



Steppe Sisters

Cultural Heritage Management: Sites and Landscapes

Cultural Heritage Documentation and Protection: Methods and tools

Steppe Sisters Early Career
Conference

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Outline



- My background is CHM of archaeological landscapes
- Methodologies for locating and monitoring cultural heritage sites and landscapes
- Cultural Heritage databases using Arches – e.g. The EAMENA database
- Case study





The EAMENA Project: Aims

- rapidly record and evaluate the status of the archaeological landscape of the MENA region
- create an accessible body of data which can be used by national and international heritage professionals
- target those sites most in danger and better plan and implement the preservation and protection of this heritage



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<https://eamena.org>

EAMENA Objectives



- Identify, understand and monitor the endangered archaeology of MENA
- Create a record of sites/monuments for each country
- Train and empower heritage defenders in the region.
- Make information freely accessible
- Help to protect and conserve MENA's archaeological heritage.



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EAMENA

Endangered Archaeology in the Middle East & North Africa



Mapping Africa's Endangered Archaeological Sites and Monuments

Maritime Asia Heritage Survey



Mapping Archaeological Heritage in South Asia



Shanxi Digital Documentation Project



Methods



Remote Sensing Survey



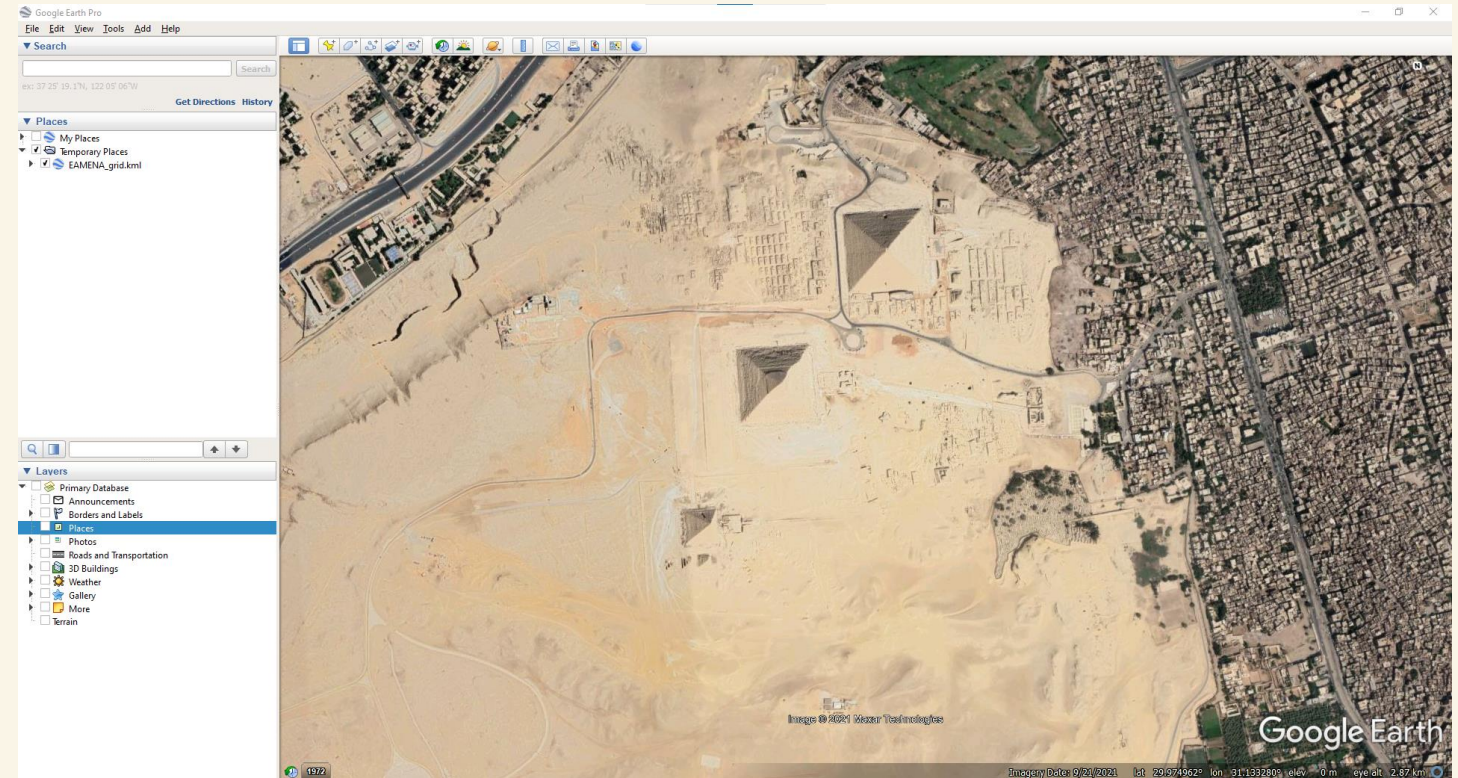
- Lots of freely available imagery such as that on Google Earth available; sometimes need to rely on commercial imagery
- Imagery from multiple dates very important
- Interpretation requires experience, and relies on the availability of good quality HR imagery
- Software requires training and internet

