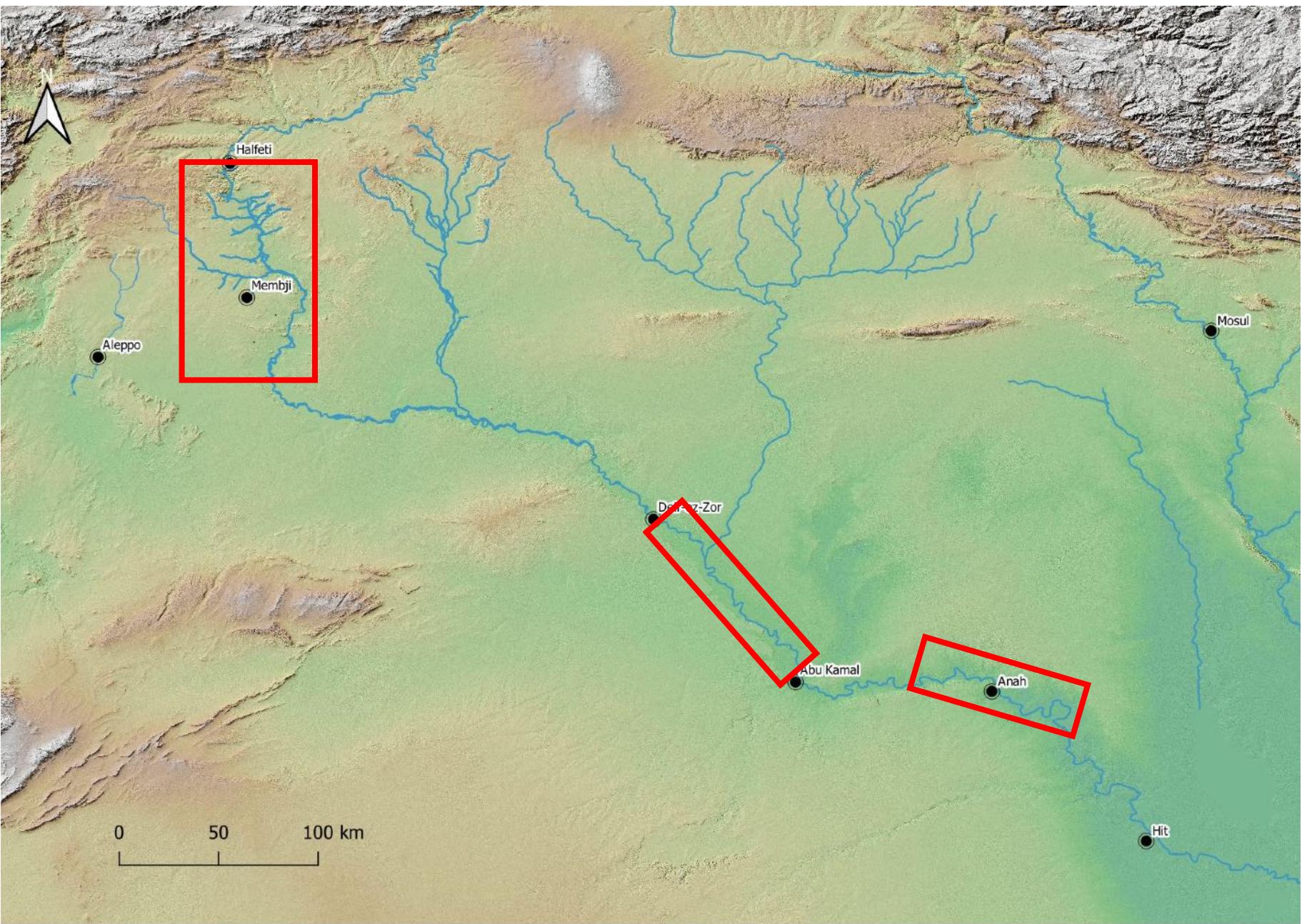
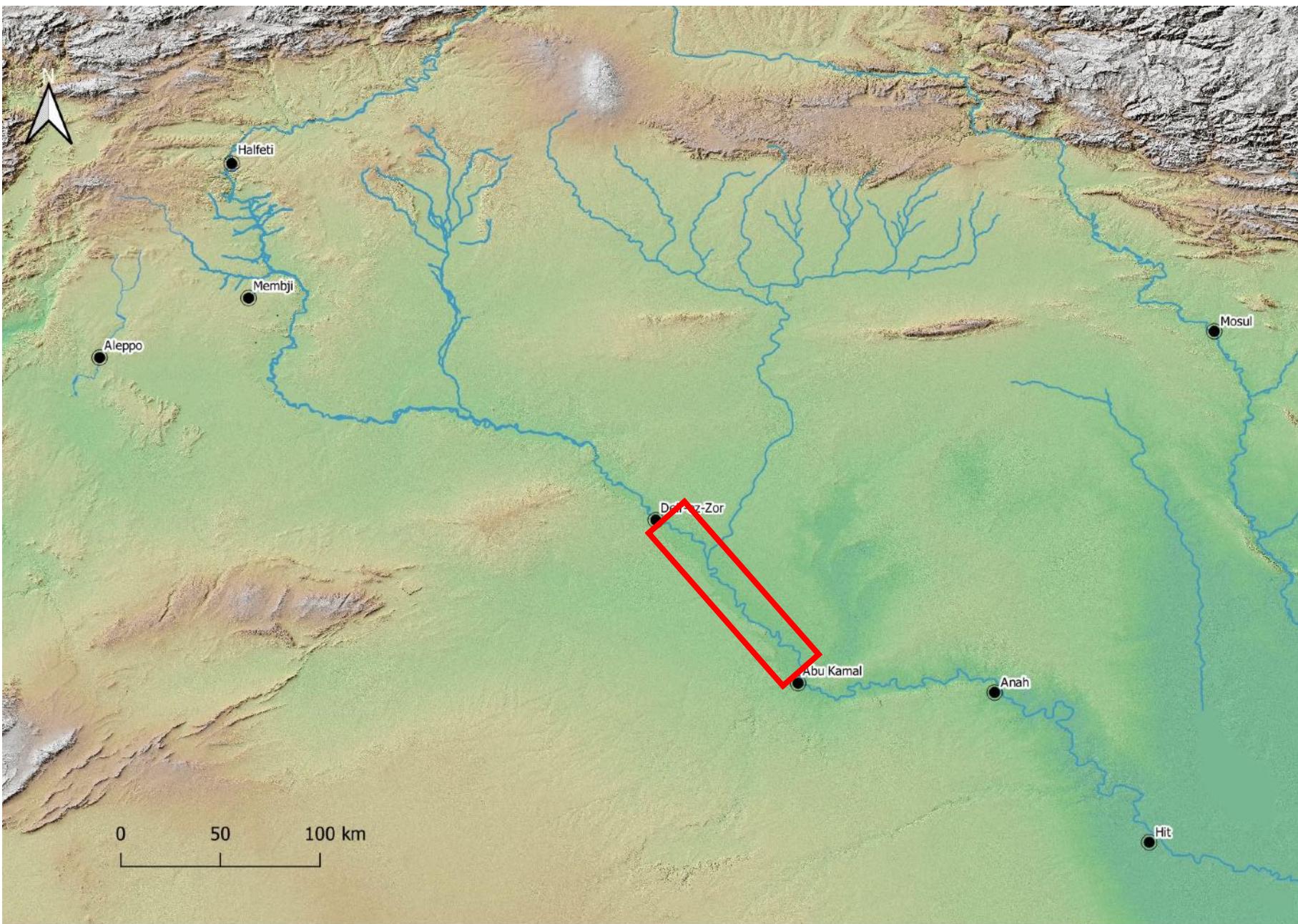


Archaeological Landscape of the Lower Syrian  
Euphrates Valley:  
an Integrated Approach Towards the Reconstruction of  
the Settlement Patterns during the Iron Age.



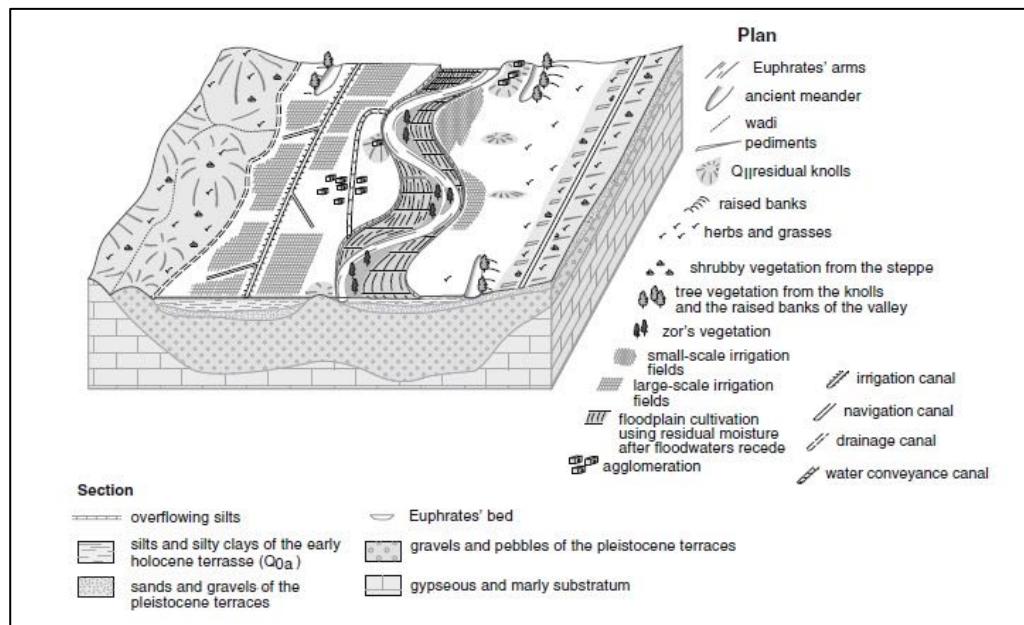
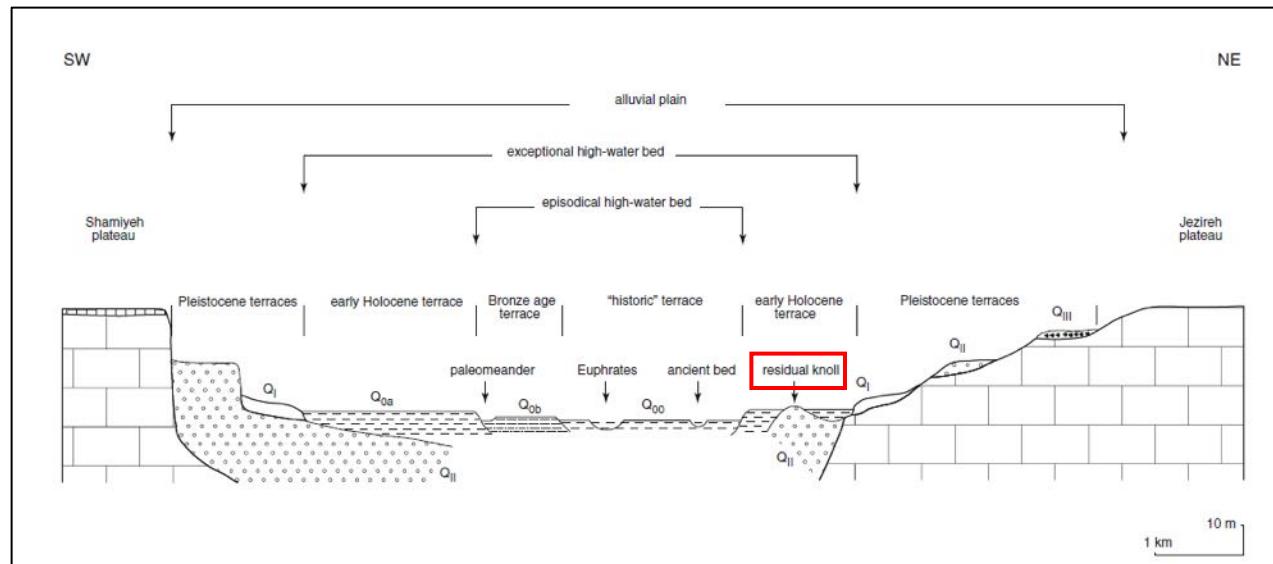
## Introduction: PhD Study Areas



Introduction: The Syrian Lower Euphrates

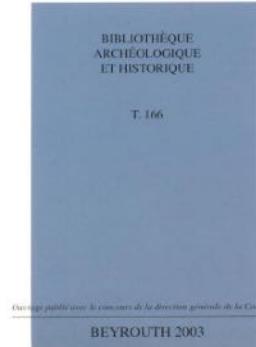
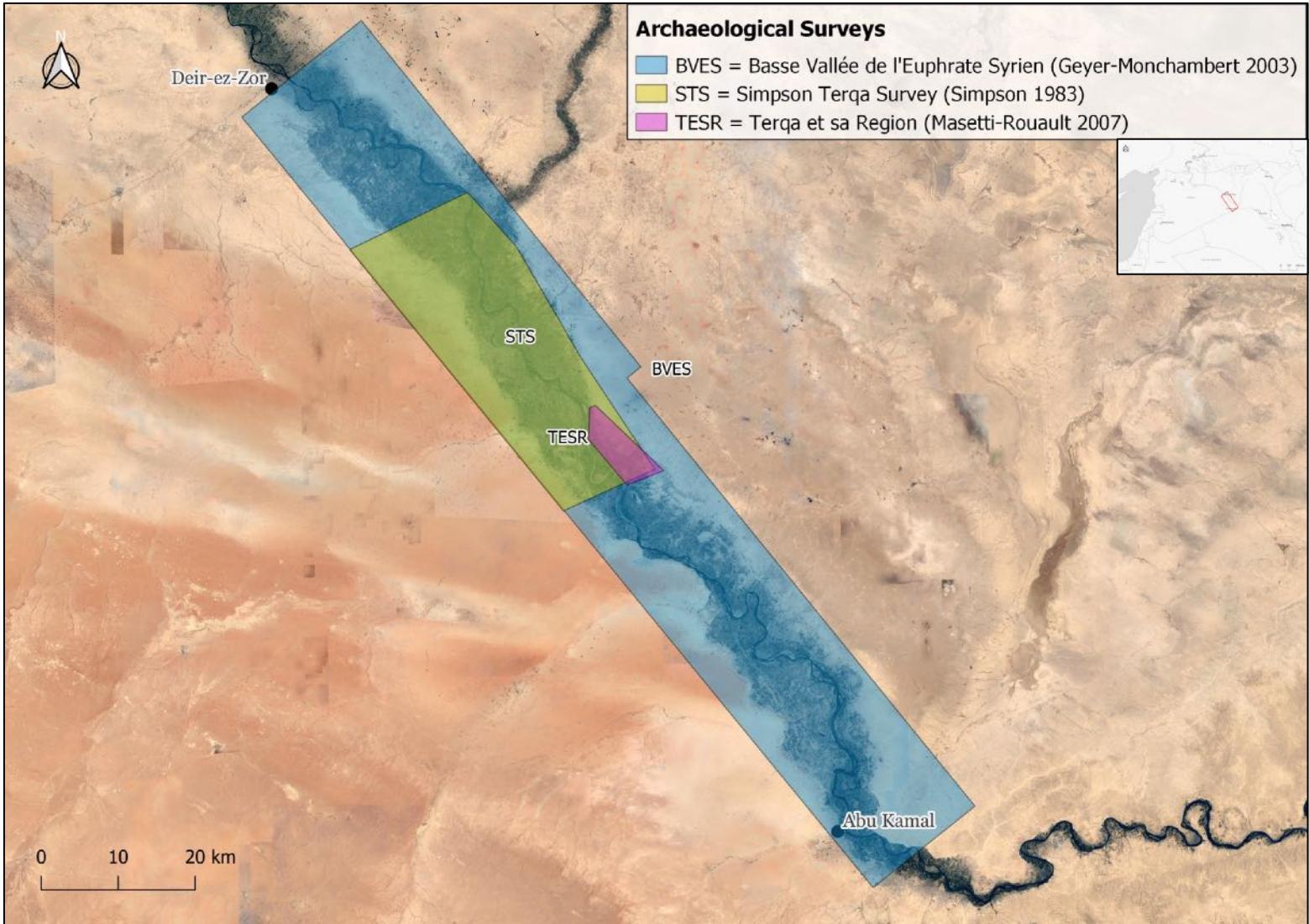


Introduction: The Syrian Lower Euphrates Valley



Above: schematic section of the Euphrates valley with highlighted "outcrops" (from Geyer-Monchambert 2003)

Left: reconstruction of the valley during the Early Bronze Age (from Geyer-Monchambert 2014)



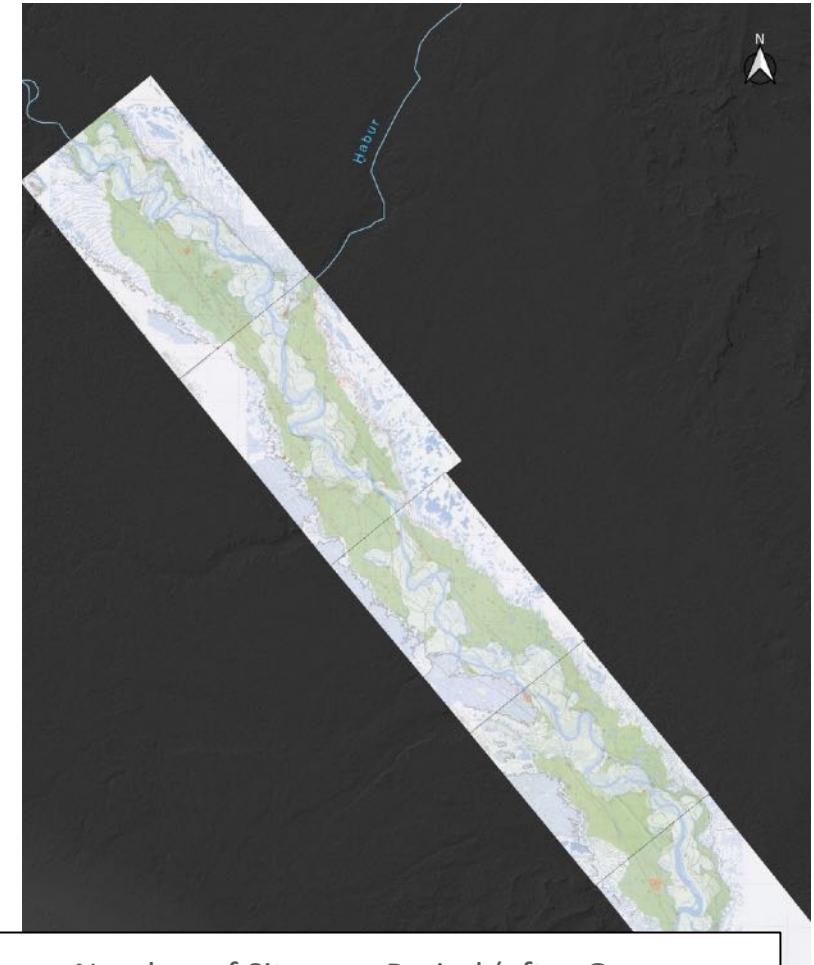
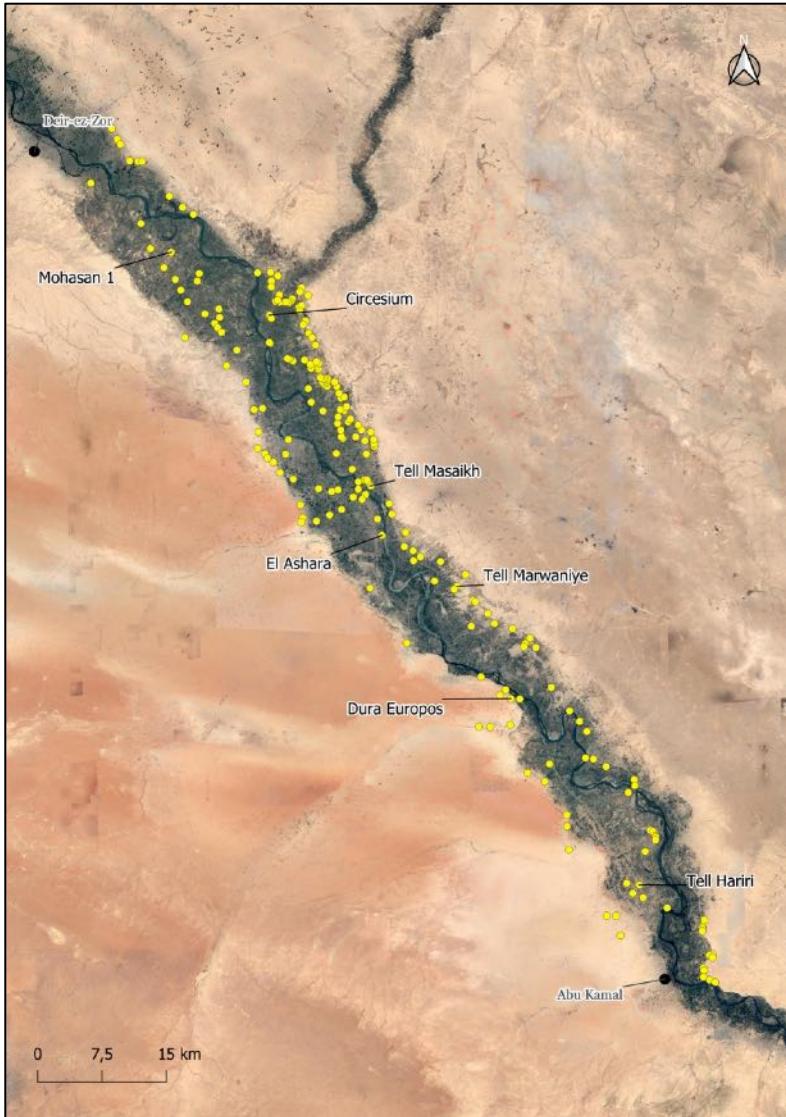
MISSION ARCHÉOLOGIQUE DE MARI  
Tome VI

SETTLEMENT PATTERNS ON THE MARGINS OF MESOPOTAMIA:  
STABILITY AND CHANGE ALONG THE MIDDLE EUPHRATES, SYRIA

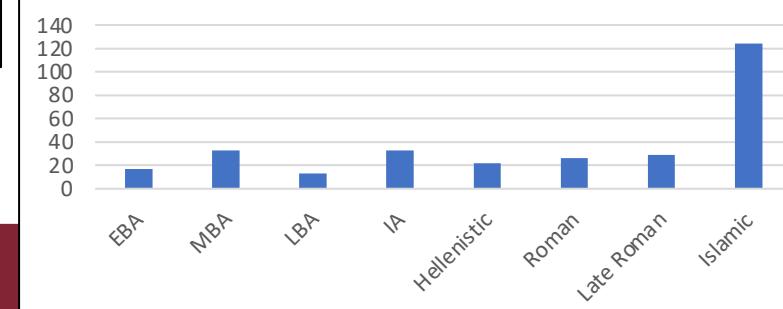
by  
Kay Christine Simpson

A Dissertation Submitted to the Faculty of the  
DEPARTMENT OF ANTHROPOLOGY  
In Partial Fulfillment of the Requirements  
For the Degree of  
DOCTOR OF PHILOSOPHY  
In the Graduate College  
THE UNIVERSITY OF ARIZONA

