

# ICOA1642: TRAINING IN ENDANGERED ARCHAEOLOGY: FROM DIGITAL DOCUMENTATION TO EMPOWERING NATIONAL HERITAGE STAKEHOLDERS IN THE MIDDLE EAST AND NORTH AFRICA

## Subtheme 03: Protecting and Interpreting Cultural Heritage in the Age of Digital Empowerment

**Session 1:** Relevance of Digital Tools & Technology in Documentation, Conservation and Safeguarding of Heritage & Community Engagement

**Location:** Silver Oak 2, India Habitat Centre

**Time:** December 13, 2017, 09:40 – 09:55

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**Abstract:** Supported by the Arcadia Fund and based at the Universities of Oxford, Leicester, and Durham, ‘Endangered Archaeology in the Middle East and North Africa’ (EAMENA) project was established in January 2015 to respond to the increasing threats to archaeological sites in the Middle East and North Africa. This project uses satellite imagery to rapidly record and make available information about archaeological sites and landscapes which are under threat.

EAMENA’s spatial database provides the fundamental information for each site, including the level of risk and how each site relates to one another. It will be accessible to all heritage professionals and institutions with an interest and passion for the wonderfully rich and diverse archaeological heritage of the Middle East and North Africa. EAMENA works with relevant authorities on the ground to limit likely damage, share information and skills, strengthen networks and raise awareness. Fieldwork and outreach are essential components of the project and the EAMENA team will target investigations to the most threatened sites, visiting (where possible) to assess site conditions, make detailed records and liaise with national authorities to share data and findings.

‘Training in Endangered Archaeology methodology with Middle East and North African Heritage Stakeholders’ is funded by the British Council Cultural Protection Fund, and is a part of EAMENA project. The objective of ‘Training in Endangered Archaeology’ is the design, organisation and delivery of training for employees of the antiquities services of the countries in the MENA region. The project also promotes and facilitates the potential adoption of a country-based heritage platform (HER) based on the EAMENA database in the several countries in the Middle East and North Africa.

**Key words:** *digital resources, interpretation, dissemination, accessibility*

## **What is EAMENA?**

The Endangered Archaeology of the Middle East and North Africa (EAMENA)<sup>1</sup> project was established in 2015 to respond to the increasing threats to archaeological sites in the Middle East and North Africa (MENA) region. The project is based at Oxford University in partnership with the Universities of Durham, and Leicester, and is sponsored by Arcadia Fund and the Cultural Protection Fund (CPF)<sup>2</sup>. It analyses satellite imagery to document sites and assesses threats to archaeological sites and landscapes.

## **Why EAMENA?**

The MENA countries are home to some of the world's best preserved archaeological remains, from the earliest settlements to the first complex agricultural societies, cities and empires, and some of the most significant Islamic sites. There are several UNESCO World Heritage Sites, as well as many other archaeological ruins, monuments, and historic urban areas that are of value to local communities and thus have future tourism potential.

The on-going conflict and instability in the region, exacerbated since the 2011 Arab Spring, have posed an unprecedented threat to the cultural heritage, and reduced the capacity of the national stakeholders in the monitoring, preservation, protection, of the cultural heritage and the recovery of movable cultural objects.

Beyond threats linked directly to armed conflict, looting and illegal excavation, it is expected that in the post-conflict reconstruction period, there is a second wave of heritage destruction; because of the urgent need for rebuilding and reconstruction in the already devastated cities and villages, the cultural heritage so often becomes forgotten. Unless the heritage is identified and well documented, it will be difficult to prevent further damage during the post-conflict phase. Without a comprehensive inventory of key heritage assets damage occurs through lack of knowledge and recognition that archaeological sites exist in those areas where there will be future infrastructure development projects.

## **How does EAMENA work?**

The EAMENA project has defined these sets of objectives to respond to the threats to archaeological sites in this region to:

- Identify, understand and monitor the endangered archaeology of MENA.
- Create a record of sites and monuments for each country in MENA.
- Train and empower heritage professionals in the region.
- Make information freely accessible.
- Help to protect and conserve MENA's archaeological heritage.
- Raise awareness and encourage informed debate.
- Create networks and share knowledge, within MENA and abroad.
- Assist customs and law enforcement agencies tackling looting and the illegal trade in antiquities.