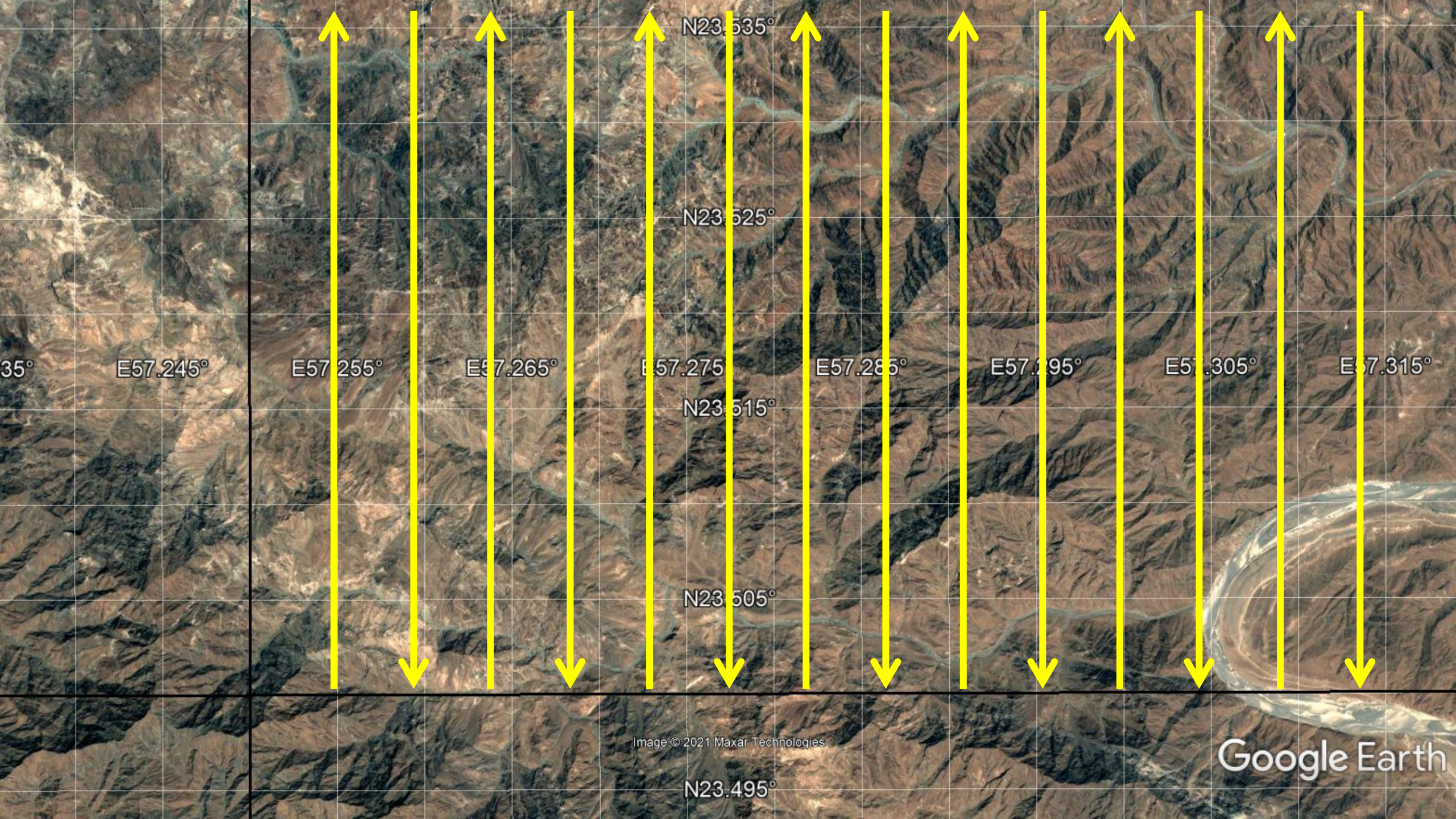


Google Earth Pro



- Pre-rectified high-resolution imagery
- Multiple basemaps available to view
- Friendly user interface compared to most GIS software
- Free!





N23.535°

N23.525°

N23.515°

N23.505°

N23.495°

35°

E57.245°

E57.255°

E57.265°

E57.275°

E57.285°

E57.295°

E57.305°

E57.315°

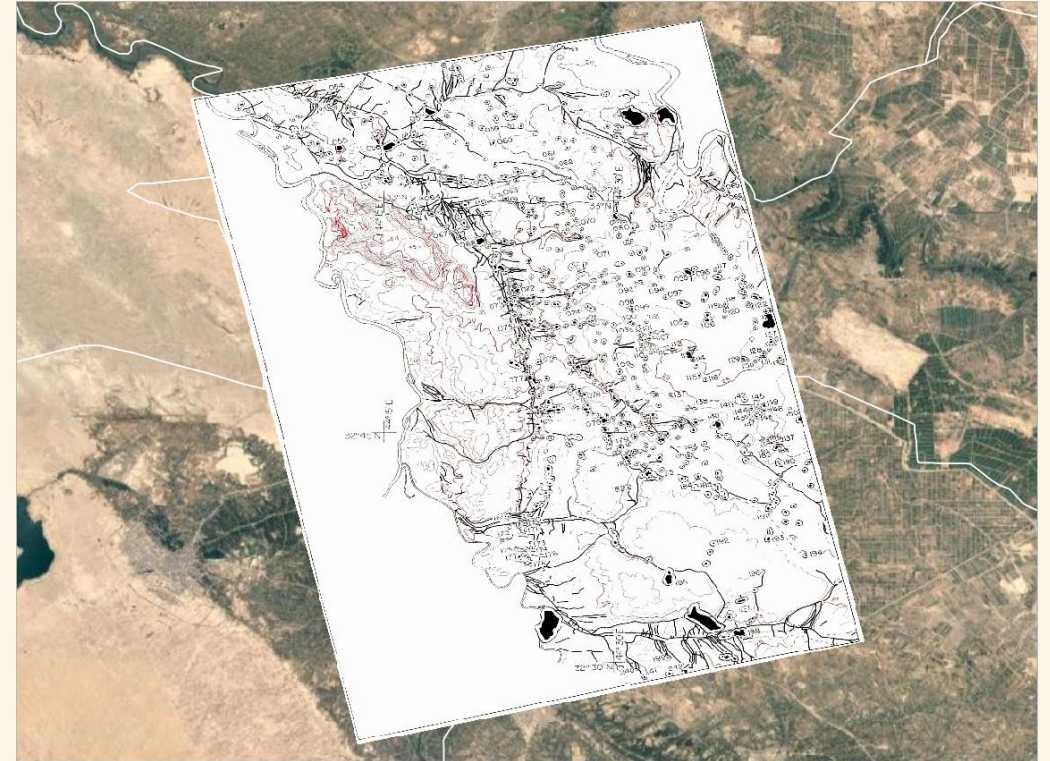
Image © 2021 Maxar Technologies

Google Earth

Other Data Collection with GIS



- Not all data comes directly from remote sensing
- Published archaeological data and maps
- Historical imagery
- Legacy data



Adams, RM. 1972. Settlement and irrigation patterns in ancient Akkad. *The City and Area of Kish*. Miami: Field Research Projects. 182-208.