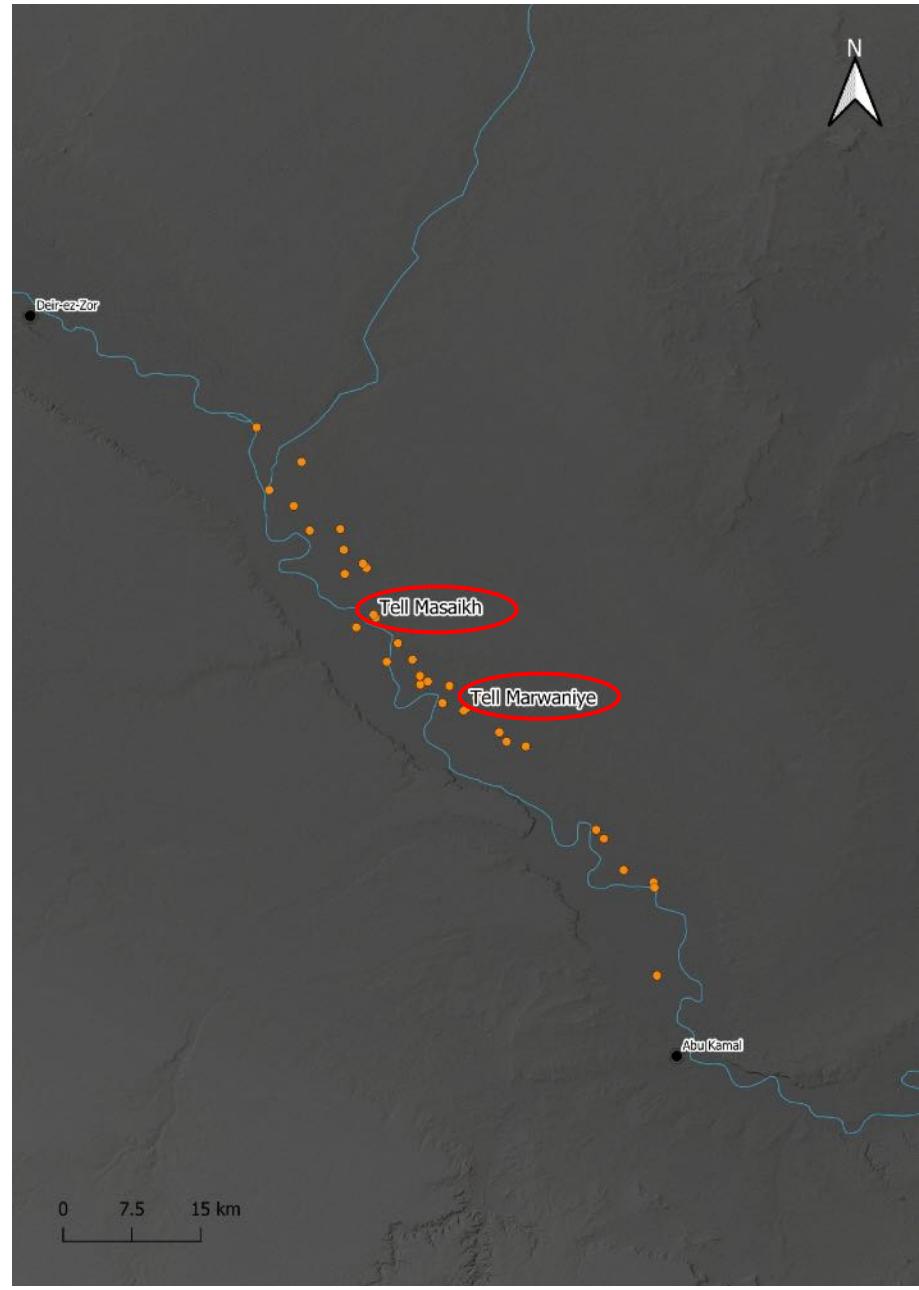
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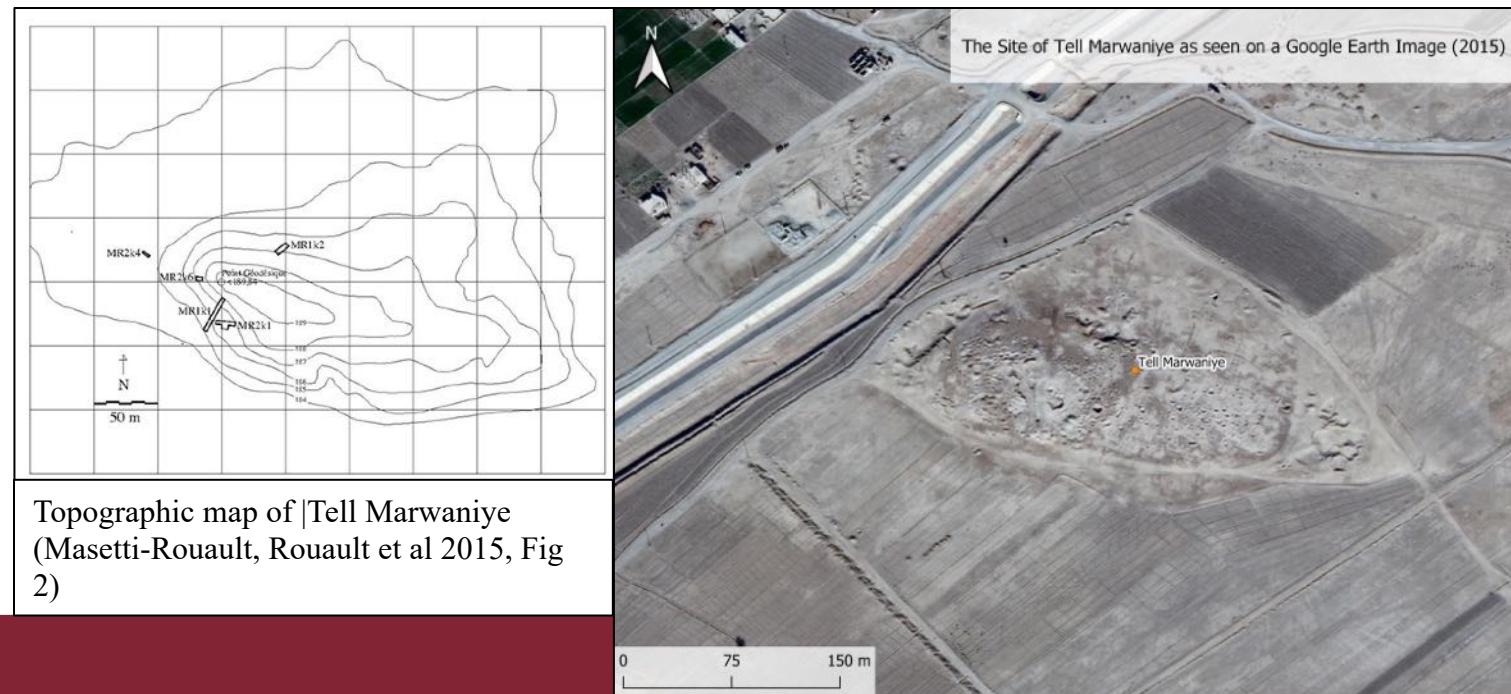
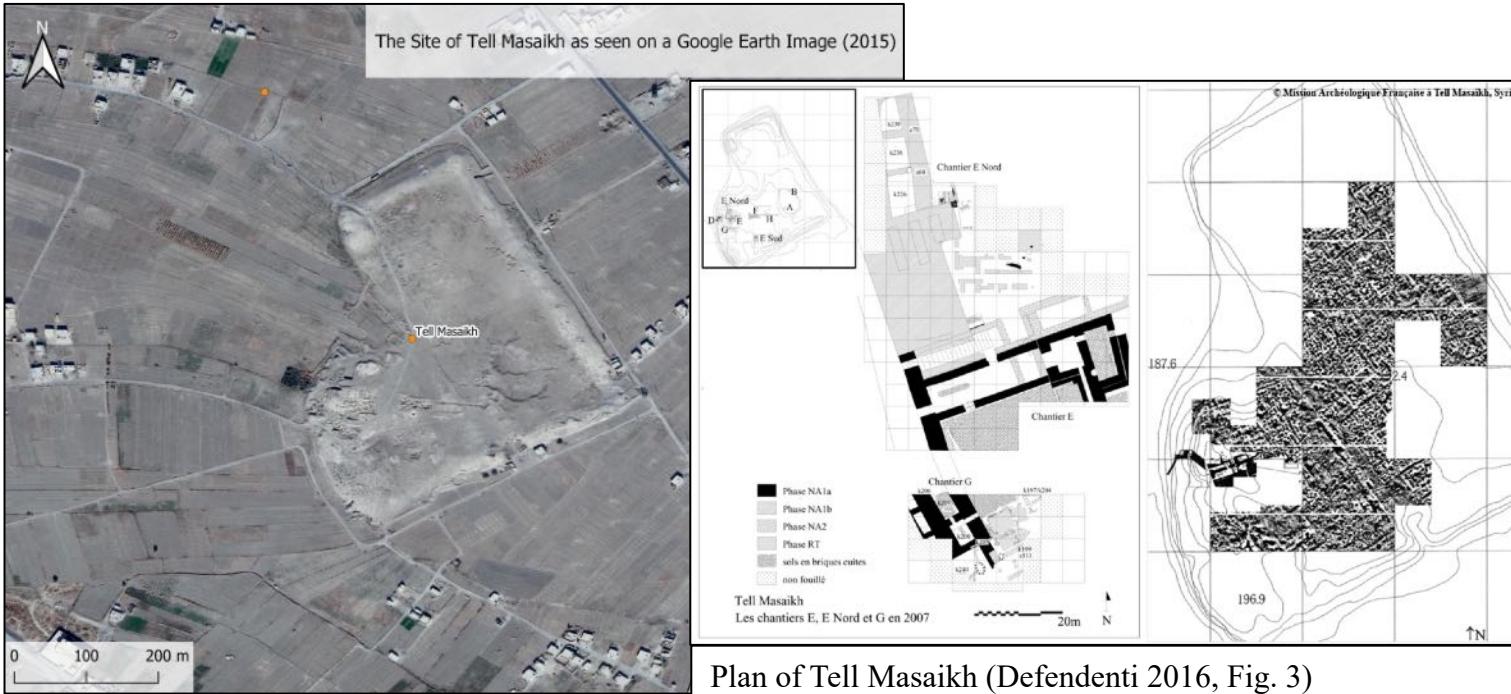
Number of Sites per Period (after Geyer-Monchambert 2003)

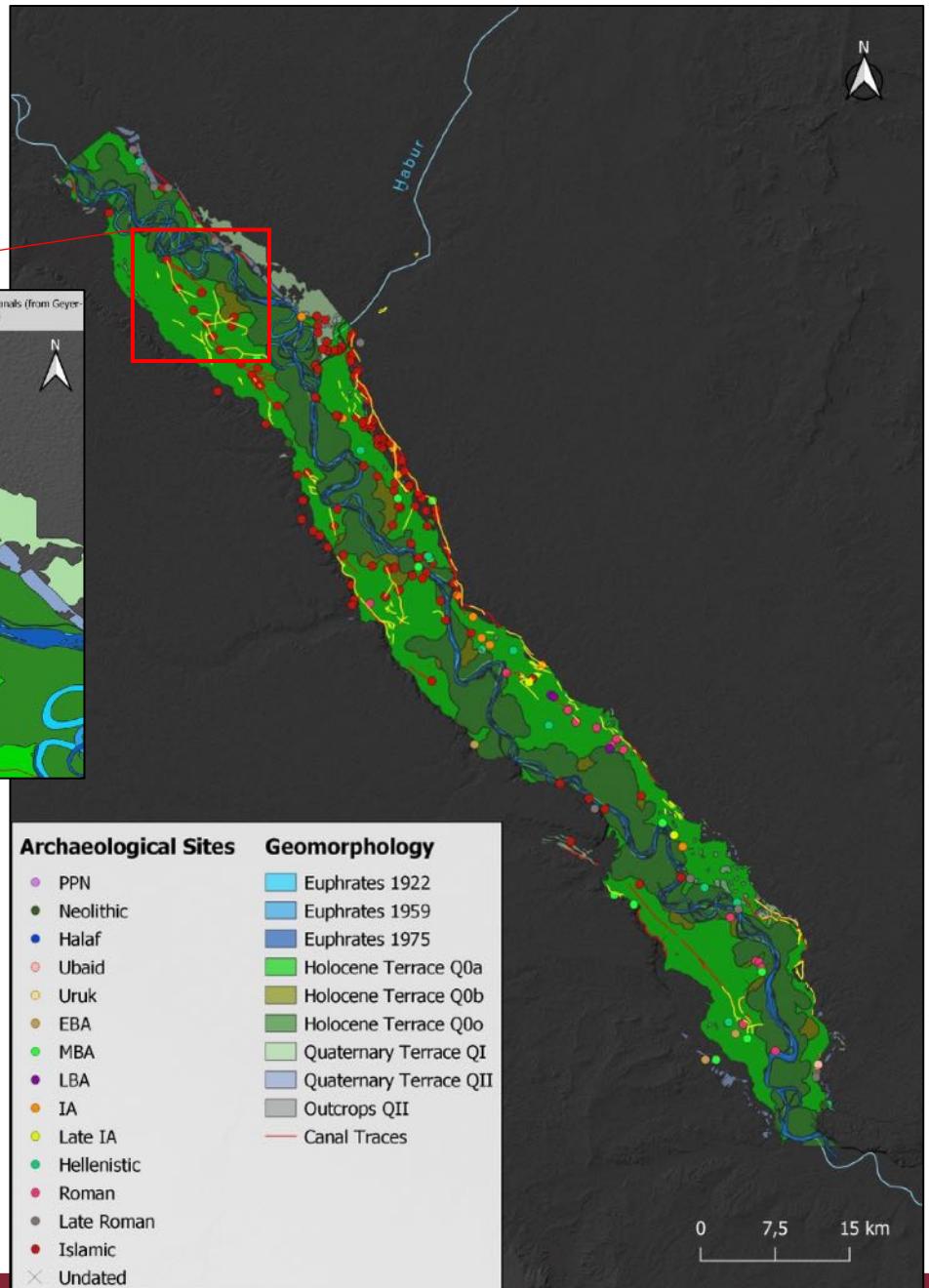
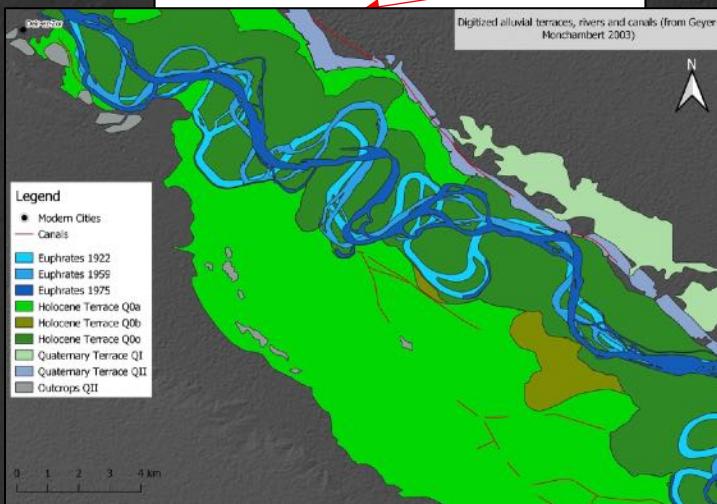
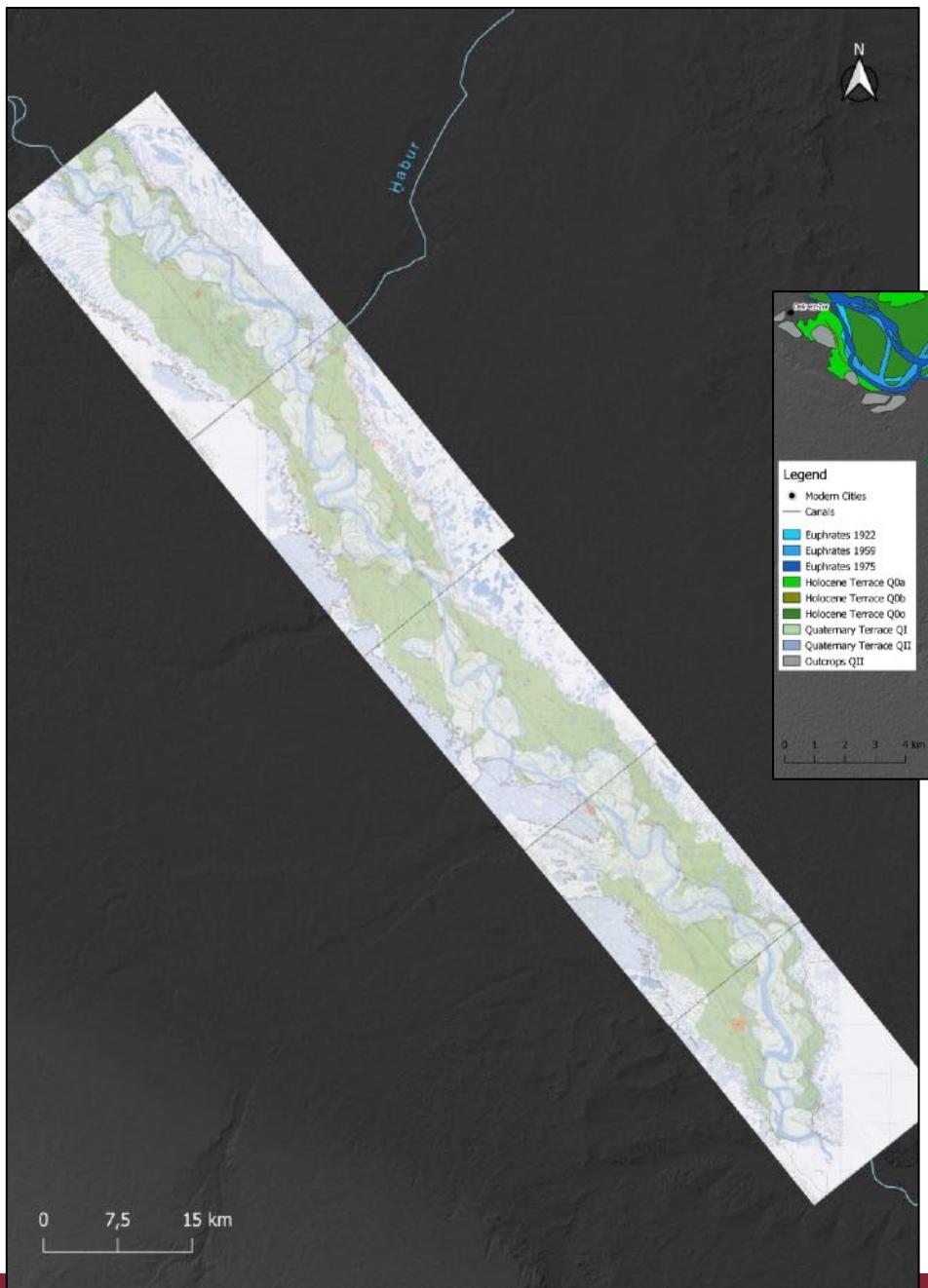


