

REPORT
of
A joint ICOMOS/UNESCO ADVISORY MISSION
to
TO HISTORIC CAIRO
and
THE PYRAMID OF DJOSER, SAQQARA,
PART OF THE WORLD HERITAGE PROPERTY OF MEMPHIS AND ITS NECROPOLIS – THE
PYRAMID FIELDS FROM GIZA TO DAHSHUR, EGYPT

The mission was undertaken by Susan Denyer and Attilio Petruccioli, representing ICOMOS, Nada Al Hassan representing the UNESCO World Heritage Centre, and Cristiano Russo invited by the Egyptian Government, between 14th and 18th November 2014.

Acknowledgments

The mission experts would like to thank the State Party of Egypt and specifically Mohamed Sameh Amr, the Ambassador and Permanent Delegate of Egypt to UNESCO, for their excellent arrangements. In particular they would like to acknowledge the detailed and helpful attention of the H E Professor Mamdouh Mohamed Eldamaty, Minister of Antiquities, and Dr Gabal Mostafa Said, Governor of Cairo, and the many experts from the Ministry of Antiquities and the Cairo Governorate who guided the mission and contributed to helpful discussions.

Finally, they would also like to express their great appreciation that the Prime Minister of Egypt, H E Ibrahim Mahlab, dedicated time for a debriefing meeting with the mission members.

Purpose of Mission

The terms of reference are attached as Annex 1. The main purpose of the mission was to suggest approaches to the urgently needed conservation of Historic Cairo in the short, medium and long term, in the context of new commitments from responsible authorities.

The mission was also requested to gain an overview of recent conservation and structural consolidation work within and on the surface of the Pyramid of Djoser at Saqqara.

Framework for the mission

On the first day, following an introductory discussion with the Minister of Culture and the Governor of Cairo, three mission experts (Susan Denyer, Attilio Petruccioli and Nada Al Hassan) undertook a six-hour guided walking tour of Historic Cairo, with staff from the Ministry of Antiquities and the Cairo Governorate. Following a meeting at the UNESCO Regional office where the team working on the Urban Regeneration Project of Historic Cairo presented the results of the project's first phase, the day concluded with a feedback session chaired by the Governor of Cairo with the Minister of Antiquities and the Ambassador to UNESCO. Staff from the Ministry of Antiquities, the Cairo Governorate and from the UNESCO Regional Office and other experts were in attendance.

On the second day, the four experts undertook further site visits to parts of Historic Cairo.

On the third day, three mission experts (Susan Denyer, Cristiano Russo and Nada Al Hassan) undertook a field visit to the pyramid of Djoser led by staff from the Ministry of Antiquities and Mr. Hassan Fahmy Imam, the Engineer in charge of the restoration project and supervision of the works on behalf of the Ministry. The visit started in the premises of the construction site with a presentation of the restoration studies and project, and of the progress of the restoration works carried out up to this date. The presentation was followed by an extensive visit to the pyramid of Djoser (from the outside, and the inside), including access to the scaffoldings inside the pyramid, the upper part of the shaft, the funerary chamber and some of the galleries.

The field visit was followed by a meeting at the Ministry of Antiquities Project Department where the mission members could consult the documents, studies and drawings pertaining to the restoration project.

The third day concluded with a meeting with the Prime Minister which allowed an opportunity for the mission experts to outline a brief summary of their advice on both Historic Cairo and the Pyramid of Djoser at Saqqara.

CONTENTS OF MISSION REPORT:

1. MAIN OUTCOMES AND CONCLUSIONS OF THE MISSION

2. BACKGROUND TO THE MISSION

3. HISTORIC CAIRO

- o *OUV and Key Attributes*
- o *Summary of Vulnerabilities and main causes*
- o *Conservation Activities*
- o *Research and Documentation (UNESCO project)*
- o *Current State of Conservation*
- o
- o *Overall Recommendations:*
 - § *Revitalisation Project for Historic Cairo*
 - § *Suggested Overall Road Map for Way Forward with short, medium and longer-term actions*
- o *Specific Recommendations*
 - § *Governance*
 - § *Stricter development controls*
 - § *Cultural tourism strategy*
 - § *Capacity building*
 - § *Research strategy*
 - § *Conservation approaches*
 - § *Boundaries*
 - § *Prioritising Actions*
 - §

4. HISTORIC CAIRO: RECOMMENDATIONS

5. PYRAMID OF DOSER AT SAQQARA , PART OF THE WORLD HERITAGE PROPERTY OF MEMPHIS AND ITS NECROPOLIS – THE PYRAMID FIELDS FROM GIZA TO DAHSHUR

- o *Summary of restoration works*
- o *Observations on the background studies and overall restoration approach*
- o *Recommendations*
- o *Consolidation and Restoration works: structural aspects*
- o *Consolidation and Restoration works: inter-disciplinary approach*
- o *Consolidation and Restoration works: documentation*
- o *Consolidation and Restoration works: next phase*
- o *Consolidation and Restoration works: future work*

6. SAQQARA: RECOMMENDATIONS

1. MAIN OUTCOMES AND CONCLUSIONS OF THE MISSION

HISTORIC CAIRO

The field visits of the mission underscored the extraordinary importance of Historic Cairo as a complex living city and the exceptional richness of its urban fabric, as well as the quantity and quality of historic monuments not just in the Citadel area but spread throughout the various districts.

At the same time the mission was made fully aware that the fabric of Historic Cairo is under severe strain, from inadequate development control. Although many of the monuments have been restored and are being managed, the urban fabric that gives meaning to these monuments and sustains the life of the city is extremely vulnerable. The symptoms of this decay are widely acknowledged by the authorities; their multiple causes, aggravated by the instability of the past few years, are also well known.

The mission further considers that unless actions are taken to reverse what is becoming a downward spiral in the immediate future, it could well become impossible to sustain the attributes of the property's Outstanding Universal Value (OUV).

Fortunately the authorities at the highest level – the Prime Minister, the Governorate of Cairo and the Ministry of Antiquities are aware of the challenge and are considering how it might be addressed in a holistic way.

Over the past few years, the World Heritage Committee has requested the production of a Management plan, the definition of robust boundaries, and a halt on demolition. All of these are essential but in the mission's view not sufficient. If Historic Cairo is to survive as a jewel in Egypt's crown (as envisaged when it was nominated for inscription) a much more holistic and interdisciplinary approach is needed for the entire city.

The mission considers that what is needed is no less than a major Revitalisation Project for Historic Cairo that can valorise the attributes of OUV and the social and cultural assets of the city to drive forward a programme that reverses urban decline and **fosters a synergy between the present and the past**. Such a programme would need to be tiled into the wider development of Greater Cairo and particularly to the districts immediately adjacent to the property such as downtown, the Nile's banks and the Moqattam – all of which are facing major transformational pressures and rapid urban change.

This mission report has not dwelt on the threats but rather has attempted to suggest short, medium and long-term actions that could contribute towards an overall Road Map for a revitalisation programme.

Short Term Actions – within one year

In the short term, introduce stricter controls, particularly on demolition and development in order to stabilise the current situation.

Undertake emergency measures to halt the growing decay of the buildings inscribed on the Ministry of Culture's Register of Buildings of Special Value, of which a large number are decayed and are awaiting demolition and subsequent reconstruction.

At the same time it would be desirable to announce as soon as possible the intention to launch a revitalisation project for Historic Cairo and to set out a provisional timeframe as well as aims and objectives – which would cover not just conservation of buildings but also social and economic aims and objectives related for instance to better housing and the fostering of traditional crafts.

In order that any actions are taken on the basis of agreed value of the World Heritage property, its retrospective Statement of OUV needs to be approved by the World Heritage Committee as do robust boundaries.

A management structure for the property needs to be established that draws together the key stakeholders. The creation of a Technical Unit for the Protection of Historic Cairo of multidisciplinary and highly qualified staff from all the key entities would seem to be an essential first step.

And in preparation for a revitalisation project, work could be undertaken within the framework of a phase II for the UNESCO-led project URHC (if this could be extended) on surveys of social and cultural assets.

There is also a need to launch an awareness-raising project to foster understanding of the World Heritage property and its assets amongst residents but also amongst those involved in development control measures.

Medium Term Actions- within two to three years

In the medium term, much clearer frameworks are needed within which the property is managed. These need to cover stricter legal codes, clearer governance arrangements, appropriate spatial, tourism, and transport strategies, and more detailed planning guidance.

A Management Plan for the World Heritage property needs to be drawn up, agreed and approved – as set out below.

Based on these frameworks, the scope and timeline of the Revitalisation project could be worked up, and possible pilot projects launched that could demonstrate the efficacy of a multi-disciplinary project in one or more defined areas of the city.

At the same time, work on integrating the Revitalisation project into plans for Greater Cairo needs to be started.

Long Term Actions - within five years

Given the extreme fragility of the property, the mission considers that if the attributes of OUV are to be saved, within five years substantial and demonstrable progress needs to have been demonstrated through the freezing of unplanned constructions, clear progress in the state of conservation of Buildings of Special Value, and a pilot revitalisation project on track in an identified neighbourhood in the City.

There also needs to be a clear road map in place to take the work forward for a further five years.

These recommendations are based on a very short mission of two days only. In order to develop such ideas, the mission suggests that a Technical Workshop might be convened to explore further strategic or area-based approaches for what could become one of the world's largest urban revitalisation projects.

PYRAMID OF DOSER AT SAQQARA RECOMMENDATIONS

Consolidation and Restoration works: structural aspects

The consolidation and restoration works were suspended on the external area at the end of 2011, while they continued on the internal area of the pyramid until December 2013. The early suspension of the restoration activity has not permitted the completion of the works therefore rendering the final result regarding the structural safety partially futile.

