the present, there cannot be changes or influences that can be ascribed to the site that have had an effect on the economic system, although the surrounding area's private actors voice an interest in making something out of the existence of the site, but even they believe little will be achieved.

There are a number of reasons for the above and they will be discussed further on.

In a recent presentation at a "Development Forum" in April 1999, that took place in Pella Prefecture, the following aspects were identified as representative of the economic developmental situation and potential in Pella Prefecture:

- a. different speeds of development among areas of the Prefecture
- b. declining agricultural per unit revenue
- c. high cost of transportation for the local products to reach their markets
- d. low response of the agricultural population to the competitive environment and the technological changes

- e. inability of the secondary sector to adapt to the new market realities due to lack of the needed structures
- f. absence of integrated policy and co-ordinated initiatives in the tertiary sector services, tourism and culture
- g. little integration in the policies for the valorisation of the natural environment and resources
- h. slow development and promotion of the cultural heritage and resources
- i. absence of initiatives for information, and sensitisation of local population
- j. ineffective policies in the sector of vocational training
- k. under-valuing of the support services needed for the developmental processes

For purposes of understanding the economic activity, it is important to identify the territorial context, thus is necessary to define the particular levels of the territory surrounding the site (see also relevant discussions in Phase 1 and Phase 2 Reports):

As such we consider:

- "immediate area" the so-called "Pellaia Chora" which has been described in the Phase 1 Report
- "local area" the area within the boundaries of the Pella Municipality, which is the competent local government authority for the archaeological site
- "surrounding area" the greater Pella site area, without regard to specific administrative boundaries, because due to its geographic position, this area, draws from territory of neighboring municipalities and Prefectures (Giannitsa in Pella Prefecture and Chalkidona and Koufalia, in Thessaloniki Prefecture)

It should be noted that the Pellaia Chora definition of the site area implicates <u>two</u> Municipalities, since the Tomb at Archontiko actually lies at the edge (but within) the boundary of the Municipality of Giannitsa.

We consider, however, that the relevance of the analysis is best served by studying the Pellaia Chora within the context of the Pella Municipality, both because the Municipality of Giannitsa does not consider itself an "archaeological" municipality, and because by far the largest part of the Pellaia Chora (including the main site) is part of the Pella Municipality.

The residents of the Municipality have been brought together by the formation of the Municipality as a result of the implementation of "Program Kapodistrias" (see analysis in Phase 2 Reports). In Pella, the Communities existing before the new Municipality (formed in 1997 by Law 2601 for Local Government) had established economic and social relationships with the larger settlements nearer to them. The new Pella Municipality does not include any of these larger settlements, which are:

- Giannitsa in the West
- Koufalia in the North-East
- Chalkidon in the South-East

It is also noteworthy that the latter two settlements belong to the Thessaloniki Prefecture, and as such follow a different political and governmental direction.

This particularity results in a non-cohesive Municipality and places a heavy burden on the local Municipal government to try and create a cohesive unit, based principally on the Pellaia Chora site area attraction, since, as was noted in Phase 2 Reports, the "local" area does not have any other attractions.

As has been noted in Phase 2 Summary Report, the natural, cultural and archaeological and historic resources of Prefecture of Pella are located in the western-northern area of the Prefecture. Visitors, therefore, to the Prefecture are directed to this area, which has the concentration of the attractions, and only incidentally stop at Pellaia Chora site for a visit, on their way to their destination.

The limits of the eleven (11) Municipalities of the Prefecture are indicated in the map on the following page. This map can serve as reference for the economic gravitations of the various aspects being described later on.

PELLA PREFECTURE – MUNICIPALITIES BOUNDARIES MAP See Pella images

The distances within the Prefecture of Pella are sufficiently short that there is no need and no incentive to the visitor to stop at any other location after a visit to Pella site, (such as the Pella settlement or the nearby town of Giannitsa) and normally moves on. It is noteworthy that Edessa, the Prefecture capital and center for the leisure and other visitor activities is only at a distance of 50 kms from the Pella site, being reached easily within 45 minutes by car (half of the distance is by 4-lane national road, the other being a two lane adequate country road).

The relationships, therefore, between the economic structure of the surrounding area and the site (and its management) are at present very low or nil, and both the representatives of the economic sector (public and private) and the site management, see few possibilities for change, given the present facilities and site layout. Thus, in terms of "short term" and "medium term", which are the periods under review, we can expect little, and see "bleak" prospects.

It must also be taken into consideration that the nearly site of Vergina, the other Macedonian city (of the three in the Macedonian network) is much more promoted and known, because of the finds of the tombs of Philip of Macedonia (father to Alexander the Great) and the very impressive archaeological finds.

In the following discussion, we have chosen to present data and information not only from the immediate area but also from the Municipality of Giannitsa, which, at 10 kms from the site is the largest nearest town and the only center of population and activity (however insufficient) that might have anything to do with the site.

1. Size of the productive structure located on the territory and its effects on the single activities of the site management (item E1)

1.a - Brief description (2-3 pages) of the structure of the productive activities located on the territory (Item E1: research sector, planning and freelance sectors, craft sector for restoration, etc.) that have a direct effect on site management.

The descriptive section is completed by a map showing the area of gravitation and location (with legend) of the production activities considered.

The number and dimensions of the businesses (or individuals) operating in the sectors in E1 must be shown in Table 3.a (see point 3), which must also tell of the employment impact of the site functions.

The leading economic activity of the Prefecture is agriculture followed by livestock. The area is dominated by cultivation of fruit trees with important production of peaches, apples and cherries as well as the cultivation of cereals.

The main livestock production consists of milk (mainly from sheep and goats and secondly from cattle) as well as cattle meat that reinforce the local economy.

The distribution of the land uses is indicated in the table below, and shows the great importance of agriculture and related activities in the economic distribution of the land resources.

| Uses of Land Area | Acres | % |
|----------------------|---------|-----|
| Cultivated areas | 940.900 | 38% |
| Grazing ground Areas | 745.200 | 30% |
| Forest | 588.700 | 23% |
| Water areas | 79.900 | 3% |
| Inhabitable areas | 73.600 | 3% |
| Others areas | 77.500 | 3% |

Source : (E.Σ.Y.E.) National Statistical Service 1991 Census data

The productive firms of the secondary sector show a heavier concentration (gravitational location) in the Province of Giannitsa (located in the east and south-east of the Prefecture and including the Pella Municipality), since Giannitsa is the largest town of the Prefecture and also the traditional center of the agricultural area; the distribution is indicated in the table below:

PELLA PREFECTURE
Distribution of Industrial-Manufacturing-Handicrafts firms by province

| Province | % |
|-----------------------|------|
| Province of Edessa | 33,5 |
| Province of Giannitsa | 46,5 |
| Province of Almopia | 20 |

Source: Pella Chamber of Industry and Commerce based on 1991 Census data

In the tables below different forms of analysis of the productive sector is presented. It will be evident that the totals and the breakdowns do not match. This is due to different categorizations applied by the different sources (agencies or organizations) carrying out the surveya, the different chronological periods of the surveys, the fact that firms are founded and others close (particularly smaller ones). The official data are those based on the 1991 Census Survey, but these data do not seem to correspond to the requirements of the Phase methodology. So, the other sources and data have been collected and are presented even with the difficulty of being based on different categorizations.

On the basis of the distribution of economic sectors noted in the Phase 3 parameters we have tried to match the details of data available from the Hellenic Statistical Service and show the results in the table below. It is noted that the "matching" is the result of our effort to find relevant correspondence between the Matrix parameter definitions (E1a to E1p) and the categories of data and information available.

We have tried to match as much as possible the activities, and have included, for clarification, the types of productive activities considered in the data of the table.

When a "cell" is empty, it either means that there is no productive activity (firm) reported in that category, or that the information collected does not match the particular Matrix Parameter.

PRODUCTIVE ACTIVITIES SECTOR DISTRIBUTION

| *E1 | Productive Activities | Number of firms | Description of firms' activities included |
|-----|--|--------------------|---|
| E1a | Research sector | | |
| E1b | Planning and free-lance sector | | |
| E1c | Craft sector for restoration | | |
| E1d | Chemical industry sector | | |
| E1e | Mechanical industry sector | 39 | -General mechanical -Manufacture of agricultural and forestry machinery |
| E1f | Other industrial sectors (specify) | 270 | -Lights and lamps -Chairs and seats -Other furniture -Wood products -Clothes, shoes |
| E1g | Craft sector for gifts and fancy goods | | |

| E1h | Other craft sectors (specify) | | |
|-----|---|------------|---|
| E1i | Information technology sector | | |
| E1j | Publishing trade sector | 14 + 31 | "31" refers to firms trading in books & newspaper and stationary supplies |
| E1k | Communication sector | 10 | -Television -Radio -Publicity |
| E11 | Local farming, agro-food and agro- industrial sector | 53 | -meat and poultry -sugar and products of fruits and vegetables -milk and cheese -tea and coffee |
| E1m | Catering sector | 349 | -Restaurants -Pastry shops -Bars - Coffee houses - Canteens |
| E1n | Reception and hotel sector | 17 | -Out of which 5 with catering facilities -Hotels & other |
| E1o | Tourist services sector (tour operator, etc.) | 12 | Travel agencies – bureaus |
| E1p | Trade sector | 2019 | -284 Wholesale trades -1735 Retail trades |
| | TOTAL FIRMS | 2814 | |

Source: Ministry of Development – Department of Industrial Investments 93-94 Secondary (Industrial) Sector survey

CROP PRODUCTION IS OVER AN EXTENDED PLAIN (VIEW FROM EDESSA)

GREENHOUSES LINE UP THE COUNTRY SIDE

The Prefecture has also important export activity. A number of firms include export among their customers. The list below is indicative of the relevance of the activity, where it can be seen that the food and beverage sector (agricultural produce products) is by far the predominant group.

Export Activity

| Category of activity | Number of firms |
|-----------------------|-----------------|
| Food-beverage | 127 |
| Marble works | 4 |
| Machinery-Machines | 6 |
| Furs-leathers | 3 |
| Metallic construction | 3 |
| Clothes | 6 |
| Textile Industry | 3 |
| Shoes | 1 |
| Other | 35 |
| Total | 188 |

Source: Chamber of Commerce and Industry of Pella (1991)

Compared to the next table which gives an analysis of the secondary sector we see that 188 out of 3257 firms are reporting exporting activity, that is 5.8% of total.

TOBACCO STORES ARE MULTI-STORY CONSTRUCTIONS

In the surrounding area there are only a couple of light manufactures, but these are located in the neighbouring Municipality of Giannitsa, outside the Pella community and outside the Municipality boundaries, and bear no relationship to the site, to merit any consideration.

In the table below another breakdown of the secondary sector is provided – manufacturing and handicrafts – based on a more recent survey of the Prefecture's "Pella Development Agency". It is noted that since the basis of the categories distribution is different from the analysis provided earlier there is no attempt to match the two.

PELLA PREFECTURE
Manufactures and Handicrafts by Category

| | 1 | |
|---|--------------------|--------|
| Category | Number of firms | % |
| Food-beverage | 558 | 17,13 |
| Wood construction, furniture & paper | 487 | 14,95 |
| Textile clothes & shoes | 481 | 14,77 |
| Relative with car and car accessories | 452 | 13,88 |
| Machinery and metal construction | 413 | 12,68 |
| Production and repair of electric and electronic equipment, irrigation and water supply material | 261 | 8,01 |
| Other handicrafts (printing, production of building materials, cement production, ceramics, products for home uses, marble work, chemical products and paints, wire products, etc.) | 594 | 18,24 |
| Various Manufactures | 11 | 0,34 |
| Total | 3.257 | 100,00 |

Source : Analysis by Chamber of Commerce and Industry on data from the database of Pella Development Agency S.A. 1995

The following table is an analysis of the business activity of the productive firms registered at the Chamber of Commerce and Industry. Explanations on the information provided are at the end of the Table.

ANALYSIS OF ACTIVITY OF PRODUCTION FIRMS

| Business | Description of Activity | FIRMS LOCATED IN MUNICIPALITIES OF GIANNITSA PROVINCE | | | | IES | - Munici | | | |
|------------------|--|--|------------|------------|------------------|-------|----------------------------------|--------------------|----------------------|------------------------------------|
| Activity Code | (the Greek original description has been retained in some categories to facilitate clarifications) | | Krya Vrisi | Karyotissa | Athyra & Rachona | Pella | pality of Pella Sub- Total | Province Totals | Prefecture Totals | % of Munici- pality of Pella |
| 1000-1450 | Coal, Lignite, Mining, Quarries | 7 | | 4 | | | | 7 | 26 | |
| 1500-1599 | Enterprises producing, transformation, standardization, of food and beverage products | 161 | 69 | 8 | 6 | 8 | 14 | 244 | 657 | 2,13% |
| 1600 | Production of tobacco products | 2 | | | | | | 2 | 2 | |
| 1700-1775 | Production of textiles and spinning mills | 2 | | | | | | 2 | 24 | |
| 1800-1830 | Manufacture of clothes and fur products | 224 | 42 | 30 | 20 | 67 | 87 | 353 | 648 | 13,43% |
| 1900-1930 | Manufacture and production of leather products | 16 | | | | | | 16 | 30 | |
| 2000-2053 | Wood industry and production of wood products | 17 | 3 | 1 | | 1 | 1 | 21 | 128 | 0,78% |
| 2100-2125 | Production of paper pulp and paper related products | 11 | | | | | | 11 | 26 | |
| 2200-2233 | Printing and publishing | 12 | 2 | | | | | 14 | 39 | |

| | | | | | | 1 | 1 | 1 | 1 | 1 |
|------|--|----|----|---|----|----|----|-----|-----|-------|
| | Production of chemical substances, soap and cleaning products, glues | | | | | | | | | |
| 2400 | and plastic films | 5 | | | | | | 5 | 13 | |
| 2500 | Products from plastic raw materials | 22 | 3 | | | | | 25 | 43 | |
| | Production from other non-metallic raw materials, cement, asbestos, gypsum and stone works | 40 | 4 | | | 2 | 2 | 46 | 110 | 1,82% |
| | Products from base metals and other ferrites | 3 | | | | | | 3 | 6 | |
| 2800 | Manufacture of metal products (except machinery and metal furnishings) | 90 | 22 | 9 | 13 | 10 | 23 | 135 | 347 | 6,63% |
| | Manufacture of all types of metal products | 42 | 3 | 1 | 2 | | 2 | 47 | 80 | 2,50% |
| | Manufacture of office equipment, machinery, computers, electrical apparata | 9 | 1 | | | | | 10 | 20 | |
| | Manufacture of medical and other measuring instruments | 7 | | | | | | 7 | 14 | |
| | Manufacture of vehicles, motorcycles and other transport equipment | 12 | | | | | | 12 | 20 | |

| | Manufacture of furniture, jewelry, music organs, sport articles and | | | | | | | | | |
|-----------|--|-----|-----|----|----|----|----|-------|-------|-------|
| 3600 | | 98 | 8 | 1 | 7 | 3 | 10 | 116 | 229 | 4,37% |
| | Recycling of metal products and other wastes | 2 | | | | | | 2 | 3 | |
| | | | | | | | | | | |
| | Provision of electricity, gas, steam and hot water | | | | | | | | 1 | |
| | | | | | | | | | 1 | |
| | Construction, buildings and others (kataskevi ktirion kai allon ergon) | 174 | 37 | 4 | 4 | 10 | 14 | 225 | 678 | 2,06% |
| | Sales, servicing and repairs of | | | | | | | | | |
| 5000 | vehicles and other related activities | 463 | 80 | 13 | 23 | 20 | 43 | 586 | 1.274 | 3,38% |
| | | | | | | | | | | |
| 5100 | Wholesaling and commercial agents | 527 | 139 | 39 | 30 | 41 | 71 | 737 | 1.759 | 4,04% |
| 5200 | Retail business | 992 | 213 | 21 | 24 | 33 | 57 | 1.262 | 2.876 | 1,98% |
| | Hotels, restaurants, campings, bars | | | | | | | | | |
| 5500 | (xenodoxeia, kampingk,estiatoria, bar) | 401 | 103 | | | | | 504 | 1.321 | |
| 6000-6200 | transport (metafores) | 19 | 1 | | | | | 20 | 37 | |
| | The second selected and district and distric | | | | | | | | | |
| | Transport related activities and Travel agencies | 19 | 6 | | | | | 25 | 59 | |

| 6400(Post and Telecommunication) | 1 | | | | 1 | 7 | |
|---|-----|----|--|--|-----|-----|--|
| Financial intermediaries and 6500 financial institutions | | | | | | 2 | |
| Private insurance and related financial activities (Idiotikes Asfaleies kai synafeis xrimatooikonomikes drastiriotites) | 132 | 38 | | | 170 | 443 | |
| Real estate management (diaxeirisis 7000 akinitis periousias) | 2 | | | | 2 | 11 | |
| Leasing of machinery, equipment, and of house and personal equipment (Ekmisthosi mixanimaton kai exoplismoou xoris xeiristi, ekmisthosi eidon atomikis 7100kai oikiakis xrisis) | 1 | | | | 1 | 3 | |
| Data processing and related activities (pliroforiki kais synafeis 7200drastiriotites) | 10 | 1 | | | 11 | 40 | |
| Research and development (erevna 7300kai anaptixi) | | | | | | | |
| Legal, Accounting and financial and Tax services, market research, 7400 advertising, photography, lottery | 85 | 15 | | | 100 | 241 | |
| Public Administration (dimosia 7500dioikisi) | 2 | | | | 2 | 4 | |
| 8000 Education (ekpaideusi) | 45 | 15 | | | 60 | 116 | |

| Health and social welfare (ygeia k 8500koinoniki merimna) | ai | | | | | | | 5 | |
|---|-------|-----|-----|-----|-----|-----|-------|--------|-------|
| Disposal of wastes, refuge, and 9000health rubbish | | | | | | | | | |
| Activities of professional business 9100employer organizations | , | | | | | | | | |
| Leisure, cultural, athletic, activitie 9200(including cafeterias) | s 74 | 19 | | | | | 93 | 223 | |
| Provision of other services and 9300 activities | 74 | 18 | | | | | 92 | 225 | |
| TOTALS | 3.803 | 842 | 131 | 129 | 195 | 324 | 4.969 | 11.790 | 2,75% |

Source: Chamber of Commerce Pella 1999

The above analysis is based on the list of registered members of the Chamber of Commerce and Industry. The categoriies follow a breakdown of the Statistical Codification system (hence the listed codes).