Data: Survey Data

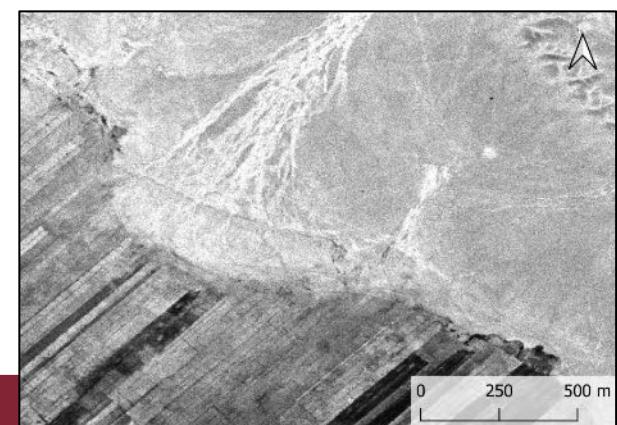
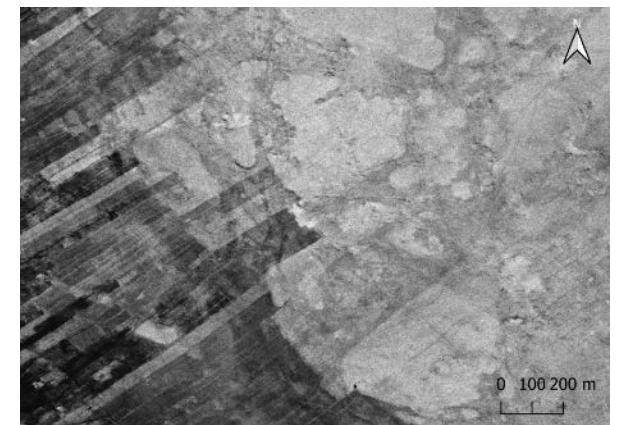
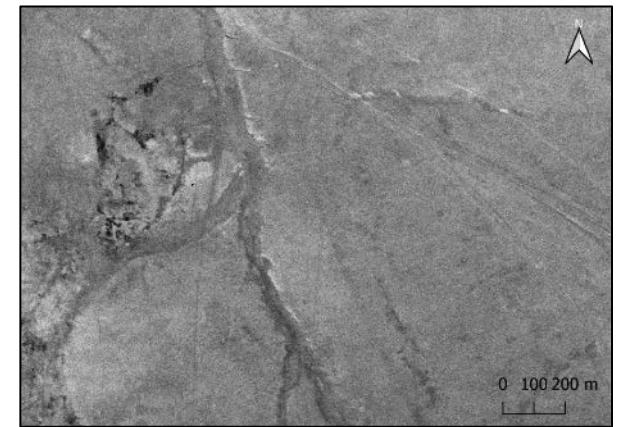
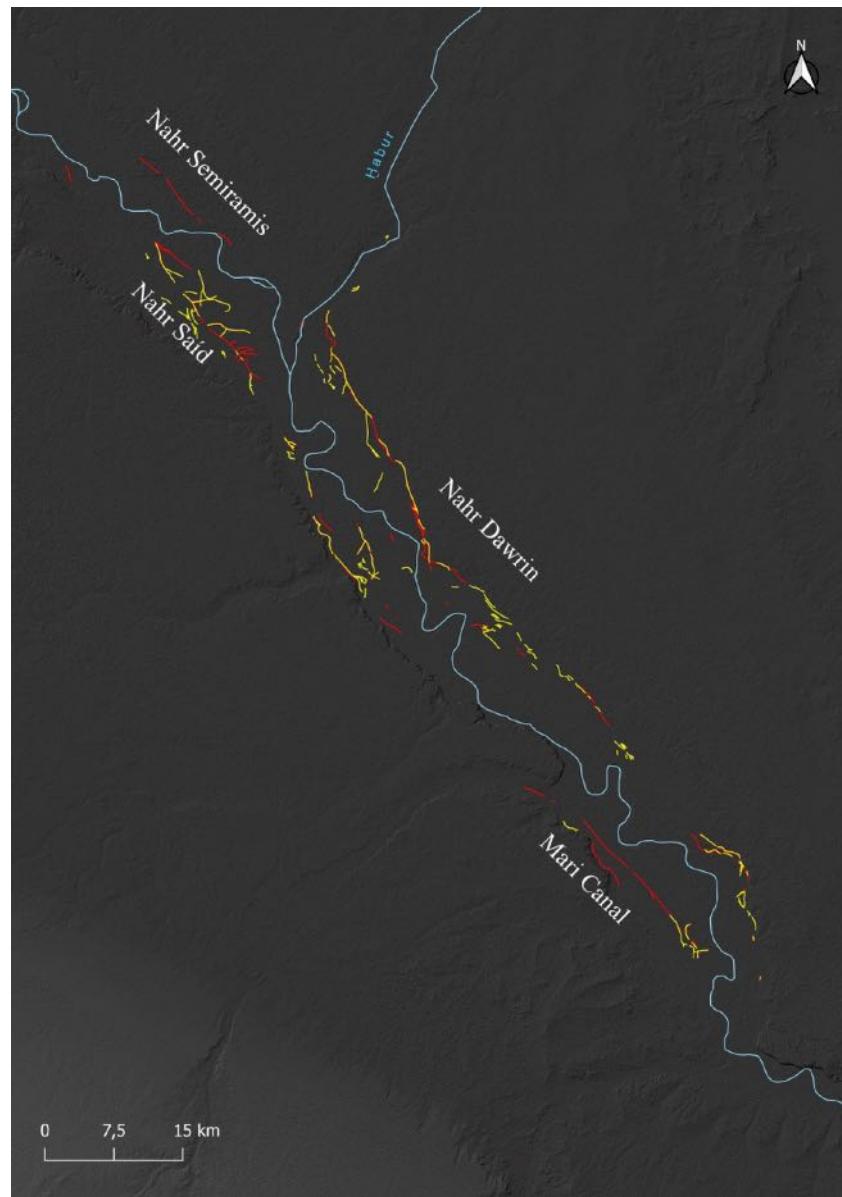
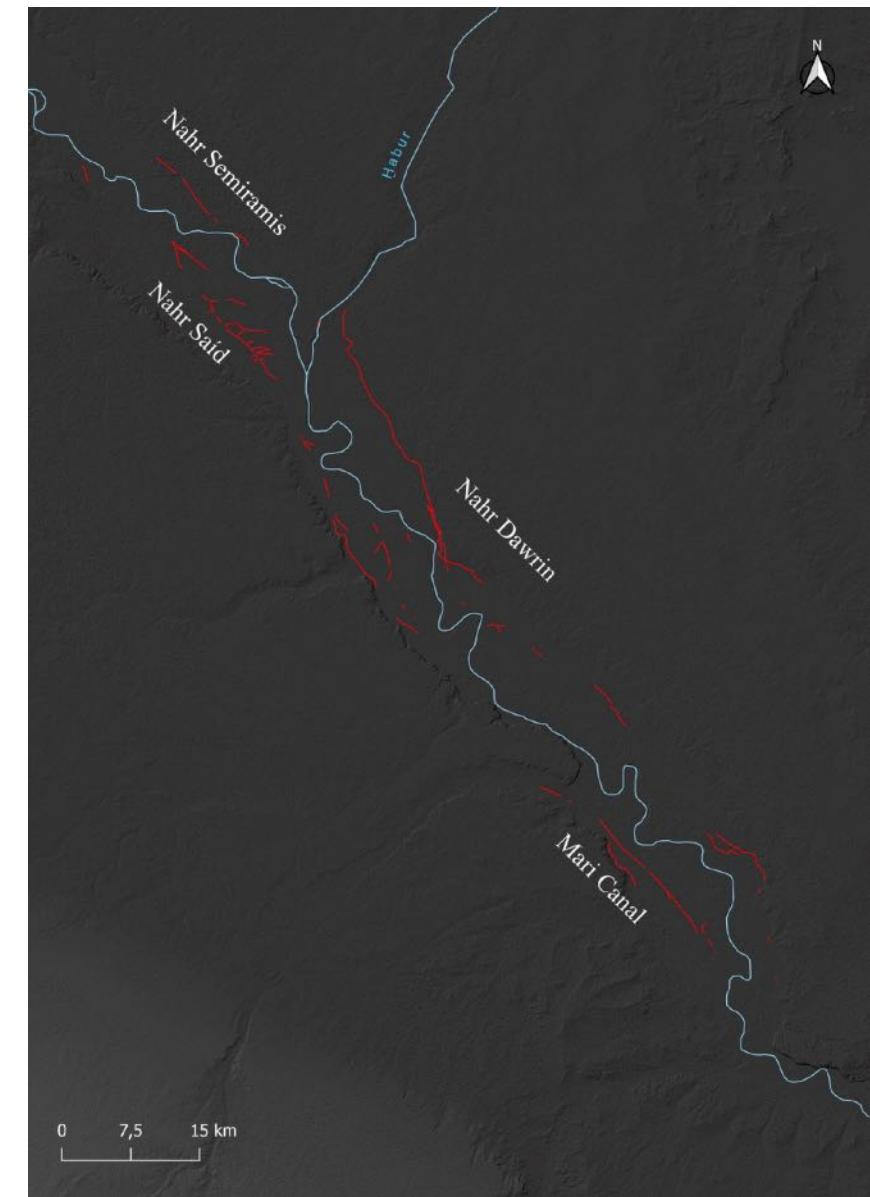


Data: Excavations Data

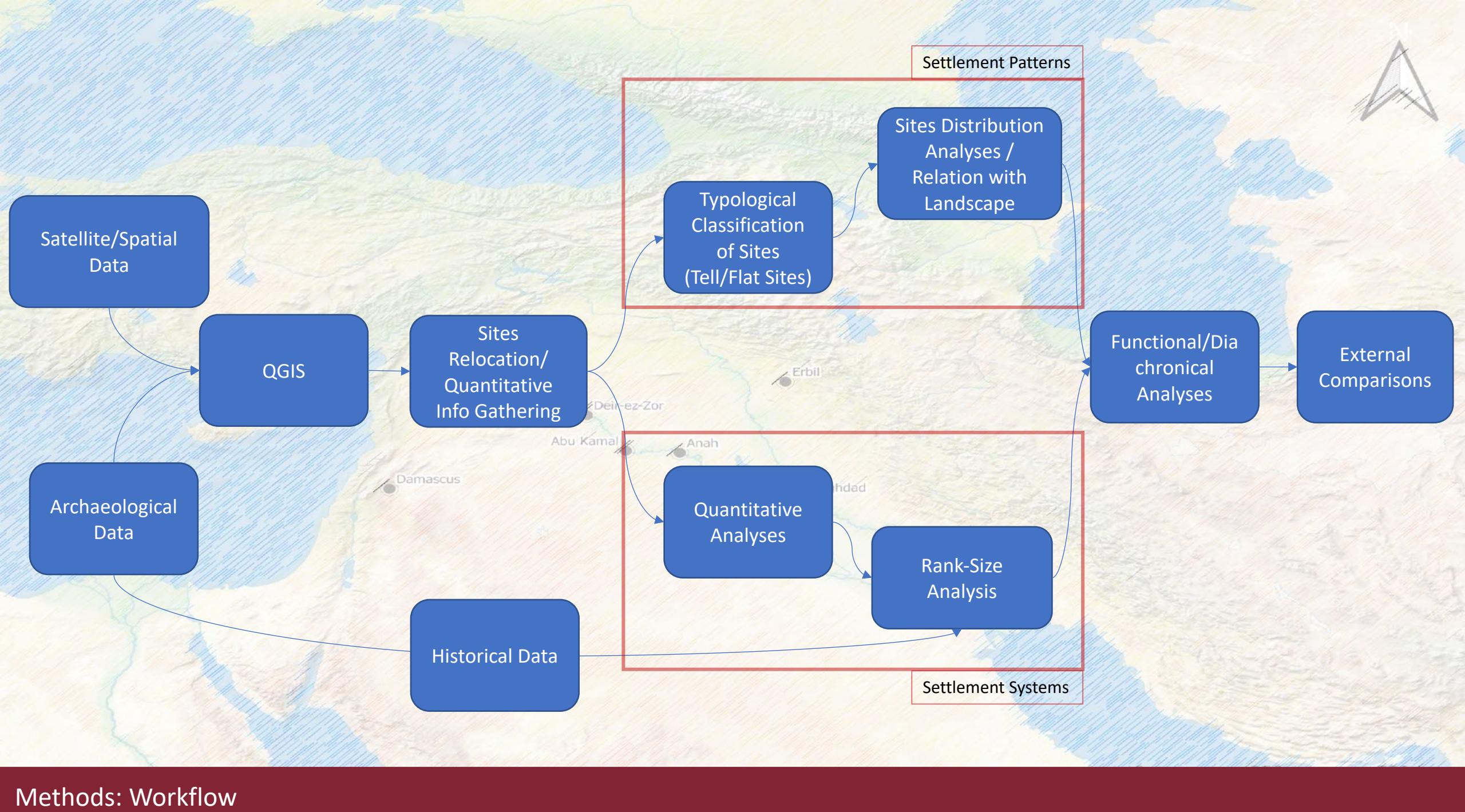


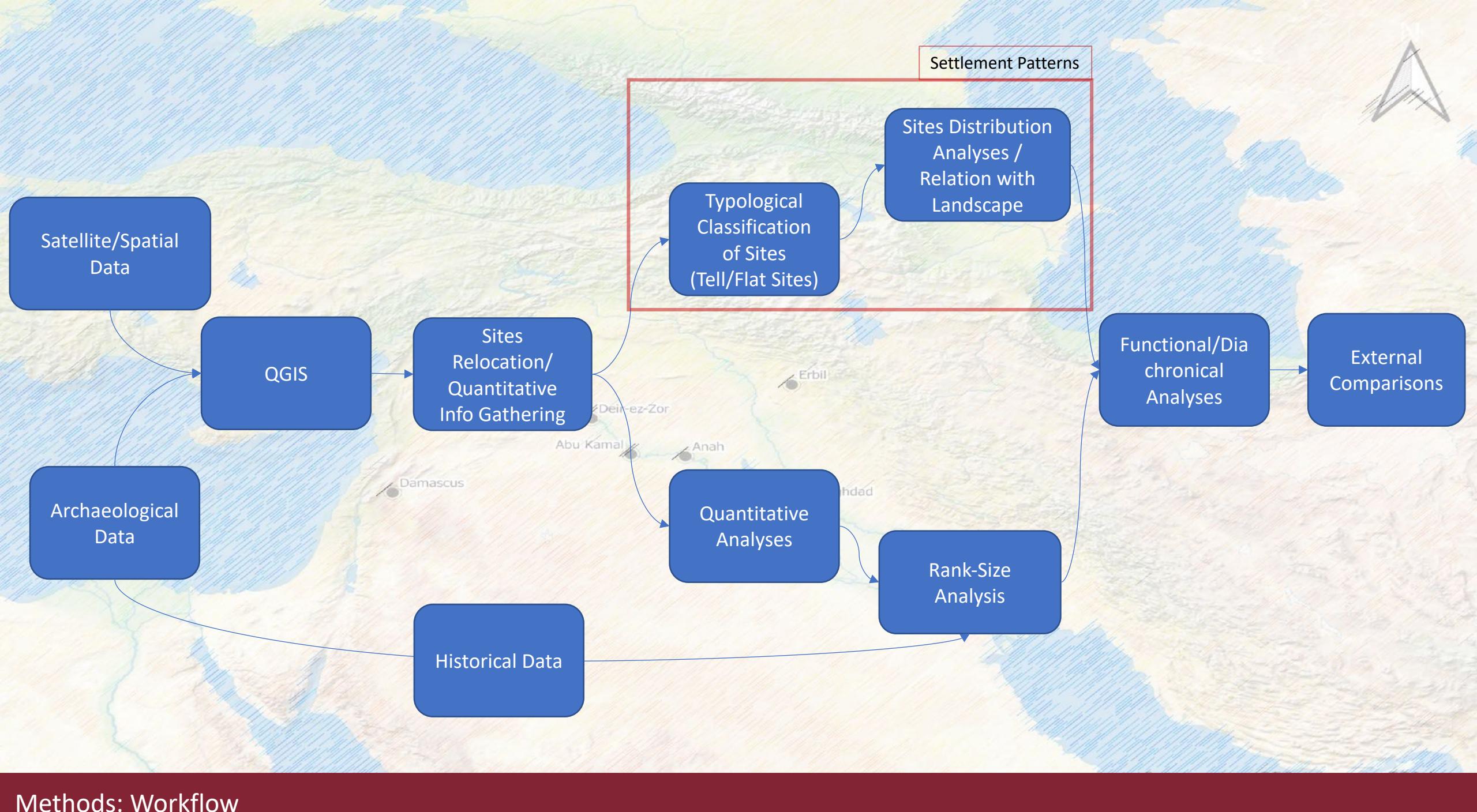


Methods: Digitization of Survey Maps, Geomorphology and Archaeological Sites



Methods: Remote sensing for traces of hydrological features in the valley

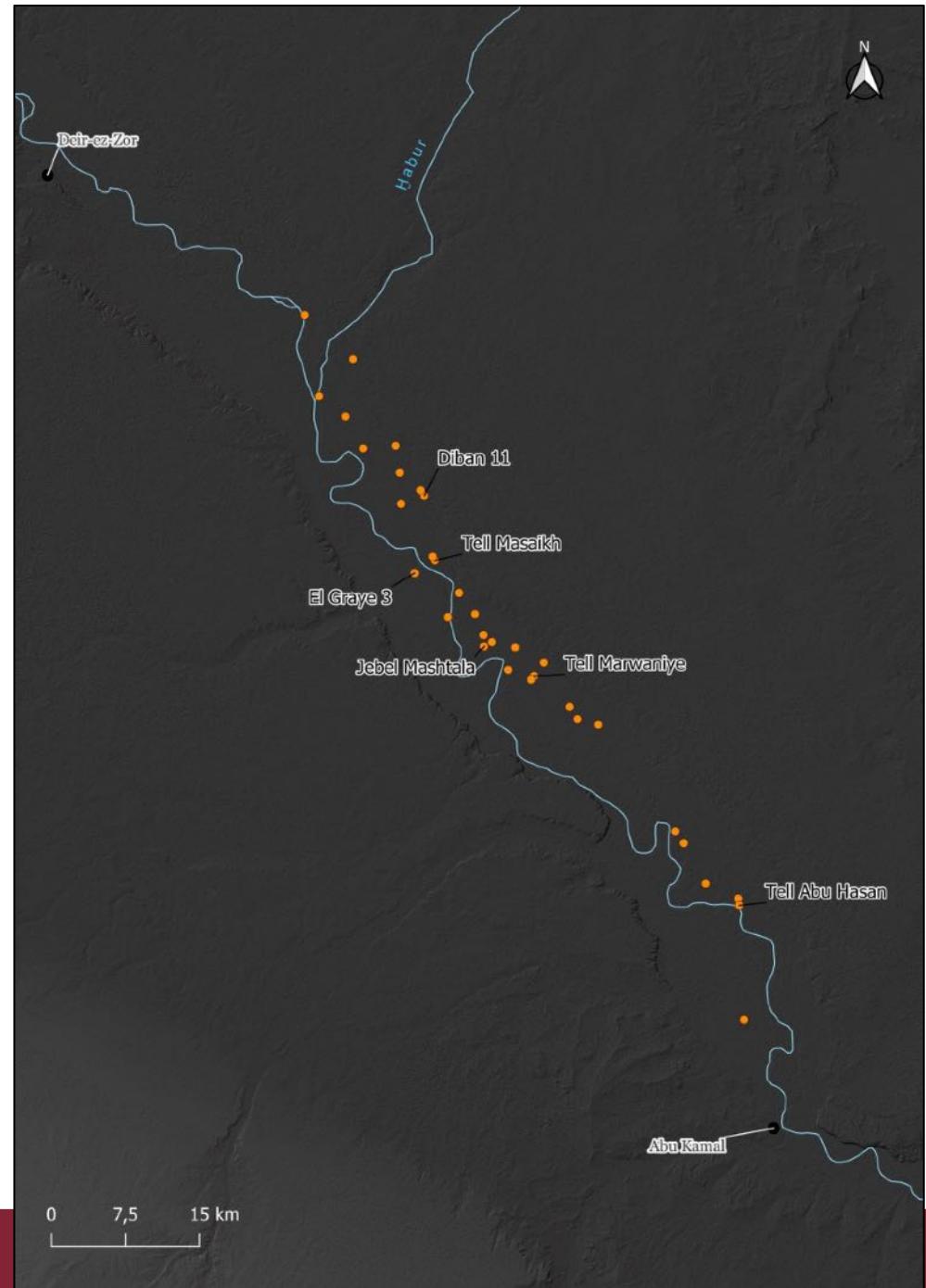




## Iron Age Settlement Pattern

- 33 Iron Age sites
- Pattern strongly oriented towards the left bank (30 sites)
- 27 sites are located on the Holocene Terrace, 6 on the Pleistocene Terrace