Disturbances and Threats



- Monitoring disturbances and threats to archaeology
- ‘Newsworthy’ threats – conflict and looting
- Everyday threats – agriculture, construction
- ‘Human-exacerbated’ threats – natural erosion



Agriculture



Conflict



Construction



Looting



Natural Erosion



Conflict Damage



Palmyra on 20 Feb 2014 on Google Earth (image © 2019 CNES/Airbus)



Palmyra on 22 April 2016 on Google Earth (image © 2019 CNES/Airbus)



Agriculture

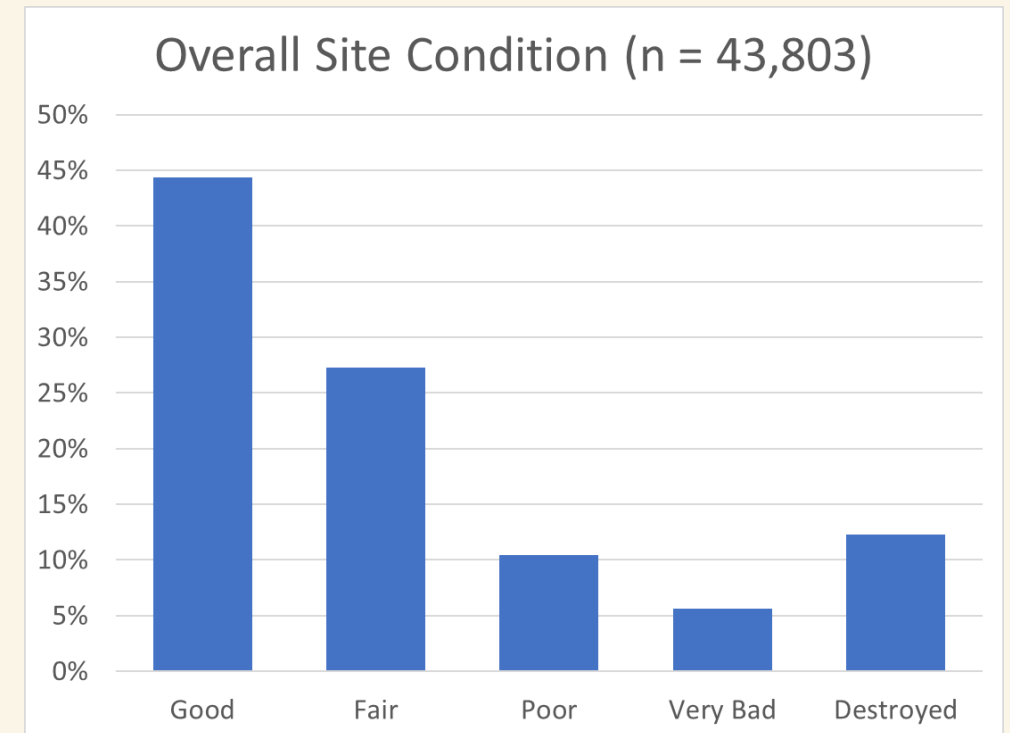


Flooding, drought, erosion....climate change



Condition Assessments

- Monitor and record the condition of sites over time
- Overall site condition (good, fair, poor, very bad, destroyed)
- Damage extent (horizontal coverage of damage)
- Disturbances (type, category, effects, date)



Online Courses / History



Endangered Archaeology: Using Remote Sensing to Protect Cultural Heritage

Discover how to use satellite imagery to identify and assess endangered archaeological sites in the Middle East and North Africa.