It is to be underlined that the following works need to be completed as soon as possible giving priority to the works concerning the shaft cover (safety measures, insertion of beams and mortar injections) before proceeding with those works concerning the façade:

- o In the interior, work on the insertion of tie-beams on the side of the shaft dome, the injections for the general improvement of the masonry; securing stone blocks in precarious situations.
- o Regarding the external facades, the consolidation of the Pyramid's four corners has not been completed (connections are lacking between the four surfaces of the pyramid), in particular the area on the south-east corner (Fig. 4). Those areas, furthermore, are the ones most likely to be vulnerable in case of a recurring seismic event.

Consolidation and Restoration works: inter-disciplinary approach

- Even though the choices may often have a predominantly structural character, they must nonetheless be shared with all professional entities involved at various levels of engagement (architects, Egyptologists, archeologists, etc.) in order to find a consolidated and agreed solution.
- It is crucial that the exterior of the pyramid should allow an understanding of its original form, its age, and, for experts, the scope and extent of the restoration work. This last requirement should not take precedence over the others. The restoration works should allow the visiting public to perceive the stepped form of the pyramid. The current approach of filling-in the cavities in the southern surface of the pyramid by a flat surface of stones in the area of the first step appeared to the mission to be too dominant. It was considered that a more subtle way could be found of differentiating new work from the old in such a way that suggests the original overall form of the monument. The final solution must be acceptable not only from a structural historical and archaeological point of view but also from an aesthetic point of view.
- Solutions should be reversible and, wherever possible, low-impact structural solutions in order to avoid choices that have for example resulted in the construction of a contrasting wall in the area surrounding the sarcophagus (in the funerary chamber). To this end, the involvement of conservation architects in the structural consolidation project is crucial.

Consolidation and Restoration works: Documentation

- All works need to be documented with the necessary calculations and justifications; in particular, the following documentation needs to be compiled prior to any further implementation.
- Preparation of detailed reports regarding static studies and calculations, and the justification of the proposed works, showing their necessity and providing their correct measures and precise amounts.
- Availability of a diagnostic plan to control the correct implementation of the works, proposing for example the tension stress of the tie-beams on location, the measurement as well as the mapping of the injected mixture. Special attention must be paid to the correct distribution of the mortar in the masonry through the implementation of a series of video-endoscopic tests to be carried out - where possible - on the drill holes used for the tie-beams before their insertion.
- Reactivation of an automatic monitoring system to control possible development of cracks as well as of the thermo-hydrometrics during the implementation of the works.
- Following the termination of the works, the provision of a full set of "as built" project drawings, which integrate the possibly occurring variants in the course of the works.

Consolidation and Restoration works: next phase

In view of the forthcoming re-commencement of the works, it would be beneficial to share the project documents, drawings and calculations with the World Heritage Centre and ICOMOS as soon as they are ready, and to foresee an expert mission, with the team in charge of the second phase of the works, prior to the launch of the tender, or in case the tender has already been bid for, prior to the commencement of the works. Such a mission should allow time to study the documentation and provide in depth technical advice on the overall scope and detail of the proposed interventions.

Consolidation and Restoration works: Future work

In general, for all future conservation projects and works, especially for major interventions for a monument of such outstanding importance, it would be advisable to set up an inter-disciplinary scientific committee, preferably with international members, that could help advise on restoration solutions. It is also recalled that, in line with the provisions of the Operational Guidelines for the implementation of the World Heritage Convention, paragraph 172, the Egyptian Government should inform the World Heritage Centre of any works prior to their commencement, and provide details for assessment by the Advisory Bodies.

2. BACKGROUND TO THE MISSION

The present document reports on the joint World Heritage Centre/ ICOMOS Advisory Mission to Cairo, which took place from 14 to 18 November 2014, at the invitation of the Egyptian Government.

Previously, an inter-Agency mission to Cairo took place from 4 to 9 September 2014 by UNESCO, ICCROM, ICOM, and the UNESCO Category II Centre for World Heritage in Bahrain. Its main objectives included the review, assessment and follow-up on activities concerning Historic Cairo. The mission provided the Prime Minister of Egypt with proposed short, medium and long-term actions, and a report, which contained a table of Specific actions for Historic Cairo by main stakeholders (see Annex 4 below).

However, the Egyptian Government requested that further input on Historic Cairo be provided by ICOMOS as their representatives were unable to join the September mission. In addition, the Egyptian Government expressed the wish that such a mission would also include the Pyramid of Djoser in Saqqara, at the World Heritage Property “Memphis and its Necropolis – the Pyramid Fields from Giza to Dahshur. Consequently, the Egyptian Government invited a joint World Heritage Centre/ ICOMOS mission from 14 to 19 November 2014 to look more in-depth into the issues facing Historic Cairo on one hand, and to advise on the way forward with regards to the restoration works at the Pyramid of Djoser in Saqqara, on the other hand.

The mission members reviewed the State of Conservation reports and World Heritage Committee Decisions related to the property (see Annex 5), technical reports on both properties, and the outcomes of the recent inter-Agency Mission.

3. HISTORIC CAIRO

Outstanding Universal Value and Key Attributes

Field visits by the mission emphasised the multiple attributes of Historic Cairo in terms of the exceptional richness of the urban fabric, as well as the quantity and quality of historic monuments not just in the Citadel area but spread throughout the various districts. These include an unparalleled number of Sabil-s (water fountains) for local communities, some sponsored by wealthy merchants, many still with their underground water tanks, Masjid- (mosques), Madrasas (schools), Kuttabs (coranic schools), palaces and Bimaristans (hospitals). But these only fully convey their value when appreciated as part of the extensive urban areas that they served.

Historic Cairo was one of the first historic cities to be inscribed on the World Heritage list in 1979, at the same time as the Medina of Tunis, Dubrovnik and Kathmandu and a year after Krakow and Quito. Of all of these, Historic Cairo is by far the largest urban area (at around 35 sq kilometres) and arguably the most complex in terms of its morphology and layers of history.

A retrospective Statement of Outstanding Universal Value has still to be approved by the World Heritage Committee. A draft text has been prepared but not yet fully agreed and submitted to the World Heritage Committee for approval.

The ICOMOS evaluation of Historic Cairo at the time of inscription nevertheless provided a clear understanding of the key attributes of the overall Old City as reflected in criteria (i), (v) and (vi).

Criteria (i) celebrates the 'great monuments of Cairo' , over 600 of them spread around the city that span from the 7th to the 20th centuries, and include public buildings, fortifications, palaces, tombs and dwellings, many of which are seen as 'incontestable masterpieces' in terms of the form and rhythm of their colourful architecture, their exquisite decorative details, their contribution to the study of Islamic art, and the 'unforgettable' contribution of their 'thousand' minarets to the skyline of Cairo.

Criterion (V) celebrates the richness of the 'well preserved' centre of Cairo in which numerous streets, and old dwellings maintain, in the heart of the traditional urban fabric, 'forms of human settlement which go back to the Middle Ages', and the way these chart the historic development of the city from the beginnings of Islam at Fustat down to the 20th century, through the various capitals of the Fatimids from the 10th-12th century who founded Cairo, of the Ayyoubids (1171-1250) who unified Fustat and Cairo, and of the Mamelukes (1250-1517).

And Criterion (vi) celebrates the way the historic centre of Cairo constitutes an 'impressive material witness to the international importance of the political, strategic, intellectual and commercial' activities of the city developed during the medieval period.

Taken together the justification for these three criteria clearly demonstrates the Outstanding Universal Value of Historic Cairo as a living, dynamic, multi-functional city. The urban fabric and layout that has persisted since Mediaeval times must be seen as one of its key attributes, alongside its architectural masterpieces that reflect its political and strategic importance, the schools and other institutions that reflects intellectual prowess, the many streets and squares that reflect its continuing commercial activities based on distinctive traditional crafts.

At the time of inscription it was acknowledged that there were few cities in the world that were then as rich as Historic Cairo in terms of the way its old buildings display history and beauty. In the intervening thirty-five years that significance has become even greater as many historic cities around the region and even globally (that are not inscribed on the World Heritage List) have been drastically altered by modern developments or by conflicts. Today Historic Cairo is an extraordinary survival, not just as a relict city or as a museum but as a dynamic city that still readily displays its value, albeit in an extremely fragile way.

Summary of Vulnerabilities and main causes

The main reason for the visit was to consider how the vulnerabilities of the urban area might be addressed in the immediate, medium and long term. The mission was requested not to dwell on the problems, which were well understood, but to concentrate on measures that might be taken to address the vulnerabilities.

The following text therefore only touches briefly on these vulnerabilities but considers some of the causes, in order to allow an understanding of the measures necessary to reverse trends.

What became clear to the mission is that in certain areas the historic urban fabric is only just surviving. While some of the monuments are vulnerable to a lack of conservation, the main threats are to the lesser buildings and their associated urban layout that form the essential context for these monuments, that are the backdrop for the commercial and social life of the city, and that could underpin cultural tourism which could benefit local communities. The mission viewed many extremely valuable examples of merchants' houses each with different decorative treatment, some with fine stonework, and many with detailed fretwork shutters and oriel windows, as well as example of courtyard layouts that have persisted, although subdivided. And almost without exception, all needed intervention to varying degrees and some were only just habitable.

The vulnerabilities do not just relate to the fabric of the city; they impinge on social, cultural and economic activities, which foster the dynamic life of the city and guarantee its sustainable conservation.