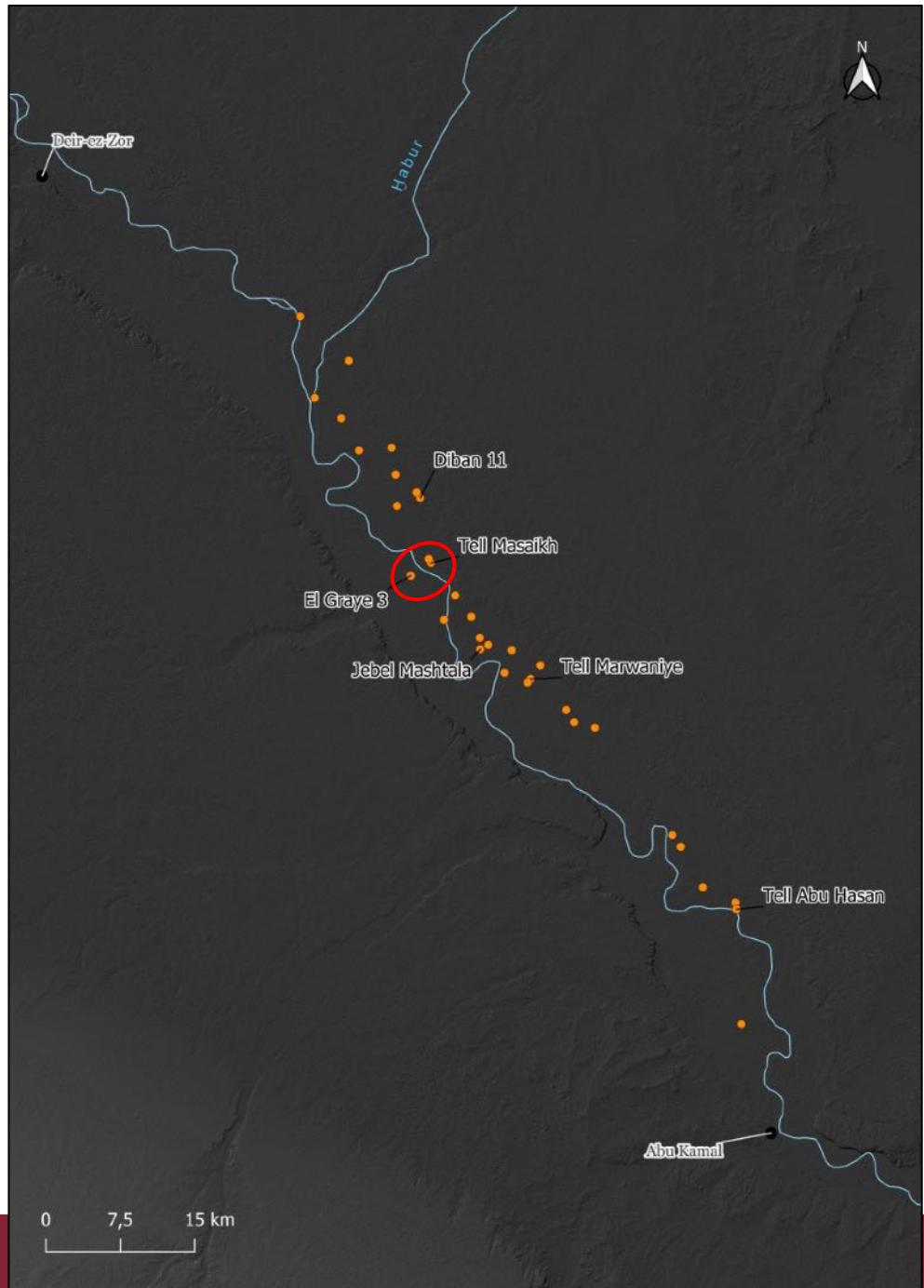
Results: General Distribution

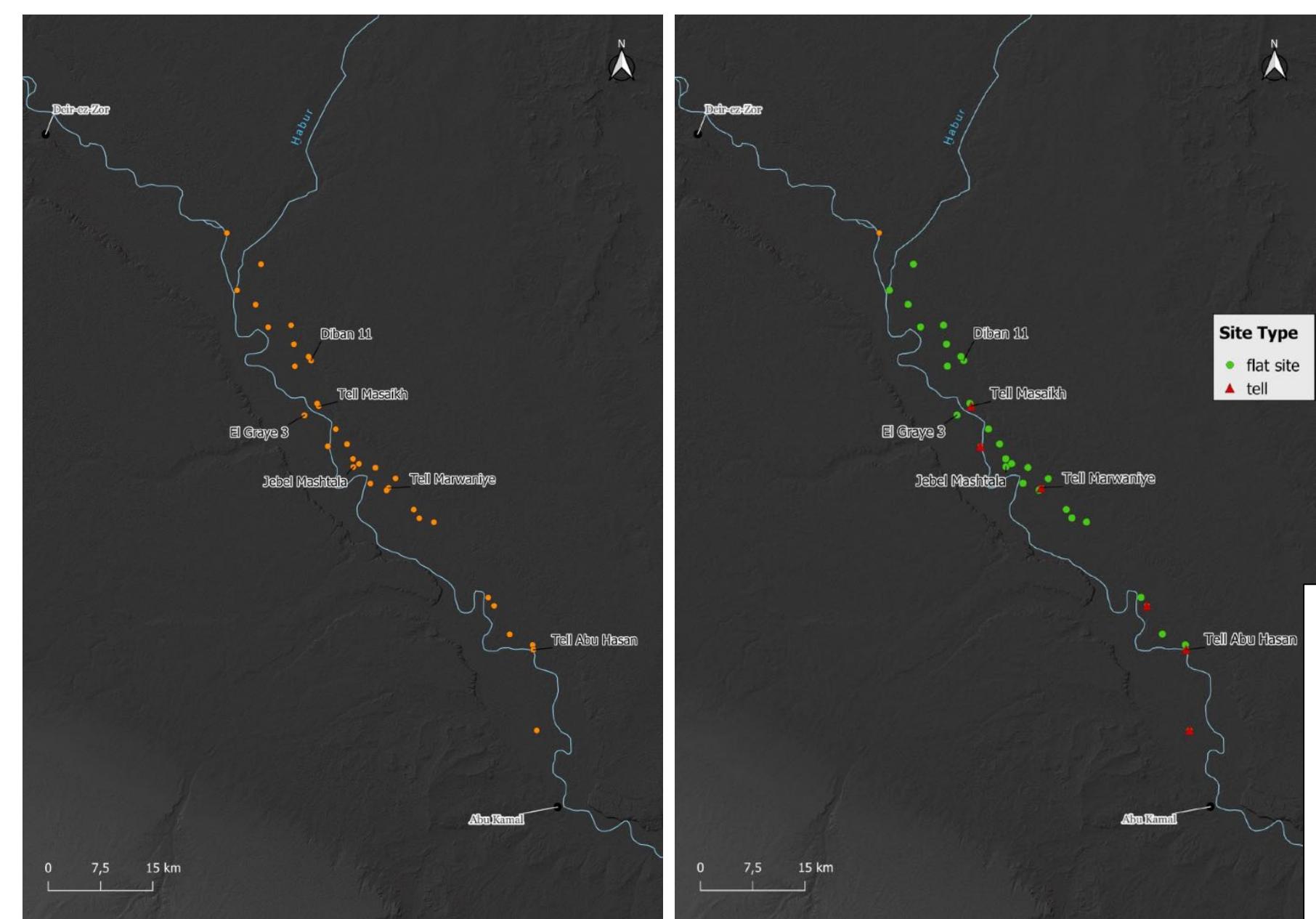


## Iron Age Settlement Pattern

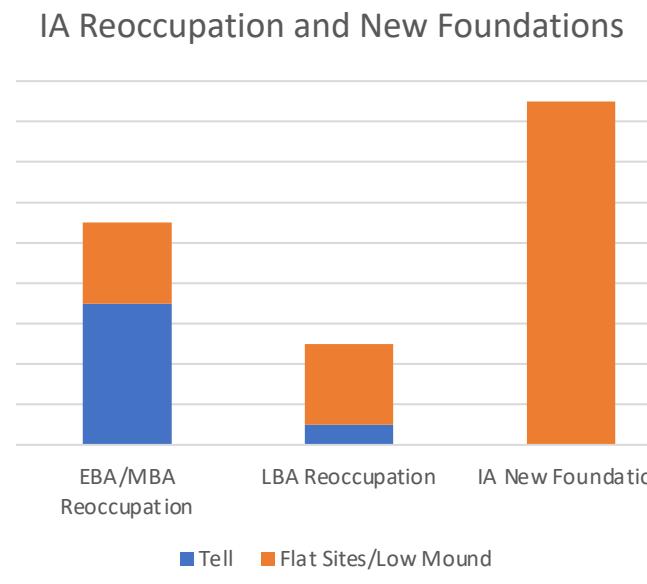
- 33 Iron Age sites
- Pattern strongly oriented towards the left bank (30 sites)
- 27 sites are located on the Holocene Terrace, 6 on the Pleistocene Terrace
- Paired sites: Tell Masaikh (Kar-Ashurnasirpal) and El Graye 3 (Nebarti Ashur?)

*"I founded two cities on the Euphrates, one on this bank of the Euphrates (which) I called Kār-Ashurnasirpal (and) one on the other bank of the Euphrates (which) I called Nēbarti-Aššur."* (Grayson 1991, 216).



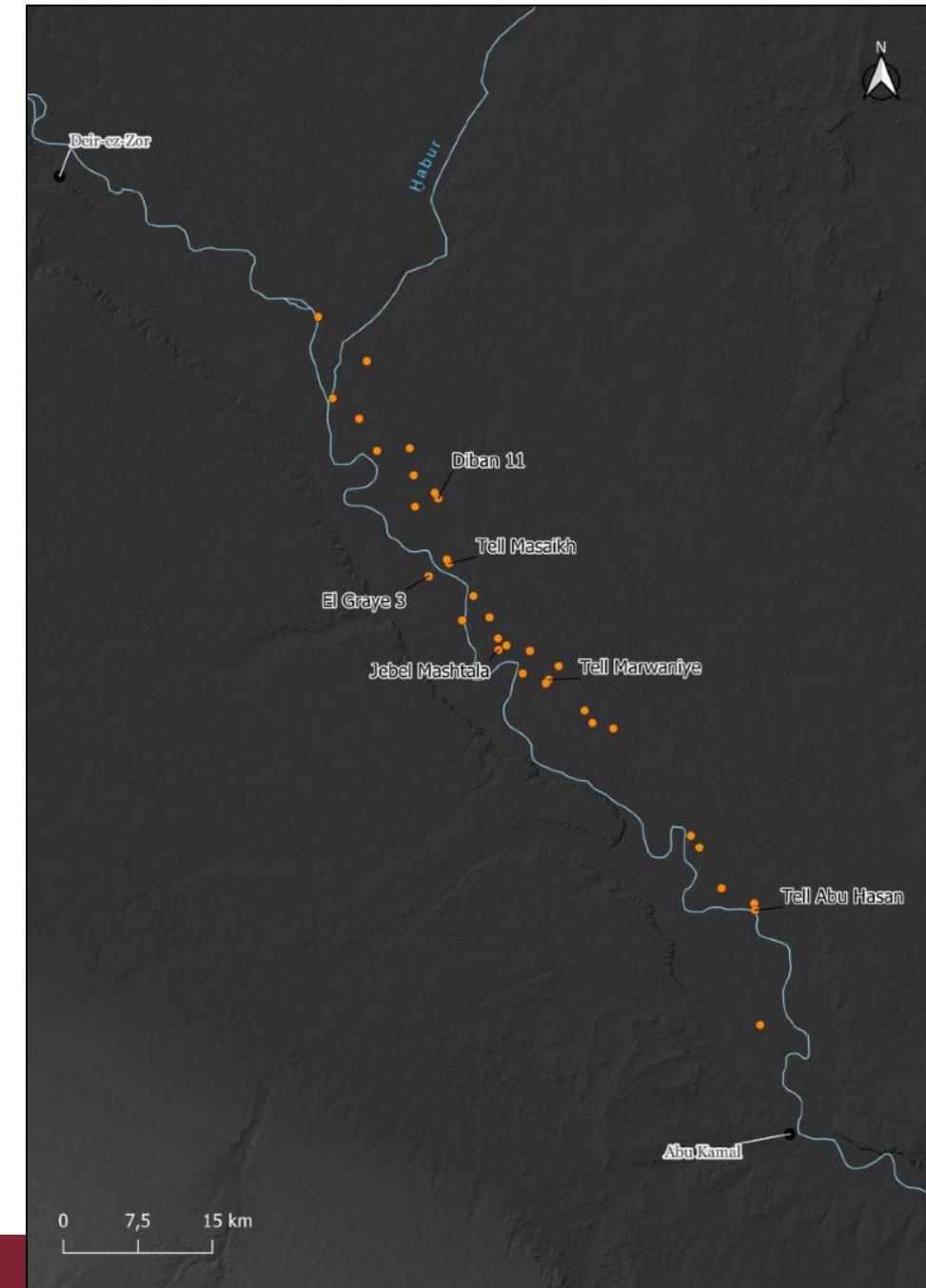
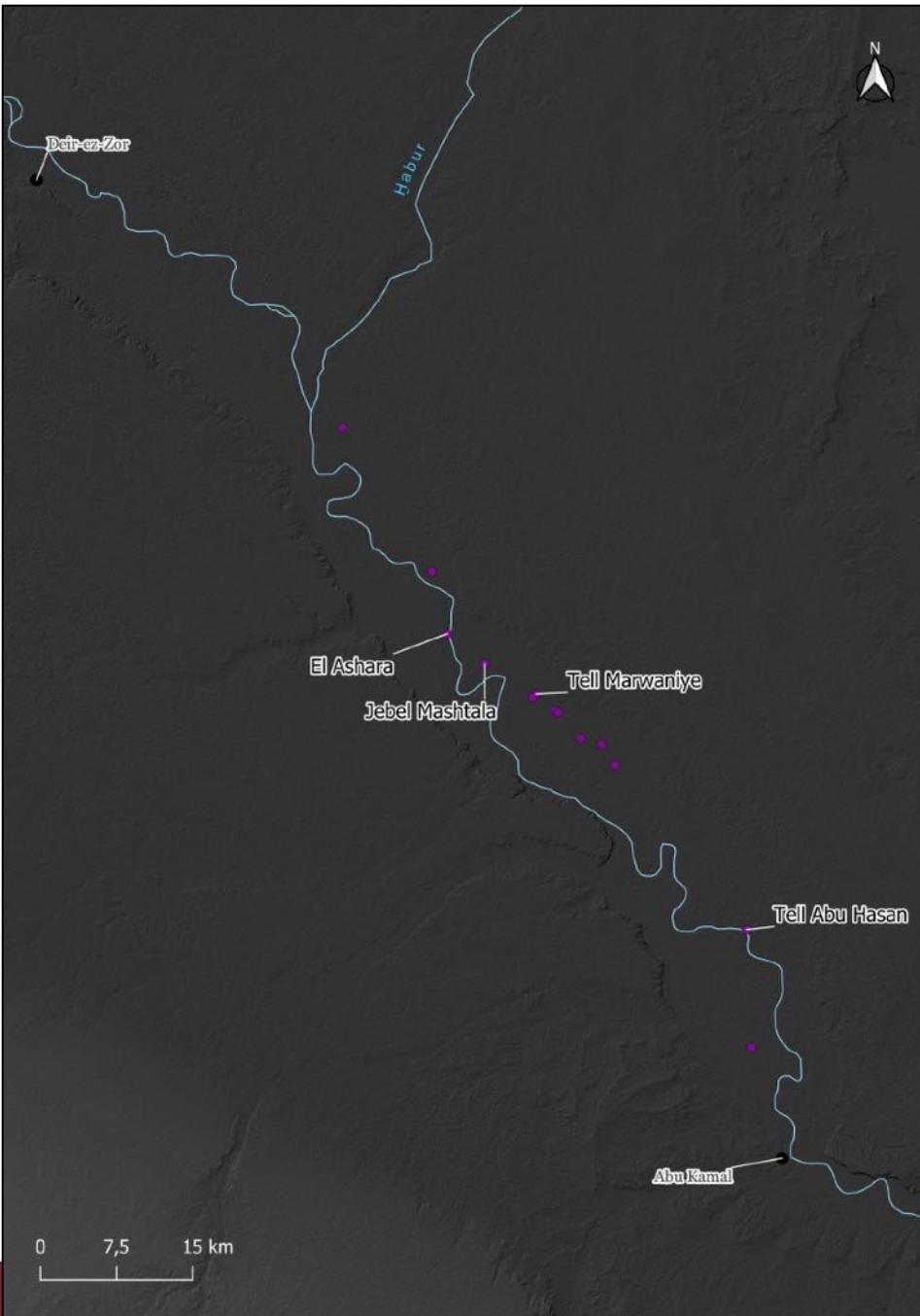


## Results: Site Typology

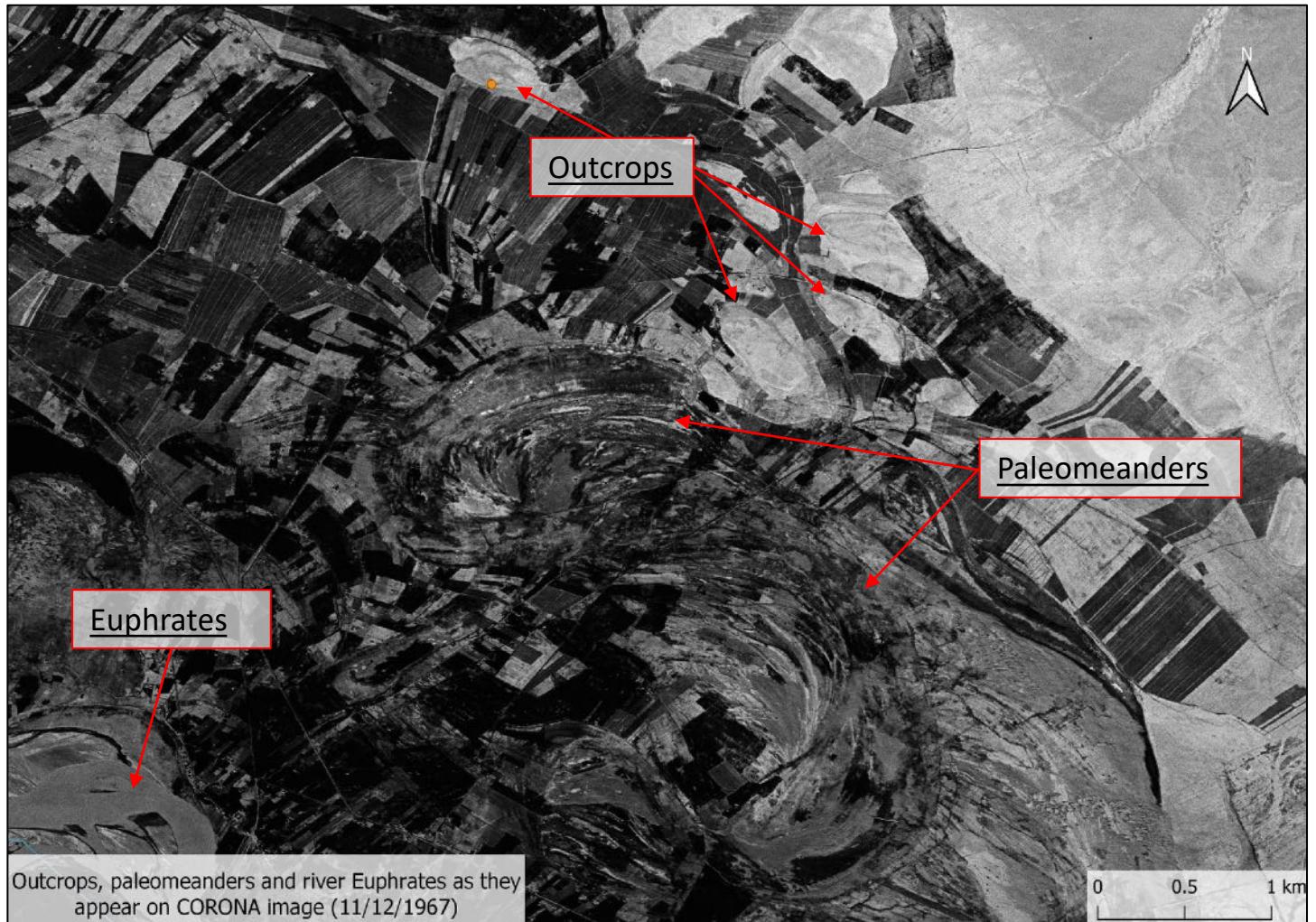
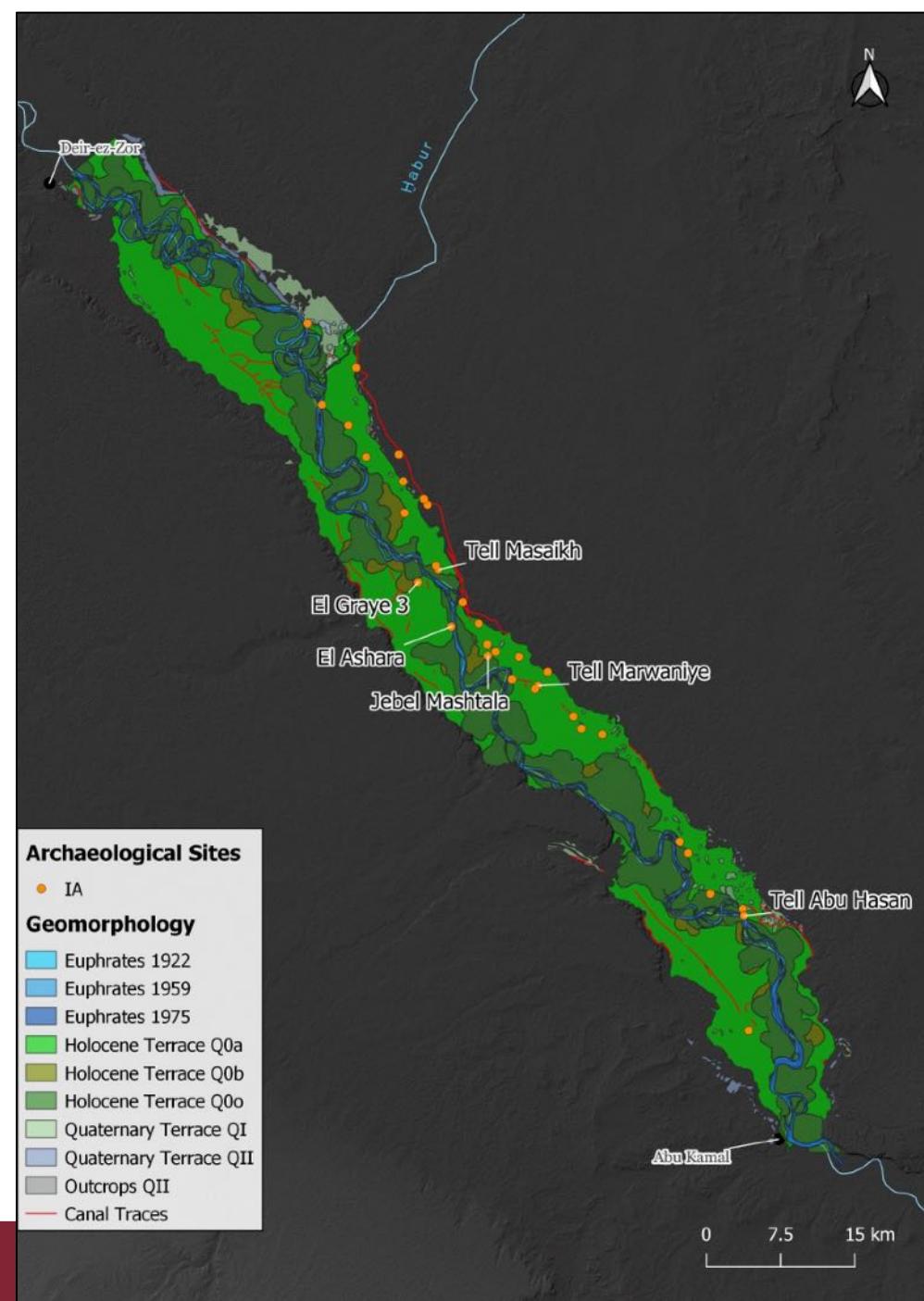


## New phase of occupation during the Iron Age

- Settlement increase from 13 to 33 sites
- 17 new IA foundations
- More evenly spread across the valley
- Strong continuity, 10 LBA sites reoccupied during the IA
- Reoccupied sites mainly found along smaller local canal systems
- Lacking extensive knowledge on LBA diagnostic material

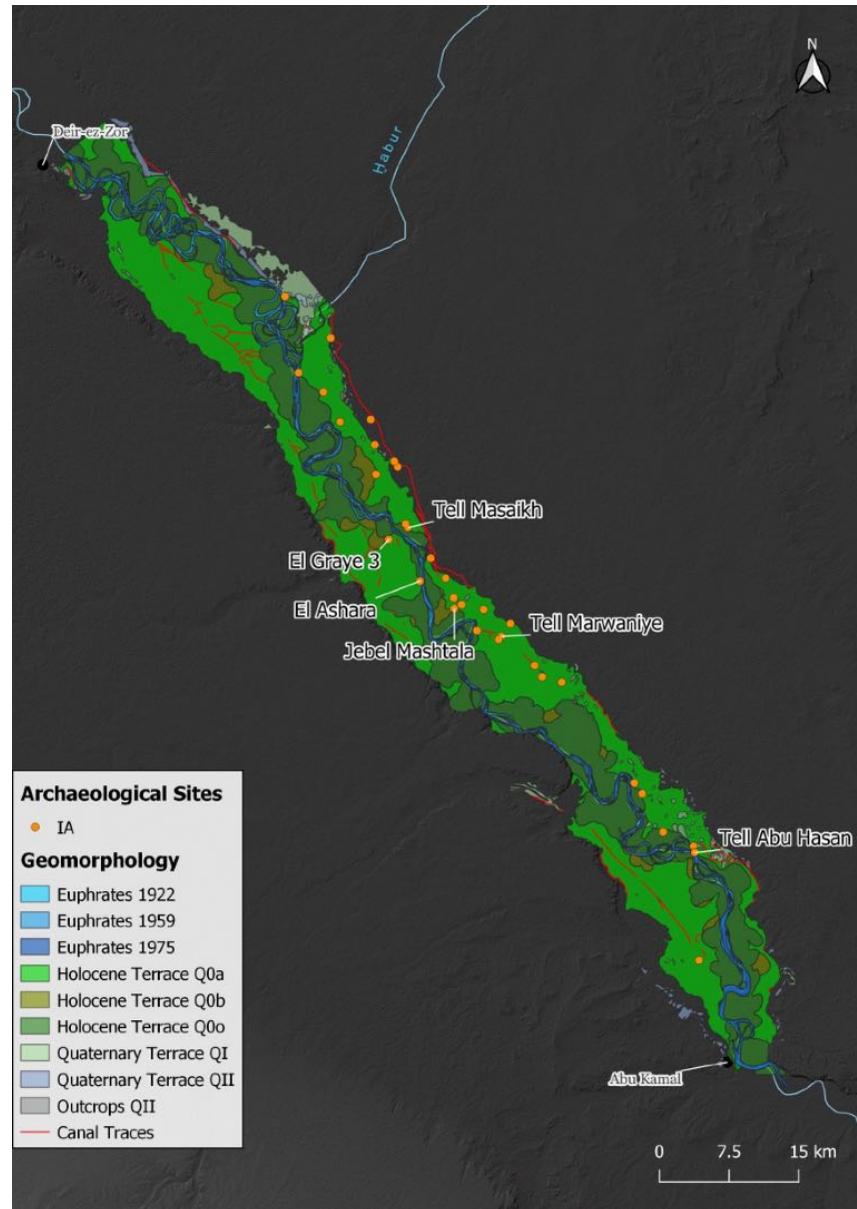
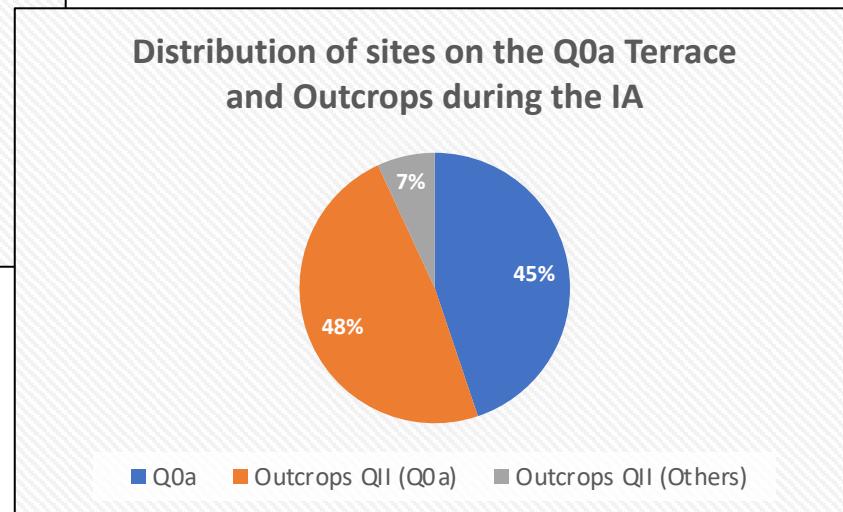
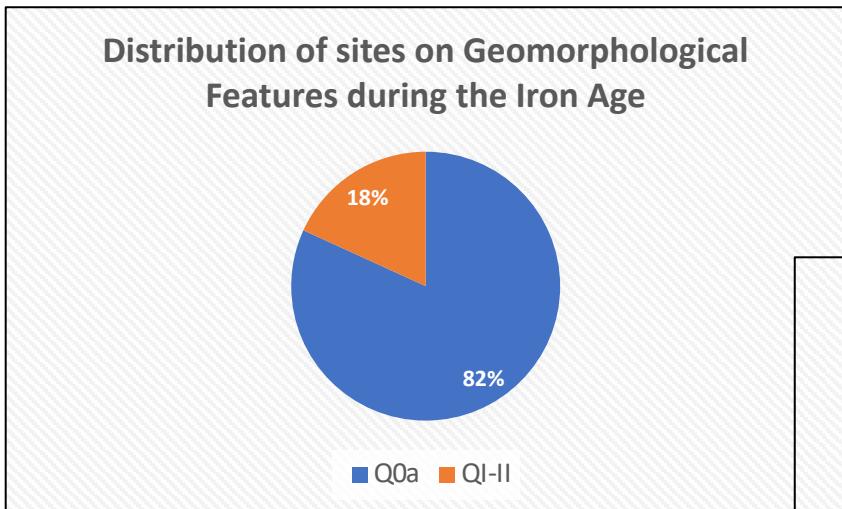