The membership includes all sorts of legal forms of business activity, companies, individuals and professionals and trade. It is noted that the list does not exclude any members not having paid their dues (such members may have ceased operation or be deceased – if individuals) because the present data processing facility of the Chamber did not allow for such differentiation. The Administrative unit of the Chamber was unable to offer any estimates on the proportion of such "inactive" members, and even less to try to guess proportions by category.

It is noted that according to Greek law, while most of the businesses must be registered with the Chamber, some exclusions are in effect, such as agricultural producers dealing in raw produce, hotels (registered at the Chamber of Hotels, but listed individually within the Phase 2 Report).

The representatives of the productive sector (Chamber Council position presentation at a recent Conference) have indicated that the whole Prefecture is facing problems with the activity of the businesses primarily due to the following elements:

- i. insufficient infrastructure particularly with road transport
- ii. only one of two delineated industrial areas in full operation
- iii. generally most prefecture firms are small, and family businesses, unable to take advantage of economies of scale
- iv. lack or absence of professional scientific staff to support various necessary functions for these businesses
- v. many businesses are seasonal due to their involvement with the processing of seasonal fruits, vegetables, produce
- vi. financial burden on staff employment with heavy employer contributions for social security and taxes
- vii. inability to access sub-contracting market
- viii. the recent war in former Yugoslavia
- ix. lack of government support and grants for technological renovations and upgrading of operational equipment
- x. slow adoption of quality certifications ((ISO etc.) by local businesses

1.b - On the basis of the matrix analysis of Item E1, identify and describe (in 3-4 pages) the following:

- Crisis areas
- Success areas
- Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
- Research
- Protection and conservation
- Site development policies and implementation of the archaeological resource
- Promotion policies
- Policies for the supply of user services
- Admission fee policies
- Management and organisation of human resources
- Budget policies

The results of this analysis is summarized in a table following:

It is noted that in the table only short and medium term implementation possibilities are considered under the "potential" aspect.

Table 1.a – Assessment of impact of Item E1 (**productive structure**)

| | Crisis areas | Successes areas | Potential | | |
|---|--|--|--|--|--|
| Research | | The site management operates independently from the productive structure and there is no direct relationship | | | |
| Protection and conservation | > See above | | > See above | | |
| Site development policies and implementation of the archaeological resource | The present situation is that there has been restricted development for visits. | A study has been undertaken to develop the site and improve the visit layout and make more area visitable. | With the implementation of plans to integrate the site, it is likely that the overall site visit will be longer and more interesting, and the longer period of stay of visitors will give rise to opportunities for development of "productive activities" in the site area. | | |
| Promotion policies | It is noted that no entity may use historic data or pictures to present or promote the site without the express permission and approval of the Ministry of Culture. Private sector and local actors could independently | | With the implementation of plans to integrate the site, it is likely that more activity will be undertaken to promote the "new" site and thus involve the productive structure, particularly in the relevant communication sectors. | | |

| | (and do to a certain extent) promote the existence of the site, but with little relevance to relating the visit to the productive sector. | sectors. |
|--|--|--|
| Policies for the supply of user services | The immediate and local area Protection Zoning System acts as a detriment for construction or development of major faculties for visitors. Area of site has low economic and business significance compared with neighbouring areas of Giannitsa, Edessa (further on), and Thessaloniki | With the implementation of plans to integrate the site, it is likely that more activity will be undertaken by the private sector to support and offer new user services. Site management will be promoting (upon completion of the new Museum) educational or instructive activities related to the Museum exhibits or the find of the archaeological area in relation to the availability of the new Museum multipurpose hall and exhibition areas, and could collaborate with the private sector in the area. |
| Admission fee policies | These are set outside the responsibility of site m and fees are collected directly by Archaeologica | nanagement by appropriate departments of the Ministry al Receipts Fund; no change is envisaged |

| Management and organisation of human resources | | Site management does not have a policy of subcontracting site works, except building etc., which are supervised by the Ephorate; so few possibilities exist for the area. | |
|--|--|---|---|
| Budget policies | No provisions are envisaged in creating additional or independent sources of financing. | Site management proposes budget to Ministry, gets approval and implements according to fund allocations. There are no relationships with local area | Activity of private sector to develop user facilities would not be hindered by site management (which would assist "psychologically" if it agrees, but without funding) |

2. Size and effects of cultural and leisure time activities offered in the area of gravitation on the single activities of the site management.

2.a - Brief description (2-3 pages) of the cultural and spare time activities offered (Item E2: music activities, theatre activities, cinema activities, convention-events activities, etc.) that provide direct support for site use.

The descriptive section may be completed by a map showing the area of gravitation and location (with legend) of the leisure time infrastructure and cultural activities considered (theatres, cinema, convention centres, etc.). If the area of gravitation coincides with that of point 1.a, the infrastructure may be shown on the same map.

It should be pointed out that at the present time no cultural or spare time activity being undertaken or organized in the Pella Prefecture has any relation to the archaeological site.

However, there are a number of facilities in the Prefecture. In Phase 2 Report (Table 2b – Territorial Facilities, pp. 37-40) a number of these facilities were individually identified. Here we provide a statistical list and a description of those we consider more relevant - those at <u>close</u> distance to Pella Municipality or physically located <u>in</u> Pella Municipality; these are presented in the following table.

CULTURAL AND ATHLETIC FACILITIES

| Cultural and Athletic facilities | Municipality of Pella | Municipality of Giannitsa | Pella Prefecture | % Of facilities at Municipality of Pella |
|-------------------------------------|--------------------------|------------------------------|------------------|---|
| Theatres | | 1 | 5 | 0% |
| Cinemas | | 1 | 3 | 0% |
| Cultural centers | 5 | 1 | 37 | 13,51% |
| Other centers | 2 | | 13 | 15,38% |
| Libraries | 2 | 1 | 18 | 11,11% |
| Museums | | | 4 | 0% |
| Multi-purpose halls | | | | |
| Other cultural facilities | | | | |
| Football fields | 6 | 12 | 107 | 5,61% |
| Basketball fields | | | | |
| Athletic centers | 2 | 1 | 8 | 25,00% |
| Track fields (400 m) | | 2 | 14 | 0% |
| Other athletic facilities | | | | |

Source :National Statistical Service data based on 1991 Census

The seeming higher percentages noted for the Municipality of Pella in Cultural Centers arise from the fact that the formation of the Municipality (see earlier discussion on Local Authorities Program "Kapodistrias") put together separate Communities having small cultural organizations and meeting halls.

The higher percentage of "football fields" also is due to the same reason.

Cultural Organizations

There are a number of cultural organizations in the Prefecture, distributed among the various townships. Even though there is no relationship with the site management and no activities of these organizations are locationally or culturally (at least so far) related to the site, we consider it useful to provide a list of these organizations that are closer to Pella site (within the Prefectural province) since in the future they may develop some collaboration with site management.

PELLA PREFECTURE PROVINCE OF GIANNITSA Cultural Associations and Organisations

Municipality of Pella

Cultural Association "Pella"

Instructive and cultural Association of Nea Pella Community

Theatrical Workshop of Pella

Municipality of Giannitsa

Historical and Folklore Society "Phillipos"

Cultural Association "Pella"

Association of Pontioi of Giannitsa

Cultural Association of Nea Trapesounta (Tsali)

Lyceum of "Ellinidon" (Giannitsa Branch)

Cultural Association of Paralimni "Platon"

Cultural Association of Kariotii of Giannitsa "The An. Pomilia"

Association of Pontioi of Mesinio

Formative Association of Asvestariotii of Giannitsa "Gonos Giotas"

Cultural Association of Pentaplatano "Pylorini"

Cultural and Formative Association of Ampelio

Cultural and Formative Association of Damnio "Diogenis"

Student Association

Formative and Civilizing Association of Kariotissa

Instructive Artistic and Civilizing Association of Kariotissa

Cultural Association of Gallatii "Philippos"

Progressive and Formative Association of Kali

Progressive Culturizing Association of Palaifito "Pyrsos"

Dancing Association of Esovalto 'Megas Alexandros"

Municipality of Krya Brisi

Civilizing Association of Epirotioi of Krya Brisi "Pyrros" Association of Pontioi "Al. Ypsilantis"

Source: Prefecture of Pella - July 2000

Additionally, the elected Vice Prefect responsible for cultural activities, indicated that:

- 1. lack of facilities (i.e. no ancient theatre, etc.) on site and
- 2. the nature of the material of the site remains which are deteriorating (see Phase 1 Report on maintenance)

prevent site management from allowing events on site.

A list of cultural activities undertaken is provided, for information purposes, and it is evident that the above comment adequately describes both the current situation and the lack of future potential. Nevertheless in the table at the end of this section, certain potentials noted by the site management are identified.

We note (also remarked in Phase 2 Report) that the Municipality of Pella is in the process of constructing a small Conference and Public Events Center (apprx. 200 seat capacity); we believe however, this is for meeting the municipal functions demand, since the population numbers in the area cannot justify the economic operation of these facilities.

Similar type facilities and services can be found at neighboring towns (see relevant Table 2b referred above in Phase 2 Report) with larger populations, particularly Giannitsa which is the largest settlement in the area (approx. 40.000 inhabitants), at 10 kms from Pella in the west, and at Chalkidon, a town of the Prefecture of Thessaloniki, just at the Prefecture boarder, at 10 kms. from Pella in the east.

The information on cultural and leisure facilities in the earlier table is based on the 1991 Census and may be outdated (next Census is expected in 2001). But even so, it is evident that the Municipality of Pella ranks low in such facilities. Some pictorial examples of the facilities in the Municipality (not necessarily in the Community) of Pella are shown in the following pages.

| CULTURAL FACILITIES AND ORGANIZATION | IS AT PELLA MUNICIPALITY |
|--------------------------------------|--------------------------|
| | |
| CULTURAL GROUP OF PELLA COMMUNITY | |

CULTURAL CENTER AND FOOTBALL ACADEMY OF ATHYRA COMMUNITY See Pella images

ATHLETIC FACILITIES AT PELLA MUNICIPALITY

ENCLOSED GYM

FOOTBALL FIELD

It is noted that the town of Edessa, the Prefecture capital, only about 45 minutes drive from Pella site, not only has very attractive natural resources, but also sufficient accommodation and leisure facilities which attract the visitors.

An Edessa area attractions map is shown on the following page (also included in the Phase 2 Summary Report) and is followed by some pictures showing entertainment establishments in the area.

A very good example of the application of European funds of the *Leader* initiative is the restoration of an old factory just at the edge of a cliff overlooking the plain; some pictures of the restoration are included.

EDESSA AREA ATTRACTIONS MAP

LEISURE / ENTERTAINMENT FACILITIES AT EDESSA

"LEADER" SIGN IDENTIFYING UTILIZATION OF EUROPEAN FUNDS See Pella images

OLD FACTORY RESTORATION AT EDESSA

Various Cultural and other Events

In Phase 2 Report a list of various cultural and religious events was provided, primarily in order to make evident the lack of such attractions in the Pella area, which could result in an indirect way to attract visitors to the site. This is obviously not the case, since in the Prefecture the majority of these events are concentrated in the western area of the Prefecture.

The categories and individual events taking place in the Prefecture of Pella include, as in other parts of Greece, certain national and religious celebrations and holidays. While these may be considered of local importance, their geographical distance from the site, and their attendance levels (no data were available, but qualitative assessments were given in various interviews), would rank them not of a size or importance to be considered "resources" able to attract visitors to Pella.

However, since some of these events (religious, commercial, traditional) are taking place with certain regularity in different locations of the Prefecture, they may be considered as having a potential, which could be exploited for the indirect promotion of the site.

The list below is more comprehensive with respect to the surrounding area within the Province of Giannitsa (Municipality of Giannitsa and Pella):

| Locality | Period | Event |
|-----------|----------------------|---|
| Pella | 30 June | Religious Festival (celebration of Apostles Peter and Paul) |
| | 29-30 July | Local Cultural Festival |
| Giannitsa | 20 October | Historic Celebration of the Freedom from Turkish Occupation |
| | 6-12 September | Commercial Fair |
| | April | "Zoodocheia" by the Cultural Association of Nea Trapesounta |
| | May | "Paralimnia" by the Cultural Association of Paralimni "Platon" |
| | July | "Pyrrichia" by the Association of Pontioi of Mesinio |
| | July | "Karyotika" by the Cultural Association of Kariotii of Giannitsa "The An. Pomilia" |
| | August | "Sotiria" by the Cultural Association of Pentaplatano "Pylorini" |
| | Summer Film Festival | Film Festival by the Municipality of Giannitsa and other Cultural organizations |
| | 23 December | Local Traditional Feast "Kolint: Mpampo" with bond fires by Municipality of Giannitsa and other Cultural organizations |

2.b – On the basis of the matrix analysis of Item E2, identify and describe (in 3-4 pages) the following:

- Crisis areas
- Success areas
- Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
- Research
- Protection and conservation
- Site development policies and implementation of the archaeological resource
- Promotion policies
- Policies for the supply of user services
- Admission fee policies
- Management and organisation of human resources
- Budget policies

The results of this analysis are summarised in a table following:

It is noted that the site management is not involved and foresees no potential that it will be involved in "recreational" activities.

Therefore the following table is relating only to "cultural" activities.

It is noted that in the table only short and medium term implementation possibilities are considered under the "potential" aspect.