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<sup>1</sup> <http://eamena.arch.ox.ac.uk/>

<sup>2</sup> <https://www.britishcouncil.org/arts/culture-development/cultural-protection-fund/projects/endangered-archaeology>

EAMENA's database provides the fundamental information about archaeological sites, including location, morphology, form, interpretation, condition, and the level of threat. The data are gathered through different sources:

- Remote sensing: EAMENA team undertake image analysis by using Google Earth and high-resolution satellite imagery from other sources, as well as some historical aerial photographs,
- Published reports and existing databases, including the results of the Aerial Archaeology in Jordan project, Fragile Crescent project of Durham University, Digital Atlas of the Holy Land among many others.
- Data collected from recent field surveys and on site assessment (Bewley et al 2017)

Up to now, around 160,000 records have been entered into the database, using a standard methodology and consistent terminology for data recording and condition assessment. These sites are located in Egypt, Iraq, Iran, Jordan, Libya, Morocco, Saudi Arabia, State of Palestine, Syria, and Yemen, representing different type of built heritage from prehistoric periods to early twentieth century structures.

The EAMENA database uses Arches open source programme. This software, developed by the Getty Conservation Institute and World Monuments Fund (WMF), is a geospatially-enabled software platform for cultural heritage inventory and management<sup>3</sup>. Arches platform has been configured by the EAMENA to respond to the specific needs of the project for data recording and condition assessment. To achieve a standard semantic framework and thus provide data in a form that can shared, the EAMENA database uses CIDOC Conceptual Reference Model (CRM) which “provides definitions and a formal structure for describing the implicit and explicit concepts and relationships used in cultural heritage documentation” (CIDOC-CRM 2017).

## **EAMENA background**

Responding to the increased threat to the cultural heritage and the lack of an archaeological record for the countries in the MENA region, EAMENA project was born based on the long standing experience of Aerial Archaeology in Jordan (AAJ) project and APAAME Aerial Photographic Archive for Archaeology in The Middle East, directed by Professor David Kennedy and Dr Robert Bewley, Director of EMANEA project (APAAME 2017). Started in 1997, AAJ project includes annual programme of flying over Jordan for documenting heritage places and monitoring their conditions and changes by capturing high resolution aerial photographs. AAJ and APAAME aerial photography archives are publicly available online on flickr<sup>4</sup>. Other projects directed by the EAMENA's Principal and Co Investigators in North Africa, Syria, Lebanon, Iraq, and also the study of civilisation Saharan have produced large datasets of archaeological records.

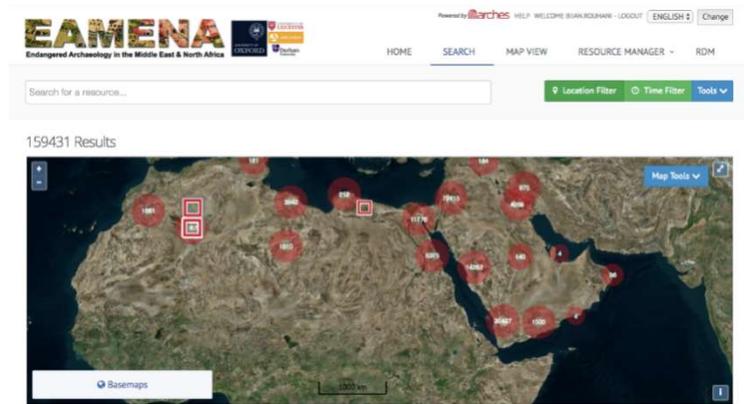
The recent critical condition of heritage places and archaeological sites in MENA has necessitated a methodology for archaeological survey that can quickly assess the condition of cultural heritage on the ground, particularly for those places that are not accessible because of the situation on the ground. To respond to this need, EAMENA project was launched in 2015, using freely available satellite imagery from Google Earth, Bing, and other sources.

Currently, EAMENA has over 15 staff, including the Project Director, Principal and Co Investigators, researchers, and Training managers based in Oxford, Durham, and Leicester Universities.

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<sup>3</sup><https://www.archesproject.org/>

<sup>4</sup><https://www.flickr.com/photos/apaame/collections>



*Fig.1- EAMENA Database*

## **Training in Endangered Archaeology**

Since the beginning of the project, enhancing the capacity of the national heritage stakeholders in the MENA region was one of the main aims of EAMENA. Training local heritage professionals in the region to assess threats and disturbances to archaeological sites will lead result in better monitoring and better protection of these places. The systematic monitoring and condition assessments will also allow heritage stakeholders and the departments of antiquities to prioritise sites that need further intervention and emergency response.

In December 2016, EAMENA project was awarded from the CPF for Training in Endangered Archaeology Methodology. The CPF is launched by the British Council in partnership with the Department for Digital, Culture Media and Sport, and is designed to manage a £30m fund, which supports cultural heritage projects in the at risk countries in the MENA. The CPF seeks to achieve three main outcomes: Cultural Protection; Training and Capacity Building; Advocacy and Education.

Training in Endangered Archaeology of the EAMENA project has been awarded £1,7m by CPF to train 140 archaeologists from seven countries in the methodology developed by the EAMENA team. In this three-year project, 2017 to 2020, local heritage professionals will become familiar with data recording, data analysing, risk and condition assessment, and site prioritisation methods.