Results: LBA-IA Transition



Results: Sites Location and Geomorphology

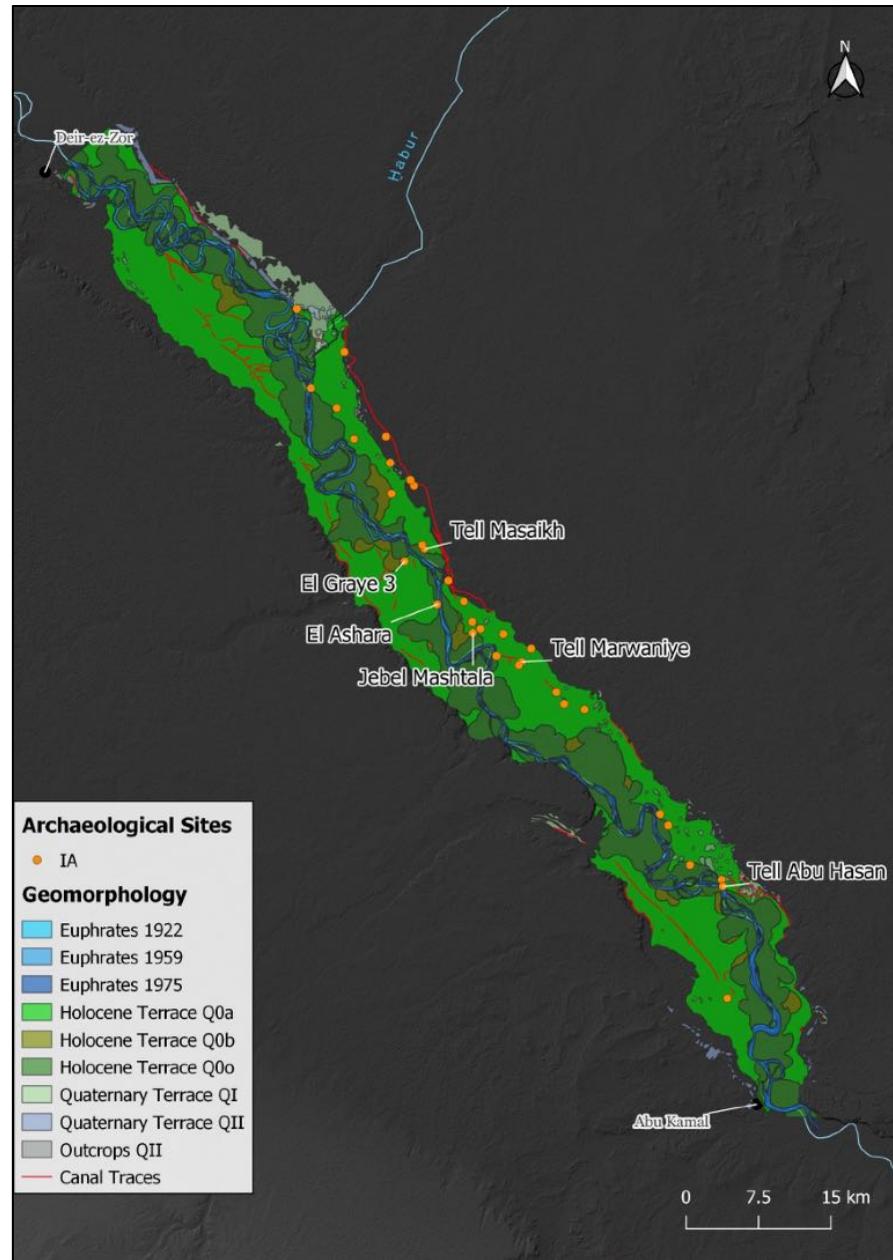
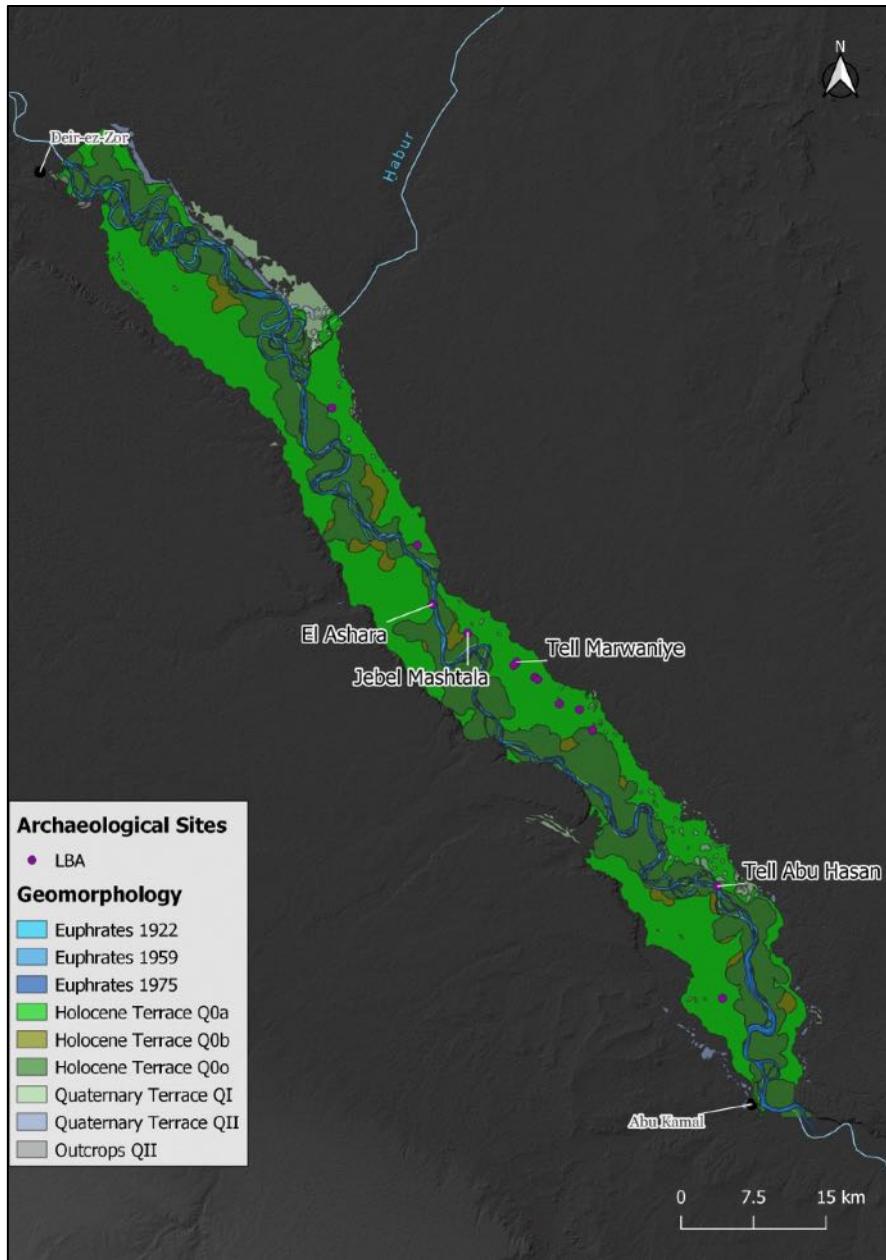
- 27 sites are located on the Holocene Terrace (Q0a).
- 6 are located on the Pleistocene Terraces (QI-II) and closer to the Nahr Dawrin canal.
- More than half of the sites (16) are located on elevated outcrops (14 protruding from the Holocene Terrace and 2 located on the Pleistocene Terraces)



Results: Sites Location and Geomorphology

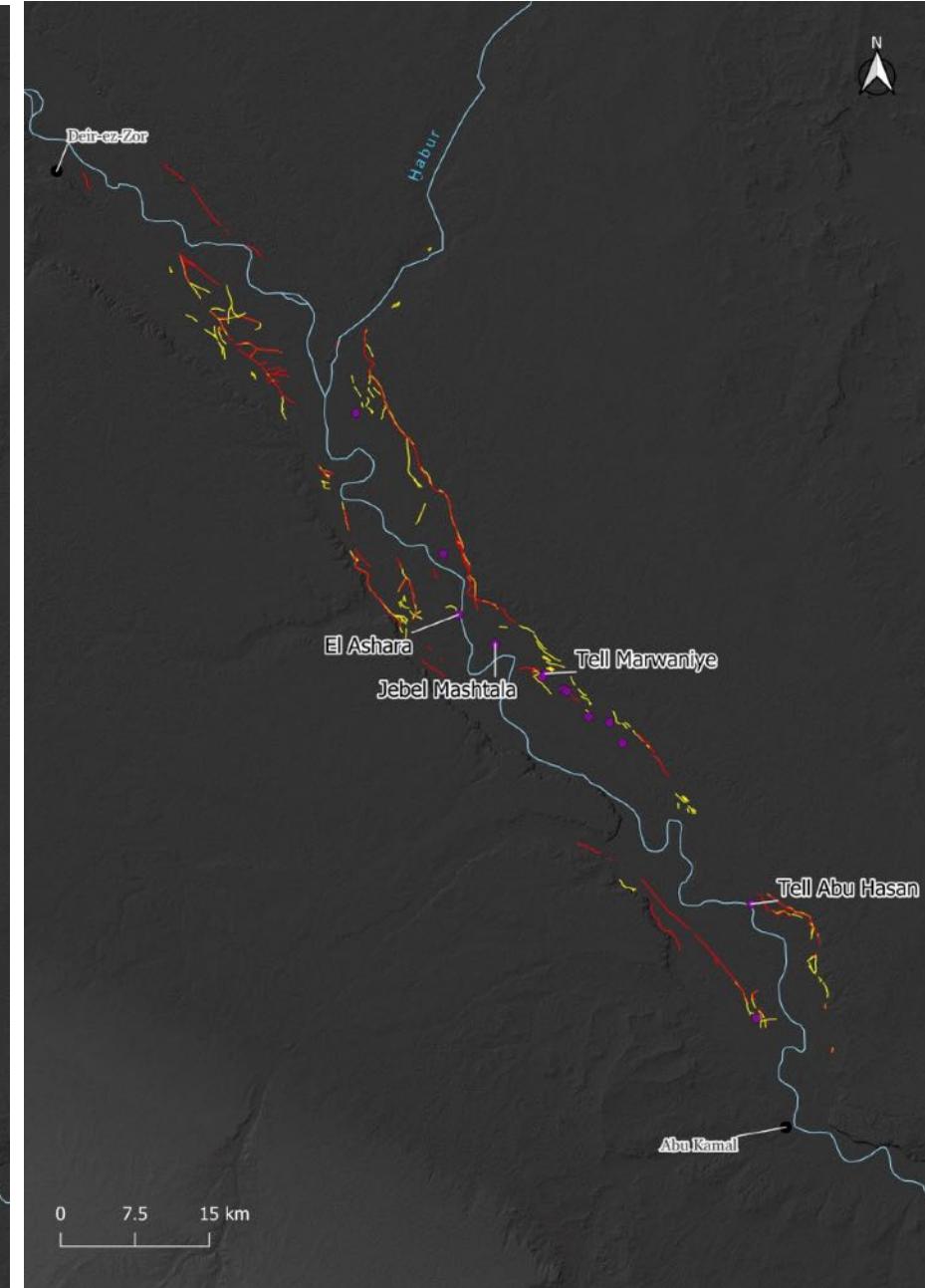
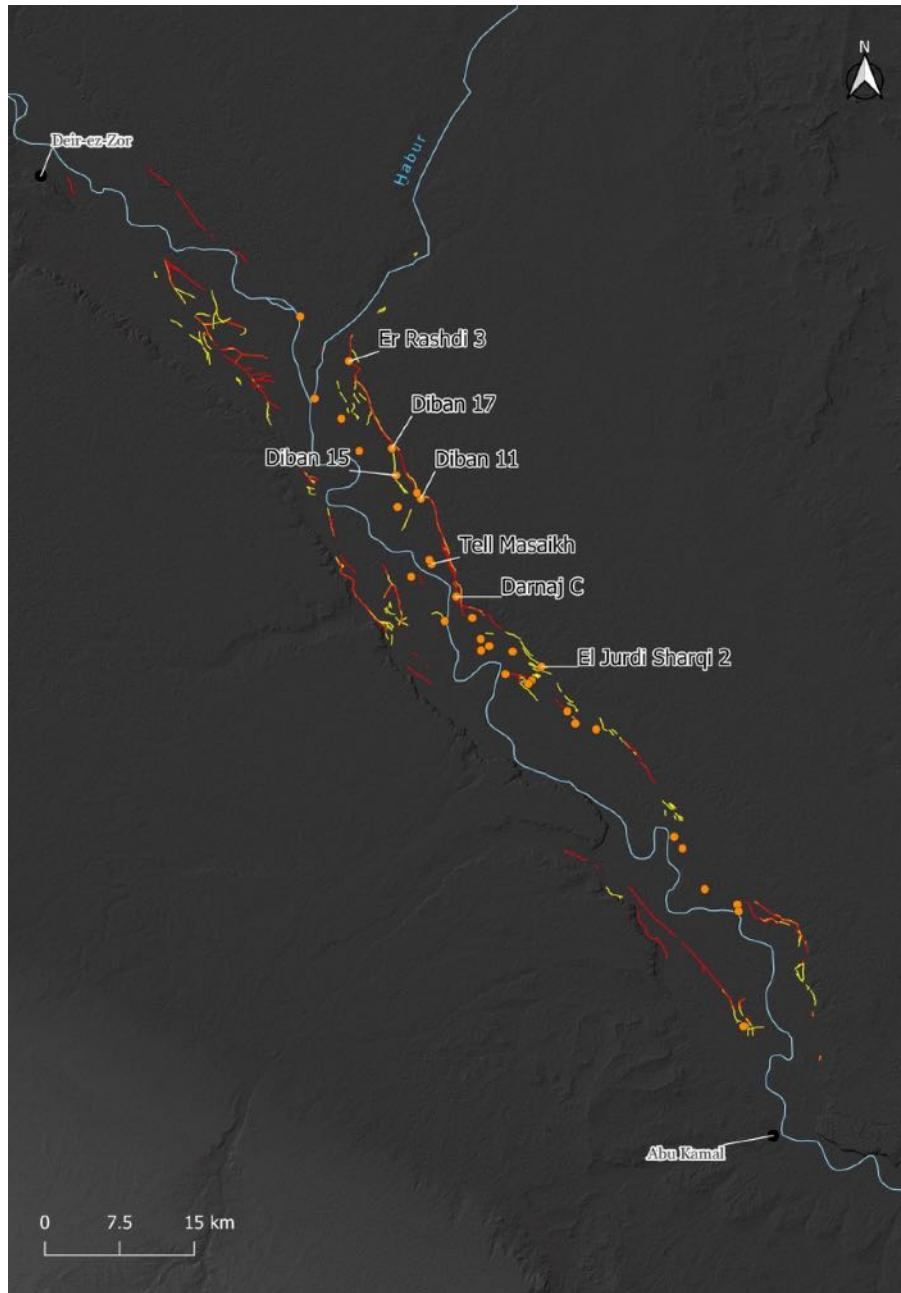
## Similar disposition in the LBA

- 7 sites on Outcrops
- 6 sites on the Holocene Terrace
- Settlements on outcrops are more than doubled during the IA



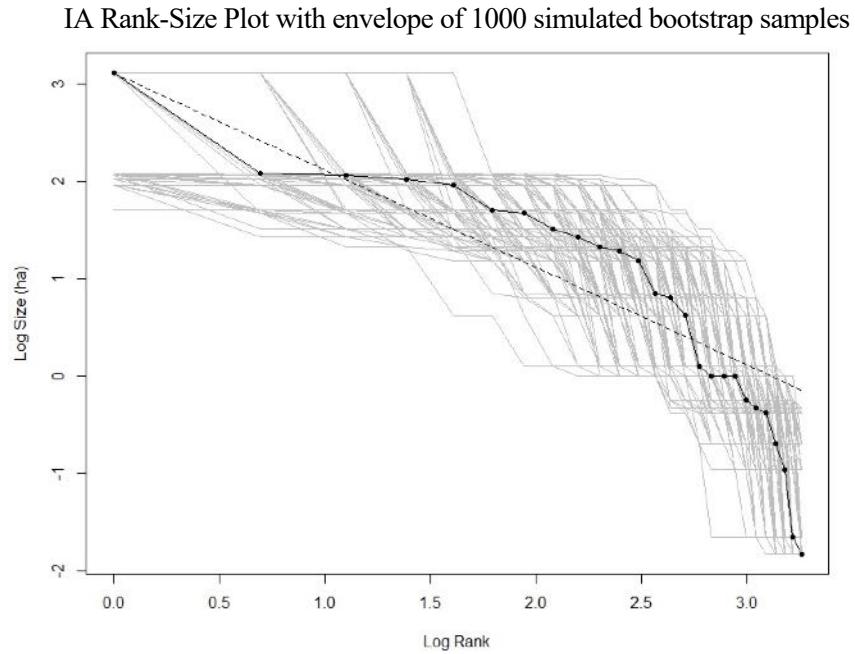
## Iron Age settlement went probably side by side with the canal use

- 5 sites directly associated with the traces recovered during the 1982-1990 survey.
- 2 more sites (Diban 15 and El Jurd Sharqi 2) associated with traces visible from remote sensing.
- Iron Age settlement went probably side by side with the canal use
- Evidenced by the absence of LBA sites along the canal
- LBA sites are mostly found around the traces of the “Marwaniye Canal”

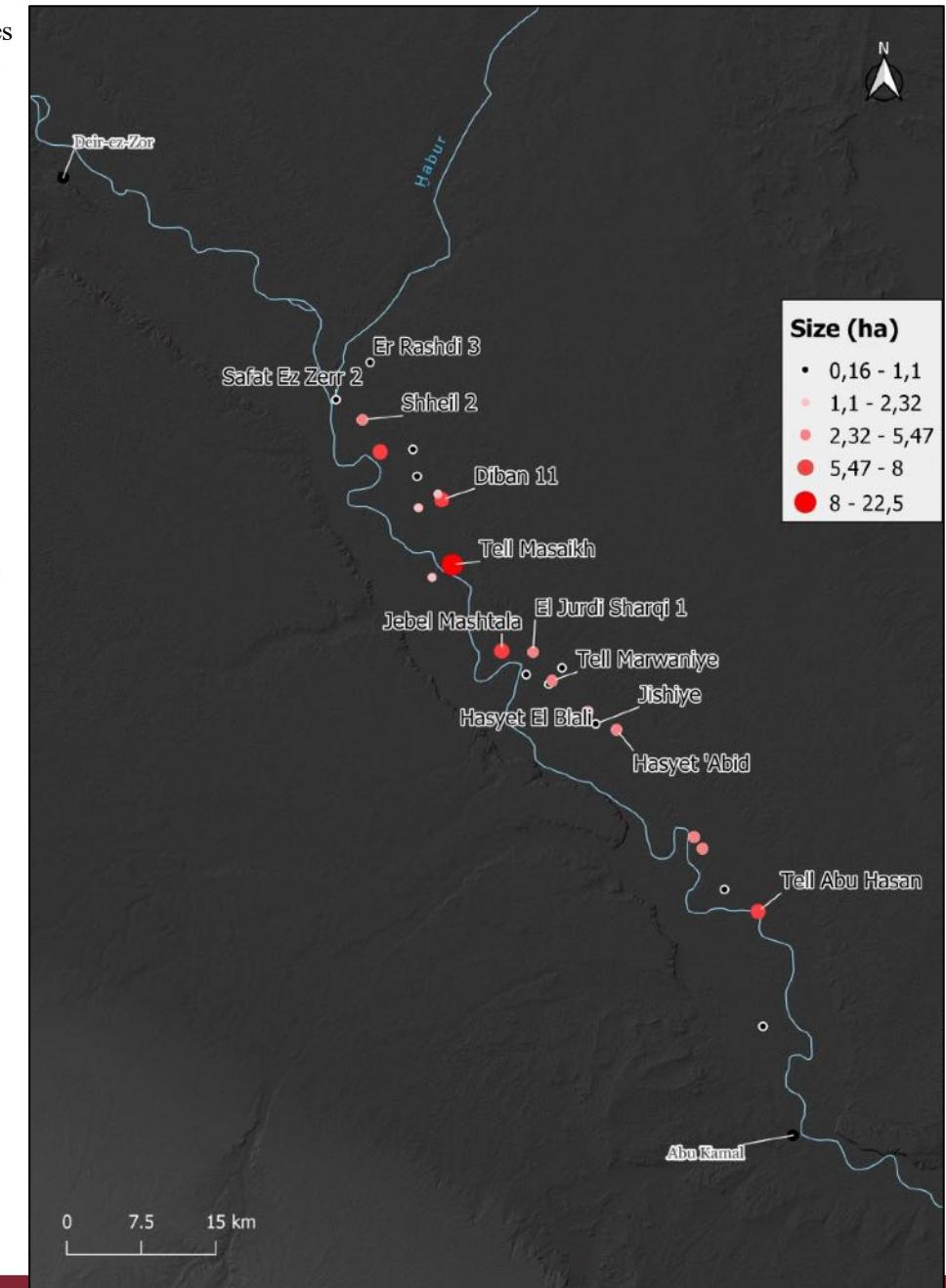


## Settlement system not strongly integrated around the major site in the valley

- The IA was marked by the foundation of Tell Masaikh, which rose as the major center in the valley (as testified also by Assyrian textual sources)
- Larger sites forms the primo-convex curve, usually not found in strongly integrate Settlement Systems
- Evidence of IA I material and continuity of occupation from LBA on some of the larger sites might suggest two overlapping settlement systems
- Uncertainties to be kept in mind:
  - Site extension is a proxy measurement for the occupied area
  - It is likely that not all sites were occupied at the same time
  - Data and spatial extension limited by the available surveys
  - Lack of knowledge on IA sub-phases prevents more detailed picture