Table 2.a – Assessment of impact of Item E2 (cultural and leisure time activities)

| | Crisis areas | Successes areas | Potential |
|---|---|-----------------|--|
| Research | > There is no relationship with cultural activities in the area | | No potential is envisaged in this area. |
| Protection and conservation | > There is no relationship with cultural activities in the area | | |
| Site development policies and implementation of the archaeological resource | So far site development has been primarily directed at the protection of the site and the finds | | Prefecture and surrounding area cultural, athletic, etc. clubs can involve site in their activities |
| Promotion policies | At present there is no policy of site management relating to promotion (promotional activities are decided at Ministry level) | | Site management will look favourably with respect to organising on-site photographic exhibitions related to the archaeological site or to related subjects |
| | | | Site management is positive in the use (and in allowing third parties the use) of the multi-purpose hall of the new museum for all sorts of cultural or educational |

| | | activities. Site management will consider the possibility to allow for the organisation on-site of a cultural musical festival or event related to the appreciation of the archaeological site under the August full moon (similar events did take place in other archaeological sites in |
|--|---|--|
| Policies for the supply of user services | Site is not a destination and does not offer opportunities for visitor nights | Greece). In developing the new Museum and the re- organisation of the site are, it is projected that the Ephorate will put out to public tender the operation of the refreshment services. |
| | | There is a potential for the area cultural and other organizations to incorporate the site cultural element in their activities |
| | | The completion of the new site Museum, within its |

| | | | multi-purpose hall could provide a basis for scientific and cultural events to take place in the environment of the archaeological area. |
|--|--|--|---|
| Admission fee policies | Decision making on fees done independently from site particulars | > No relationship | No potential possibilities under present functional organization |
| Management and organisation of human resources | Site personnel is not involved in any cultural activities | | After the building of the new museum, certain activities that may be related and make use of the new facilities and the enhaced voisit aspects, may invlove site management and personnel in cultural activities related to the site or the exhibits. |
| Budget policies | ➤ Budgeting done for all of Ephorate's sites and not for specific site | Funding is budgeted and provided to site management independently from revenue of entrance fees (thus, the available funds are not dependent on the income generated by entrance fees) | There is no likelihood that the site's (really Ephorate's) budget will contain provisions for cultural activities, other that those arising out of the normal operations. |

3. Structure of the job market and effects on the single activities of the site management (Item E3)

3.a - Brief description (2-3 pages) of the job market structure (Item E3: level and composition of unemployment, level and composition of employment, professional qualifications) and training processes that directly affect the site management activities.

Completing the descriptive part are three tables:

As a general comment it should be pointed out that the market structure of the area develops independently from the site and has little direct relation to the site, with the exception of the job openings that the site management can fill from local residents (these are basically labourers, maintenance workers, and other of non-specialised skills).

We see that the Prefecture, which has a great dependence on the primary sector (agriculture and packing and canning of produce) shows that in the distribution of the active population (actively wage earners):

Distribution of active population

| Economic sector | % |
|-------------------------------|-------|
| Primary sector | 49% |
| Secondary sector | 18% |
| Tertiary sector | 30% |
| Did not declare or unemployed | 3% |
| Total | 100 % |

Source: National Statistical Service data based on 1991 census

The distribution of productive firms analysis is derived from the different sources of data and information (which are not directly compatible), as explained below.

In order to provide data for the Table 3a, we have based the column "No. of Firms" on the Table in 1a providing the distribution of firms per category; we are basing the information on column "No of employees" on the information of the following table, and have tried to match the categories with the Parameters of the Matrix (evidently the table has many empty cells). In the following table, the Cells, which are transferred in Table 3a, are marked with *shading*.

COMPOSITION OF EMPLOYMENT

| | Male | Female | Total | % Total |
|---|--------|--------|--------|---------|
| Total employed | 37.677 | 14.644 | 52.321 | 100% |
| Employment by economic sector | | | | |
| Agriculture, forestry, fishing | 19.649 | 6.201 | 25.850 | 49,41% |
| Mining and quarrying | 65 | 2 | 67 | 0,13% |
| Manufacturing and handicrafts | 3.660 | 2.964 | 6.624 | 12,66% |
| Provision of electricity, natural gas, water supply | 319 | 16 | 335 | 0,64% |
| Construction | 2.273 | 15 | 2.288 | 4,37% |
| Commerce, Hotels, Restaurants | 4.464 | 1.597 | 6.061 | 11,58% |
| Transport, Storage, Communication | 1.868 | 97 | 1.965 | 3,76% |
| Intermediate financial institutions | 314 | 179 | 493 | 0,94% |
| Real estate management, | 429 | 321 | 750 | 1,43% |
| Public sector, defence, social security | 1.747 | 612 | 2.359 | 4,51% |
| Education | 784 | 958 | 1.742 | 3,33% |
| Health and social welfare | 483 | 765 | 1.248 | 2,39% |
| Provision of services and domestics | 569 | 354 | 923 | 1,76% |
| Other organizations and institutions | | | 0 | 0,00% |
| Did not declare sector of economic activity | 1.053 | 563 | 1.616 | 3,09% |

Source: National Statistical Service based on 1991 Census data

There are no data per firm, so we have used the above data to try to enhance the information in the Table 3a.

It must be noted, however, as has been mentioned in other sections, as well, that the site activities are not affected by the productive structure of the territory. Employment on site has some relationship with the surrounding area (see under 3 further below), and this is the main relationship that can be attributed to the site management.

Table 3.a – Size of productive sector located on the territory that affects the single site activities

| Sectors | | Size of the productive structure | | Impact on site activities (see note 1 below) | |
|---------|--|----------------------------------|--|--|------------|
| | | No. of firms totally | No. of employees (or free-lancers) | Employed | Unemployed |
| E1a | Research sector | | | | |
| E1b | Planning and freelance sector | | | | |
| E1c | Craft sector for restoration | | | | |
| E1d | Chemicals industry sector | | | | |
| E1e | Mechanical industry sector | 39 | 6.624 +2.288 = 8.912 | see note 2 below | |
| E1f | Other industrial sectors (specify) | 270 | have included Construction | see note 2 below | |
| E1g | Craft sector for gift and fancy goods | | | | |
| E1h | Other craft sectors (specify) | | | | |
| Eli | Information technology sector | | | | |
| E1j | Publishing trade sector | 14+31 | Part of 1.965 which includes | | |
| E1k | Communication sector | 10 | transport and storage | see note 2 below | |
| E11 | Local farming, agro-food, and agro-industrial sector | 53 | 25.850 which includes individual farmers | | |
| E1m | Restaurant and catering sector | 349 | 6.061 | see note 2 below | |
| E1n | Reception and hotel sector | 17 | from commerce, | | |
| Elo | Tourist services sector (tour operators, etc.) | 12 | hotels and restaurants | see note 2 below | |
| Elp | Trade sector | 2019 | | see note 2 below | |

NOTE 1: Impact on site activities

Details on personnel employed on the site are given in the Table above, based on the information from Phase 1 Summary. As regards the numbers of unemployed, there are no data, unless one considers the seasonal employees as unemployed offering themselves for employment. These (seasonal) numbers have been included in the column unemployed.

NOTE 2: Employment attributed to the site activities

While there is no direct relationship of the productive structure with the site and the site management, we cannot disregard that from the normal day-to-day operations of the site, there

is some relationship with some firms locally. We have therefore indicated the sectors in which it is considered that some relationship exists with the site management.

In order to obtain a more general understanding of the situation in the job market in the Prefecture, we present below certain additional information on the population distribution and the employment distribution among different types of professional employment.

We see in the table below that Pella Municipality ranks 9^{th} in population out of 11 Municipalities in the Prefecture and is at the bottom of the second grouping (if we consider as first grouping the >10.000, as second grouping 6-10.000 and the third grouping <6000 residents).

Municipalities and their population in Pella Prefecture

| Municipality | Population (based on 1991 Census data) | % of Prefecture |
|----------------------------|--|--------------------|
| Giannitsa | 27.433 | 19,77 |
| Edessa (also capital city) | 25.051 | 18,05 |
| Aridaia | 19.430 | 14,00 |
| Skydra | 15.558 | 11,21 |
| Krya Vrisi | 9.818 | 7,08 |
| Exaplatanos | 9.400 | 6,77 |
| Kyrros | 7.744 | 5,58 |
| M. Alexandros | 7.651 | 5,51 |
| Pella | 7.293 | 5,26 |
| Meniida | 5.310 | 3,83 |
| Begoritida | 4.073 | 2,94 |
| Total of Prefecture | 138.761 | 100,00 |

Source: Program "Kapodistrias" for Municipal Re-organization data compiled based on National Statistical Service Census 1991

We should also note the interesting development of the overall population in Pella Prefecture which is shown in the Table below:

| PREFECTURE OF PELLA | | | |
|---------------------------------|--------|---------|--|
| RESIDENT POPULATION CENSUS 1981 | | | |
| MEN WOMEN TOTAL | | | |
| 66.833 | 65.353 | 132.186 | |

| PREFECTURE OF PELLA | | | |
|---------------------------------|--------|---------|--|
| RESIDENT POPULATION CENSUS 1991 | | | |
| MEN WOMEN TOTAL | | | |
| 69.266 | 69.495 | 138.761 | |

| PREFECTURE OF PELLA | | | |
|---------------------------------|--------|---------|--|
| RESIDENT POPULATION CENSUS 2001 | | | |
| MEN WOMEN TOTAL | | | |
| 72.578 | 71.753 | 144.340 | |

The population increase between 1991 and 2001 is of 4%. We should stress that Pella is one of the almost rare cases in Greece where the men are more than women.

Employment distribution Prefecture of Pella

| Employment Function | |
|--|------|
| Free lance and independent Professionals | 4,5 |
| Management and administrative personnel | 0,9 |
| Clerical personnel | 4,1 |
| Shop operators, trading businesses, and salesmen | 9,3 |
| Employed in service provision | 4,5 |
| Agriculture, forestry, fishing | 53,2 |
| Technicians, labourers, operators of transport machinery | 23,8 |
| Did not declare /did not answer | 0,8 |
| TOTAL | 100 |

Source: Chamber of Commerce Pella data 1991

Table 3.b – Professional qualifications present in the area

| Employed | | | |
|-------------------------------|--|---|---|
| Vocational qualifications | Directly employed in the site activities (enter data of point 4, Phase 1) | Employed in activities generated by the presence or activities of the site (see note below) | Unemployed or seeking 1 st employment |
| Archaeologists | 2 | 3-4 | There are no data for |
| Architects | 1 part time = 0,5 full time | 2-4 | the area Except for seasonal guards, local |
| Restaurant owners-caterers | None | Unknown if any | maintenance personnel, and unskilled labour, |
| Marketing expert | 0 | 2 – part time - considering 1 for Prefecture and 1 for Municipality | which respond, on a per case basis, to job offerings by site management, there are no individual separate |
| Communication experts | 0 | Unknown | applicants. |
| Conservators | 2 | 2-4 | |
| Draughtsmen – designers | 1 | - | |
| Guardians (site & museum) | 14 | 10 | |
| Administrative | 3 | - | |
| Cleaning personnel | 1 | 2 | |
| Site maintenance and ordering | 2 | - | |
| Site area cleaning | - | 4 | |
| Gardens upkeep | 1 | - | |
| General workers | 3 | 40-50 | |
| Total | 30 | 61-76 | |

NOTE: Since there are no data for (and really no particular activities employing) personnel having jobs arising from the site, we consider that the <u>seasonal</u> jobs are jobs that "arise from site

activities" and in that, we have provided the numbers in the column. Since they are seasonal, the annual equivalent of these numbers should be at $\frac{1}{2}$.

It is obvious that there are some personnel involved with the site visits such as coach drivers, guides, etc. but these are employed in firms not located in the vicinity of the site and the employment covers other responsibilities, thus even if we could have the counts, we could not attribute the proportion due to the site.

We might consider that personnel of some shops or restaurants in the area are employment arising from the site; however, the interviews with the relevant people did not indicate such situation (rather the contrary).

"IN-SEASON" LOADING OF PRODUCE IS SEEN EVERYWHERE

See Pella images

Table 3.c – Training offering Pella Prefecture Totals (1999 data)

| Description of type of training | Pupils yearly | Number of Schools | Trained yearly (graduating class) |
|------------------------------------|---------------|----------------------|---|
| Secondary education – Gymnasium | 4.976 | 25 | 795 Edessa area |
| Gynniasiuni | | | 737 Giannitsa area |
| Secondary education – | 3.1243 | 11 | 398 Edessa area |
| Lyceum | | | 360 Giannitsa area |
| Technical Education | 1.274 | 7 | System has been put in effect recently in Edessa area |
| | | | 145 Giannitsa area |

Source: Ministry of Education - Directorate of Education for Pella Prefecture

As can be seen from the analysis in the Table below of the individual specializations offered in the Technical Education schools, in the Province of Giannitsa there is no direct relationship with the site jobs.

EDUCATION Specializations in Schools of Techical Education of Giannitsa (T.E.E) (School year 1998-1999)

| 1 st T.E.E. (Πρώην 1° ΤΕΑ) | |
|---|---|
| Sectors | $Specializations (1^{st} cycle)$ |
| Economy-Management | 1. Management administration staff 2. Sales staff |
| Transformation and Trading of agricultural products | Technology of animal produce Trading of agricultural products |
| Agricultural production and natural resources | Crop production Animal production |

| Tourism Professions | 1. Staff for transport companies |
|---------------------|----------------------------------|
|---------------------|----------------------------------|

| 2 nd T.E.E. (Πρώην 2 ^o TEA) | |
|---|---|
| Sectors | Specializations (1 st cycle) |
| Health and Social Welfare | Nurses Doctor assistant and paramedical laboratories: pharmacies, beauty Institutes, dietary institutes etc Social workers |
| Computers and Data processing | 1. Support services for Clients/Users of computer systems |
| Applied sciences | 1. Graphical technicians |
| Electronics | Electronic equipment and installations. Repair and maintenance of computer equipment |

| 3 rd Τ.Ε.Ε. (Πρώην ΤΕΣ) | |
|------------------------------------|---|
| Sectors | Specializations (1 st cycle) |
| Mechanological | Internal combustion engines and motorcars Thermal and και Hydraulic installations Freezer Installations Vehicle body shop work |
| Electrical | 1.Motorcar electrics 2. Building electrical installations |
| Construction | 1. Metal construction – welding, metal formations |

Source: Ministry of Education - Directorate of Education for Pella Prefecture

3.b - On the basis of the matrix analysis of Item E3, identify and describe (in 3-4 pages) the following:

- Crisis areas
- Success areas
- Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
- Research
- Protection and conservation
- Site development policies and implementation of the archaeological resource
- Promotion policies
- Policies for the supply of user services
- Admission fee policies
- Management and organisation of human resources
- Budget policies

The results of this analysis should be summarised in a table such as the following:

It is noted that in the table only short and medium term implementation possibilities are considered under the "potential" aspect.