The EAMENA training project will:

- 1- Provide a reliable platform for national heritage stakeholders to record and share information, which enables them to improve heritage management systems in their countries.
- 2- Provide training and capacity building for the staff of the departments of antiquities, and equip them with a standard methodology, digital platform, and tools required for site monitoring.
- 3- Engage communities in heritage preservation by advocating the role that heritage can play in modern life of the local communities. Through a number of exhibitions in the MENA countries, use of social media and other teaching materials the project will present heritage in new ways and highlight the threats, in a comprehensible way, to local communities and younger generations.

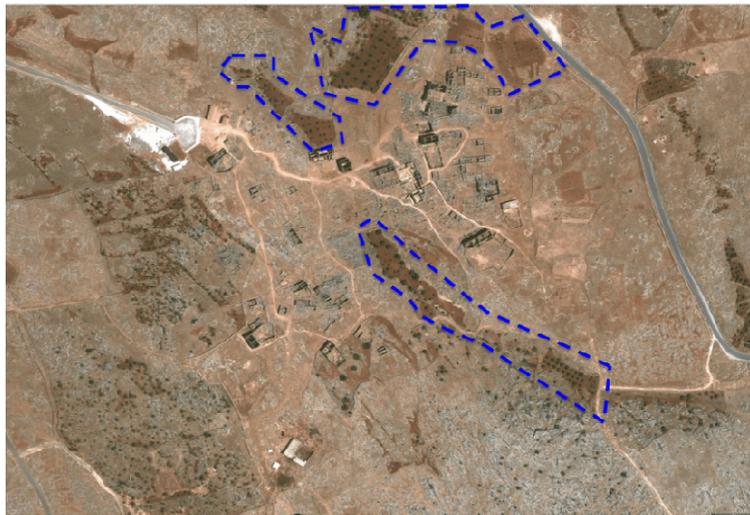
## Training objectives, methodology, and delivery

The EAMENA partnership includes Jordan's Department of Antiquities, Palestine Department of Antiquities and Cultural Heritage, National Heritage Institute of Tunisia (INP), Libya Departments of Antiquities in west and east (Tripoli and Benghazi), The Directorate General of Antiquities in Lebanon, the Syrian DGAM, and Iraq's State Board of Antiquities and Heritage (SBAH).

During the training project, up to 30 professional archaeologists and antiquities staff for the departments of antiquities and Universities will be trained in the methodology developed by EAMENA project for each of the partner countries. Trainees will be able to create and enhance digital records of heritage sites and to monitor specific threats. Trainings are offered in 2 stages: Stage 1 basic training for a total of 20 trainees of each country; Stage 2: Advanced training for a group of 10 trainees selected from a selection of trainees of Stage 1.

The training workshops will be following these objectives:

- Discovering and cataloguing heritage places
- Monitoring the current condition
- Identifying damage to sites
- Risk and threat assessments for each site
- Prioritising sites for protection and intervention
- Risk management and mitigation strategies



*Fig.2- The impact of agriculture on Serjilla, Syria, 2010, Source: EAMENA*

Training will be delivered in different ways, including lectures and presentations, practical sessions with trainees on using Google Earth, record creation, and using the database, interactive sessions and discussions, site visits and on-site condition assessment, and case studies prepared by trainees as well as the training team. The project has also prepared manuals and tutorials that will be translated to Arabic.

The project has also purchased and donated to each of national heritage agencies a set of equipment, including computers, cameras, and GPS recorders. The equipment will be used by trainees during and after each workshop for data entering and site monitoring. The project will create and support a network of heritage wardens in the region by training and equipping local archaeologists and professionals.

The first round of training is planned to take place in November 2017 in Tunis for 20 professionals from Tunisia and Libya. The second round will be in February 2018 in Amman for 20 participants from the Department of Antiquities of Jordan and Palestine. Further training courses will be delivered in Beirut too.

## **Implementing EAMENA methodology in partner countries**

The project is encouraging the adoption of EAMENA database and data recording methodology as a standard tool for the Middle East and North Africa. In 2015, EAMENA project started working on developing a national heritage management platform for Yemen, called the YHMP. The platform, supported by UNESCO Doha Office, is based on the existing structure of EAMENA database and is designed to respond to the specific needs of General Office of Museums and Antiquities (GOAM) in Yemen. The YHMP was also endorsed by an international experts meeting in Venice, in December 2016, which was organised to coordinate efforts and exchange of information for safeguarding of Yemen's cultural heritage<sup>5</sup>.

In July-August 2017 and sponsored by UNESCO Doha Office, the first training and development workshop was organised in Amman for the Director of Yemen GOAM and a number of GOAM heritage and IT specialists. Following the feedback by GOAM on the YHMP platform, it was agreed that EAMENA should continue its work on further developing the YHMP and make required changes to make it a bespoke national platform for heritage management in Yemen. While EAMENA will continue to seek other resources to continue training to the GOAM staff, the Oxford team will also create a core of Yemeni trainers who can act to deliver EAMENA skills to other heritage professionals Yemen.