What has also become clear is that these vulnerabilities have multiple causes:

-First although the majority of residents are part of a long-standing community and identify closely with the identity of the city, many of them are not prosperous enough to afford the work necessary to stabilise, repair and update their houses. The lack of repair work over decades on large numbers of buildings is causing many to become structurally unsound, with the result that upper floors are abandoned. In some cases this lack of stability has been a reason given to justify their demolition, while others simply collapse. This phenomena has targeted, and is still targeting, a large number of buildings inscribed under the Ministry of Culture's Registry for Buildings of Peculiar (Special) Value.

-A second cause is more recent. The recent 'revolution' in Cairo has created over the past four years an administrative vacuum of which some residents took advantage. This has led to the unregulated demolition and rebuilding of some houses with inappropriate materials and scale, and extra unauthorised stories being added to existing buildings, which in some instances have had dramatic and worrying repercussions with the new extra weight causing the buildings to lean some degrees from the vertical. There have also been reports of land grabbing. This is coupled with the great housing crisis that Cairo has been facing since decades. It is understood that there are as many as 700 violations in the Historic City.

-A third cause is the apparent ease with which demolition permits were issued in the past – a situation which the mission understood was being reversed with new procedures.

-A fourth reason relates to the lack of infrastructure in many parts of the city, such as water and sewage services and rubbish collection, which means that the area is not necessarily as good a place to live as it might be.

-A fifth cause is connected to the multiple ownerships of most of the houses.

-A sixth cause is connected to the idea of three metres buffer zones around monuments which has in the past had the effect of contributing to the demolition of nearby buildings that might be seen to threaten their stability, thus leaving the monument 'freed' and isolated from its urban context.

-A seventh cause relates to the gradual decline of craft guilds and activities in the historic City, which has had an impact on the status, and prosperity of those involved.

-An eighth cause is drainage problems that add to structural instability and relate to the position of Historic Cairo at the edge of the Nile and rising water tables.

A related factor is the lack of clarity of the boundaries of the inscribed World Heritage property – as mentioned above.

Conservation Activities

The mission was shown several examples of detailed restoration work on monuments although some, such as at the Bimaristan (Hospital) al-Mu'ayyidi, now halted through lack of funds.

In terms of the urban fabric, the mission also viewed examples of street renovation work near the Hakim mosque and the larger street regeneration project along Al-Muizz and Al-Gamaliya Streets in the north of the city which involved the introduction of underground services, the paving of streets, the detailed restoration and unification of shop facades and the engagement of craft shops as a focus for tourists. A further area where a similar project was envisaged around Bab Nasr Square was also viewed. In other areas of the city, resources are being provided for cultural activities such as stages and platforms.

The potential restoration and development of caravanserais as tourist hotels were also described and some comments on these are offered below.

Research and Documentation (UNESCO Project)

The Urban Regeneration for Historic Cairo project (URHC) implemented by UNESCO, has been run by staff at the UNESCO Regional office over the past four years. A summary of the aims of this project and its achievements is set out in Annex V.

This URHC project has assembled highly valuable documentation and analysis of the historic fabric of the city as well as analytical studies of key social and economic aspects by respected authorities. This work aimed to provide an appropriate and shared information platform for urban conservation and should indeed be an exemplary basis for future work.

The project also aimed to prepare a conservation plan and to establish an institutional framework for the management of the World Heritage property. As set out below, the mission considers that such aims cannot be carried out in by this project alone but rather need to be embedded in the responsibilities of Ministries and Agencies and supported by key stakeholders.

If funding is available to continue the URHC project, the mission considers that it could very usefully to augment the research already undertaken in terms of mapping the social and cultural resources for conservation that could be available to support a large-scale revitalisation project – see below. It would also be desirable if the UNESCO unit could somehow ensure formal support the proposed Technical Unit (see below).

Current State of Conservation

The mission is of the opinion that Historic Cairo as a whole is under severe threat as a coherent entity. Moreover it considers that its vulnerabilities are such that urgent action is needed in the immediate future if longer-term measures are to be successful in reversing the overall decline in the fabric and in fostering the economic and social prosperity that is essential to sustain its distinctness as a living city.

The World Heritage Committee has requested on several occasions that conservation and management plans be produced for the Historic Cairo, that boundaries be clarified, that demolition be stopped and that a draft retrospective Statement of OUV be submitted to the Committee. A high-level mission (September 2014) has recently detailed further measures relating to the need for a technical unit for the World Heritage property, for greater protection measures, and for strong governance. It also set out some of the detailed measures that might be undertaken by such a Technical Unit, by the Ministry of Antiquities, by the Cairo Governorate, by the National Organisation of Urban Harmony and by the Ministry of Endowment and the Egyptian Endowment Authority.

This mission considers that even if all these necessary measures are undertaken, the Old City could still be vulnerable. It considers that the scale of the city, the scope of its problems and

the potentially disastrous consequences of lack of action in terms not only of a loss of fabric, but the loss of a highly distinctive culture shaped by a millennium and a half of development, means that the vulnerabilities need to be addressed at the highest strategic level and in the immediate future – as in ten or even five years' time it might be too late. And the mission was assured that such a commitment could be put in place.

What the mission suggests is needed is a major Revitalisation Project for Historic Cairo that addresses all aspects of the historic urban landscape – cultural, social, economic and environmental – and one that aims to integrate Historic Cairo into greater Cairo in terms of infrastructure and harmonised development.

Such a project could become one of the world's largest such projects. It would clearly need national support at all levels, as well as considerable financial backing. International involvement could be highly beneficial.

Below are some more detailed suggestions related to the implications of such an approach.

Revitalisation Project for Historic Cairo

For such a large project that has an urgent dimension there could be an inherent tension between the need for actions to be taken on the basis of adequate research and evidence; there might also be conflict between the need to spread action across the city and the need to focus resources. Over and above these considerations there will be a need for the involvement of local communities, particularly with regard to ensuring their understanding of the values of the Old City and the attributes that carry those values, and of how they might be engaged and could benefit. And one major factor will be how far the project should be centrally directed and how far it might support local initiatives.

The mission suggests that there is a need for a Road Map whose ultimate aim is to sustain the Outstanding Universal Value of the Old City through its revitalisation. This Road Map would need to set out a linear time frame with stages necessary to define progress in achieving this aim, but also cross-cutting measures that will show engagement throughout the city in terms of harnessing social and cultural assets, and in terms of how the Historic Cairo project engages with development in greater Cairo.

Suggested Overall Road Map for Way Forward with short, medium and longer-term actions

As such a Revitalisation project might take twenty years, it could be difficult for it to be undertaken sequentially around the city meaning some neighbourhoods would have to wait many years before receiving support.

As the Old City is so clearly defined in terms of neighbourhoods, the mission suggests that the possibility of these being the focus of development should be considered. The neighbourhoods could be analysed in terms of how monuments might be seen as the focus of wider ensembles and areas, but equally importantly in terms of the social and cultural resources of those areas. What are the distinctive characteristics of these areas, how might their communities of interest be defined, and how might they be harnessed?

The possibility of a pilot project was mentioned briefly during the mission. There appeared to be the suggestion that local people might have to be moved out before the buildings could be restored – but this might have been misunderstood. The mission suggests that a pilot project could be useful in one neighbourhood but in terms of showing how engagement and capacity building might contribute towards the overall aim. If the pilot project were only to address the

physical fabric, however well the work might be undertaken, this could narrow the benefits delivered.

At the same time as a pilot project on one area, work could be done to consider cultural and social resources across city as a basis for structuring work in other neighbourhoods. The pilot project could stem from the work done by the URHC project on the area surrounding the Citadel. The initial outcomes of this research might also be the basis for capacity building – see below.

The scale of the revitalisation project is such that one overall approach of projects managed directly may not be sufficient and public private partnerships perhaps also need consideration, particularly in connection with cultural tourism offers.

The Mission considers that the mechanisms needed to launch a large-scale revitalisation project could take some time to put in place. Meanwhile urgent actions are needed in the short-term to avoid the overall property falling even further towards irreversible degradation, while the longer term revitalisation project is scoped and developed.

However as the short-term actions are necessarily ones that will constrain further negative change, the mission considers that it is highly desirable that such additional constraints on actions are complemented by a commitment to develop a longer-term revitalisation project and the offer of positive opportunities to give residents some confidence for the future.

The mission suggests the following short, medium and long-term actions. These need to be further developed and put together into an overall Road Map that could lead at the end of ten years to Historic Cairo achieving measurable benefits in terms of the conservation of the historic fabric and in social and economic terms.

Short Term Actions – within one year

In the short term, introduce stricter controls, particularly on demolition and development in order to stabilise the current situation. This would require the freezing of unplanned constructions and a substantive work to address the conservation of Buildings inscribed on the Ministry of Culture's Register of Peculiar (Special) Value from the legal, administrative, financial and technical viewpoints, of which a large number is decayed awaiting demolition and subsequent reconstruction.

At the same time it would be desirable to announce as soon as possible the intention to launch a revitalisation project for Historic Cairo and to set out a provisional timeframe as well as aims and objectives – which would cover not just conservation of buildings but also social and economic aims and objectives related for instance to better housing and the fostering of traditional crafts.

In order that any actions are taken on the basis of agreed value of the World Heritage property, its retrospective Statement of OUV needs to be approved by the World Heritage Committee as do robust boundaries.

A management structure for the property needs to be established that draws together the key stakeholders. The creation of the Technical Unit for the Protection of Historic Cairo would seem to be an essential first step. The Technical Unit for the Protection of Historic Cairo should include multidisciplinary and highly qualified staff from all the key entities would seem to be an essential first step.