Table 3.c – Assessment of impact of Item E3 (**job market**)

| | Crisis areas | Successes areas | Potential |
|-----------------------------|--|---|---|
| Research | Particular specialities and skills are not needed for any other site in the area, and site management may only select from the local (primarily agriculturally occupied) locals. | Site management has used students for practical training, establishing a base for good relations with the relevant institutions. | The future, with the expansion of the archaeological site, will give rise to increased needs of the site management operations and thus greater potential for employment of locals on site activities. Collaboration with the area Educational Institutions could also assist in the research interests (or jobs) of the site. |
| Protection and conservation | > Same as above | Certain maintenance and preservation skills can be "trained on site" with the benefit of offering "technical skills" to locals The immediate area can provide personnel for seasonal employment and there is a "repetition" of hiring by site management | The future, with the expansion of the archaeological site will give rise to increased needs of the site management operations and thus greater potential for employment of locals on site activities. Potential collaboration with educational institutions in the area of expanding the |

| | | practical training for skills related to the protection and conservation. It should be investigated whether the repetitive process can be organised in a form of annual "training camp" for certain specialities, as to train a few new people every year (who may cover needs at other archaeological locations) |
|---|--|--|
| Site development policies and implementation of the archaeological resource | Of the types of jobs categories required to be covered by a site, there are few that can be satisfied by the local expertise Site management has to rely to personnel living further away or originating from further away, in order to cover specialist needs. | The future, with the expansion of the archaeological site will give rise to increased needs of the site management operations and thus greater potential for employment of locals on site activities. Site management investigates the possibility to change the organizational structure of the site operation (a single entity at present as described in |

| | | departments, one dealing with the site area and the other dealing with the new Museum operation. This "new" structure is still under examination. |
|--------------------|--|---|
| | | Potential exists in the creation of the area, by measures to expand local skills by further developing the "museum copies" production (see also relevant table in Sect. 1 of this report and description of the production of museum copies in Phase 1 Report). |
| Promotion policies | The site does not undertake any promotion activities and as such there are no needs for such skills. Books and brochures are prepared and published away from site location | If promotional collaboration is developed with local actors, then in the future certain skills in the promotion of cultural resources could be developed. However, from the interviews undertaken the research team would consider a very low potential for this. |

| Policies for the supply of user services | Site management is restricted from the lack of large numbers of visitors to justify any effort being directed to making serious changes in the user services (details of the attendance levels of the visitors have been provided in Phase 1 Report). | | | The future, with the expansion of the archaeological site will give rise to increased needs of the site management operations (including user services provided) and thus greater potential for employment of locals on site activities, based on Site management's relative freedom for decision making in this area. |
|--|---|--|---|--|
| | | | > | Site management may collaborate with local area training institutions towards an effort be to increase the skill or knowledge level of personnel of the site (see also below under "Management and Organization of Human Resources). |
| Admission fee policies | Not relevant since they are set independently from site and from site management | Not relevant since they are set independently from site and from site management | > | Not relevant since they are set independently from site and from site management |

| Management and organisation of human resources | Absence of relevant and substantial secondary sector and substantial tertiary sector in the area of Pella Municipality, results in low technical expertise of potential workers and site management must "import" specialist workers Absence of secondary sector and substantial tertiary sector, results in low technical expertise of potential workers and site management must "import" specialist workers Demographic structure of population is "ageing" and site jobs are not interesting enough to keep younger people in the area. | Ability of site management to hire seasonal employees locally, since Site management has sufficient freedom of authority, in that it can facilitate the employment of local people or accept recommendations of personnel trained at programs executed by local actors. Emphasis on agricultural activity provides alternate employment for locals who are seasonal employees at the site Use of locals for seasonal and part time personnel and re-employment of locals for seasonal jobs (year-after-year) | Implementation of the plans to integrate sub-sites and enlarge the main site area, along with the construction of the new Museum, will create a potential for employment of local and surrounding area human resources in the foresee-able medium term. |
|--|---|--|---|
| Budget policies | Budgeting done for all of Ephorate's sites and not for specific site | Funding provided independently from revenue of entrance fees (not dependent on level of entrance fees) | |

4. Identification of subjects and authorities that regulate both the offering of goods and services and the offering of work and its professional qualification (Item E4).

4.a -Brief description (1-2 pages) of the (public and private) actors involved.

We may consider the subjects and authorities of the area in two categories:

- i. those subjects and authorities having an "official" governmental power, irrespective of the extent of the actual regulatory power they may exercise on the site
- ii. those subjects and authorities that are originating either in the economic structure or from the professional or private sector, again irrespective of the extent of the actual regulatory power they may exercise on the site

The players that fall within the first category are the following, described briefly with their responsibility or powers:

| Subject or Authority | Responsibility or Power |
|---|---|
| Ministry of Culture | Responsible for all matters relating to archaeological, historic, cultural, affairs, on a national level. |
| Central Archaeological Council | Legislatively established Consultative body of the Ministry of Culture. |
| | Highest Advisory authority of Ministry of Culture responsible to give "official opinion" on protection, restoration, etc. matters of archaeological sites and finds, on a national level. |
| | Its Opinions are guiding Ministry policy and are implemented by decrees of the Minister of Culture. |
| 17 th Ephorate of Prehistoric and Classical Antiquities | Departmental Unit of the Ministry of Culture with responsibilities over archaeological sites and monuments usually in a number of Prefectures. |
| | The Ephorate acts as the main site administrator, has the authority to propose and implement decisions that relate to the site. |

| | Is subjected to the Ministry of Culture from where it receives approvals for funding and the allocations. |
|--|---|
| Archaeological Receipts Fund | Independent Authority of the Ministry of Culture for collection and re-distribution of site revenues. |
| | Financial administrator for expropriation disbursements |
| | Collects revenues from entrance tickets to the site, prepares site publications, may pay some site seasonal personnel, may act as funds disbursing body for a number of budget items. |
| Ministry of Interior (only by function of its overseeing responsibility) | Responsible for all matters relating to local government. Is the supervisory authority for the Prefectural and Municipal Governments. |
| Ministry of Environment and Public Works (only by function of its overseeing responsibility) | Responsible for all matters relating to environmental protection, land uses (excluding archaeological protection designation) all public works. Through the regulation of land uses may facilitate the development of businesses in the area. |
| Ministry of Interior (only by function of its development planning responsibility) | Responsible for all matters relating to establishing and implementing policy for national and regional development, and administering certain aspects of investment grants to private sector companies. |
| Regional Government | Government appointed authority for implementation of government policy at regional level; has regulatory power on certain land uses, approves locally the applications for investment grants, administers Community Structural Funds allocations. |
| Prefectural Authority | Elected authority with administrative |

| | responsibilities in the Prefecture area. Regulates and supervises implementation of projects for the development of Prefectural resources and attractions and can select priorities for development. |
|-------------------------------|---|
| Municipal Authority | Elected authority responsible for services within the municipality area. Regulates uses of Municipal property, approves applications for different types of business operation such as restaurant, bars, entertainment places, hotels. Regulates the use of street sidewalks and traffic within the municipal areas. May assess certain local taxes. |
| National Tourist Organization | While it is part of the Ministry of Development, it is mentioned specifically since it establishes and implements tourism development and promotion policy. |

The players that fall within the second category are primarily professional or private organizations, the activities of which may influence the offering of goods and services in the area of the site, but which cannot influence site management and its operations with respect to the development and enhancement of the site.

| Subject or Authority | Responsibility or Power |
|---|--|
| Chamber of Commerce and Industry of Pella Prefecture | The Chamber is a private sector public body established by decree, which has delegated responsibilities (issuance of permits for businesses, maintenance of the business register), and performs various initiatives for the support of its members and their interests. |
| | By law all businesses must be registered with the Chamber in order to be legally operating. |

| Federation of Professionals and Handicraft Businessmen of Giannitsa | Professional body looking after the interests of their members in Municipality of Giannitsa. Membership includes both individuals and firms. | |
|---|---|--|
| Commercial Association of Giannitsa | Professional body (member of the above Federation) looking after the interests of their members. Membership is mainly the trading establishments within the city of Giannitsa. | |
| Chamber of Hotels of Greece | Nation-wide body which regulates the requirements for operation of an accommodation establishment. | |
| Educational Institutions | Various institutions, which either have particular programs, related to functions in archaeological sites or to certain of their operations (restoration, maintenance, protection, guidance etc.) | |

We must also mention that the following authorities have an indirect influence or involvement in that they regulate the financial operations of the businesses:

| Authority | Responsibility or Involvement |
|------------------------------|---|
| Ministry of National Economy | Regulates the approvals for new investments and through its agencies offers government grants for specific investments |
| Ministry of Agriculture | Regulates the activity of agricultural businesses and administers the LEADER Programs of the European Union which may financially support with grants the development of agrotourism businesses |
| Ministry of Labour | Through its agencies regulates the implementation of vocational training programs in the area |

| Ministry of Economics – Tax Offices | Regulates the local and national taxation and accounting practices for businesses |
|--|---|
| "OAEΔ" Hellenic Manpower Organization | Agency of the Ministry of Labour, particularly dealing with registration of the unemployed, re-training, research on labour market, and administrative procedures for registering employment by employers (individuals and firms) and for grants to employers for new jobs. |

Finally, we must make reference to certain special organisations that have been set-up to support the development of the Prefecture. These organisations do not have any involvement with the site management but provide developmental services and support to the public and private business sector in the Prefecture (and to the extent that some such businesses are in the proximity of the site, they are indirectly involved).

Most important among these are:

| Organisation | Relevance | |
|---|---|--|
| Macedonian Development Agency | Company set-up by the 11 Chambers of Commerce and Industry, of Macedonia Regions, with the Association of Exporters and Association of Industries of Northern Greece, to assist with development studies, European programs, new investment attractions; a branch operates at the offices of each member Chamber. | |
| Municipal Enterprise for Tourism and Cultural Development | Daughter company of Pella Municipality primarily involved in developing and promoting local resources, with emphasis on tourism and cultural development. | |
| Development Agency of Pella S.A. | Company set-up in 1989 by 20 shareholders, all local authorities, organizations and social or athletic clubs with common aims and goals, located in Prefecture of Pella; goals of the company are mainly: | |
| | To promote the economic and social development of the area. The promotion of the tourism and the | |

. The protection and the conservation of the physical and artificial environment.

tourist development programs.

- 4. The training and the education of the local population.
- 5. Undertaking of initiatives for the projection and promotion of the local or/and traditional products.
- 6. To support the co-operation among the local authorities.
- 7. To support the co-operation among the public and the private sector.

PELLA PREFECTURAL BUILDING

See Pella images

4.b - Brief description (1-2 pages) of sector legislation (hotel, trade, etc. sector) and regulatory framework of reference for the sectoral planning of the activities.

We have to consider the regulatory framework in two ways:

- a) the first part is the relevance or implications of businesses the economic sector with the site,
- b) the other part is the economic sector by itself.

As regards the <u>first part</u>, we have already noted that archaeologically designated sites, or sites of potential interest for excavations, are so declared by the relevant local Ephorate of the Ministry of Culture, and may or may not (depending on the importance of the site's potential) be permanently restricted, or temporarily restricted until a physical excavation investigation is undertaken.

The regulatory framework of agricultural use of the land has a relationship in that activities of soil tilling are likely to damage possible finds. While the protective zoning is expected to prevent this, in practice, actual tilling does have a negative effect.

Crop production is partially regulated by the Ministry of Agriculture, which regulates the European and National Government subsidies for various crops.

Since monitoring and policing agricultural cultivation in the whole area is very difficult and resources to do such a job are not available to the Ephorate, studies may be hindered from possible damages to finds.

Further details in these aspects may be looked at in the Phase 1 and Phase 2 Reports.

As regards the <u>second part</u>, the regulatory framework for different sectors or categories of businesses relevant to the site services is relevant. This legislation is practically everything that regulates the establishing, operation and permits necessary for a business, items which apply in the businesses that may have a relationship with the site. Here, the influence of site management is only to the extent that it may wish to protect the site, and deriving from this try to "restrict" some activities of the businesses.

It is pointed out, however, that practically, with the exception of the few eating establishments in Municipality of Pella that could provide services for the visitors, there are no other businesses operating or being involved with the site. So there is practically no relevance of this regulatory sector.

Of course, there is a potential for development of such services in the future, subject to the "free market" laws, meaning if there is sufficient demand for them, something that the representatives of the productive sector feel is rather unlikely under the present circumstances.

The operation of accommodation establishments is regulated by the National Tourism Organisation (NTO) and indirectly by the Chamber of Hotels (national body). New establishments must obtain a permit that the land on which they propose to develop is suitable (suitability permit), a building permit for approval of their plans in that they are following the specifications of the NTO for the relevant type and category, a safety permit relating to adherence to safety regulations and equipment.

Operation of an accommodation establishment, as for all businesses, also includes relevant registration with the tax and the labour authorities.

Again, we point out that there are no accommodation businesses in the area except for the <u>one</u> hotel in Giannitsa (no relationship with the site, except that the Research Team stayed there to see how it was).

The different trades, such as those that could provide services for the site, are subject to different regulations, such as regulations for eating establishments, travel agencies, car rental agencies, guides, transport companies, etc. Again, however, there are no such services in the area having a relationship with the site.

4.c - Brief description (2-3 pages) of the levels and types of territorial planning and management tools, which may interact and/or interfere with the site management functions, such as commercial plans, plans for the location of production activities, etc.

The main instruments are those that regulate the planning priorities and the flow of funds and economic development in the area.

With respect to instruments for planning and development, the most important are:

- The plan for Development of major projects of national importance, contained in the 3rd Structural Funds Program
- The National Development Plan
- The Regional Development Plan
- The Prefectural Development Plan
- The Municipal Development Plan
- The Ministry of Culture Plan
- The National Tourist Organization Plan
- The National Economic Development Plan of the Ministry of Development
- The Official Opinions of the Central Archaeological Council, as guides for the planning and development of antiquities, archaeological sites and monuments

With respect to financial instruments, some of those, which have affected development of activities in the Prefecture, relate to the implementation of the priorities of the various economic instruments, which regulate the flow of funds from national sources and from the European Union. Among these, the most important are:

- The National Budget with respect to projects and actions applicable to the relevant territory
- The area plan and the development plan of European Union regions (SDEC)
- The European Structural Funds (ESF) and the European initiatives and policies
- The Regional Development Axes of the Regional Development Plans within the ESF policies
- The Prefecture Development Plan and Budget
- The Municipal Budget

One of the important territorial planning tools that affect the operation of the area is the program for expropriations. In the surrounding area of the site there are a number of localities that have been identified for expropriation, but the process is rather long and sometimes, until necessary funds are made available it may take even up to ten years. Of course, the land referred to is blocked for any activity, from the moment of the expropriation decision.

Among other activities the local authorities and development agencies of the Prefecture (which have been named above) are applying the following planning and implementation instruments:

- 1. Studies and projects that help local authorities with their development plans.
- 2. Community and national development projects that assist the development of the county or smaller areas within it.
- 3. Submission of proposals to the European Community funds or initiatives that could find application in the area.
- 4. Setting-up of human or technical networks between local organizations or people and corresponding bodies from Greece, Europe and the rest of the world.
- 5. Participation in experience exchange programs with main aim the transfer of knowledge and technology.
- 6. Management of local initiatives that concern tourism, human potential, SMEs, environment, rural development etc.
- 7. Technical assistance to local authorities and other local organizations and clubs.

4.d - Brief description (1-2 pages) of actors and decision-making processes that define Items E1, E2 and E3 and so influence site management.
 Actors and decisional processes must be represented through 3 flow charts, one for each considered item, which can be such as the following:

The principal actors have been already described in the previous section. The interactions and "reciprocal" influence these actors have on the site management is shown in the three following "decision making flow charts".

In all three cases the main issue of the "independence" of site management in its functional operation from its surrounding territory and actors should be kept in mind. So in actuality, we could say that the site management has no relationship and cannot be influenced by anybody except its supervising Ministry of Culture.

We accept, however, that in day-to-day management, the site management comes in commentate with local actors, and we have tried to reflect these "contacts" in the following flow-charts.

In the charts, these contacts have been indicated by lines, and we have tried in the flow charts to show the direct contacts, indirect contacts or reciprocal contacts and thus influences in the decision making of the actors versus the site management and, where applicable, vice-versa.

In the charts, solid lines note somewhat direct relationships, dotted lines note indirect relationships or influences, and two-way lines (solid or dotted) show that there is a two way influence that can be considered. It should be emphasized that actually site management is not subject to accepting any of these direct or indirect influences because of its independency.

For practical purposes, the relationships of Chart E1 – Productive Structure are influences only applicable onto the firms (the firms operate "around" the site) in the surrounding area and not directly onto the site management.

The relationships in Chart E2 – Cultural and Leisure Time Activities are more evident, and in this chart we also have the possibilities of some reciprocal relationships. We have not shown in the chart, but we note that even private individuals may apply to site management for support or permits for cultural activities.

The relationships of Chart E3 - Job Market indicate the influences on the site management from the various actors and the overall environment local and more general, with respect to employment positions available or needed for the site operations.

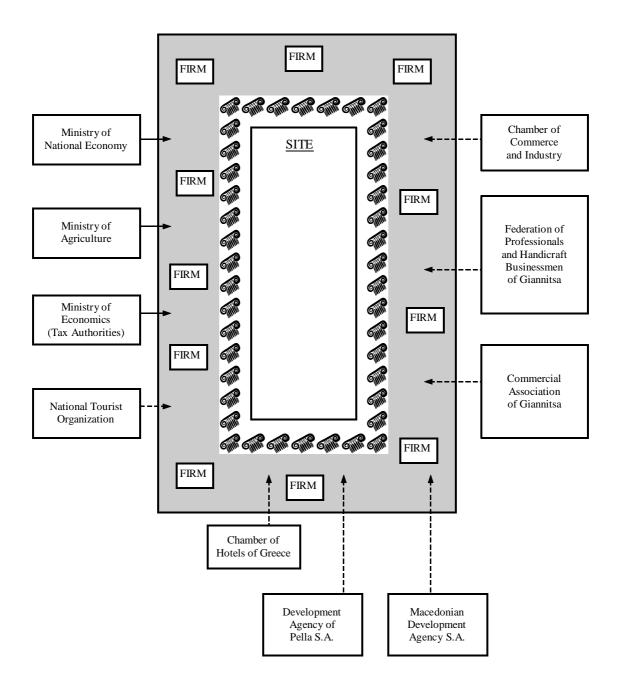
It should also be noted that not all of the actors previously mentioned (see 4a above) are involved in the flow charts; this is because for some of them there is practically no relationship at all with (and obviously no relevance or influence on) the site management.