The development of the EAMENA methodology, as a national heritage platform, will also be important in Jordan, which already has an online geographic information system (GIS), called MEGA-Jordan<sup>6</sup>. The system, launched in 2011 designed by the Getty Conservation Institute and the WMF, the organisations that developed Arches programme. Migration from MEGA-J to a newer Arches system is in the purview of Jordan's Department of Antiquities (DoA) in the near future. By providing essential training on the new Arches based database, the EAMENA project will enhance the capacity of the DoA staff to use this new platform for heritage management and monitoring as well.

## **Conclusion**

Since the launch of the project in 2015, EAMENA team have successfully documented and monitored threats and disturbances to archaeological sites in the Middle East and North Africa. The analysed data shows that in addition to armed conflict, intentional destruction, and illicit excavation and looting, cultural heritage in the region is at risk because of other risk factors, including development and construction, extraction of physical resources, natural erosion, and agricultural activities; for example in Libya 32% of the sites recorded have been affected by agriculture.

Documentation and assessment are key components of heritage management cycle which should enable national heritage agencies to gather baseline information that are necessary for prioritising interventions in order to prevent, mitigate, or reduce the impact of threats to the cultural heritage. The training component of EAMENA project is designed to empower national heritage stakeholders in the MENA

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<sup>5</sup> [http://www.unesco.org/new/en/doha/about-this-office/single-view/news/unesco\\_organizes\\_meeting\\_on\\_gis\\_museums\\_awareness\\_raising/](http://www.unesco.org/new/en/doha/about-this-office/single-view/news/unesco_organizes_meeting_on_gis_museums_awareness_raising/)

<sup>6</sup> <http://megajordan.org/>

region to better plan for heritage management and preservation, in a region that is threatened by various natural and human-made factors.

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## **List of Figures**

Fig.1- EAMENA Database.

Fig.2- Agriculture disturbance, Serjilla, Syria. EAMENA website

# ICOA1642: FORMATION EN ARCHEOLOGIE A RISQUE: DE LA DOCUMENTATION NUMERIQUE A L'AUTONOMISATION DES ACTEURS DU PATRIMOINE NATIONAL AU MOYEN-ORIENT ET EN AFRIQUE DU NORD

## Sous-thème 03: Protéger et interpréter le patrimoine culturel à l'ère de l'autonomisation numérique

**Session 1:** Pertinence des outils numériques et de la technologie dans la documentation, la conservation et la sauvegarde du patrimoine et l'engagement communautaire

**Lieu:** Silver Oak 2, India Habitat Centre

**Date et heure:** 13 Décembre, 2017, 09:40 – 09:55

**Auteur:** Bijan Rouhani

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**Résumé:** Soutenu par le Fonds Arcadia et basé aux universités d'Oxford, de Leicester et de Durham, le projet «EAMENA» a été créé en janvier 2015 pour répondre aux menaces croissantes pesant sur les sites archéologiques en Europe, le Moyen-Orient et l'Afrique du Nord. Ce projet utilise l'imagerie satellitaire pour enregistrer rapidement et mettre à disposition des informations sur les sites archéologiques et les paysages menacés.

La base de données spatiale d'EAMENA fournit les informations fondamentales pour chaque site, y compris le niveau de risque et la manière dont chaque site est en relation avec les autres. Il sera accessible à tous les professionnels et institutions du patrimoine ayant un intérêt et une passion pour le patrimoine archéologique merveilleusement riche et diversifié du Moyen-Orient et de l'Afrique du Nord. L'EAMENA collabore avec les autorités compétentes sur le terrain pour limiter les dommages potentiels, partager les informations et les compétences, renforcer les réseaux et sensibiliser. Le travail sur le terrain et la sensibilisation sont des composantes essentielles du projet et l'équipe EAMENA ciblera les enquêtes sur les sites les plus menacés, les visitant (si possible) pour évaluer les conditions du site, établir des registres détaillés et assurer la liaison avec les autorités nationales pour partager les données et les résultats.

'Training in Endangered Archaeology methodology with Middle East and North African Heritage Stakeholders' est financé par le British Council Cultural Protection Fund et fait partie du projet EAMENA. Le programme de formation en archéologie à risque vise la conception, l'organisation et la fourniture de formations pour les employés des services d'antiquités des pays de la région MENA. Le

projet fait la promotion et facilite l'adoption de plates-formes patrimoniales nationales (HER) basées sur la base de données EAMENA dans plusieurs pays du Moyen-Orient et de l'Afrique du Nord.

**Mots-clés:** *ressources numériques, interprétation, diffusion, accessibilité*