[Join now](#)

1,094 enrolled on this course

MOOC (Massive Open Online Course)

English:

<https://www.futurelearn.com/courses/endangered-archaeology-remote-sensing/1>

Arabic:

<https://www.futurelearn.com/courses/endangered-archaeology-remote-sensing-arabic/1>

Farsi:

<https://www.futurelearn.com/courses/endangered-archaeology-remote-sensing-to-protect-cultural-heritage-persian/1>

French:

<https://www.futurelearn.com/courses/endangered-archaeology-remote-sensing-french/2>

*Databases
(historic
environment
records)*



Arches Databases



- Web based database
- graph database (rather than a relational database)
- an open source software platform (freely available)
- for cultural heritage organizations
- to manage cultural heritage data
- Getty Conservation Institute & World Monuments Fund

 arches®

The logo for Arches consists of a red icon on the left, which is a stylized, nested arch shape. To the right of the icon, the word 'arches' is written in a red, lowercase, sans-serif font. A registered trademark symbol (®) is located at the bottom right of the word.

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





EAMENA Database

- EAMENA database version 3.0
- providing customised clones to partner agencies across the Middle East – Palestine, Jordan, Lebanon
- Public version
 - Anyone can create an account and see basic site information
- Full version
 - Researchers can apply for full access to see all the data
 - As open as practicably possible!