And in preparation for a revitalisation project, work could be undertaken within the framework of the URHC project (if this could be extended) on surveys of social and cultural assets and support to the Technical Unit.

There is also a need to launch an awareness-raising project to foster understanding of the World Heritage property and its assets amongst residents but also amongst those involved in development control measures.

Medium Term Actions- within two to three years

In the medium term, much clearer frameworks are needed within which the property is managed. These need to cover stricter legal codes, clearer governance arrangements, appropriate spatial, tourism, and transport strategies, and more detailed planning guidance.

A Management Plan for the World Heritage property needs to be drawn-up, agreed and approved – as set out below.

Based on these frameworks, the scope and timeline of the Revitalisation project could be worked up, and possible pilot projects launched that could demonstrate the efficacy of a multi-disciplinary project in one or more defined areas of the city.

At the same time, work on integrating the Revitalisation project in to plans for Greater Cairo needs to be started.

Long Term Actions - within five years

Given the extreme fragility of the property, the mission considers that if the attributes of Outstanding Universal Value are to be saved, within five years substantial and demonstrable progress needs to have been demonstrated to revitalise at least a quarter of the World Heritage Property.

There also needs to be a clear road map in place to take the work forward for a further five years.

Specific Recommendations

To augment the strategic actions outlined above, the following sets out more detailed specific recommendations for aspects of the overall property and its conservation, management and development.

Development control

A more appropriate and effective legal framework is needed, which combines heritage protection and urban development planning, and safeguarding measures for the original urban fabric, overcoming the existing separateness between different legal tools.

If possible, revise and reconsider some of the “organization decisions” issued by the Governorate, especially total and partial demolition decrees. Some of these have been issued more than 30 years ago. It is recommended to limit the total demolition decrees to cases where there is no alternative, instead privileging the consolidation decisions to preserve the architectural value of the old buildings. For this purpose, the appropriate legal, financial and administrative measures need to be revised or set, as needed.

Based on the existing legislation there is the urgent need to establish clear and comprehensive building regulations to be respected and applied by the concerned

administration which aim to control building activities to prevent further damages to the heritage values and promote a well-balanced evolution of the urban environment.

There is also an urgent need to enforce the existing general Protection Measures across the World Heritage property. However, a more detailed regulation should be enforced in the areas with higher heritage values, where conservation interventions of buildings and open spaces could be identified to protect the historic urban fabric. In this regard, urban regulations should be set for new constructions in the property including the definition of their architectural features (volumes, heights, materials, colours, design guidelines, percentage of land occupancy).

It is imperative to overcome the current lack of protection measures for the historic fabric, and develop planning tools to undertake a proactive policy of rehabilitation and regeneration. To this purpose, in the short term, it is possible to exploit the opportunities provided by the “building law” n.144/2008, which envisions “detailed plans” for the “areas of peculiar value”, even if these are not specifically designed to support a widespread effective heritage protection and promote integrated urban rehabilitation. In this framework, additional buildings could be added to the register of buildings with peculiar (special) value.

Management Plan

The main aim of a Management Plan for a World Heritage property is to set out clearly the assets that need to be managed – that is the attributes of OUV, an agreed management system that draws together all key stakeholders, and the constraints within which management is undertaken. If Management Plans are to be effective they need to be embedded in the local planning system so that they are recognized.

The Management Plan normally also sets out a vision for the property and key actions for the various stakeholders to undertake. In the case of Historic Cairo, the situation is one that could be defined as an emergency: management cannot be undertaken from the basis of an acceptable status quo. The mission suggests that what is urgently needed is the first part of the Plan: the defined assets, the management structure and the legal and administrative constraints. The vision for the property could be seen to be defined and delivered by the Revitalisation project.

Historic Cairo Technical Agency for the Protection of Historic Cairo

The mission understands that a Steering Committee has been created under the responsibility of the Prime Minister, and the creation of a Technical Agency for the Protection of Historic Cairo has been discussed. There are very positive measures. The Technical Agency could presumably take the lead in developing the Management Plan, and provide technical support for its elaboration and its finalization into legal planning documents;

If the Historic Cairo Technical Unit is established it is understood that this would be responsible for extending the current violation study to the entire World Heritage property by recording previous decisions for each building, gathering archival information from the concerned administrative bodies, carrying out the field survey and taking a decision on whether there is violation.

This technical body could also be responsible for setting out a research agenda and how the continuation of activities developed by the URHC project (survey of the urban fabric, archival research, performing a shared information platform) could be taken forward in terms of further sector and planning studies and social and cultural asset surveys;

Building upon the experiences carried out in framework the URHC, the Technical Unit could also develop new urban design and conservation planning studies with the following characteristics:

- Be based on the extension of the Information platform and Inventory created for the “priority areas”, in order to provide detailed plot-by-plot and open spaces regulations for the urban fabric;
- Address vacant lands and “frozen assets” as a priority, and define criteria for adaptive reuse;
- Be integrated by architectural guidelines for conservation/transformation interventions (material, building techniques, and design criteria).

One of the key challenges of revitalising Historic Cairo is the need to link its development within the wider framework of Greater Cairo, particularly in term of infrastructure and strategic planning. In this regard, the areas at the edge of Historic Cairo, need to make the connections with downtown, the Nile banks, and the Moqattam – all of which are facing major transformational pressures and rapid urban change.

Awareness raising and capacity building

If residents are to be supportive of actions to revitalise the city, a project needs to be launched to raise awareness of the importance of the city in general terms and in terms of details relating to all the attributes of OUV.

The Technical Unit could also take the lead in promoting and valorizing the Historic Cairo World Heritage site through campaigns (based on research and documentation) and specific initiatives aimed at different targets (stakeholders and technical staff, inhabitants, shop owners, tourist market, academic world).

Cultural Tourism strategy

If tourism is to be a positive force in the revitalising of Historic Cairo, its development needs to be undertaken within an agreed strategy that includes the following goals: maintaining the identity of the Old City and its life styles, advancing the local economy, and combining the interests of the citizens with those of the tourists.

Tourism marketing should reflect these goals and be designed to respect community features and services, and promote the property’s values and image so that potential users are fully aware of the place's distinctive advantages. It should set attractive incentives for the current and potential buyers and users of its goods and services, and deliver a place's products and services in an efficient, accessible way.

But before a community can embrace some or all of these strategies, it must 'do its homework' in terms of understanding its own competitive advantages and disadvantages; identifying who its target markets are; improving the products and services that it can offer to these target markets; and determining how it can communicate its message to them. In this regard, technical support for small and medium enterprises could be included in the Revitalisation Project.

Reuse of monuments and old buildings

Excessive exploitation of heritage sites by tourism is regarded as a major risk, especially for physically fragile sites, which attract flocks of tourists, and sites where tourist facilities are few or inadequate. Excessive use of monuments has been criticized on the grounds that it may rob the Old City of its traditional cultural landmarks and destroy the authenticity and significance of the local heritage.

The rush to providing tourist facilities when not matched with good planning and financial ability can lead to building facilities with poor locations and mediocre design, which in turn can seriously harm the quality and authenticity of the urban landscapes.

Environmental control

The rehabilitation of the residential fabric requires a substantial improvement of the environmental conditions and, to this effect, the waste management system plays a crucial role. It definitely affects the livability of Historic Cairo and is recognized as a major priority issue by the resident population and it represents a serious limitation to the attraction of investments in new services and economic activities. Considering the nature of Historic Cairo, in terms of narrow streets, lands and alleys, which obstruct the waste collection process, there needs to be a direct service, which starts from housing units and adapts to their operational position, using special tools and equipment (small cars or carriages, etc).

Enforcing the provisions of the Environmental law 4/1994 concerning dumping garbage and solid waste in places not specified for the purpose. Enforcing the hygiene law concerning fencing the vacant plots, and punishing the dumping of garbage on other than public soil. Private buildings filled with garbage or have it compiled on the roof should pay a violation fees too.

Conservation Approaches

Taking into account the evolution of the discipline and practice of urban heritage conservation in recent decades, it is time to move away from a conventional approach, which is basically aimed at protecting individual "monuments" or listed buildings. It is necessary instead to address the historic urban fabric as a whole with appropriate planning measures and promote integrated urban conservation projects combining heritage protection and socio-economic improvements for the resident population, an approach developed in the UNESCO Recommendation for Historic Urban Landscapes. It is urgent to deal more effectively with the challenges of heritage preservation and valorisation in a living and vibrant historic city like Cairo protecting and regenerating the historic fabric, not only isolated and individual buildings or sites.

Concerning the use and the occupancy of monument, it is recommended to establish guidelines to identify compatible activities and related general adaptive reuse criteria. These should take into account the diversity of the urban context and be referred to a comprehensive vision of each conservation zone and sub-zone, also addressing the residents' needs. In the case of well-preserved Wakala as in Al-Gamaliya, the lower floors, used for trade in the past, are easily adaptable for collective functions. The residential upper floors on the other hand, where triplex apartments of innovative and complex features represent a unique testimony of a sophisticated medieval building type, should not be modified by the projected reuse plans.

The project to include a number of traditional-style hotels in the area located between the Qayt Bay Wakala and Hakim mosque, where in medieval times there was a continuous fabric of commercial buildings, requires a double preliminary work by the authorities: a philological analysis on the archaeological remains in situ and a search on archival documents so as to return an authentic documentation of the urban fabric and the architectural features, including monuments. There is a real risk that under the pressure of fast work, the design project for reconstruction and restoration be mainly undertaken by an international hotel company. The risk is that this could lead to a 'disneyfication' with the result that tourists, instead of getting rich and authentic cultural insights and experiences, might be offered "staged authenticity"; it is therefore recommended that private investment projects be backed by a team from the

Technical Unit who would ensure that international standards are followed in terms of the methodology of interventions in historic urban fabrics.