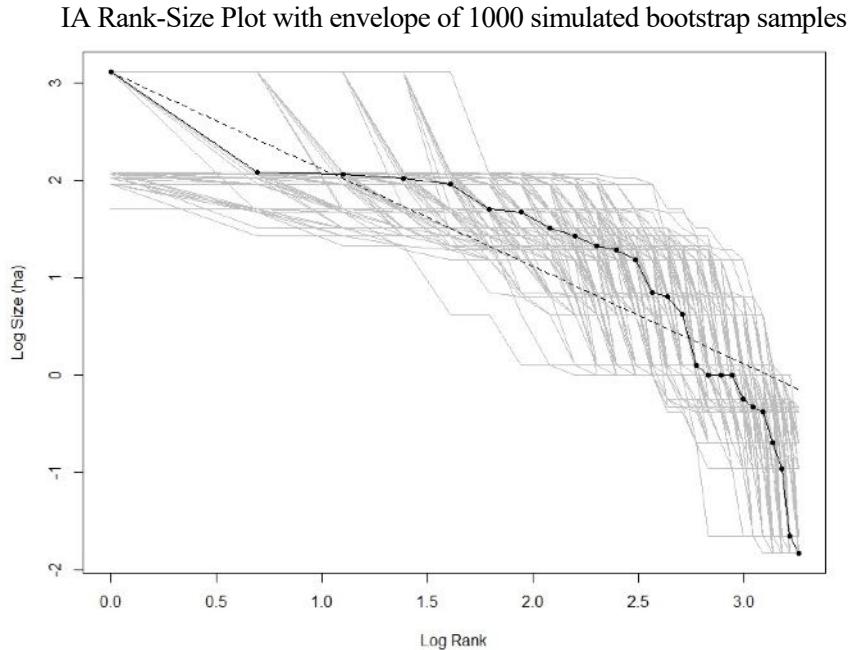


*Original R code for bootstrapping and A coefficient after Crema 2013;  
Palmisano 2017*



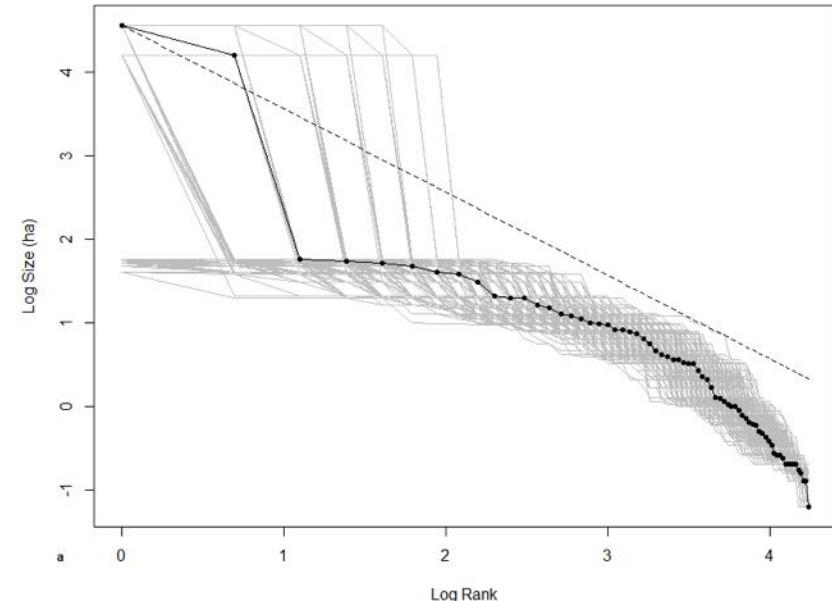
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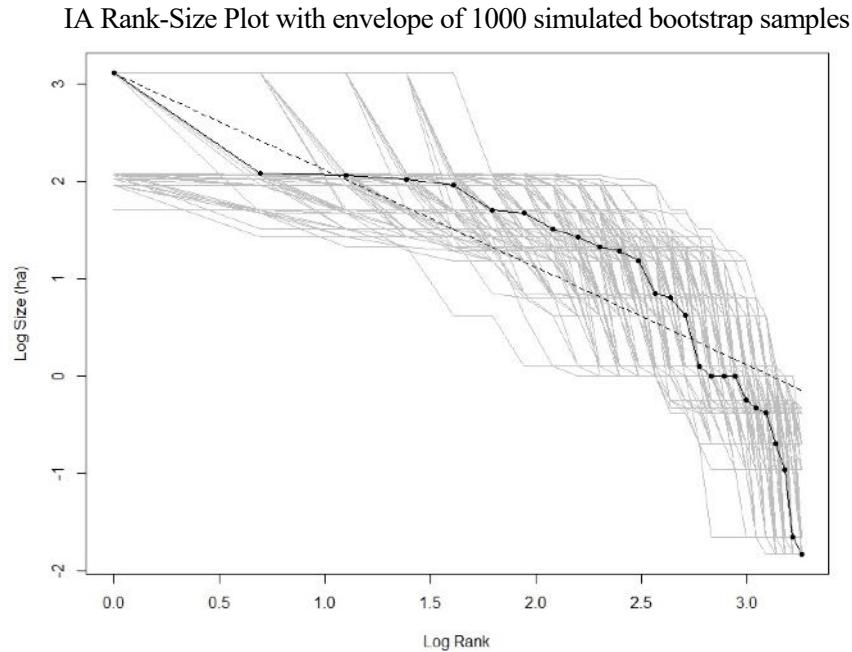
*Original R code for bootstrapping and A coefficient after Crema 2013;  
Palmisano 2017*

Carchemish Area: IA Rank-Size Plot with envelope of 1000 simulated bootstrap samples



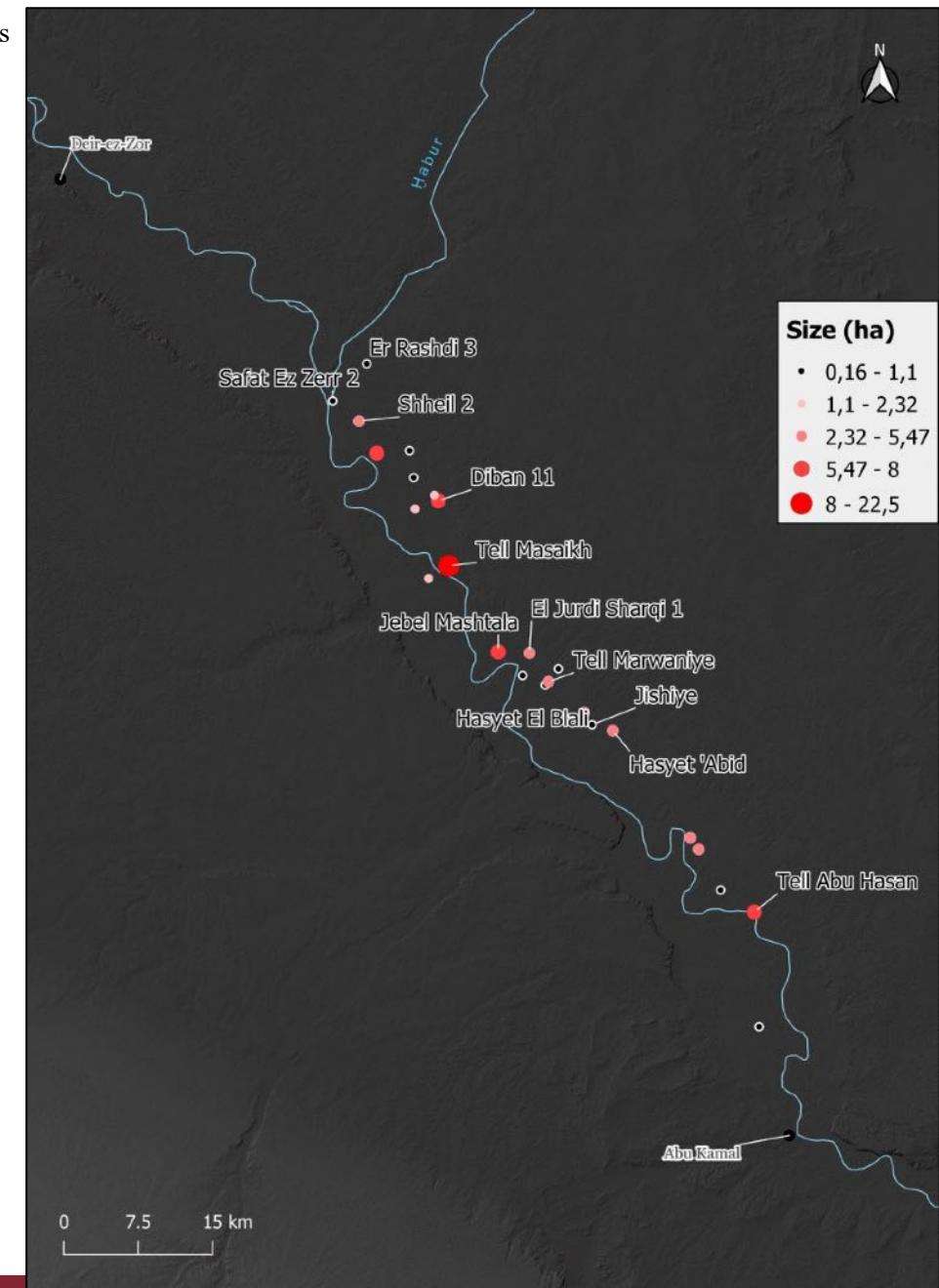
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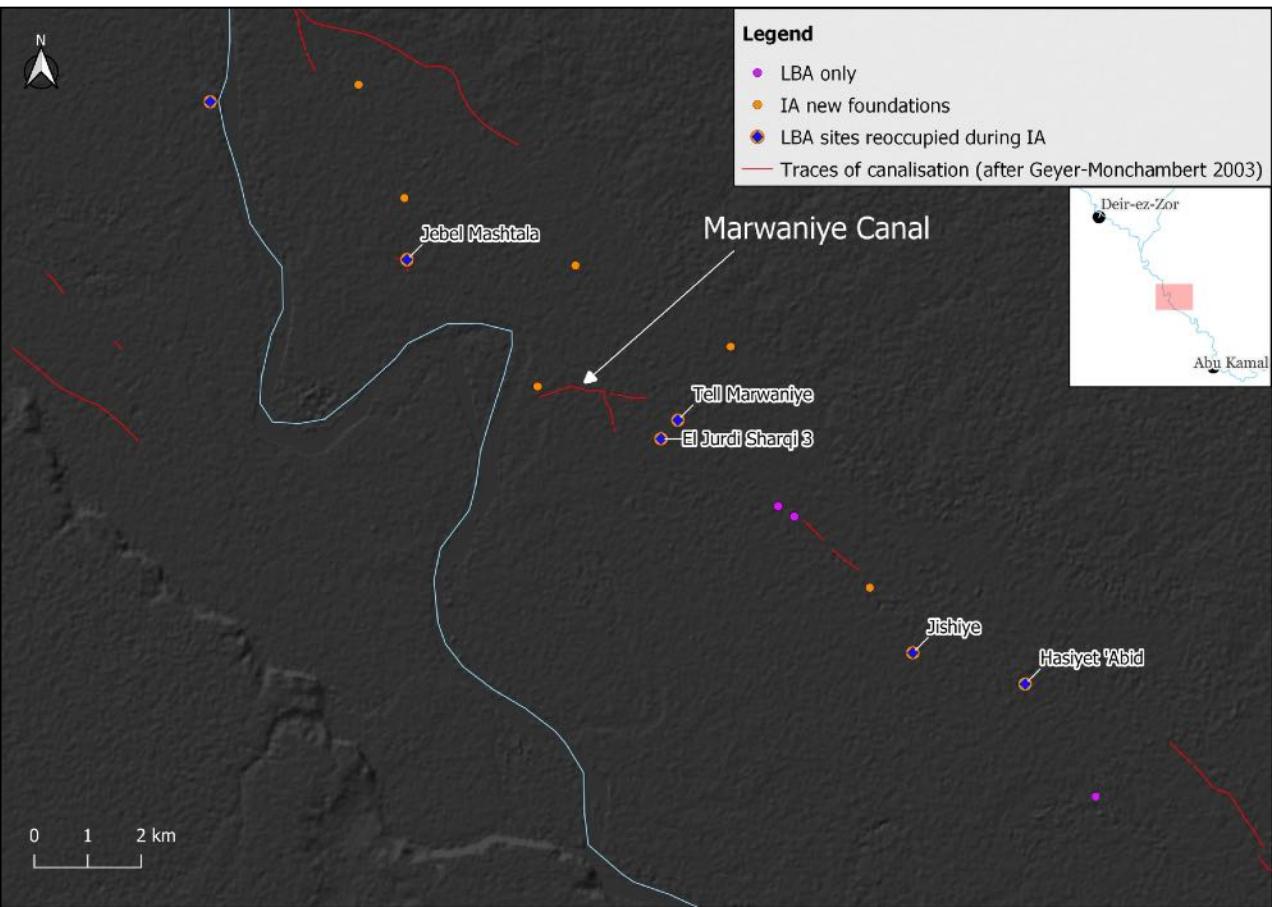
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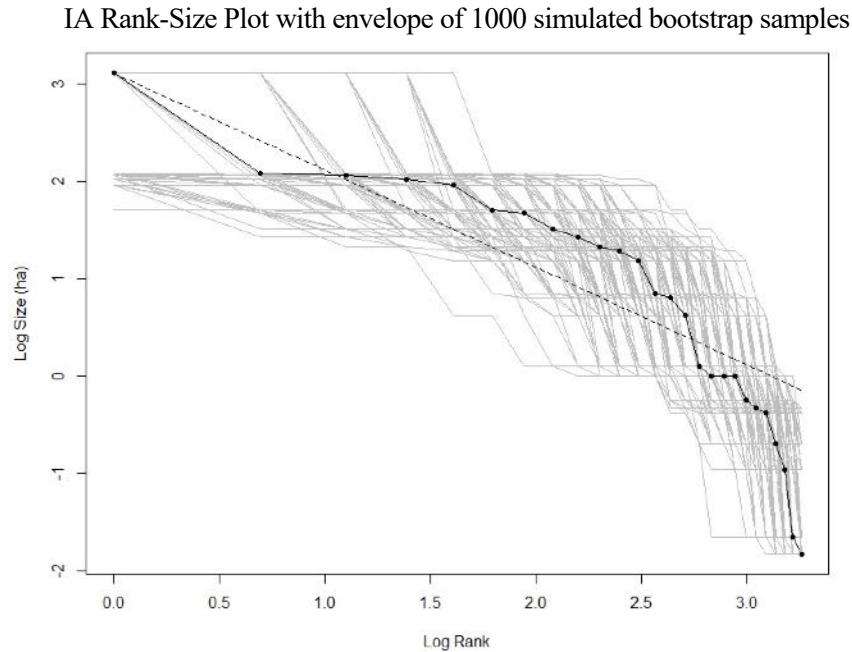
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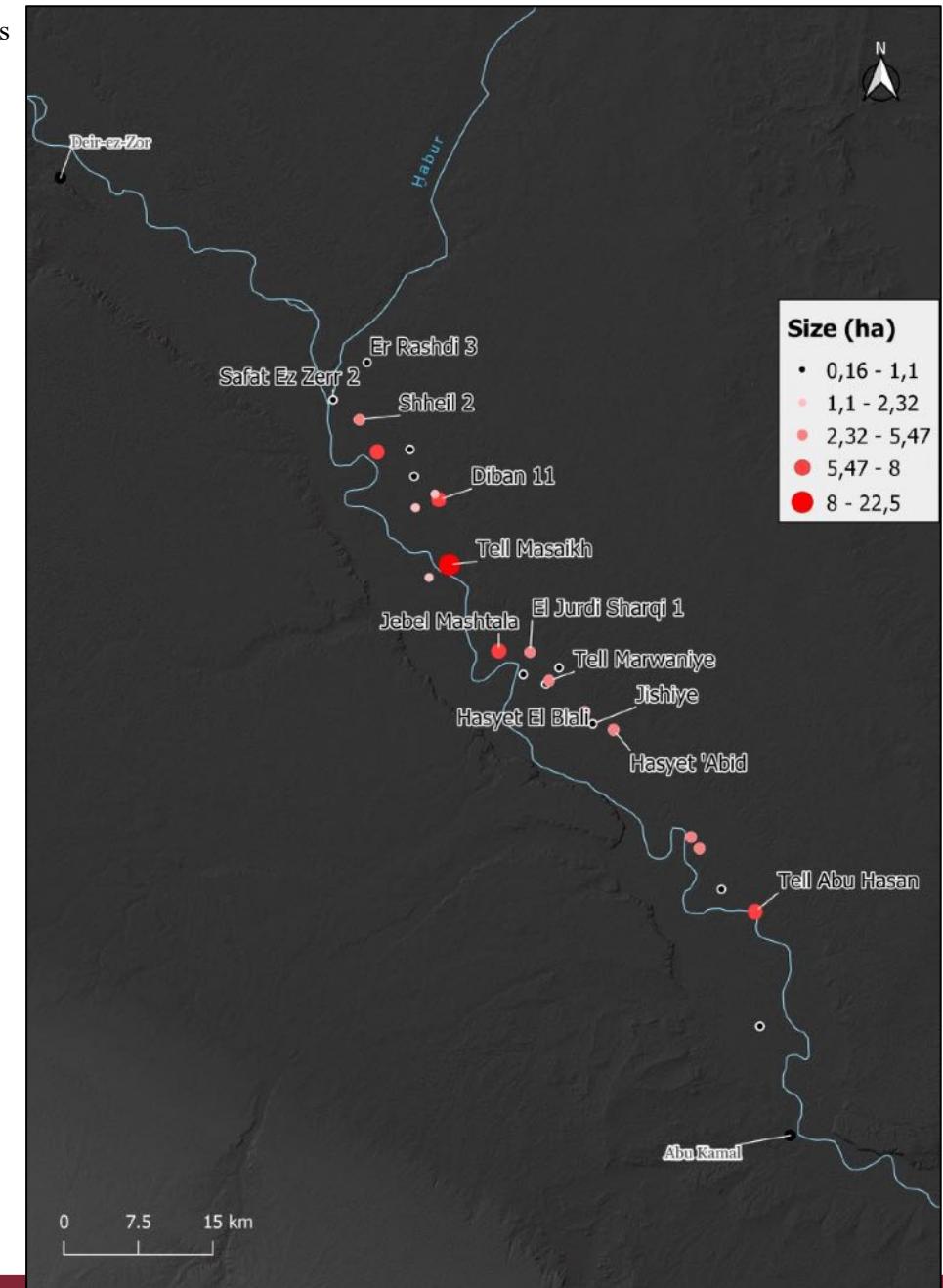


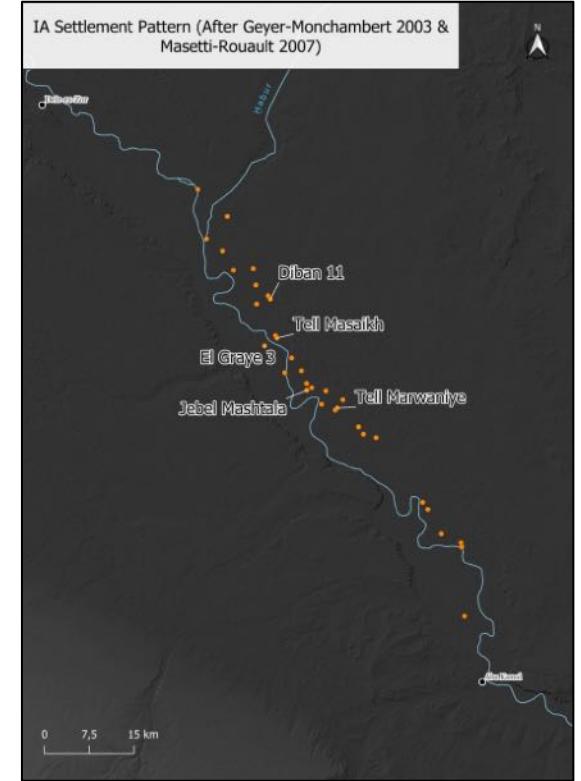
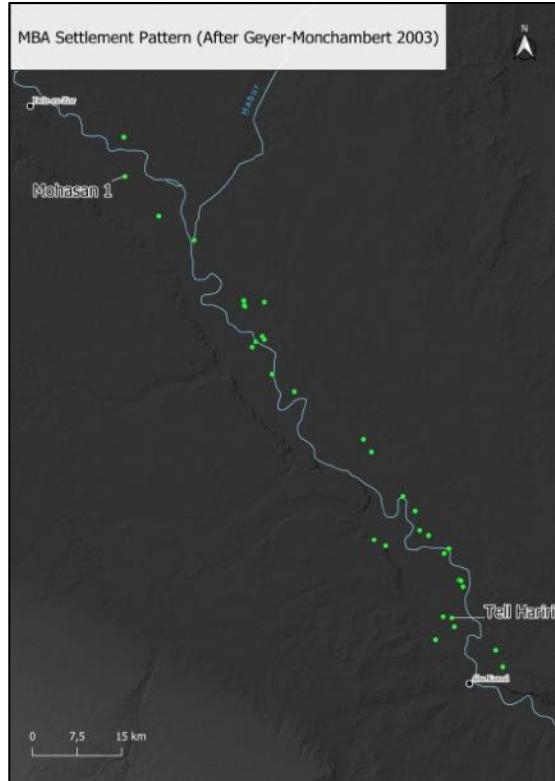
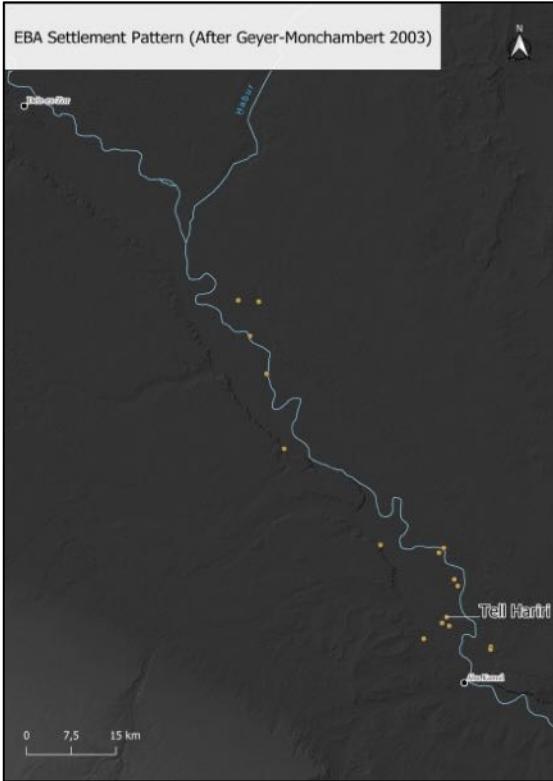
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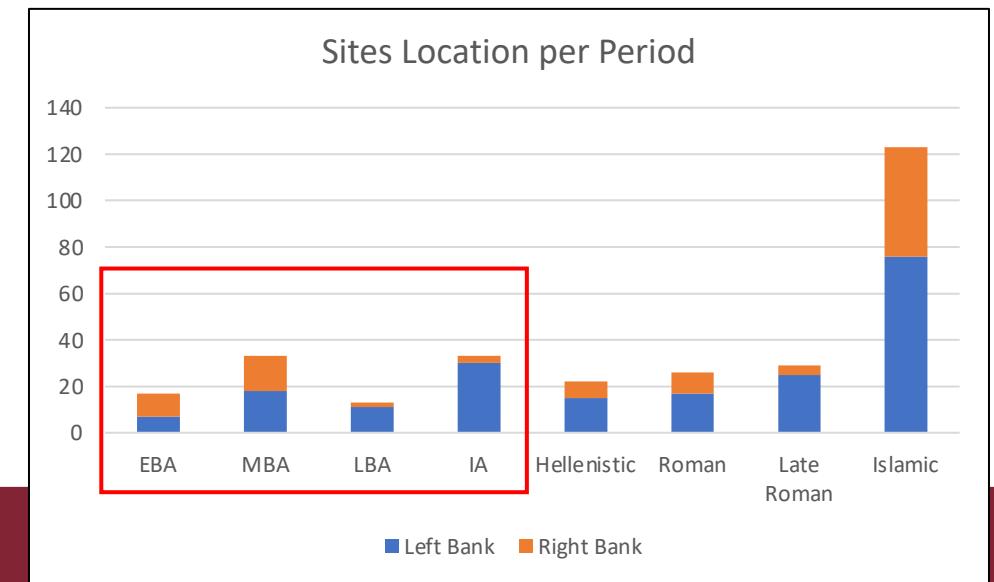