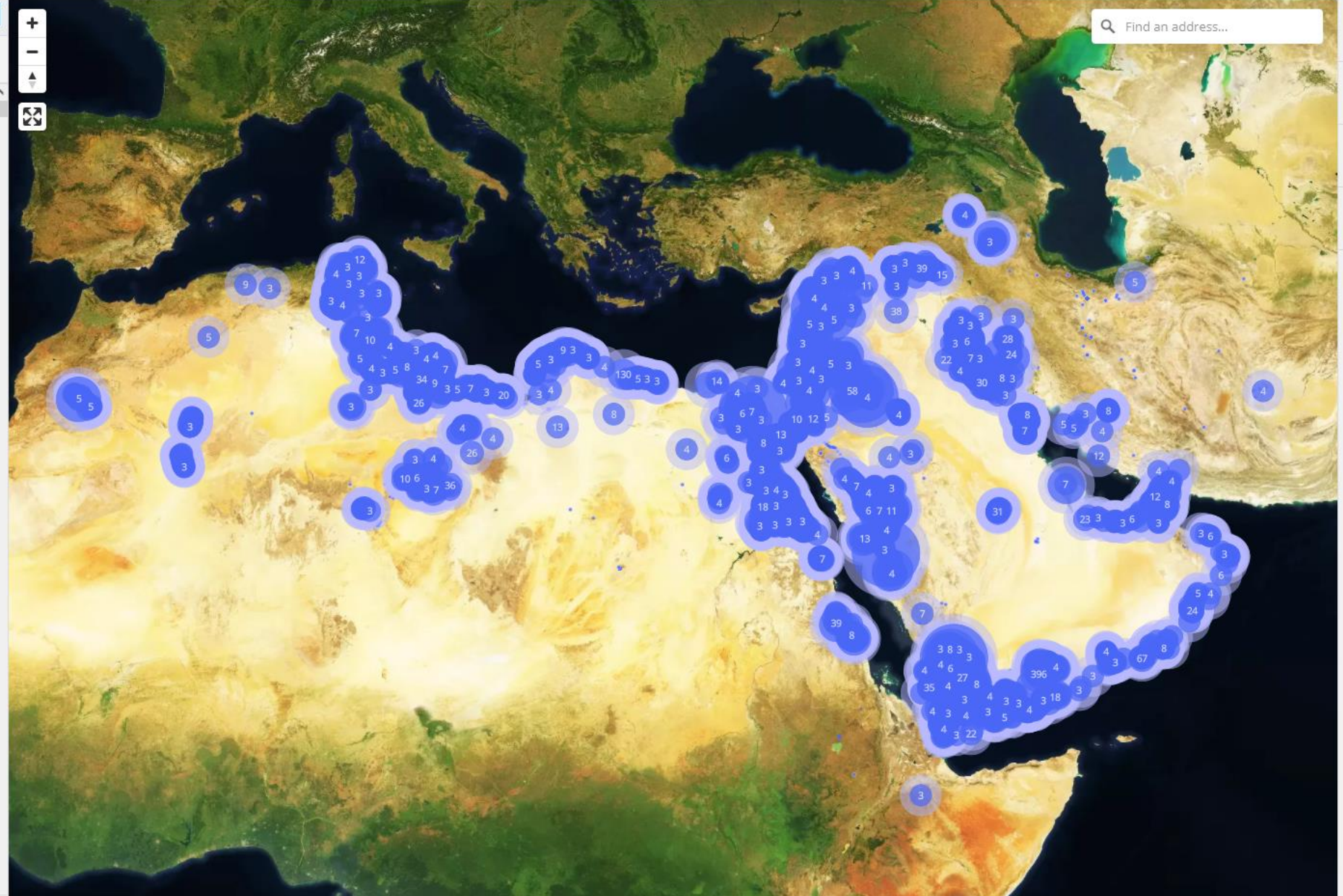
Heritage Place

Map Filter Advanced Related Details

QA Type Resource Type

Results: 163860 Clear Filters Ascending

- EAMENA-0119734**
E52N17-24_000006
Details Edit Map Related Resources
- EAMENA-0129993**
E47N14-31_000103
Details Edit Map Related Resources
- EAMENA-0087155**
MDr-NS09-g
Details Edit Map Related Resources
- EAMENA-0136432**
Limes Arabicus Site 145
Details Edit Map Related Resources
- EAMENA-0129994**
E47N14-31_000104
Details Edit Map Related Resources
- EAMENA-0131518**
E49N16-24_000058
Details Edit Map Related Resources





EAMENA Database

- Structured around different types of resources...

Resource Manager | Welcome, Will | English (en) | [Notifications] | [Search] | [Help]