4. HISTORIC CAIRO: MAIN CONCLUSIONS & RECOMMENDATIONS

The field visits of the mission underscored the extraordinary importance of Historic Cairo as a complex living city and the exceptional richness of its urban fabric, as well as the quantity and quality of historic monuments not just in the Citadel area but spread throughout the various districts.

At the same time the mission was made fully aware that the fabric of Historic Cairo is under severe strain, from inadequate development control. Although many of the monuments have been restored and are being managed, the urban fabric that gives meaning to these monuments and sustains the life of the city is extremely vulnerable. The symptoms of this decay are widely acknowledged by the authorities; their multiple causes, aggravated by the instability of the past few years, are also well known.

The mission further considers that unless actions are taken to reverse what is becoming a downward spiral in the immediate future, it could well become impossible to sustain the attributes of the property's Outstanding Universal Value (OUV).

Fortunately the authorities at the highest level – the Prime Minister, the Governorate of Cairo and the Ministry of Antiquities are aware of the challenge and are considering how it might be addressed in a holistic way.

Over the past few years, the World Heritage Committee has requested the production of a Management plan, the definition of robust boundaries, and a halt on demolition. All of these are essential but in the mission's view not sufficient. If Historic Cairo is to survive as a jewel in Egypt's crown (as envisaged when it was nominated for inscription) a much more holistic and interdisciplinary approach is needed for the entire city.

The mission considers that what is needed is no less than a major Revitalisation Project for Historic Cairo that can valorise the attributes of OUV and the social and cultural assets of the city to drive forward a programme that reverses urban decline and **fosters a synergy between the present and the past**. Such a programme would need to be tiled into the wider development of Greater Cairo and particularly to the districts immediately adjacent to the property such as downtown, the Nile's banks and the Moqattam – all of which are facing major transformational pressures and rapid urban change.

This mission report has not dwelt on the threats but rather has attempted to suggest short, medium and long-term actions that could contribute towards an overall Road Map for a revitalisation programme.

Short Term Actions – within one year

In the short term, introduce stricter controls, particularly on demolition and development in order to stabilise the current situation.

Undertake emergency measures to halt the growing decay of the buildings inscribed on the Ministry of Culture's Register of Buildings of Special Value, of which a large number are decayed and are awaiting demolition and subsequent reconstruction.

At the same time it would be desirable to announce as soon as possible the intention to launch a revitalisation project for Historic Cairo and to set out a provisional timeframe as well as aims and objectives – which would cover not just conservation of buildings but also social and economic aims and objectives related for instance to better housing and the fostering of traditional crafts.

In order that any actions are taken on the basis of agreed value of the World Heritage property, its retrospective Statement of OUV needs to be approved by the World Heritage Committee as do robust boundaries.

A management structure for the property needs to be established that draws together the key stakeholders. The creation of a Technical Unit for the Protection of Historic Cairo of multidisciplinary and highly qualified staff from all the key entities would seem to be an essential first step.

And in preparation for a revitalisation project, work could be undertaken within the framework of a phase II for the UNESCO-led project URHC (if this could be extended) on surveys of social and cultural assets.

There is also a need to launch an awareness-raising project to foster understanding of the World Heritage property and its assets amongst residents but also amongst those involved in development control measures.

Medium Term Actions- within two to three years

In the medium term, much clearer frameworks are needed within which the property is managed. These need to cover stricter legal codes, clearer governance arrangements, appropriate spatial, tourism, and transport strategies, and more detailed planning guidance.

A Management Plan for the World Heritage property needs to be drawn up, agreed and approved – as set out below.

Based on these frameworks, the scope and timeline of the Revitalisation project could be worked up, and possible pilot projects launched that could demonstrate the efficacy of a multi-disciplinary project in one or more defined areas of the city.

At the same time, work on integrating the Revitalisation project into plans for Greater Cairo needs to be started.

Long Term Actions - within five years

Given the extreme fragility of the property, the mission considers that if the attributes of OUV are to be saved, within five years substantial and demonstrable progress needs to have been demonstrated through the freezing of unplanned constructions, clear progress in the state of conservation of Buildings of Special Value, and a pilot revitalisation project on track in an identified neighbourhood in the City.

There also needs to be a clear road map in place to take the work forward for a further five years.

These recommendations are based on a very short mission of two days only. In order to develop such ideas, the mission suggests that a Technical Workshop might be convened to explore further strategic or area-based approaches for what could become one of the world's largest urban revitalisation projects.



The Southern elevation of the Djoser Pyramid of Saqqara before the works (Photo, Hassan Fahmy)

5. PYRAMID OF DJOSER AT SAQQARA, PART OF THE WORLD HERITAGE PROPERTY OF MEMPHIS AND ITS NECROPOLIS – THE PYRAMID FIELDS FROM GIZA TO DAHSHUR

The following technical reports were received prior to the mission and were duly reviewed:

- § The Stepped Pyramid at Sakkara Current Restoration Work: Reviewing and analyzing Professor's Giorgio Croci's report of September 2011, Dr Moustafa El Ghamrawy, 1st October 2014, Professor of Engineering and a Consulting Engineer Member, Permanent Committee of Egyptian Antiquities
- § Report of the Mission to the Pyramid of Djoser in Saqqara, 26-29 September 2011, Giorgio Croci (UNESCO report)
- § A Power Point Presentation by Dr Hassan Fahmy (October 2014)

Summary of restoration works

The works concerned two main areas:

Exterior:

- Restoration of the outer profile of the Pyramid :
 - Removal of sand.
 - Filling in of cavities in the exterior masonry with fallen or newly cut stones, and replacing decayed stones using a mortar similar to the original one. In this regard, the southern "façade" which presented large portions of cavities was filled by a plane surface which does not allude to the stepped form of the façade (i.e. it doesn't show the 1st step of the pyramid at its base).
 - Surface cleaning.

Interior:

- Consolidation of the inner shaft, the funerary chamber and the galleries:
 - The building of four masonry walls in the funerary chamber under the rock-hewn bedrock, to support the bedrock which presented structural failure patterns

- The consolidation of the dome covering the shaft (stone and mortar filling of cavities, preparation of mortar injections, steel anchors)
- The consolidation of the walls of the shaft (cracks and falling stones)
- The restoration of the wooden beams in the shaft
- The consolidation of the galleries that present structural failure patterns

During the field visit, it was noted that the pyramid had been in a critical structural condition before the works, with a high risk of collapse of rocks and stones, which fully justified structural consolidation works. Overall it was noted that the structural stability of the pyramid had improved after the first phases of work had been completed but that urgent completion of the planned additional works was needed to fully stabilize the pyramid. Moreover, on the outer parts, it was noted that the upper part of the pyramid had not yet been restored and that the southern angles of the Pyramid had been left with no stones.

Observations on the Background studies and overall restoration approach

Despite the lack of sufficient time for a detailed analysis of the available documents, the mission members gained the impression that the documentation, as presented by the team that participated in the project under the coordination of Professor Dr Hassan Fahmy Imam, provided an extensive phase of in-depth diagnosis and preliminary studies, which included structural analysis and tests, geophysical studies, material properties analysis and tests (stones, mortar, wood), a detailed stone-by stone survey, decay analysis and restoration proposal, and other investigative actions. In general, as far as the methodology of the structural project and material restoration is concerned, it seems to comply with the standards required for a monument of this importance and this construction typology.

However, the documentation shared with the mission members did not include structural calculations and their relevant safety verification to justify the subsequently implemented works; in particular this concerns the steel tie-beams that were inserted as support of the cover structure of the shaft (e.g. number of tie-beams, length of anchors, pre-tensile load, execution phases, methodology and injection pressure of the mortar, etc.) as well as the reconstruction of the masonry supporting the rocky walls surrounding the sarcophagus in the funerary chamber (e.g. dimension of the thickness of the newly-built consolidation walls, verification of the foundations, implemented systems, etc.).

The only available calculation models refer to the provisional structures of the scaffolding utilized for the support of weight loads transmitted onto pneumatic cylinders positioned in the transitorily phase and actually already partially removed. A complete assessment of the structural consolidation project would require a thorough study of all the documentation including the related calculations.

In addition, the documentation shared with the mission members did not include historical, archaeological and photographic documentation of the pyramid, although the engineers referred several times to the photographic archives that sometimes guided their analysis and conservation solutions. Indeed, the restoration solutions were mainly driven by structural engineering concerns as opposed to a comprehensive multidisciplinary and integrated approach that could have been achieved not only with structural and material engineers, but also with authoritative conservation architects and archaeologists. Although Engineer Fahmi referred several time in his presentation to the Venice Charter, and to the urgent structural solutions that needed to be implemented to avoid the collapse of parts of the structure, the overall conservation project of the pyramid and its final aspect after the works result from an engineering point of view rather than from a multidisciplinary approach that would integrate historical and architectural interpretations of the pyramid. This refers in particular to the four walls built in the funerary chamber, and to the southern façade of the pyramid, which was

filled in as a plane rather than a stepped surface (or a surface which alludes to the stepped form of the pyramid).

It is to be noted that Professor Dr Hassan Fahmy Imam explained that the consolidation of the rock-hewn funerary chamber was envisaged with steel beams instead of masonry, but the discussions with the archaeologists from the Ministry of Antiquities led to opting for the building of masonry walls. He also explained that urgent consolidation of the bedrock was needed to avoid the collapse of parts of the structure.