DECISION MAKING FLOWCHART E1 PRODUCTIVE STRUCTURE

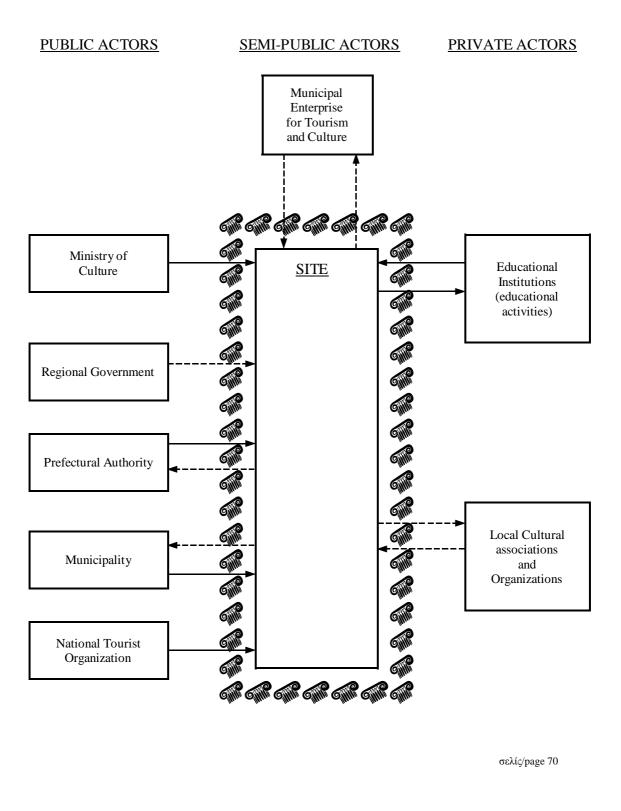
PUBLIC ACTORS

SEMI PUBLIC ACTORS

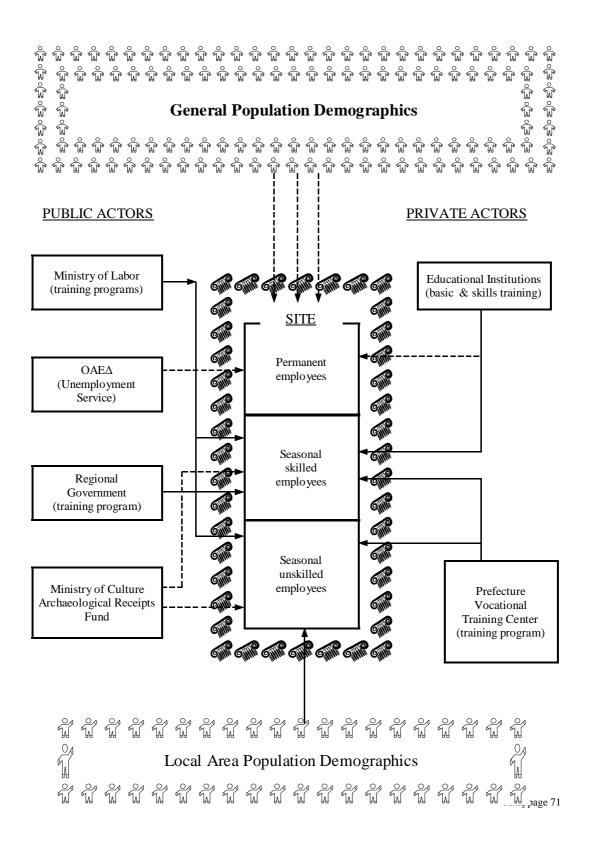
PRIVATE ACTORS



DECISION MAKING FLOWCHART E2 CULTURAL AND LEISURE TIME ACTIVITIES



DECISION MAKING FLOWCHART E3 JOB MARKET



- 4.e On the basis of the matrix analysis of Item E4 and description under point 4.d, identify and describe (in 3-4 pages) the following:
 - Crisis areas
 - Success areas
 - Potential (actions that can realistically be carried out in the short-to-medium term) relating to the following management functions:
 - Research
 - Protection and conservation
 - Site development policies and implementation of the archaeological resource
 - Promotion policies
 - Policies for the supply of user services
 - Admission fee policies
 - Management and organisation of human resources
 - Budget policies

The results of this analysis which is based on the site management functions are summarised in the table following:

It is noted that in the table only short and medium term implementation possibilities are considered under the "potential" aspect.

Table 4.a – Assessment of impact of Item E4 (**subjects and authorities**)

| | Crisis areas | Successes areas | Potential |
|---|---|---|--|
| Research | ➤ Site management operates independently from local actors in this area – so there is no relationship | ➤ Site management operates independently from local actors in this area – so there is no relationship | The collaboration, which is in effect with the local Educational Institute at Giannitsa, is expected to continue and possibly expand further |
| Protection and conservation | > see above | > See above | see also collaboration, above Good relationships with the locals would provide support and keep site management informed if any finds are located in the surrounding area |
| Site development policies and implementation of the archaeological resource | > See above | > See above | The collaboration with the Prefectural Authority and with the Municipality is expected to continue and to expand further. Expansion of range of saleable official copies and distribution in other locations in the area (as an indirect means to promote |

| Promotion policies | At present there has not been any concerted effort to promote the site as a result of a relationship or agreement or planning between the site management and local actors. The local actors that have done site promotion have done so, on their own initiative. | | A | Site management looks favourably and will continue its collaborations with the various local authorities for the promotion of the site and dissemination of relevant information; it will also support (if requested) third party efforts/ actions for site promotion. |
|--|---|--|-------------|---|
| | | | > | Site management also studies the possibility to collaborate with professional organizations and to develop "organised guided visits" which will give pre-determined emphases on the site visit; these visits may also incorporate promotion of particular surrounding area characteristics. |
| Policies for the supply of user services | On site user services are under the express jurisdiction of site management and no change to this policy is anticipated. | There exists (administered between the Ministry of National Economy and the Ministry of Development) a comprehensive investment incentives legislation, giving incentives and grants for "new" entrepreneurs, young businessmen, support of SME's etc. | <i>A</i> | Site management studies the possibility to collaborate with professional organizations and to develop "organised guided visits" which will give predetermined emphases on the site visit. (see above). Local actors may use the fact that they have facilities, |

| | | Site management would support (but not necessarily expend time, effort or money) activities of local actors with a scope to offer better or improve existing surrounding area user services. | to offer support use services. As an example, the Municipality of Giannitsa intends to have representatives on site, to try to induce visitors to make a stop-over in the town of Giannitsa after the site visit. |
|--|---|--|---|
| Admission fee policies | Not relevant, since policy is determined away and independently from the site. | Not relevant, since policy is determined away and independently from the site. | Not relevant, since policy is determined away and independently from the site. |
| Management and organisation of human resources | Local actors have no involvement or authority or influence on site management's selection of site operation procedures. | | ➤ The collaboration, which is in effect with the local Educational Institute at Giannitsa, is expected to continue and possibly expand further. |
| | | | Site management can expand the series of collaborations with institutions and even voluntary organizations; by initiating collaboration with local authorities, it can take advantage of opportunities for both site development and development of skills useful in site operations. |
| Budget policies | Budgeting done for all of Ephorate's sites and not for specific site | Funding provided independently from revenue of entrance fees (not dependent on level of | There would be a potential for an effort to co-develop with Municipality and Prefecture some site |

| entrance fees) | surrounding area facilities. Site management can influence the effort in that it controls permits through the Zoning scheme. |
|----------------|--|
| | The discretionary powers of the site management to allocate differently and not to be restricted allow it to look for funding (or cofunding) opportunities through participation in programmes for both economic benefit and production of results for the site. |

امثلة لإدارة المواقع

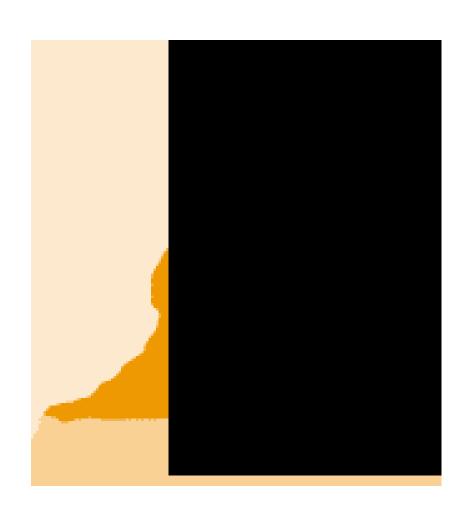
حفظ المناطق التاريخية والحضرية

- التعريف
- المناطق التاريخية و الحضرية هي مواقع مأهولة
- الاخذ بعين الاعتبار المقاييس الاقتصادية والاجتماعية
- حماية المناطق التاريخية الحضرية تتم بالتوفيق بين متطلبات الحفاظ على خصائصها الثقافية و الاثرية و بين متطلبات الحياة العصرية
 - ما الذي يجب حمايته بهذه المناطق:
 - النسيج الحضري
- خصائص التوزيع المساحي (مساحات مبنية, فراغات, خضراء.)
 - شكل و مظهر المباني,
 - العلاقة بينها و بين محيطها الطبيعي
 - القيم المختلفة للمناطق (عقائدية, ثقافية, اقتصادي, اثرية...)

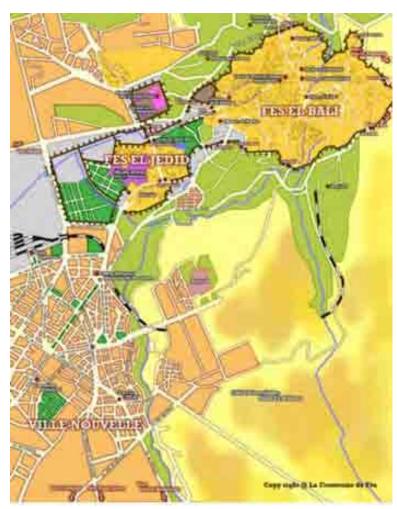
منهج العمل

- تنوع العناصر المكونة لهذه المناطق يسترعي تكاتف اختصاصات متنوعة
 - المراحل الاساسية لإعداد خطة لإدارة المناطق الحضرية:
 - ﴿ التعرف على دلالات و قيم الموقع
- ح تقييم الوضع الراهن (ألاحتياجات و الاولويات)
 - خطة الادارة
 - ◄ تنفيذ المخططات

فاس, المغرب



فاس, المغرب



- مدينة اسلامية تاريخية داخل منطقة حضرية موسعة
 - موقع تراث عالمي 1981

مشروع احياء مدينة فاس, المغرب



- مشروع مشترك: السلطة المغربية, برنامج الامم المتحدة للتنمية, اليونسكو
 - الهدف: تنمية مستدامة

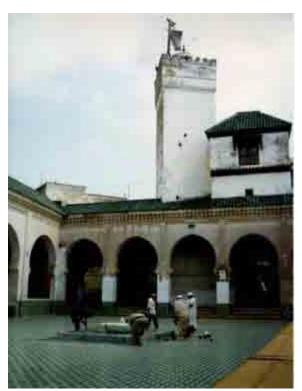
ا- التعرف على دلالات و قيم الموقع

• قيمة التاريخية

- أول عاصمة سياسية للمملكة المغربية أسسها المولى ادريس الأزهر سنة 172 هـ.
- ظلت منذ تأسيسها ، منبرا للعلم والابتكار و الابداع في الميادين السياسية و الاقتصادية و الاجتماعية و العلمية،

قيمة اثرية

• تضم ما يناهز 700 مسجدا و حوالي 403 من القصور و الدور الأثرية الجميلة



•نموذجا لتخطيط المدينة العربية الاسلامية

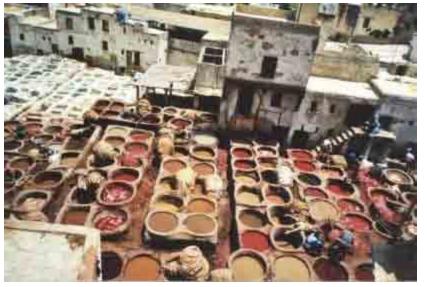


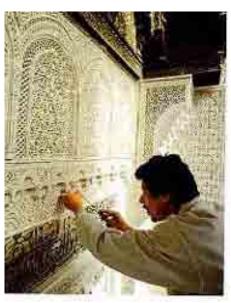
قيمة اقتصادية

• حرف















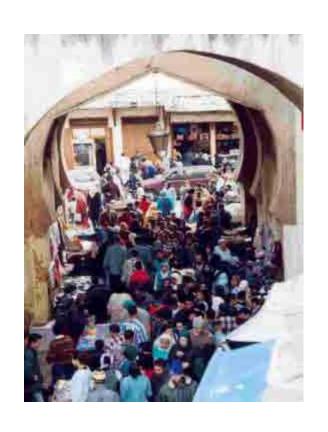
• تجارة

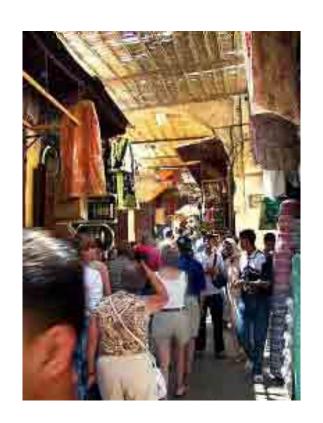
منتجات سیاحیة

للسوق المحلية

﴿ نشاط مكثف

• سياحة



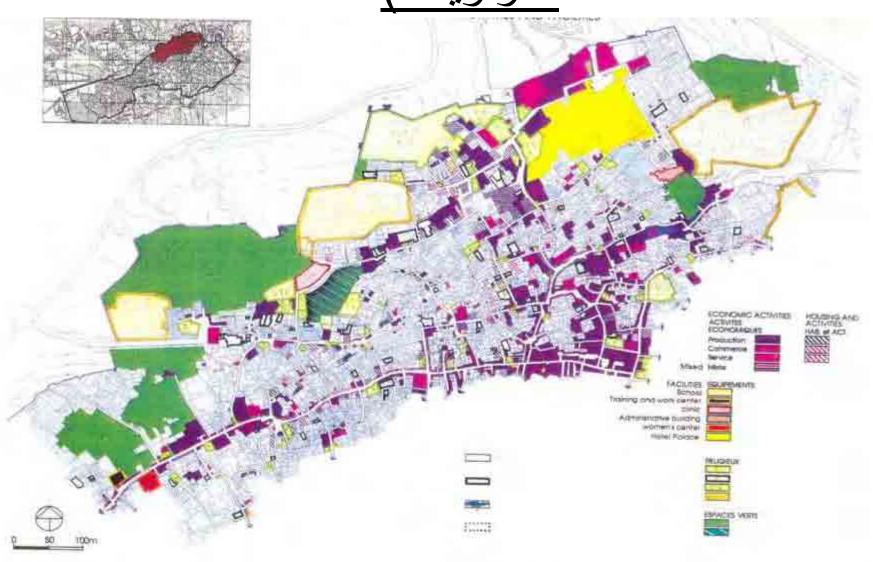


• فرص عمل: 1/2 فرص العمل بالمنطقة

قيمة اجتماعية

- رمز من رموز الهوية المحلية (فخر و اعتزاز السكان)
 - ملجئ للنازحين و ذوى الدخل الضعيف
 - سکن رخیص
 - تكلفة عيش بسيطة
 - توفر اهم الضروريات التي تفتقد في الارياف

ب- تقييم الوضع الراهن (ألاحتياجات و الاولويات)



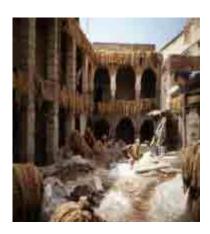
التقييم

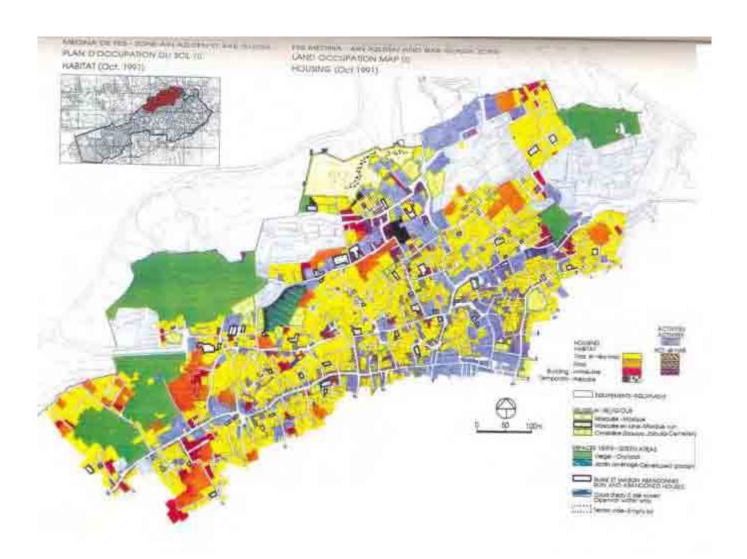


- عدم تكافئ في توزيع الاستخدامات
- تركز الانشطة الاقتصادية في مساحات صغيرة المخلفات:



- ترکز سکاني و بشري
 - اكتظاظ
 - صناعات ملوثة
- بيوت و اثار مهجورة ايلة للسقوط



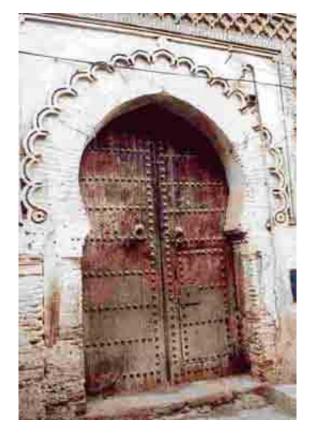


النسيج العمراني (توزيع قطع الارض, الارتفاع, حالة المباني...)