Find | Resources

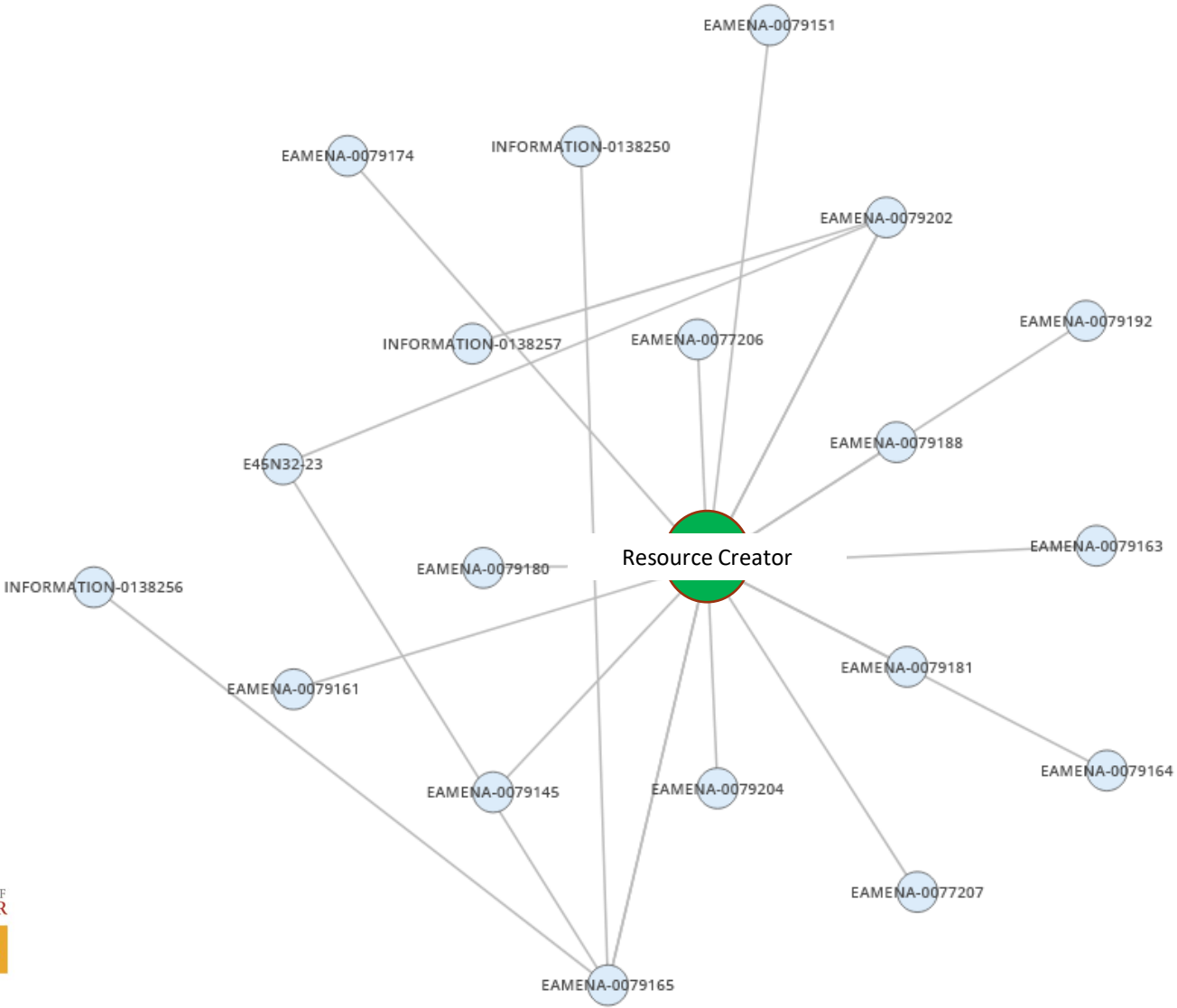
Built Component Constructed components of Site Features, including individual walls,...	Detailed Condition Assessment Field Condition & Conservation Assessment for Site Visits	Geoarchaeology Geoarchaeology/Palaeolandscapes	Grid Square EAMENA Grid Square IDs
Heritage Place Archaeological Sites, Buildings, Landscapes/Seascapes, & Urban Heritage	Information Resource Photography, Satellite Imagery, Maps, Bibliographic Information, Shared...	Person/Organization Actor resources such as individual people & groups of people	





EAMENA Database

- ... and the relationships between them



Endangered Archaeology in the Middle East & North Africa



Case studies



The DGA-EAMENA 'Beirut Explosion Heritage Buildings Survey'