6. SAQQARA: MAIN CONCLUSIONS & RECOMMENDATIONS

Consolidation and Restoration works: structural aspects

The consolidation and restoration works were suspended on the external area at the end of 2011, while they continued on the internal area of the pyramid until December 2013. At the time of the mission, no works were being carried out on the site.

The early suspension of the restoration activity has not permitted the completion of the works therefore rendering the final result regarding the structural safety partially futile. In particular, the insertion of tie-beams (Fig 1) on the side of the shaft dome has not been completed, and, in addition, the injections for the general improvement of the masonry (Fig.2) have not been carried out.



Fig. 1 – actual situation of tie-beams



Fig. 2 – plastic pipe not injected

Furthermore, there are still some areas with stone blocks in precarious conditions of stability that need to be secured (Fig.3).

Regarding the external facades, the corner stones connecting the four facades of the pyramid are lacking and have not been replaced, in particular those on the south-east corner (Fig. 4). These areas, furthermore, are the ones most likely to be vulnerable in case of a recurring seismic event.



Fig. 3 – blocks in precarious conditions of stability



Fig. 4 – *uncompleted south-east corner*

It is to be underlined that the above-mentioned works need to be completed as soon as possible giving priority to the works concerning the shaft cover (safety measures, insertion of beams and mortar injections) before proceeding with those works concerning the facade.

Consolidation and Restoration works: inter-disciplinary approach

- Even though the choices may often have a predominantly structural character, they must nonetheless be shared with all professional entities involved at various levels of engagement (architects, Egyptologists, archeologists, etc.) in order to find a consolidated and agreed solution.
- Surface treatment of the reconstructed masonry should be carried out to improve the overall aspect of the monument and to distinguish the reconstructed parts from the ancient parts even years after restoration. Thus special attention must here be paid to structural elements that may have an impact from an aesthetic point of view. The final solution must be acceptable not only from a structural historical and archaeological point of view but also from an aesthetic point of view.
- It is crucial that the exterior of the pyramid should allow an understanding of its original form, its age, and, for experts, the scope and extent of the restoration work. This last requirements should not take precedence over the others. The visiting public is unlikely to be sympathetic to viewing a pyramid that looks new and where the stepped form has been obscured. The current approach of inserting flat stones in the area of the first step appeared to the mission to be too dominant. It was considered that a more subtle way could be found of differentiating new work from the old in such a way that suggests the original overall form of the monument.
- Solutions should be reversible and, wherever possible, low-impact structural solutions in order to avoid choices that have for example resulted in the construction of a contrasting wall in the area surrounding the sarcophagus (in the funerary chamber). It is for example advisable to install a casing around the anchorage of the support beams to hide its end.

Consolidation and Restoration works: Documentation

All works need to be documented with the necessary calculations and justifications; in particular, the following documentation needs to be compiled prior to any further implementation:

- Preparation of detailed reports containing calculations regarding static studies and calculations, and the justification of the proposed works, showing their necessity and providing their correct measurements and/or precise amounts.

- Availability of a diagnostic plan to control the correct implementation of the works, proposing for example the tension stress of the tie-beams on location, the measurement as well as the mapping of the injected mixture. Special attention must be paid to the correct distribution of the mortar in the masonry through the implementation of a series of video-endoscopic tests to be carried out - where possible - on the drill holes used for the tie-beams before their insertion.
- Reactivation of an automatic monitoring system to control possible development of cracks as well as of the thermo-hydrometrics during the implementation of the works.
- Following the termination of the works, the provision of a full set of "as built" project drawings which integrate the possibly occurring variants in the course of the works.

Consolidation and Restoration works: next phase

In view of the forthcoming re-commencement of the works, it would be beneficial to share the project documents, drawings and calculations with the World Heritage Centre and ICOMOS as soon as they are ready, and to foresee an expert mission, with the team in charge of the second phase of the works, prior to the launch of the tender, or in case the tender has already been bid for, prior to the commencement of the works. Such a mission should allow time to study the documentation and provide in depth technical advice on the overall scope and detail of the proposed interventions.

Consolidation and Restoration works: Future work

In general, for all future conservation projects and works, especially for major interventions for a monument of such outstanding importance, it would be advisable to set up an inter-disciplinary scientific committee, preferably with international members, that could help advise on restoration solutions. It is also recalled that, in line with the provisions of the Operational Guidelines for the implementation of the World Heritage Convention, paragraph 172, the Egyptian Government should inform the World Heritage Centre of any works prior to their commencement, and provide details for assessment by the Advisory Bodies.

ANNEXES

1. TERMS OF REFERENCE FOR THE MISSION

2. PROGRAMME FOR THE MISSION

3. LIST OF REGIONAL AND NATIONAL OFFICIALS WHO PARTICIPATED IN THE MISSION

4. EXCERPT FROM THE INTER-AGENCY MISSION REPORT ON CAIRO BY UNESCO, ICCROM, ICOM, AND THE UNESCO CATEGORY II CENTRE FOR WORLD HERITAGE IN BAHRAIN (4 TO 9 SEPTEMBER 2014).

5. UNESCO Cairo Project

ANNEX 1:

TERMS OF REFERENCE FOR THE MISSION

ICOMOS Advisory Mission to Cairo, Egypt Terms of Reference

Dates of the mission: 14-18 November 2014

Members of the Mission:

ICOMOS:

Mr Attilio Pettrucioli: 13-17 November, for Historic Cairo

Ms Susan Denyer: 14-18 November, for Historic Cairo, and the Djoser Pyramid in Saqqara (Memphis and its Necropolis – the Pyramid Fields from Giza to Dahshur)

UNESCO World Heritage Centre:

Nada Al Hassan

Expert of the Ministry of Antiquities:

Cristiano Russo (Giorgio Croci Associati)

Objectives of the mission:

Mr Attilio Pettrucioli and Ms Susan Denyer on behalf of ICOMOS will conduct an Advisory Mission to Cairo jointly with Ms Nada Al Hassan from the World Heritage Centre and Mr Cristiano Russo, from Croci Associates. The mission will visit the two World Heritage Sites of Historic Cairo and the Djoser Pyramid in Saqqara with the following objectives:

1- Historic Cairo:

- a) Review the statutory documents related to Historic Cairo
- b) Conduct a field visit to Historic Cairo
- c) Meet with the relevant Stakeholders and Officials in Cairo
- d) On the basis of the World Heritage Committee decisions, advise on the way forward for the management and conservation of Historic Cairo, in view of the recent administrative and organisational changes initiated by the Egyptian Government to reinforce the management of the World Heritage Property, and of the results achieved by the UNESCO "Urban Regeneration project of Historic Cairo".
- e) Provide a report which includes the above points.

- 2- The Djoser Pyramid in Saqqara (part of the World Heritage site of: Memphis and its Necropolis – the Pyramid Fields from Giza to Dahshur)
- a) Review the documents related to the structural analysis and solutions and project of the Djoser Pyramid
 - b) Conduct a field visit to the Djoser Pyramid
 - c) Conduct a technical meeting with the technical team entrusted by the Egyptian Government with the structural consolidation project and works at the Djoser Pyramid
 - d) Provide technical recommendations on the conservation and structural consolidation project and works at the Djoser Pyramid to advise the Egyptian Government on any needed measures, studies, or steps to be taken forward.
 - e) Provide a report which includes the above points.

**ANNEX 2:
PROGRAMME FOR THE MISSION**

Saturday 15 November

- Morning (9.30 am) : Meeting with H.E. Dr. Mamdouh el Damaty, Minister of Antiquities, 10h, with the Governor of Cairo - Ministry of Antiquities
- Visit of Historic Cairo
- Afternoon: Meeting with the team in charge of the UNESCO “Urban Regeneration project of Historic Cairo” and the teams of the Ministries of Antiquities and Culture, and the Governorate.

Sunday 16 November

- Visit of Historic Cairo and technical meetings
- Debriefing meeting with H.E. Dr. Mamdouh el Damaty – Possible Meeting with the Inter-ministerial Committee in charge of Historic Cairo.

Arrival of Cristiano Russo

Monday 17 November

Departure of Attilio Pettrucioli

- Visit of the Djoser Pyramid in Saqqara
- Technical Meeting with the team in charge of the project and the works
- Debriefing Meeting with H.E. Dr. Mamdouh el Damaty

Tuesday 18 November :

Departure of Susan Denyer and Cristiano Russo

- Meetings of Nada Al Hassan the UNESCO Cairo Office (12 to 2.30 pm). Other meetings will be organised as deemed necessary with the National Commission, The Ministry of Antiquities, the Ministry of Culture and other.