التقييم

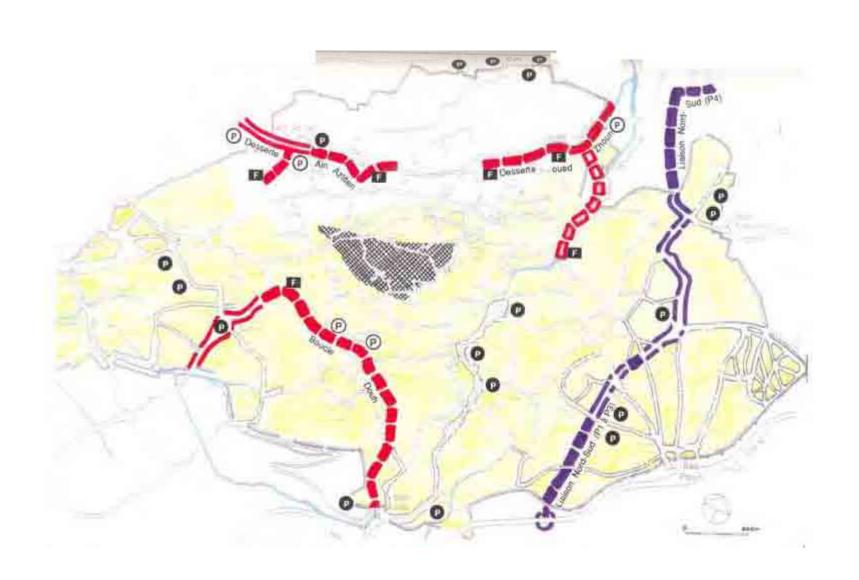
- فئات اجتماعية محدودة الدخل
 - اكتظاظ سكني
 - مباني في حالة سيئة
- تشويه للخصائص العمرانية للمدينة



• المخلفات:

- تهديد للقيمة الاثرية و لطابع المدينة
- نفور السكان و المستثمرين من المنطقة
 - تداعى القيمة المادية للسكن
 - العجز عن الاعتناء بالمباني
 - بيوت و اثار مهجورة و ايلة للسقوط

توزع الشوارع و الازقة





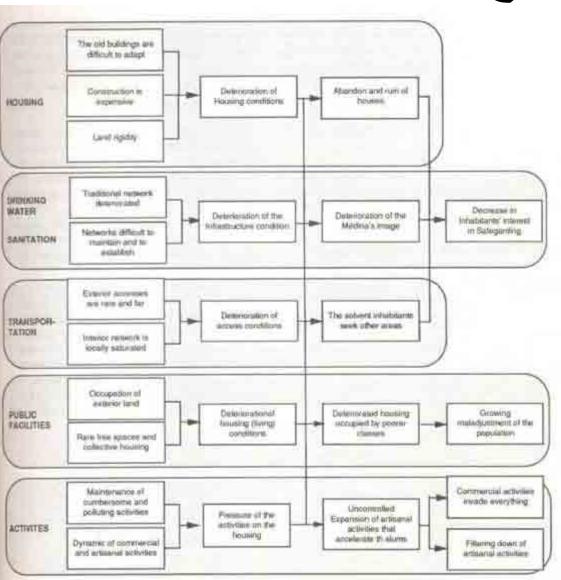
التقييم

- قلة الشوارع التي تربط بين المنطقة الاثرية و باقي المدينة
 - شوارع ضیقة
 - نقص في عدد المواقف للسيارات



- المخلفات:
 - اكتظاظ
 - تلوث
- تعطيل المرور و مصالح السكان (شحن البضائع, النقل العمومي, الاسعاف, جمع المهملات)
 - نفور السكان و المستثمرين من المنطقة
 - تداعي القيمة المادية للسكن
 - بيوت و اثار ايلة للسقوط
 - العجز عن الاعتناء بالنظافة (اخطار صحية)

تقييم الوضع و تحديد التدخلات



• عوامل متداخلة

•تدخل متعدد المجالات و الابعاد

| MAIN DIAGNOSTIC ELEMENTS | PLANNED ACTIONS | |
|--|---|--|
| trafficer general screenibility | Assort Access - Committee of new acceptant - Marry-Arment of make burnel seryore | |
| Performance of social community socialisms Performs with other Organizations of social | Action 2. Development and Facilities Constituting flamous strong new access routes, Gestlant at well areas by saleg space fixed by the floores in rules. | |
| Deteroration of the fundage Completity of the land system | Action 3. Houseons 1. Department of the Section of | |
| Tribodi sahalimooti si Taaria housing | Action 4. Activities Control and according to mithillies white of the billion Control of informatile products Transities of containing activities Emicrol of activity some authorite of the Micros | |
| Department of partialities reviews. Department of the sould reviews. Pertial of expect to fight against the later to the sould review to the sould be soul | Action 6. Environment and Disbut Pholic Services - Execution of Main Services Plan and main NACES plans for resing and electricity - Conduct of an emergening subset indexes - Disables of transfer (CM) delices | |
| Compression of thickens on the sector | Action 6 Contrast Heritage - Charles of inscribing and leading inscribing - specific forms tools - specific forms tools - services and instrument decomposes - strategy - Charles of the origination of inscribing | |
| Insufficiency and confusion of profit apply and construent. Absured of reference becaments. | Action 7 Frankelsonal Black up Plant for account and informing of miss of existing eige Fluid for account of pursual materials of the Ballega Frankel Consider of a result order agency (Proper Grankel Enterprise of better at purious (Persual Grankel Enterprise of better at purious (Persual Grankel Enterprise of better at purious (Persual Grankel) Enterprise of Bessell priser purious or considerate account | |

ج - ادارة المشروع

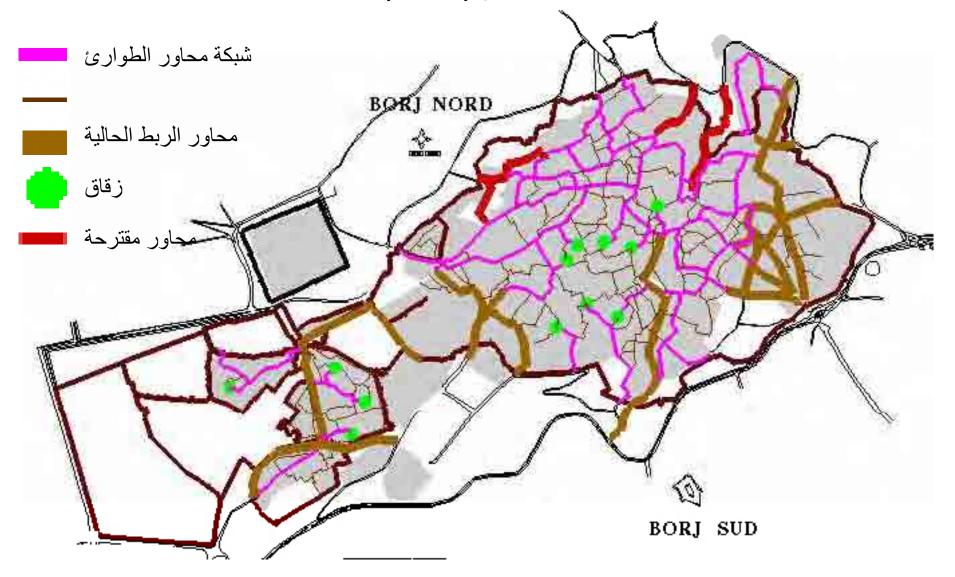
- استراتيجية الادارة
- تدخلات متزامنة
- > خطط قصيرة المدى
- حطط طويلة المدى
- > تشريك المجتمع المحلي
 - قاعدة مؤسساتية قوية
- > تعاون دولي (البنك الدولي, مجلس المدينة, اليونسكو)
 - 🔪 مکتب فنی

خطط الادارة

- 1. خطة توزيع و تحسين شبكة الطرقات
- 2. خطة تأهيل التوزيع المجالي و المرافق
 - 3. خطة تنظيم الانشطة
 - 4. خطة تحسين الخدمات
 - 5. خطة حفظ و ترميم الاثار و السكن
 - 6. خطة تنمية السياحة

1.خطة توزيع و تحسين شبكة الطرقات

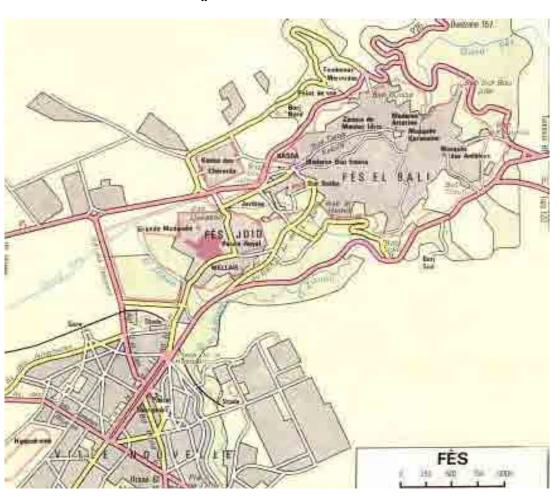
تدخل عاجل: خطة قصيرة المدي (5 سنوات)



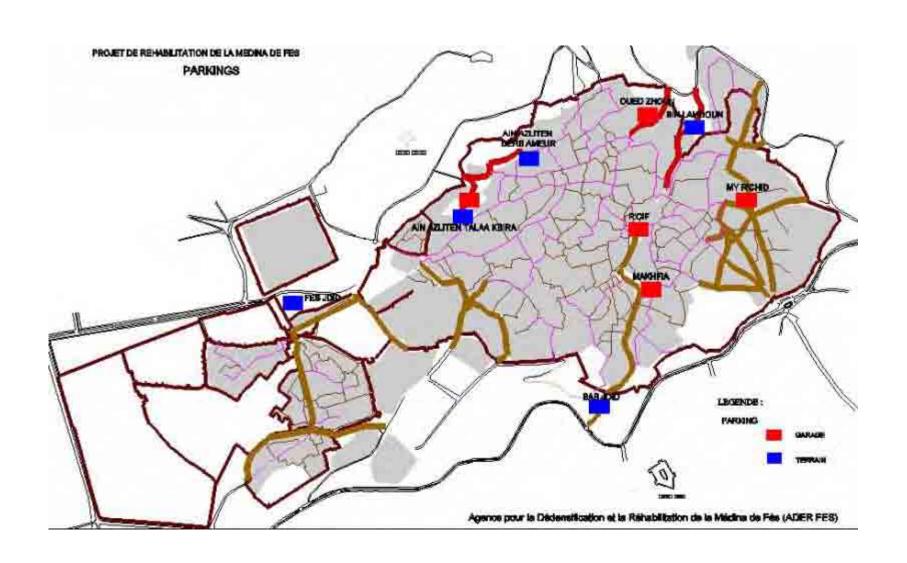
1.خطة توزيع و تحسين شبكة الطرقات

الخطة الطويلة المدي (10-15 سنة)

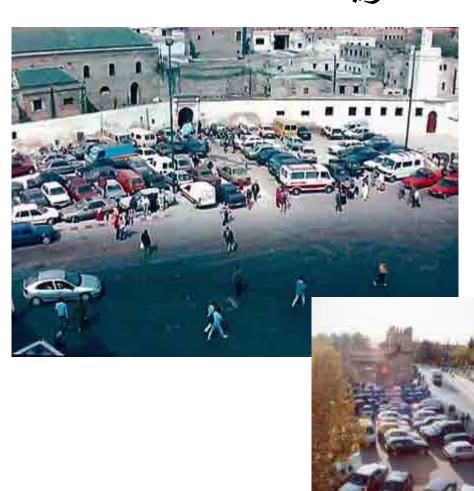
انشاء محور بوغرارب لربط المنطقة الاثرية بباقي المدينة



2. خطة تأهيل التوزيع المجالي و المرافق



• توفير موافق للسيارات و الحد من حركة المرور داخل المنطقة الاثرية



| الموقف | التمويل | |
|----------------------------|-------------------------------------|--|
| Ain Azliten/Talaa Kbira | مجلس المدينة قرض من البنك الدولي | |
| Ain Azliten/Derb Ameur | مجلس المدينة قرض من البنك الدولي | |
| Oued Zhoun | قطاع خاص | |
| Bin Lamdoun | قطاع خاص | |
| My R'chid | قطاع خاص | |
| Place R'cif | مجلس المدينة قرض من البنك الدولي | |
| Makhfia | قطاع خاص | |
| Bab Jdid | قطاع خاص | |
| F è s Jdid | قطاع خاص | |

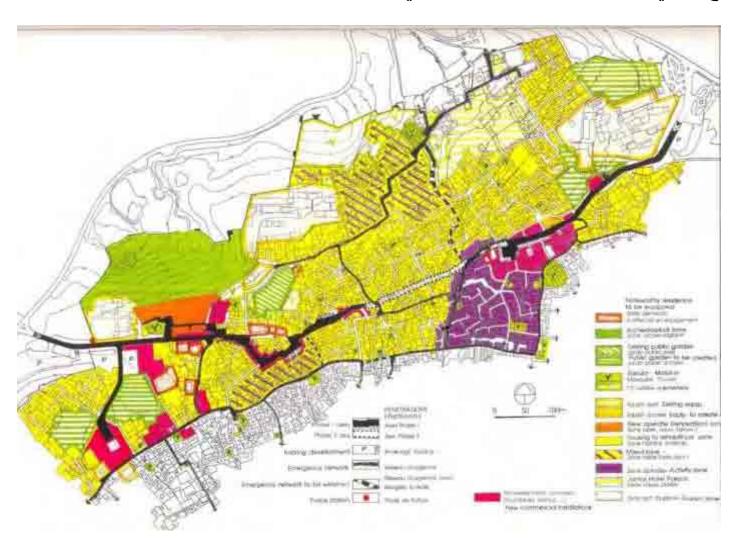
3. خطة تنظيم الانشطة

ابعاد الانشطة الملوثة





4. خطة تحسين الخدمات توزيع عملي للانشطة و الاستغلال المجالي



5. خطة حفظ و ترميم الاثار و السكن

◄ رفع كامل للمباني الاثرية (هندسي, رسوم و بيانات)