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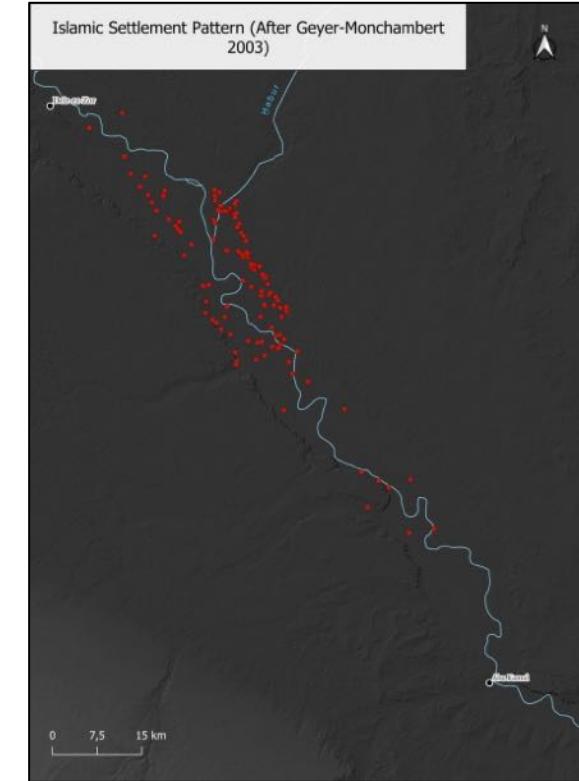
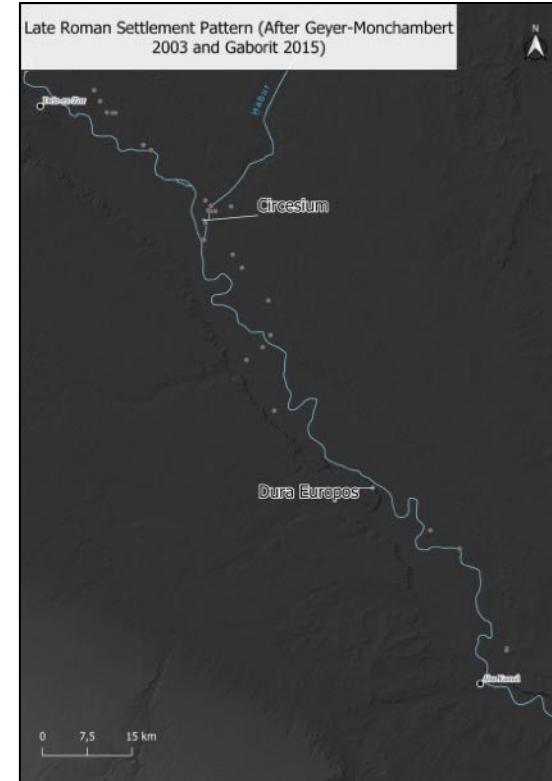




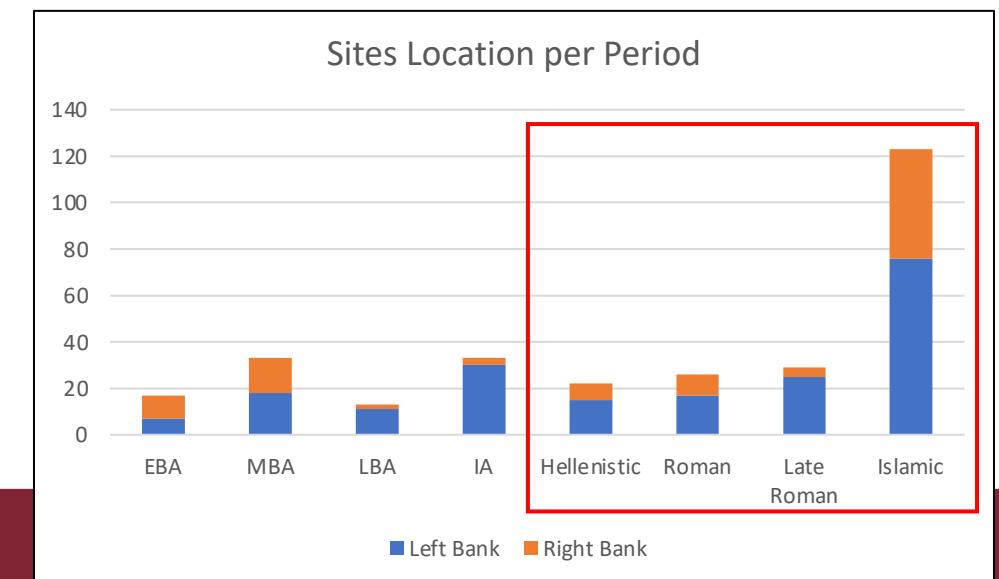
- Occupation gradually shifting towards the left bank
- Absence of a strong political center in the valley after Mari and Terqa?



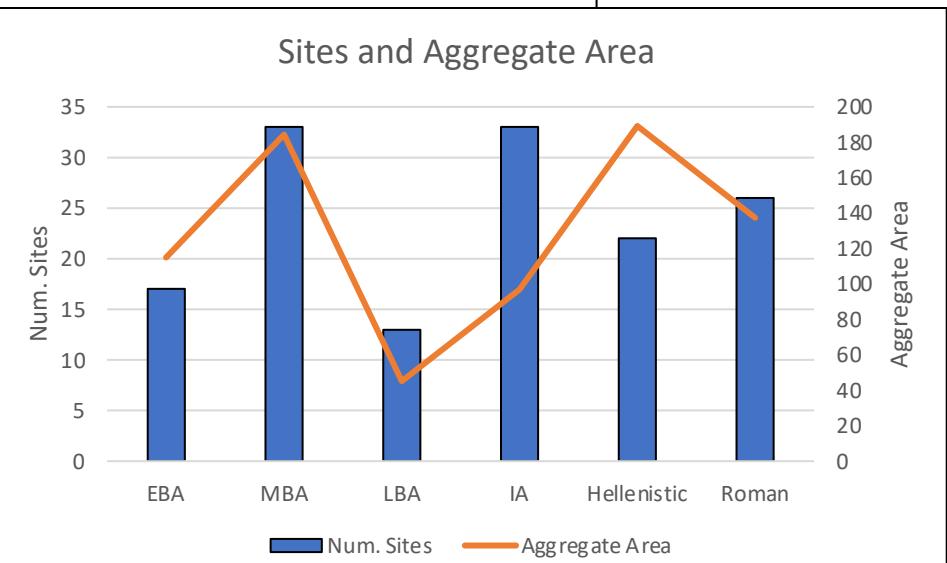
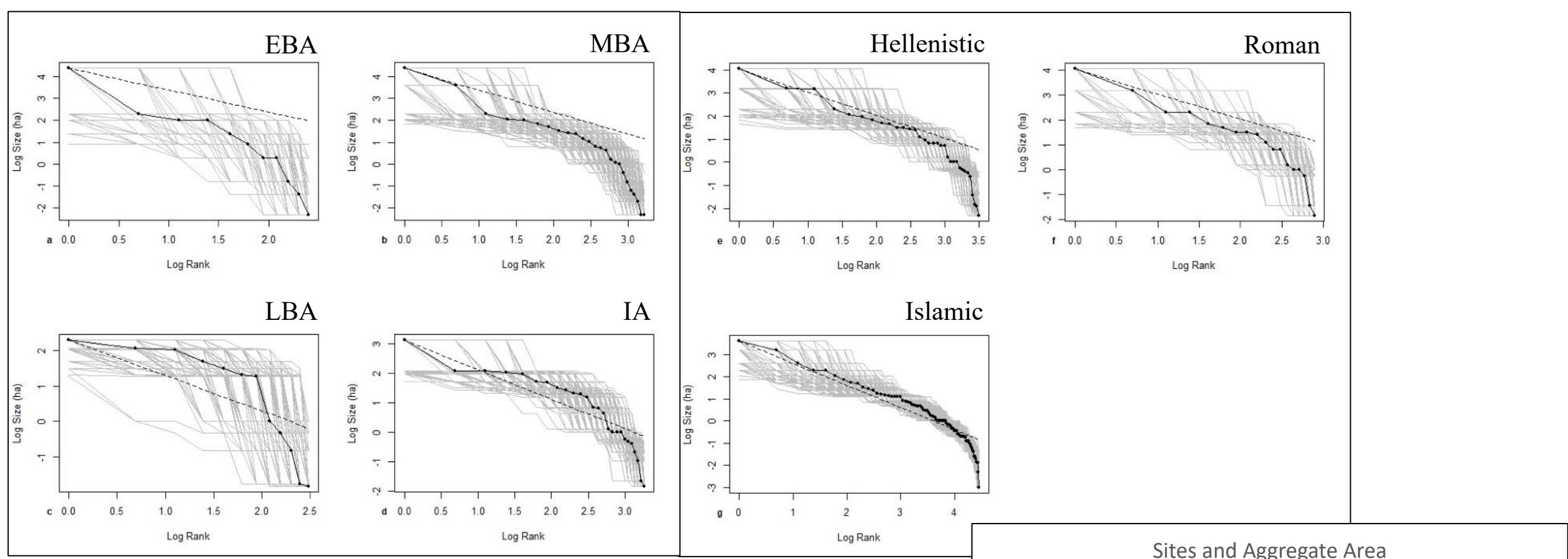
Results: Diachronic Settlement Patterns (EBA-IA)



- Gap for Late Iron Age/Achaemenid Period
- Right bank gradually reoccupied during and after the Hellenistic period
- Settlement gradually moving north, towards the confluence with the Habur

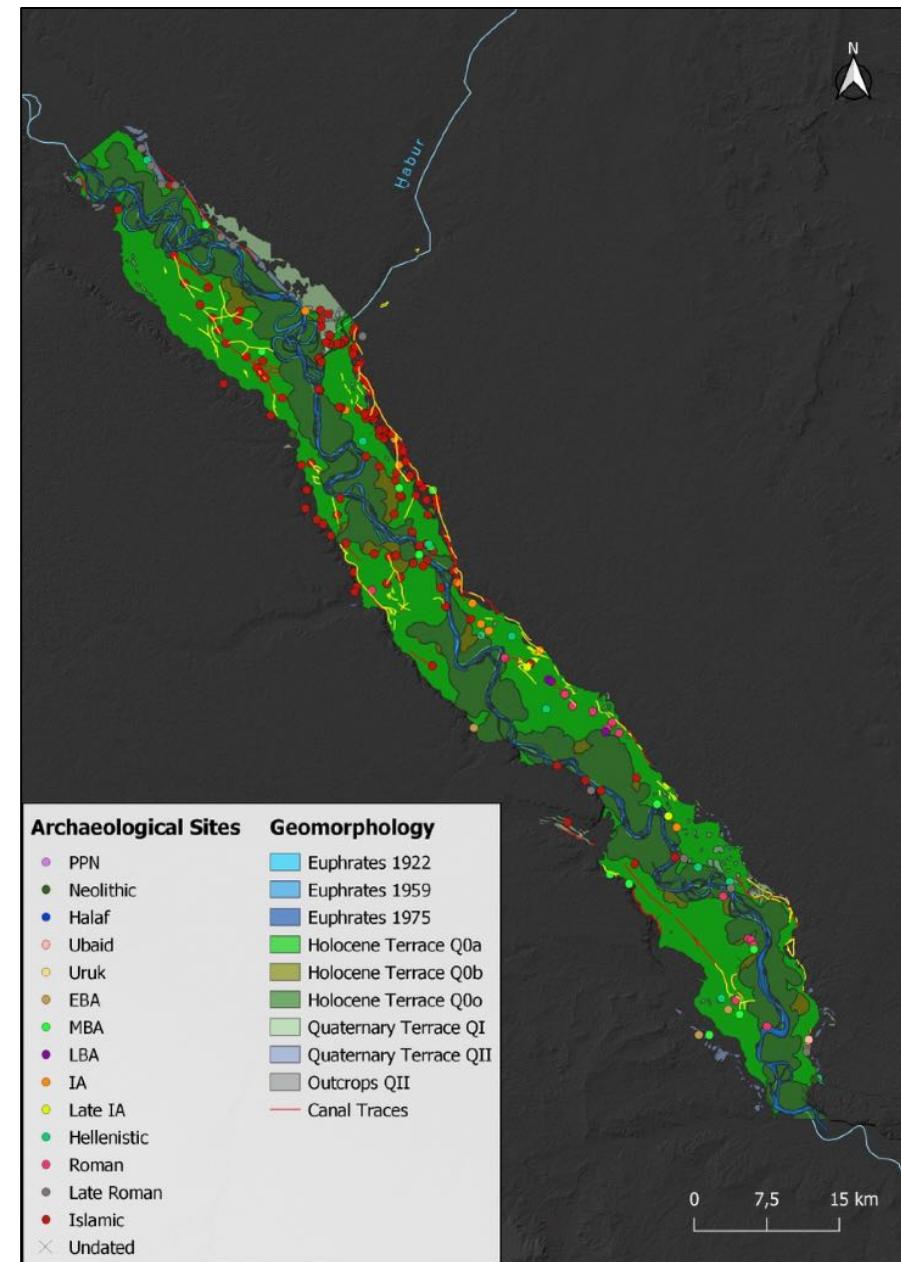
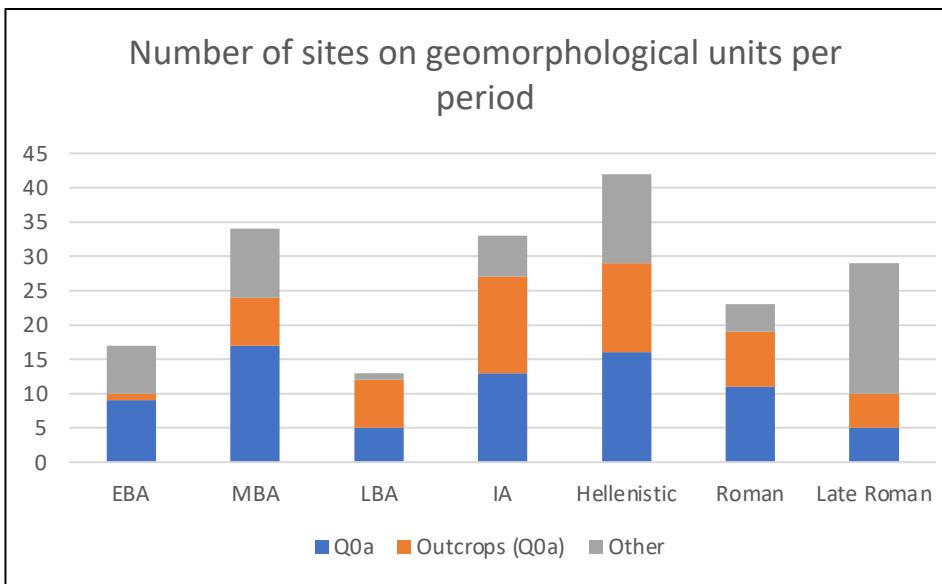


Results: Diachronic Settlement Patterns (Hellenistic – Islamic)

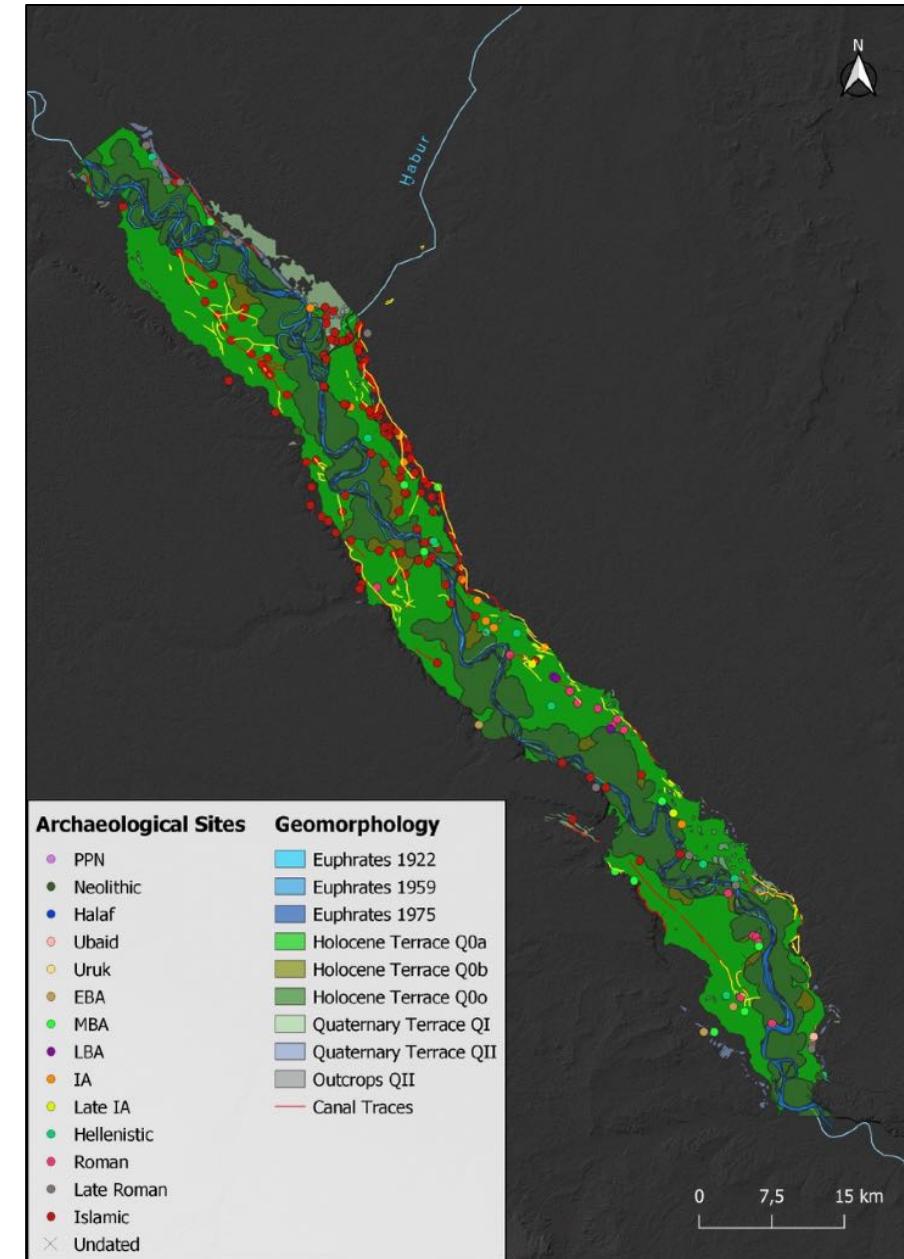
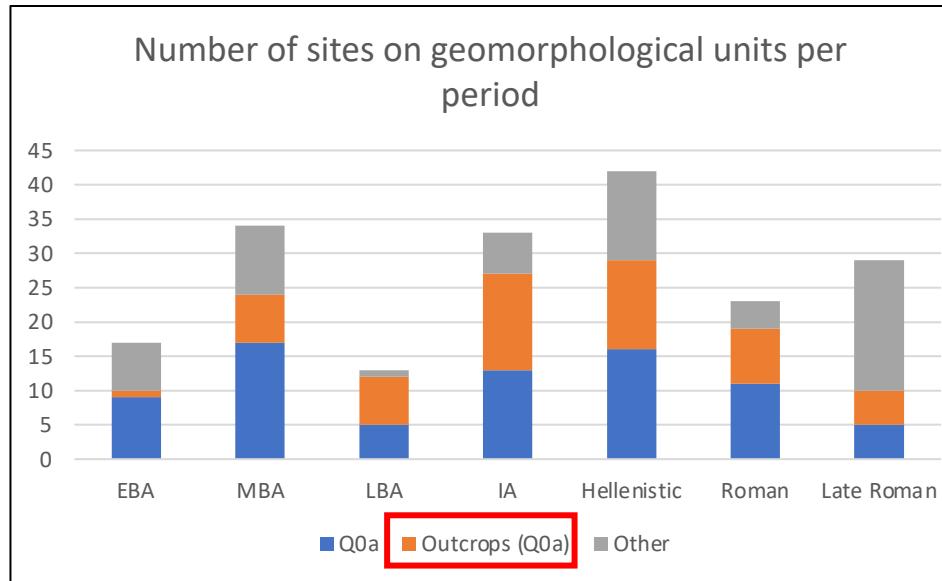