Wednesday 19 November

Return of Nada Al Hassan

ANNEX 3:

LIST OF NATIONAL OFFICIALS WHO PARTICIPATED IN THE MISSION

H.E. Eng. Ibrahim Mahlab	Prime Minister
Prof Dr. Mamduh ELDamaty Dr. Galal El-Said Dr. Riham Araam	Minister of Antiquities Cairo Governor The supervisor of the Heritage Unit – Cairo Governorate
Mr. Mohammed Abdel Aziz	Director of the development of Historic Cairo Project. Ministry of Antiquities
Dr. Ali Taha Omar	Director of the training department – Historic Cairo
Mahmoud Abdel Baset	Director of the heritage department – Historic Cairo
Mr. Wagdy Abbas	Director of Al Saeyda Zainab area
Eng. Mohammed Abu Zaid Eng. Hania Mohammed	Engineer on the historic Cairo Development Project Engineer on the historic Cairo Development Project
Mr. Sheriff Fawzi	Director of the development and archaeology awareness units
Mr. Ali Taha	Director of the training unit
Dr. Riham Arram	Cairo Heritage Preservation Unit Executive Manager - Cairo Governor's office
Mrs. Hind Ibrahim	Inspector, Ministry of Antiquities
Mr. Mohamed Fathi	Inspector, Ministry of Antiquities
Mr. Islam Saleh	Inspector, Ministry of Antiquities
Mrs. Iman Ahmed	Inspector, Ministry of Antiquities
Engineer. Hania Khalifa,	Inspector, Ministry of Antiquities
Mr. Amr Abdel Karim	Inspector, Ministry of Antiquities
Mr. Hani Mahmoud	Inspector, Ministry of Antiquities
Dr. Mohammed Al-Shikha	Head of the Projects Sector
Eng. Waad Allah Abul Ela	
Dr. Mansour Bourik	Chairman of the Central Administration of Projects Cairo and Giza.
Mr. Alaa AL Shahat	Chairman of the Central Administration of the Antiquities of Cairo and Giza .
Mr. Sabry Farag	General Director of Saqqara Area.
Mr. Mustafa Ahmed,	Director of Saqqara Area.
Mr. Ashraf Eiweiss	Director General of the Conservation Department in Saqqara
Dr. Hassan Fahmy	Director of Conservation Department in Saqqara
Mr. Ahmed Ebied	Director General of the Step Pyramid Restoration Project - Al Shorbagy Contracting Company.
Dr. Shadia Mohammed Salem	General Supervisor of the international Organizations Department for Cultural Heritage

ANNEX 4:

Excerpt from the Report of the Interagency Mission to Cairo by UNESCO, ICCROM, ICOM, and the UNESCO Category II Centre for World Heritage in Bahrain (4 to 9 September 2014).

Specific actions for Historic Cairo by main stakeholders

(NOTE: according to the current mandate of the different institutions, but subject to revision according to new structure announced by the Minister)

A. Centre for Historic Cairo (World Heritage site Technical Unit established by Prime Minister Decision)

Issues	Actions to be taken	Expected outcomes	Timeline
Capacity building	Courses for all involved technical staff on urban conservation with advice and in collaboration with ICCROM/ ICCROM-ATHAR and ARC-WH; Hire dedicated and professional staff for the Historic Cairo World Heritage technical unit.	Common understanding of integrated urban heritage concepts; Staff trained;	2014-15
Information Platform	survey of the urban fabric and sector studies, data to be inserted into GIS system;	Shared knowledge and data available of all urban components;	2014/15
Management plan	Technical unit to prepare management plan according to the vision for the site;	Management plan established; approved by the Inter-ministerial Committee for Historic Cairo; ready for implementation by stakeholders (including protection measures such as regulation for conservation zones);	Urgent – 2014/15
	Joint ICCROM-ATHAR and ARC-WH Workshop on Integrated Urban Conservation to help consolidate governance and coordination among the stakeholders	Integrated urban conservation approaches for Historic Cairo improved	2015
Conservation Plan	Technical unit to prepare conservation plan with relevant other units;	Conservation plan finalized;	Long-term
Branding Historic Cairo World Heritage site	through campaigns and tools focusing on different targets (stakeholders and technical staff, inhabitants, tourist market, academic world) with tourism sector;	Awareness raised among all stakeholders, values of World Heritage site better understood and promoted;	2015

Requirements under World Heritage Convention: requests from the Committee	1. boundary clarification for Historic Cairo World Heritage property 2. Statement of outstanding universal value (SOUV) 3. state of conservation report ICOMOS advisory mission in fall 2014 (see above)	1. Boundary clarification submitted by State Party authorities (preferably by 1.12.2014; need to include original map of approved boundaries of 2007 and clarification on topographic map); 2. SOUV submitted to World Heritage Centre 3. state of conservation report submitted to World Heritage Centre;	2. 2015 September/October 2014 (mission)
State of conservation of the monuments and site	Update the inventory of the monuments on the ownership, schedule of restoration and maintenance, use and state of conservation; share with stakeholders including on-site;	Inventory updated and analysis carried out (GIS of technical unit);	2015
Monuments deterioration	set a priority list to halt deterioration of neglected monuments;	Priority list established;	2014/15
Re-use of monuments	Define guidelines for the re-use of monuments, in line with the identified needs of the areas and the residents;	Guidelines established and ready for implementation;	2015
Antiquities zone/Protection areas of monuments	Re-define protection zones (antiquities zones under the law) around the monuments and halt any demolitions for the purpose of "monument settings";	Vernacular architecture and ensembles understood and protected; Concept of living city better understood and promoted;	2014/15

Cairo Governorate

Control of urban transformation	Joint ICCROM-ATHAR and ARC-WH Workshop on Integrated Urban Conservation to help consolidate governance and coordination among the stakeholders Ensure in collaboration with technical unit that the staff responsible of issuing building permits is aware of all laws protecting the urban heritage of Historic Cairo; Review total and partial demolition decrees for historical buildings and	Integrated urban conservation approaches for Historic Cairo improved No permits issued which are not in line with World Heritage protection;	2015 2014 – long-term
---------------------------------	--	---	------------------------------

	suspend demolitions until the approval of the Conservation Plan; Stop issuing building permits for new constructions until the protection measures are adopted; Deny the supply of infrastructures and facilities (water, electricity ...) for the illegal buildings, (enforcing Law 119/2008);		
Protection of urban fabric and vernacular architecture	Complete the list of buildings with heritage value to be registered;	List finalized by the "Committee for Buildings of Peculiar Value"	2015
Waste management	Monitor illegal garbage dumping and identify improvement measures; Define an efficient waste management system for the World Heritage site;	Waste management improved;	2014-2015/16

Other institutions

National Organization for Urban Harmony			
New constructions in World Heritage site	further develop architectural guidelines for new buildings and rehabilitation in Historic Cairo;	Clear guidelines established to be shared;	By 2015 at the latest
Ministry of Endowment and Egyptian Endowments authority			
Full information about properties	Make an inventory of all Awqaf owned properties to be shared with stakeholders;	Inventory established and provided to technical unit;	2015
Management tools	develop new creative management tools for the maintenance and preservation of awqaf properties; taking into account the buildings' heritage values; Create mechanisms and strategies for encouraging investors to restore and use awqaf-owned non-listed buildings;	Management tools developed and applied; Investors encouraged to restore and use such buildings;	Long-term
Ministry of Education			
Integrating heritage in school activities	Build on ICCROM-ATHAR's experience in the field and adapting the ICCROM-UNESCO School guide, to be disseminated to schools through the Ministry of Education	Cultural heritage awareness at schools and for young generation improved	2015

ANNEX 5

Urban Regeneration project for Historic Cairo (URHC) implemented by UNESCO.

Summary Sheet – **November 2014**

Project Title **Urban Regeneration project for Historic Cairo (URHC)**

Target Country **Egypt**

Funding source **Special Account for the Safeguarding of the Cultural Heritage of Egypt**

Total Budget approved **2,153,804 USD**

Reporting Period **January 2010- November 2014**

Executing Agency **UNESCO-World Heritage Centre**

Project starting date **January 2010**

Project completion date **November 2014**

I. Background

Requested since many years by the World Heritage Committee, an initiative for the elaboration of a conservation/management plan for Historic Cairo was initiated in 2010, through the Special Account for Egyptian Cultural Heritage at UNESCO.

The Project focuses on:

- the outline of a Conservation Plan for the WH site of Historic Cairo and its "Buffer Zones" which would include the Management Plan required by the WH Operational Guidelines;
- the set up of an institutional framework to undertake and develop a sustainable urban conservation policy, promoting the coordination and collaboration amongst the different institutions, administrations and agencies which are concerned with the management of the WH site,
- the creation of an appropriate and shared information platform for urban conservation.

Original key outputs:

- revised legislation for the management of Historic Cairo WH site;
- shared information platform for urban conservation (HC photo-bank, GIS);
- awareness raising products (campaigns for the inhabitants, turistic map and gadgets);

Expected results

Historic Cairo World Heritage site recognised and protected through an efficient management system, with coordination among the different institutions involved.

II. Description of project implementation

In spite of political institutional instability over the past years, here below the progress achieved since the beginning of the activities in July 2010, according to the original project document (Annex 3):

Project development

0) SET UP OF THE URBAN REGENERATION PROJECT UNIT

- § Project team set-up and project bureau fully equipped.
- § Documentation collected and organised.
- § Documentation for rehabilitation works of the building of Zeynab Khatoun as project bureau prepared and bidding process done, but the restoration works were canceled.

1) DELIMITATION OF THE HISTORIC CAIRO WH SITE AND ESTABLISHMENT OF RELATED PROTECTION MEASURES

- § Historic analysis carried out.
- § Revised delimitation of the Historic Cairo WH site proposed.
- § Field survey to evaluate the urban heritage values of the whole central area of HC and the cemeteries, including an extensive photographic campaign, to outline a conservation zoning plan and related protection measures for the area. The assessment also aimed to confirm or revise the proposed perimeters of the World Heritage property.
- § A3 Album presenting the results of the survey prepared in English and Arabic.
- § First zoning proposal prepared.
- § Analyses of the Egyptian legislation in relation to the protection and rehabilitation of Historic Cairo done. Summary report in English and Arabic on the discrepancies of the identification of the sub-areas of protections and related regulations for Historic Cairo proposed by Urban Harmony and by the URHC team for harmonisation.