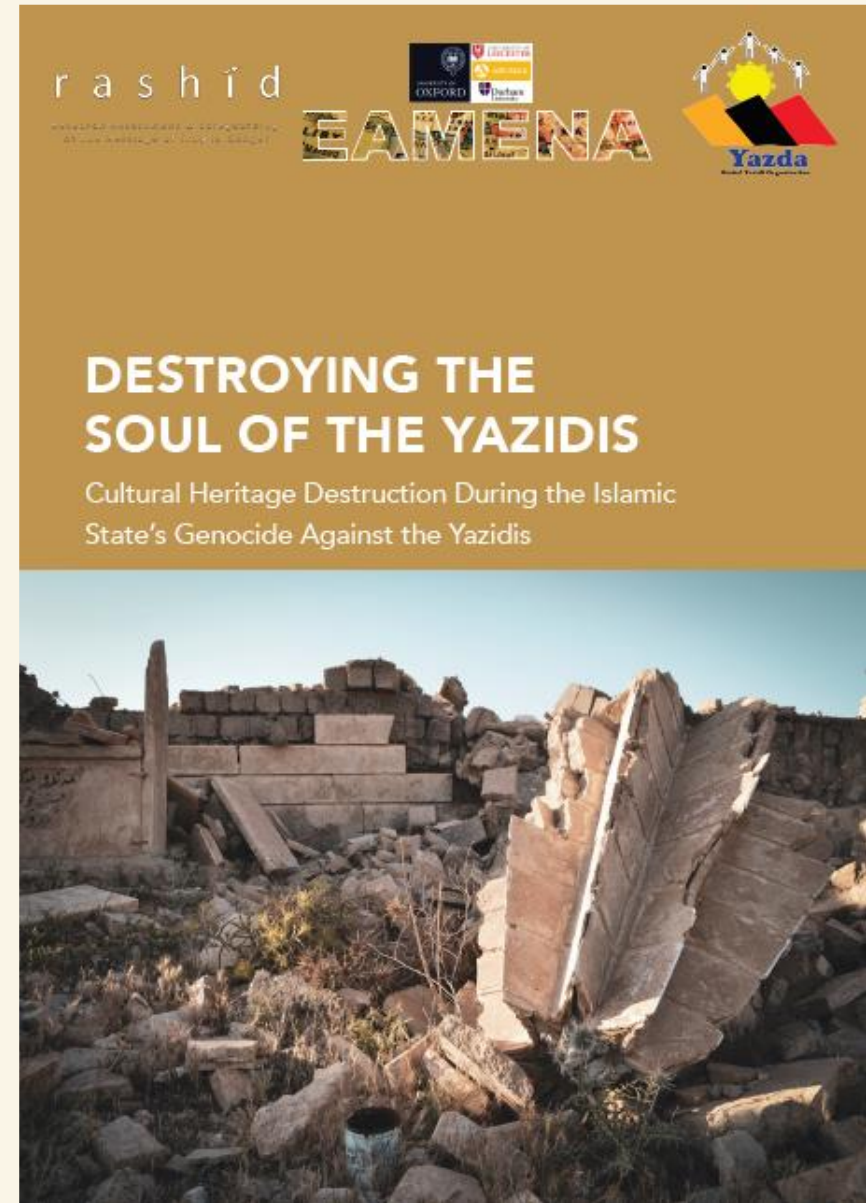






Cultural heritage destruction as evidence of war crimes

- Working alongside the Yazidi community, and international groups to document destruction of cultural heritage in northern Iraq
- Together with RASHID International and Yazda (Yazidi advocacy group), the EAMENA project participated in the production of an open-access report
- Results of an investigation into cultural heritage destruction that occurred during Islamic State's genocide against the Yazidis in Sinjar and Bahzani
- Our contribution was the analysis of satellite imagery to provide evidence for the destruction of tangible cultural heritage



Cultural heritage destruction at Sheikh Hassan, Sinjar

14 August 2016 - Image ©2021 Maxar Technologies

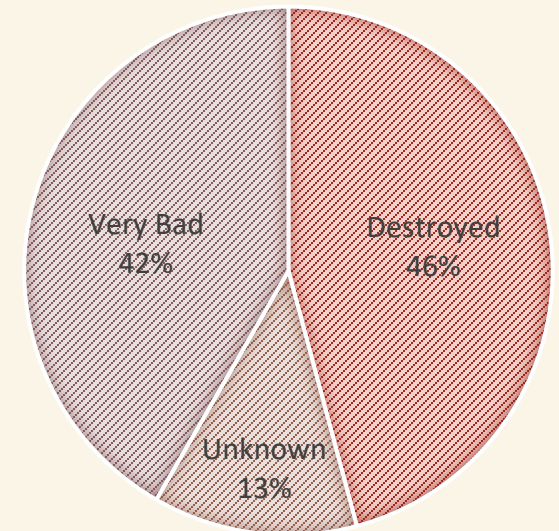


Results and Recommendations

- Twenty-one sites located and assessed with confidence on imagery
- Conclusions of the report:
 - Evidence for destruction of Yazidi tangible cultural heritage by Islamic State, along with coordinated policy of murder, slavery, sexual exploitation and brainwashing of children to destroy Yazidi intangible cultural heritage
 - **“We believe that the destruction of cultural heritage in Iraq was a war crime, a crime against humanity and is evidence of genocidal intent”**
- Yazda and Rashid have issued recommendations for ICC, National Prosecutors, UNITAD etc. to pursue justice for Yazidi community and protect Yazidi cultural heritage



Overall Condition of Sites Based on Imagery Assessment





Thanks for listening!