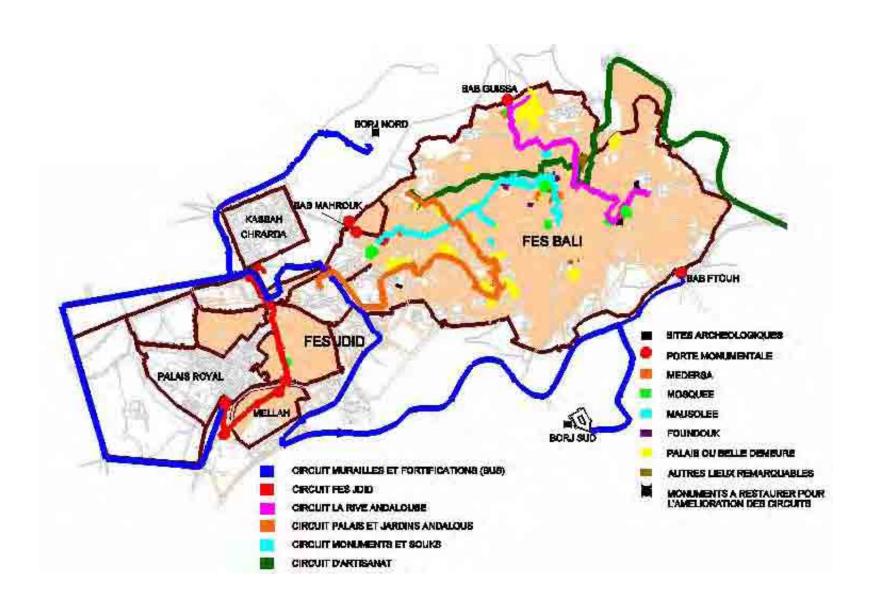


◄ التعرف على الخصائص و المميزات

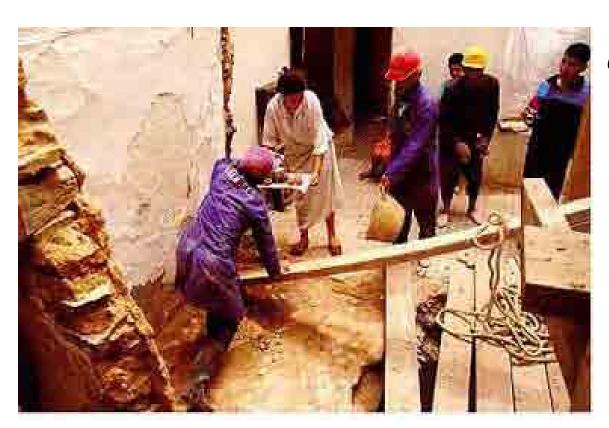
اعمال ترميم (500 مبني)12- 25/ س خلال 5 سنوات

| التكلفة (د_م) | مكاتب الدراسات | المؤسسات المنفذة |
|------------------|---|-----------------------|
| 20.62 | Ader-Fès / Commune Urbaine Fès- Médina | Tec/ Ab Istimar Saiss |

6. خطة تنمية السياحة



• تشريك المجتمع المحلي



✓ توعية و تحسيس

ح تنمية مستدامة

رشید, مصر



- ثاني اهم مجموعة من الاثار العثمانية بمصر
 - رشحت لتكون متحف مفتوح

• التعرف على دلالات و قيم الموقع

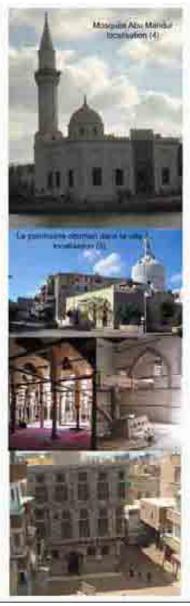
- قيمة التاريخية
- مركز اشعاع اقتصادي و ثقافي (18م)
- موقع احداث مقاومة الاستعمار الانجليزي
- المنافسة الاولى للإسكندرية في الفترة الحديثة

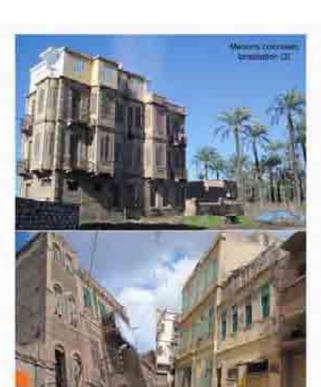
قيمة اثرية

• تضم عدید المعالم المسجلة 20 منز لا عثمانیا, 12 مسجدا, طاحونة, قلعة قایتباي, حمام, بوابة و بقایا سور, تل اثري (روماني؟)

• معالم ذات قيمة اثرية غير مسجلة (عمارات و مباني18/19م)

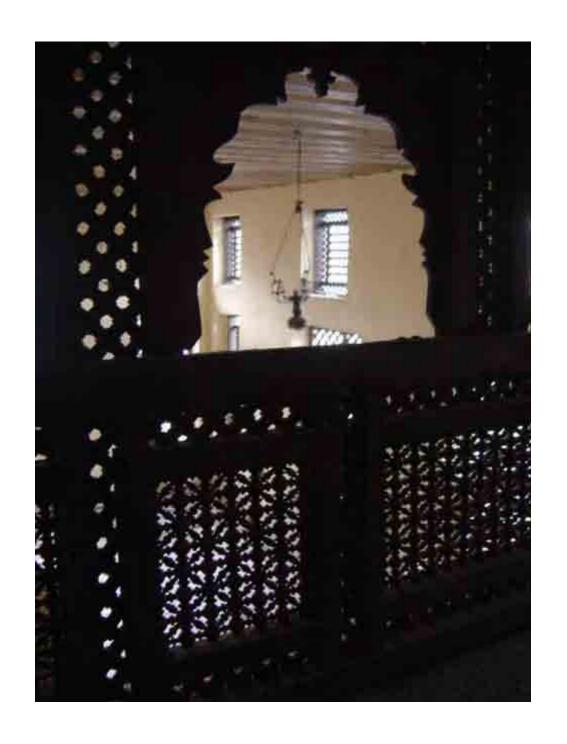












قيمة اقتصادية

• حرف

• صناعة

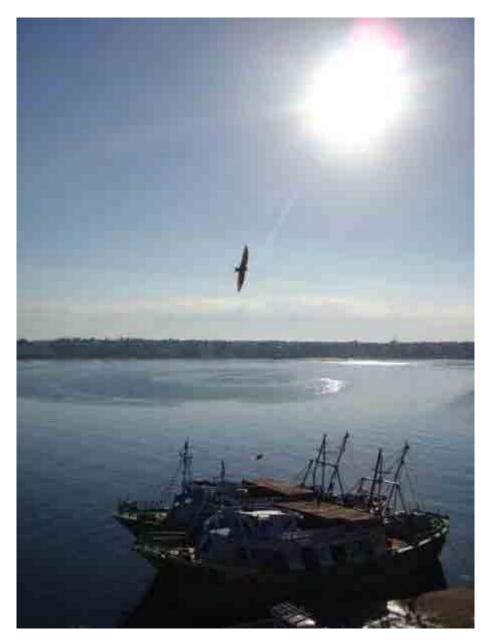
• فلاحة و صيد







تراث طبيعي





• سياحة

نشاط سياحي دون مستوى مؤهلات المدينة

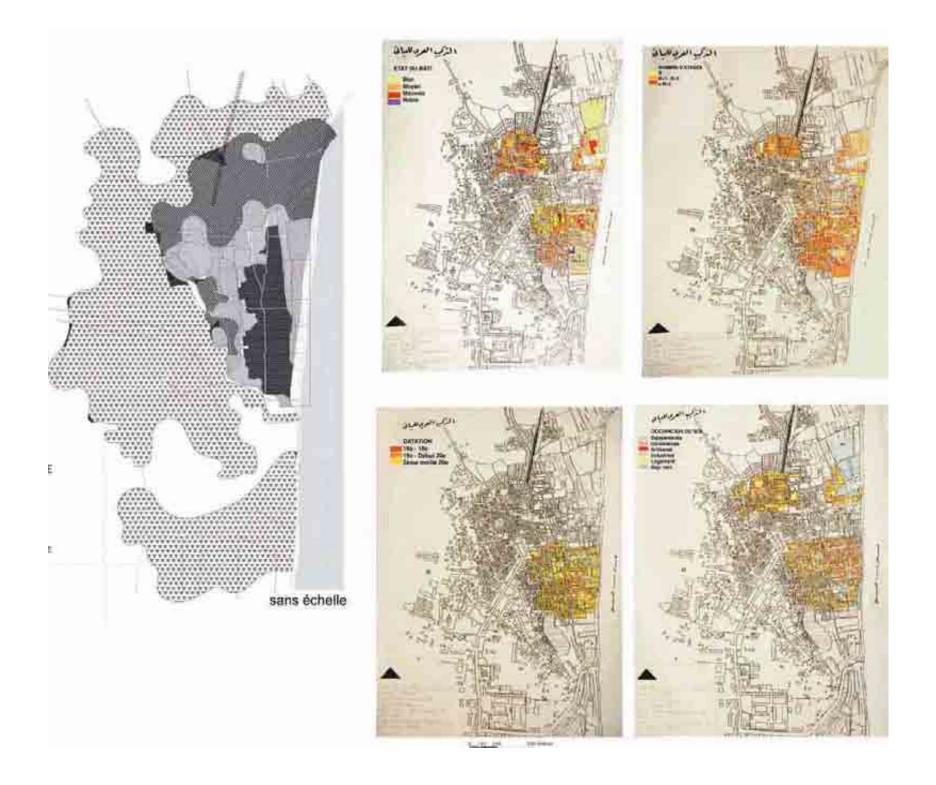
قيمة اجتماعية

• رمز من رموز الهوية المحلية (فخر و اعتزاز السكان)

• توفر تكلفة عيش و سكن رخيص للعاملين بالإسكندرية

ب- تقييم الوضع الراهن (ألاحتياجات و الاولويات)

- ادوات العمل:
- رفع دقيق و شامل لكل استعمالات الاراضي:
- ﴿ الانواع (سكن, تجارة, خدمات, مقابر, اثار...) ﴿ النسيج العمراني (توزيع قطع الارض, الارتفاع, حالة المباني...)
 - ◄ (شوارع, ازقة...)

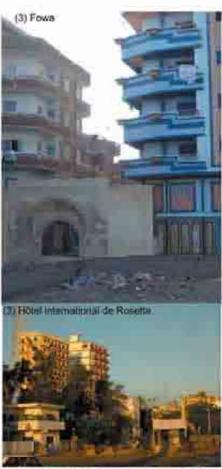


التقييم

- عدم تكافئ في توزيع الاستخدامات
- تركز سكاني و توسع عشوائي علي حساب المساحات الخضراء
 - فقدان المرافق الاساسية (صرف المياه)
 - المخلفات:
 - ترکز سکانی و بشری
 - اكتظاظ
 - صناعات ملوثة
 - اثار مفقودة و اثار مهددة



PASSIVITE FACE A DES RESTAURATIONS URGENTES



NEBATION DU CONTEXTE DANS LE LANGAGE ARCHITECTURAL EMPLOYÉ





MALAISE DANS LA GESTION DES ESPACES PUBLICS

التقييم

- شوارع ضيقة
- سوء استغلال محطة النقل العمومي
- سوء استغلال لمميزات المدينة (الكورنيش)
 - المخلفات:
 - اكتظاظ
 - تلوث
- تعطيل المرور و مصالح السكان (شحن البضائع, النقل العمومي, الاسعاف, جمع المهملات)
 - بيوت و اثار ايلة للسقوط
 - العجز عن الاعتناء بالنظافة (اخطار صحية)







تقييم الوضع و تحديد التدخلات

• عوامل متداخلة

•تدخل متعدد المجالات و الابعاد

ج - ادارة المشروع

- استراتيجية الادارة
- تدخلات متزامنة
- > خطط قصيرة المدى
- ح خطط طويلة المدى
- > تشريك المجتمع المحلي
 - قاعدة مؤسساتية قوية
- ◄ تعاون م .ج .أ /مجلس المدينة

خطط الادارة

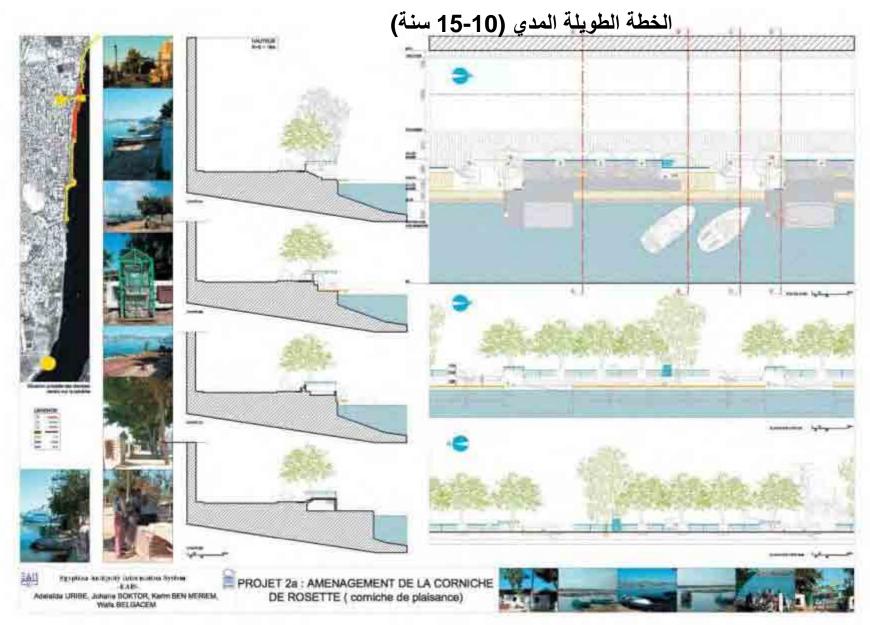
- 1. خطة تأهيل محطة النقل العمومي
 - 2. خطة تأهيل الكورنيش
 - 3. خطة تأهيل و حماية الاثار
 - 4. خطة تنمية السياحة

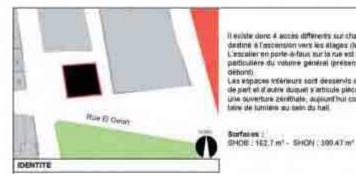
1. خطة تأهيل محطة النقل العمومي

تدخل عاجل: خطة قصيرة المدي (5 سنوات)



2. خطة تأهيل الكورنيش





Il existe donc 4 acces differents sur chassans des façades, capendant un seul est verbablement destiné à l'asconsion vers les élages (les autres donnant sur les réserves du rez-de-chaussée). L'asculier en porte à faux sur la rue est un élément particulier qui se traduit par une morphologie particulière du volume genéral (présence d'une colonne de granite massive pour supporter ce

Les espaces inférieurs sort dessenés de mamére classique evec un hálf de distribution pentral. de part et d'autre duquet s'artique pièces principales et secondaires. Le dernier étage possible Use quverture zerithate, august hai converte d'une vertière, permettant un apport supplementaine de lumians au sein du hail.

En reson des alouis cites precademment, c'est-à-dire interêt de la situation de l'édifine au sein de la ville, particularité marphologique et urbaine (litt indépendant), et genéroste dez. espaces interleurs fami du point de voe des surfaces, de la régularité des firmes el de la bonre laminosité.... cet édifice e été chaisi par la ville pour cordentr le musée municipal (dedié à Fexposition d'éléments militaires)

ROSETTE Vite:

Acresse Rue El Gelm @mr Al Sem

Lititisation Actualia: Vide N° de Registre 10 357 Type de manument : Habitation

Autres appellations : Arab Killy, Arab Kolly. Epoque de la construction : XVIII ave siècle

HISTORIQUE ST PARTICULARITES

L'une des matsons les plus grandes et sottout la plus comue. car elle apportenail à "Arab Killy", adrefois gouverneur de Rosette

DESCRIPTION URBAINE

Elle se altre dans une zone has dynamique de la ville. grace a la mixte des usages : militutionnel, commercial el **Texametique**

Elle représente un des leux les plus représentants de la sitie avec le part trécemment aménagé la mairie, la police du fourtime. Implai international de Roselfie el la place, qui expose la pierre de Roselle, syribole Historique le plus représentatif de Rosette

Se stuation privilegies d'stit independant lui permet de presenter 4 accès et 4 façades sur nue, préant des interactions bill? I rue diverses at variees.