2) DEFINITION OF THE REHABILITATION/REGENERATION STRATEGY

- § Sector studies on socio-economic evolution of Historic Cairo, housing issues, community activities, environmental risks, garbage management system, housing and dilapidated areas, commercial activities.
- § Consultation with the concerned administrations and institutions established. Protocols of cooperation signed with CAPMAS, National Organisation for Urban Harmony and Governorate of Cairo.

3) DEVELOPMENT OF ACTION PROJECTS AND PREPARATION OF THE CONSERVATION / MANAGEMENT PLAN

- § First outline of the possible set-up of a management system for the WH property prepared.
- § Outline of an Action project to address some of the major issues affecting the state of conservation of the property and its Outstanding Universal Value in a pilot area as an opportunity to set up tools and procedures for urban rehabilitation and regeneration to be extended to the rest of Historic Cairo World Heritage property through a Management Plan. Sector studies on-going:
 - rehabilitation of lower part of the Citadel;
 - urban regeneration of the decayed commercial areas and public spaces;
 - rehabilitation of the dilapidated residential historic fabric;
 - conservation and rehabilitation strategy for public properties;
 - study on the building violations.
- § Detailed survey of buildings and open spaces carried out in pilot areas and information inserted in a GIS as methodological approach to support the development of a conservation plan.
- § Guidelines for the detailed survey of buildings and open spaces prepared in English and Arabic.

- § On-the-job training "Documenting the historic urban fabric" within the URHC project for 12 staff representing the main institutions involved in the management of Historic Cairo carried out; first opportunity to promote a real collaboration amongst them to ensure an effective management of the WH site. Additional training activity participating in the studies for the Action project for the same institutional staff.

4) AWARENESS CAMPAIGNS ON CAIRO'S ARCHITECTURAL HERITAGE

- § Photobank GIS on-line (<http://www.urhcproject.org/>).
- § A touristic map prepared, together with a brochure on the SOUV of Historic Cairo WH site and some gadgets.
- § Full technical report on the first two years of activity in English and Arabic published and being distributed with the project partners and professionals.
- § Design of prototypical signage/physical objects to highlight outstanding elements to help the public interpret heritage sites in the city on-going.
- § Workshops for the community awareness and participation component of the Action Project on-going; the Governorate and SCA have requested to replicate them.

5) DEFINITION OF A LONG-TERM MANAGEMENT SYSTEM

- § Not yet available, to be developed in the coming year.

III. Challenging issues

- o The local political context has delayed the project implementation and not allowed the organisation of the first institutional and technical **stakeholders workshop**, initially planned for December 2012 with all the concerned administrations (SCA, NOUH, Cairo Governorate, GOPP, Ministry of Housing, Ministry of Religious Endowments, Ministry of Tourism), to present and discuss the results of the project.
- o **Revision of perimeters of WH site, draft of SOUV and urgent protection measures** prepared and shared with the SCA in several meetings and with all reports in Arabic for adoption and official submission to the WHC, as requested by the WH Committee. Draft SOUV sent by SCA to WHC on 12 June 2013 as proposed but not officially submitted. The corresponding map with revised boundaries not submitted.
- o **Urgent need to find an agreement at the national level on the main issues to be addressed for the safeguarding of the urban heritage and to identify an appropriate management system with clear responsibilities on the World Heritage site.**
- o The decisions taken by the prime Minister in summer 2014 on the creation of an **Inter-ministerial Committee for Historic Cairo and the technical unit dedicated to Historic Cairo World Heritage site** represent a fundamental step towards the required coordination. The possibility can be considered to have a **next phase of the project with a financial support through the Special account.**

1. Outputs

Project documents and reports

I - URHC team reports/studies:

I.1: "First Report on the Activities, July 2010-June 2012", URHC, July 2012.

I.2: "Action Project Layout", Daniele Pini, September 2013. EN & AR

I.3: "Guidelines to the survey of buildings and open spaces", URHC, 2013. EN & AR

I.4: Thematic maps of the buildings in Darb Al-Hosr, Al-Hattaba and Darb Al-Labbana. EN & AR

I.5: Thematic maps of the open spaces in Darb Al-Hosr, Al-Hattaba and Darb Al-Labbana. EN & AR

- I.6:** Report of "Classes of buildings and Open spaces and their categories of interventions" for Darb Al-Hosr, Al-Hattaba and Darb Al-Labbana, URHC, 2014. EN
- I.7:** "Study on the monuments in the Action Area", URHC, July 2014. EN & AR
- I.8:** "Heritage signage in Historic Cairo", URHC, July 2014.
- I.9:** "Violations study", URHC, August 2014
- I.10:** "Crafts study", URHC, September 2014.

II - External consultants' studies:

- II.1:** "Preliminary study of the waste disposal management in Historic Cairo", Lise Debout, June 2012
- II.2:** "Urban Conservation in Historic Cairo: An Analysis of challenges and opportunities, and lessons learned from urban conservation in Historic Cairo and the UK", Seif el Rashidi, October 2012.
- II.3:** "Study on frozen assets, Historic Cairo ", Karim Ibrahim, December 2012
- II.4:** "Living and working in Historic Cairo: Sustainability of commercial and productive activities", Dina Shehayeb, December 2012
- II.5:** "Historic Cemeteries component of the Urban Regeneration Project of Historic Cairo", May al-Ibrashy, January 2013
- II.6:** "Egyptian legislations in relation to the rehabilitation of Historic Cairo", Hassan Fahmy and URHC, July 2013
- II.7:** "URHC Community Outreach Component", May al-Ibrashy, April 2014
- II.8:** "Research on intangible heritage and storytelling event in the action area" Chirine El Ansary and May al-Ibrashy, April 2014
- II.9:** "Awqaf Properties; Maintenance and Management" Dina Bakhoum, July 2014
- II.10:** "Solid waste management report", Environics, July 2014.
- II.11:** "Documentation Levels in Surveying the Lower Enclosure of the Citadel in Historic Cairo: A Beginning to Understand the Area's Future Potentials", Nairy Hampikian, July 2014
- II.12:** "Muhammad Ali Street Project, study and proposal" Tariq al Murri, September 2014
- II.13:** "Citadel Neighbourhoods Integration Project: Research-based Urban Design Proposal for Sayeda Aisha Market Area", Dina K. Shehayeb, October 2014
- II.14:** "Valorisation and reuse plan for the area of Bab Al 'Azab", Karim Ibrahim, October 2014.

List of Maps produced within the URHC project (not exhaustive)

DEVELOPMENTS OF THE URBAN SETTLEMENT

- Cairo in 1807 (hand drawn, scanned, tiff format)
- Cairo in 1888 (hand drawn, scanned, tiff format)
- Cairo in 1948 (hand drawn, scanned, tiff format)
- Cairo in 2006 (exported from a-cad map by capmas and colored on photoshop, psd or jpeg format)

COMPARATIVE STUDIES OF THE URBAN FABRIC

- Cairo 1807-1888 (hand drawn, digitally re-coloured, tiff format)
- Cairo 1807-1888-1948 (hand drawn, digitally re-coloured, tiff format)
- Cairo 1807-1888-1948-2006 (exported from a-cad map by capmas and colored on photoshop, psd or jpeg format)

COMPARATIVE STUDIES OF THE URBAN FABRIC IN SPECIFIC AREAS

- Azbakiyya
 - 8a. 1807-1888 (hand drawn, digitally re-coloured, tiff format)
 - 8b. 1807-1888-1948 (hand drawn, digitally re-coloured, tiff format)
 - 8c. 1807-1888-1948-2006 (exported from a-cad map by capmas and colored on photoshop, psd or jpeg format)
- Fustat

9a. 1807-1888 (hand drawn, digitally re-coloured, tiff format)

9b. 1807-1888-1948-2006 (exported from a-cad map by capmas and colored on photoshop, psd or jpeg format)

MAPS CONCERNING THE WORLD HERITAGE SITE

- Identification of the core area and its buffer zone (exported from a-cad map by capmas and colored on photoshop, psd and jpeg format)
- Identification of the core area and its buffer zone, with a further identification of cemeteries, archaeological area, transitional area, parks (exported from a-cad map by capmas and colored on photoshop, psd and jpeg format)
- Identification of different protection zones within the core area (exported from a-cad map by capmas and colored on photoshop, psd and jpeg format)
- Urban heritage Value Assessment (exported from a-cad map by capmas and colored on photoshop, psd and jpeg format) :
 - a. "Architectural Value"
 - b. "Street Alignment"
 - c. "Plot Persistence"
 - d. "Activities"
 - e. "Compactness"
- Identification of administrative units (Qism, Shyakas) within the core area (exported from a-cad map by capmas and colored on photoshop, psd and jpeg format)
- Comparison between the URHC delimitation of Core and Buffer and the proposed boundaries by SCA (2007 submitted to the WH Committee) (psd and jpeg format)
- Comparison between the URHC delimitation of Core and Buffer and the boundaries of "Historic Cairo" area of peculiar value delimited by NOUH (National Organization for Urban Harmony) (associated to decree 04/07/09/8) (psd and jpeg format)
- Identification of previously implemented restoration projects within the core area, by institutions and major organizations (psd and jpeg format)

- Visitors' Map with Listed Monuments

TRAFFIC AND CIRCULATION

- Transportation Map
- Pedestrian network
- Historic Cairo street network

ACTION PROJECT AREA

- Detailed maps for sub-zones (statistical socio-economic data, architectural values etc.).
- GIS elaborations for the surveyed areas (land use, ownership, state of conservation, heights, materials, etc)