ETAT DE CONSERVATION

Actuellement, sa restauration est au stade des finitions avec la mise en place du second ceuvre lié à la fonction de musée.

Starfaces !







REZ-DE-CHAUSSEE

PREMIER ETAGE

DELIXIEME ETAGE

Critiques par rapport aux fravaux de restauration

- Destin des menuiceries en contradiction avec les moucharableh (ce qui fausse la lecture de l'ouvrage et annue la friesse du travail présenté).
- Vilvage jauere inaproprie (Sonne une ambiance jaune à l'ensemble dus préces, en desenant presque génetit pour les yeur).
- Absence de profection au soi duraré les bavaux, ce qui prée des satissurés et taches d'enduit déficies à efface;
- Présence au demier étage d'une verrière grossière dans l'épaisseur de ses menuiseries.













Adelaids Urbs Wafe Belgacem Johans Bolder Karim Bert maryem. Cellule (Fébude sur Rosette Juliet /ApQL 2005



MAISON ARAB KOLI

PRESENTATION GENERALE DE LA VILLE



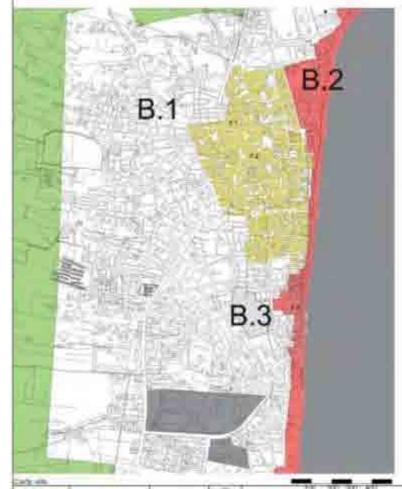
3. خطة تأهيل و حماية الاثار

• تحديد التوزع المجالي للآثار المسجلة و الغير مسجلة (اعادة تقييم)

• تحديد المناطق المحمية و درجاتها

• تقديم لائحة بشروط البناء بمنطقة الحرم





B. LAVILLE (of page ville)

8.1 Zone Urbanne Contemporaine Espace Public

Bamderman

- Hauteut minemale Am Bu-dassus. Da myestu da sail
- L'entantemi den banderinen ne dot état autorisée que pour révérammentes et infectités pour ne publicités commerçaires. Pour foviormentes elles passent être remaines au prus buttant surreune surre la forque l'évécement.

LA CHIMINAGO

- Listpout Minimai de Am-
 - Boils de la consistent. Pour les nots de Am sens inique, sour les nies de plus de lim, flouble sens
 - Signaturation au not : Approver la foi existente
- Fashingout guident

Lie Trottom

- Largeur. Au rossmertt der 12% der Is leigeur de is nie
- Heathour 18 cms
- i Revetement, en betem et friedure en tellem pretionique de 25 x 18 x 100 cm
- Pamia 25

Collecte de Décises:

- Application empération de la lui sui l'emmischim des récide aur le une publique et sur les inches. Prévier une amonde.
- Codesta organisale par la charcognilla Prévoir projet de francomment pours appair d'offressi

Marketoni Urbanti

Poubeiles - Fréquence | la même que celle | des lummaces

> Mattelaux : de la trique, les sacs amment des poeux recycles.

Lammeres - Prestituir de êm poor ses nem 8 eems prespie, Féquence de

50m



Rix disettiques our façade



Individu gamen de cocións plus les tacades

- Hamilton de Strr pour lies nam en double serre, kriquence de SCm
- Elles solvent être utombé de la Sejante sur le pord du troitoir ; lotardés de colles des Moutores métalliques supportant des lits électriques sur les locates, lcf. prioto for Moutognes sur les locates.

Secos publics - Fréquence : Chert places et les jums de la effe

Places of pascic - Le poyronniage numerum due experies verts doil film du 15%.

- Profession de tous les arbres (existants et preparection pour les arbrés satific.
- . Supprovision des cidiures pour les parcis mandants

Buin

Les Facades

- Commun de l'Imitale L'Administre d'arrepartire d'arre-
- Hauder eur une Disprés l'adices 13 de la les 100 de l'amiée 1978 du code de l'administre.
- Porte a feux : article 20 chaptile IV de sais 106 de 1986 -
- Tuturs | en tistable sont une ponte de 2% tillerdiction des toltares en porte-àteur sur la cer
- Émeignes Avancement (haxemum de 60

Servitudes out in prountful priving

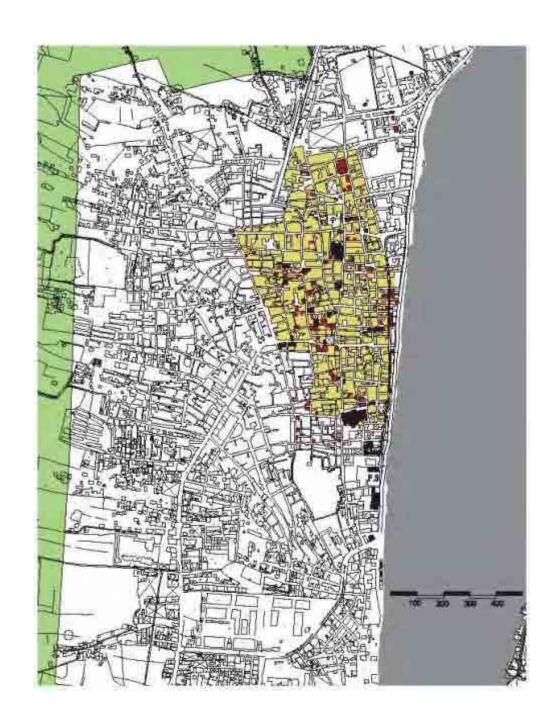
- Princest is zoning; makent live quarters spécifier
- Gatharte
- COS
- CUE

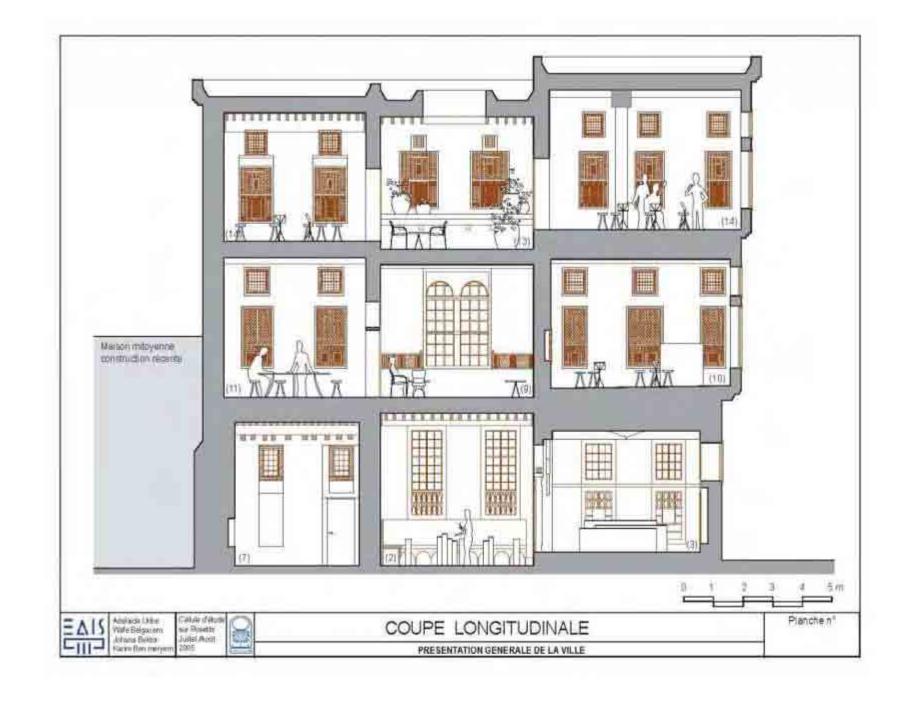
Retrat minimum sail le lintre filmière. Alignement.

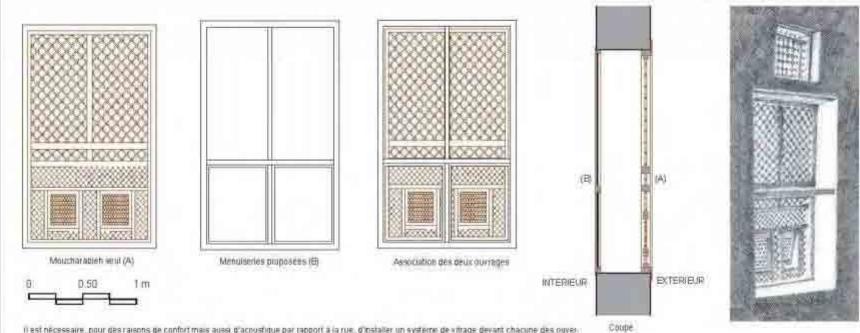
B.Z. La comiche

R.2: Le Cimenière

Literar une print verte sur la repuise funcione à chaque accès du carrellère dans in cadre d'un grand promi de vetussillation à consevoir pour cetta game manulaire.





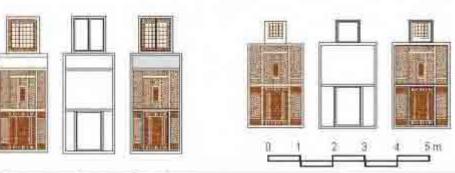


il est nécessaire, pour des raisons de confort mais aussi d'acoustique par rapport à la rue, d'installer un système de «itrage devant chacune des ouverturés de l'édifice

Cependant continge duit éte infilmement lié au dessin même du moucharabien qu'il va couvrir, afin de ne pascertuder la lecture de ce derhier.

Nous prenons danc les interventions actuelles en contre altempte (exempte (1)), et proposons une série d'exempte de menuiseries pour les baies de cette maison

Pour des raisons pratiques, ces menulauries seraient posées sur le nu inténeur du mur, créant par la même une soire de Cadre à la Daie. Le double vièrage serait incolore, de façon à garder une luminosté neutre à l'intérieur des pièces, et transparent, afin de conserver une relation visuelle avec l'extérieur (contratrement à la maison Arab Kolly).





le desain des menuiseries des baies sumonfant la dekka du premier élage est en totale ignorance avec la partition opérée par le moucharableh







Adelaids Urbe Wafe Belgacem Johana Boldor Kanm Ben meryam

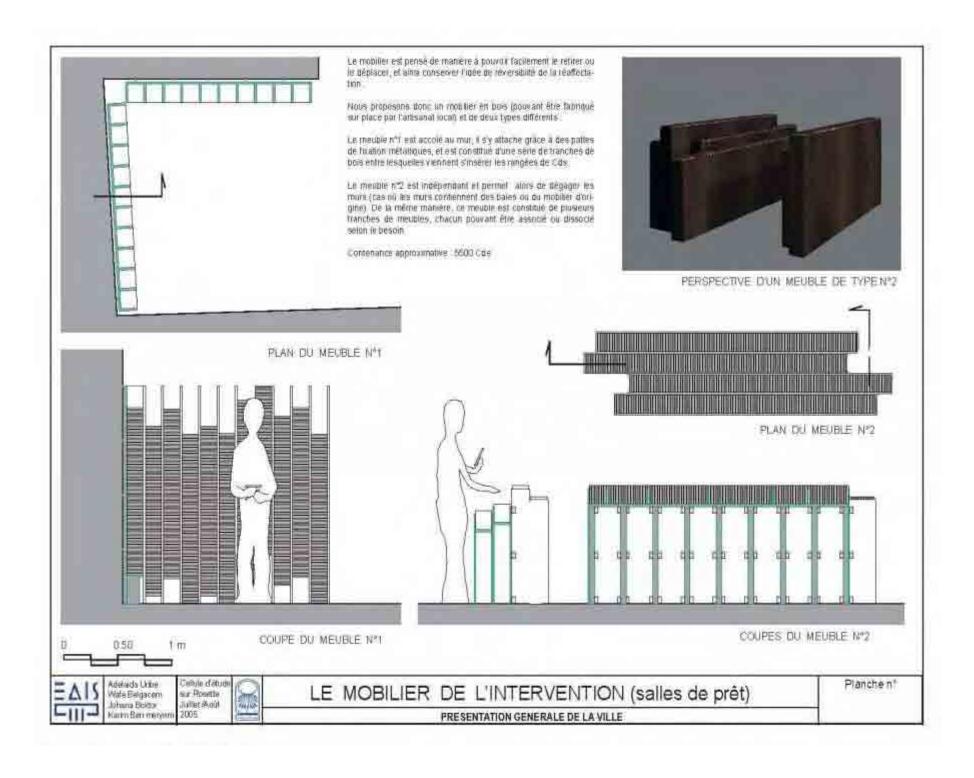
Celtule d'abuse sur Rosette Juillet Août 2005



LE VITRAGE : DESSIN DES MENUISERIES

PRESENTATION GENERALE DE LA VILLE

Planche nº



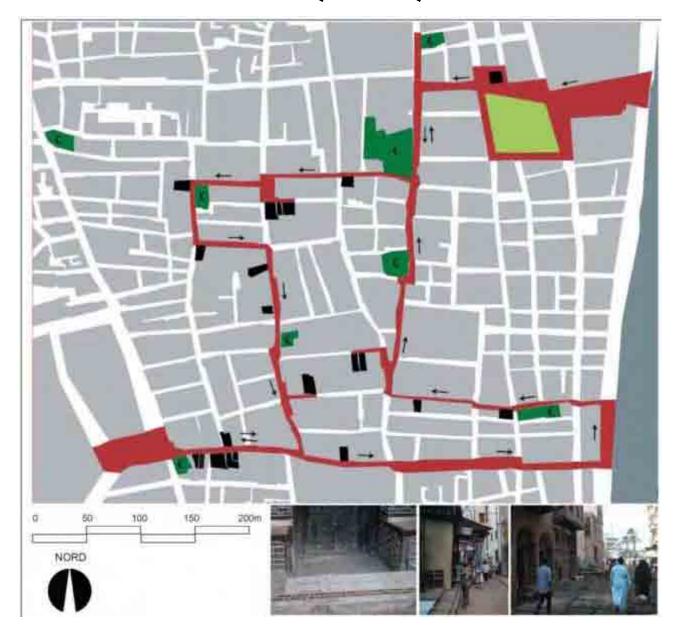
اقتراح تأهيل ميدان منزل الأمصيلي

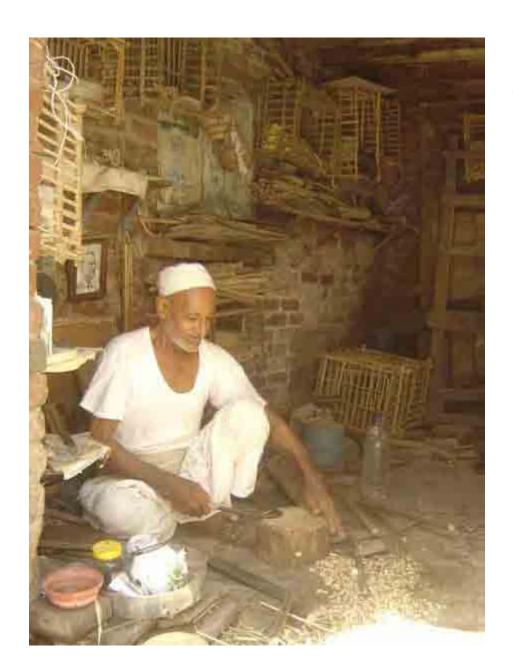






4. خطة تنمية السياحة





• تشريك المجتمع المحلي

﴿ الاستشارة

🔾 توعية و تحسيس

ح تنمية مستدامة