Results: Diachronic Analyses – Settlement System

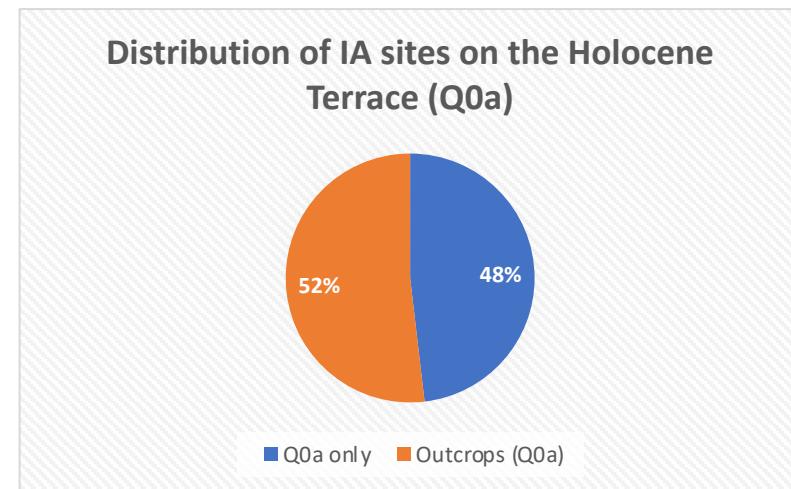
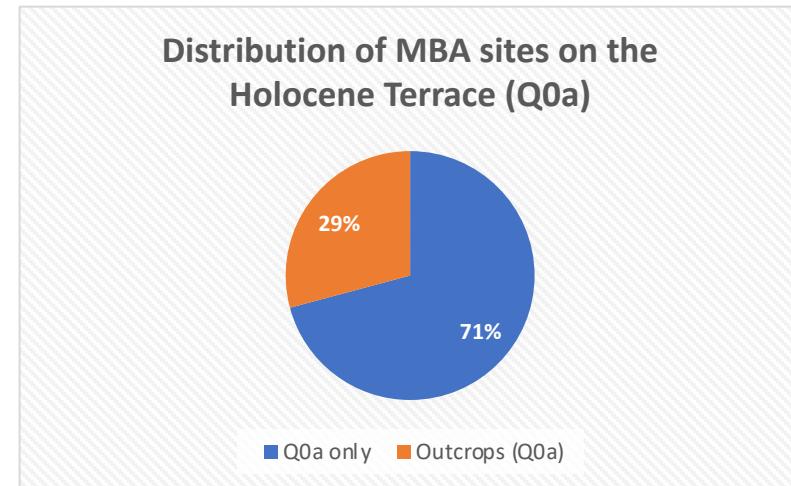
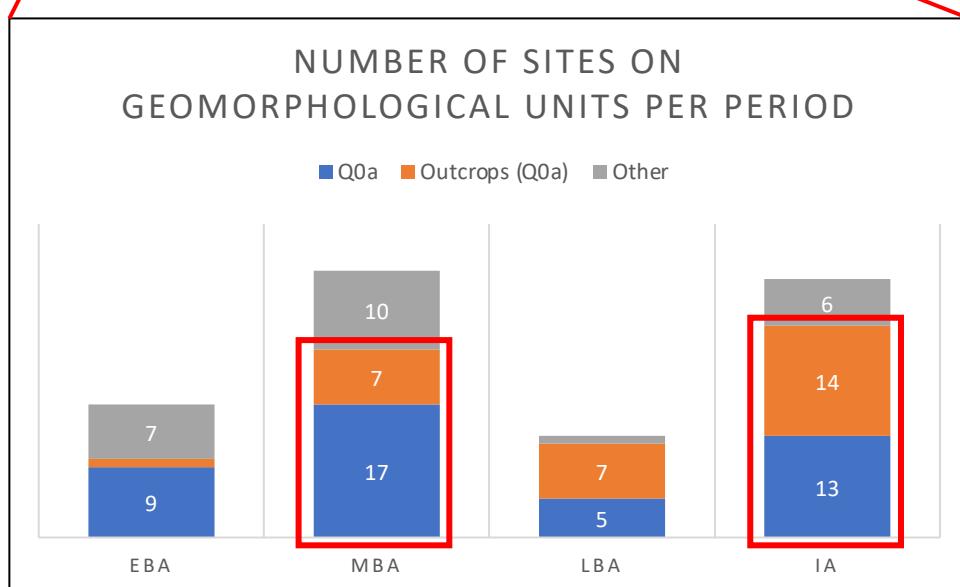
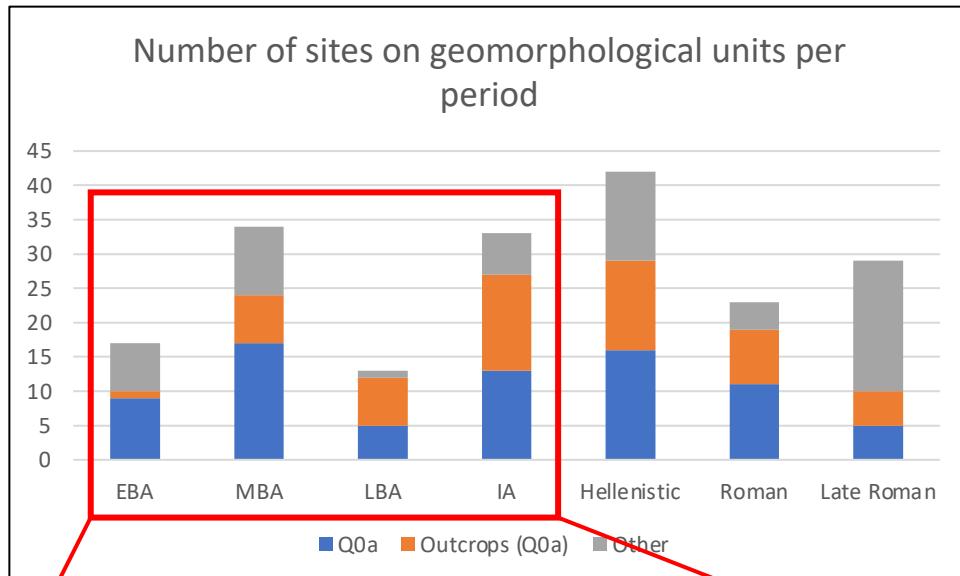
- Geyer and Monchambert (*Water Hist.* 2014) highlighted peculiar settlement location choices on outcrops for sites during the Uruk, EBA, and MBA periods.
- They also highlighted the importance of long-term analysis to inspect these patterns.
- Thanks to the digitisation of the geomorphological maps, these patterns can be inspected and quantified in the long term in an easy way.
- Plotting sites and their location in the long term reveals how this is a trend started in the periods highlighted by Geyer and Monchambert, but reached a peak in the IA and Hellenistic periods.



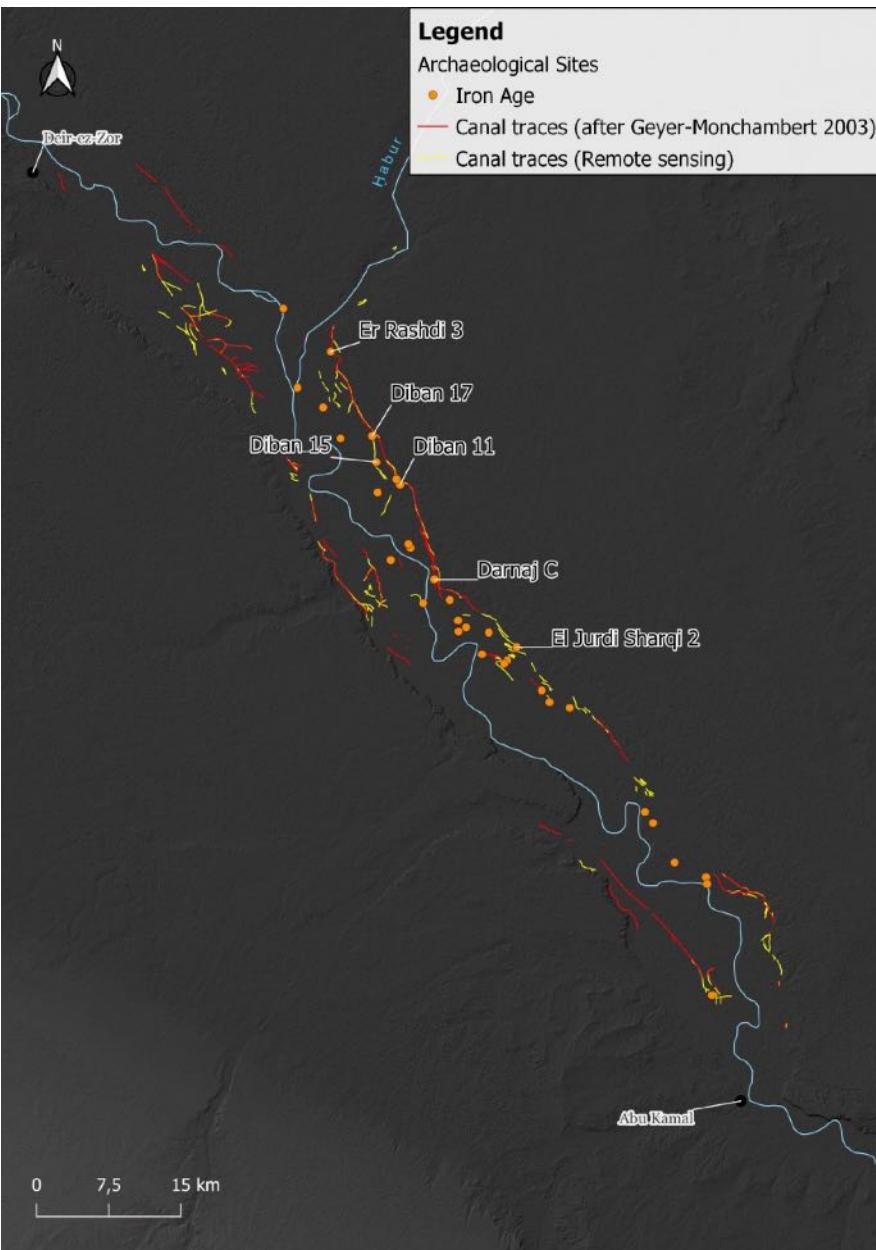
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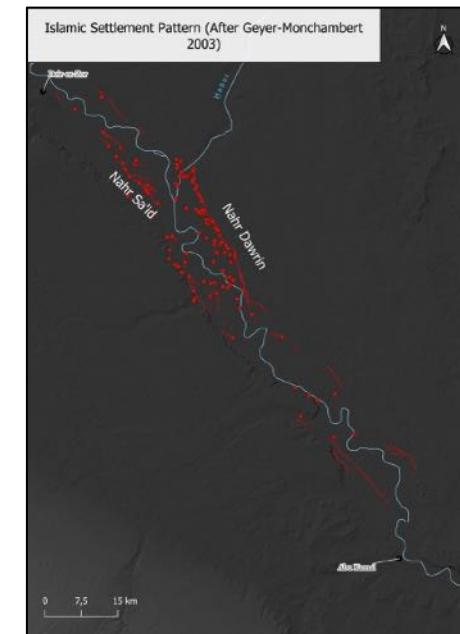
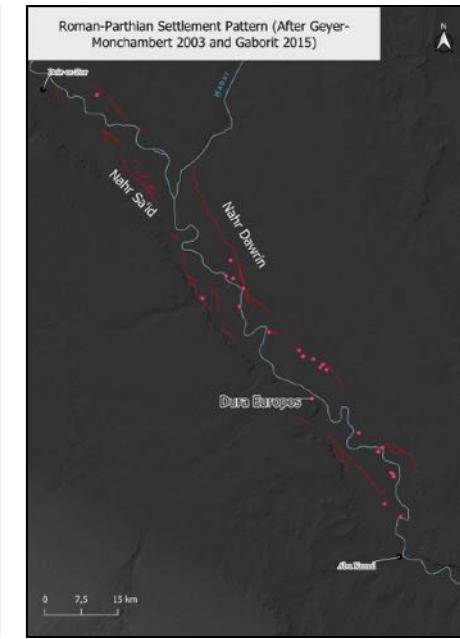
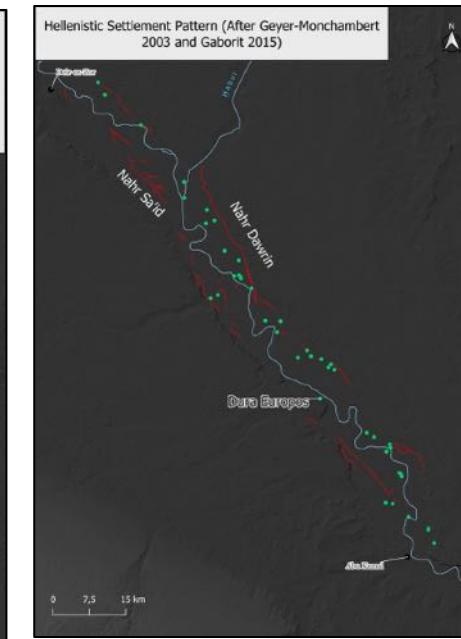
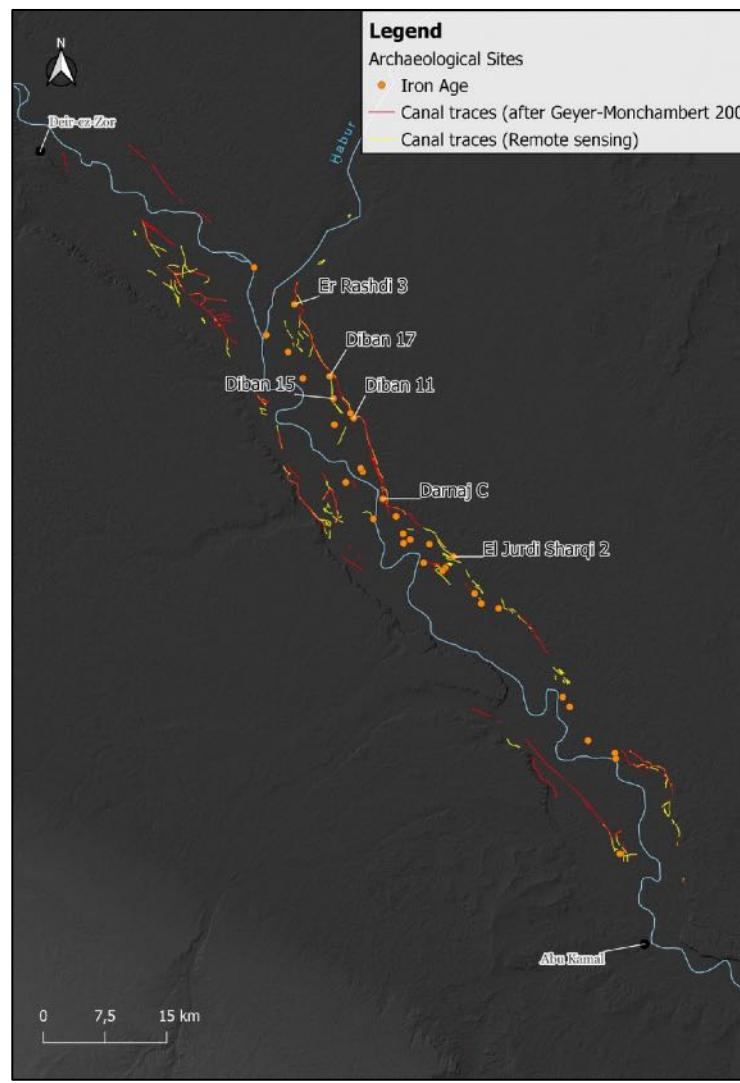
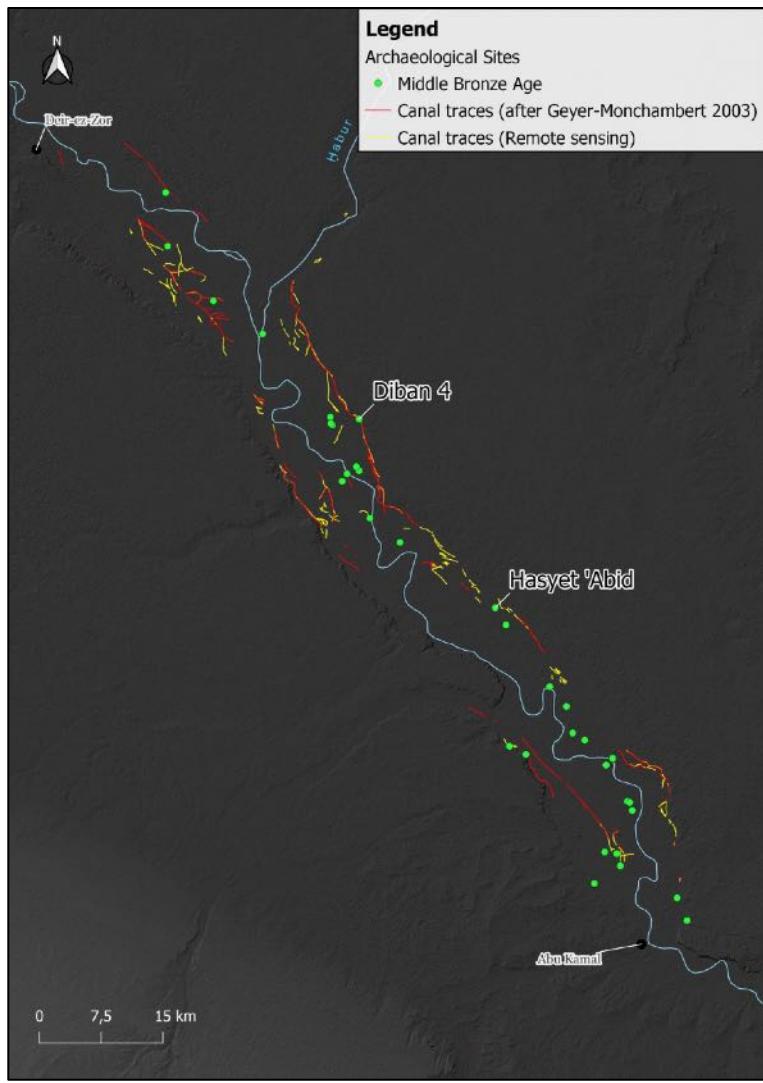
- Isolating sites located exclusively on the Q0a terrace reveals a much clearer settlement location choice for the Iron Age
- 52% of IA sites are located on outcrops in respect to 29% of the MBA



- Sites along the canal cannot provide a secure dating for its construction but can highlight major periods of use.
  - A regional canal can have a strong influence on the local settlement pattern (e.g., Habur river).
  - Two-way relationship: new settlements being sustained by the canal, while also providing maintenance.



### Settlement Pattern along the Habur river during the 750-600 B.C. (Morandi 1996, Tav. 6)



Results: Diachronic Analyses – Sites and Nahr Dawrin

## General Iron Age Trends:

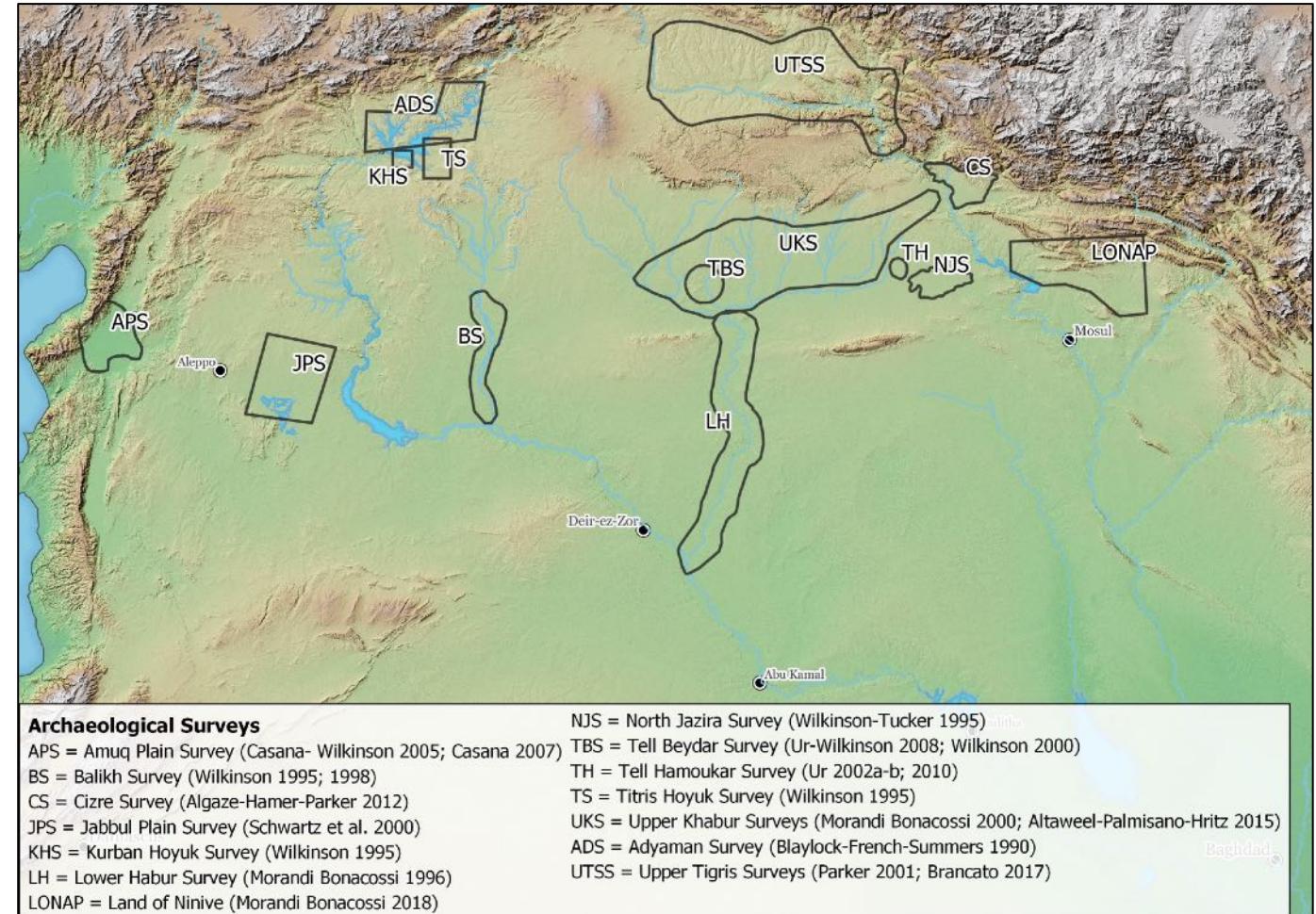
- Increase in settlement number
- Gradual abandonment of tell-based settlement in favour of large numbers of small, low-elevated sites
- Dispersal of settlements in previously unoccupied areas / in between older settlements

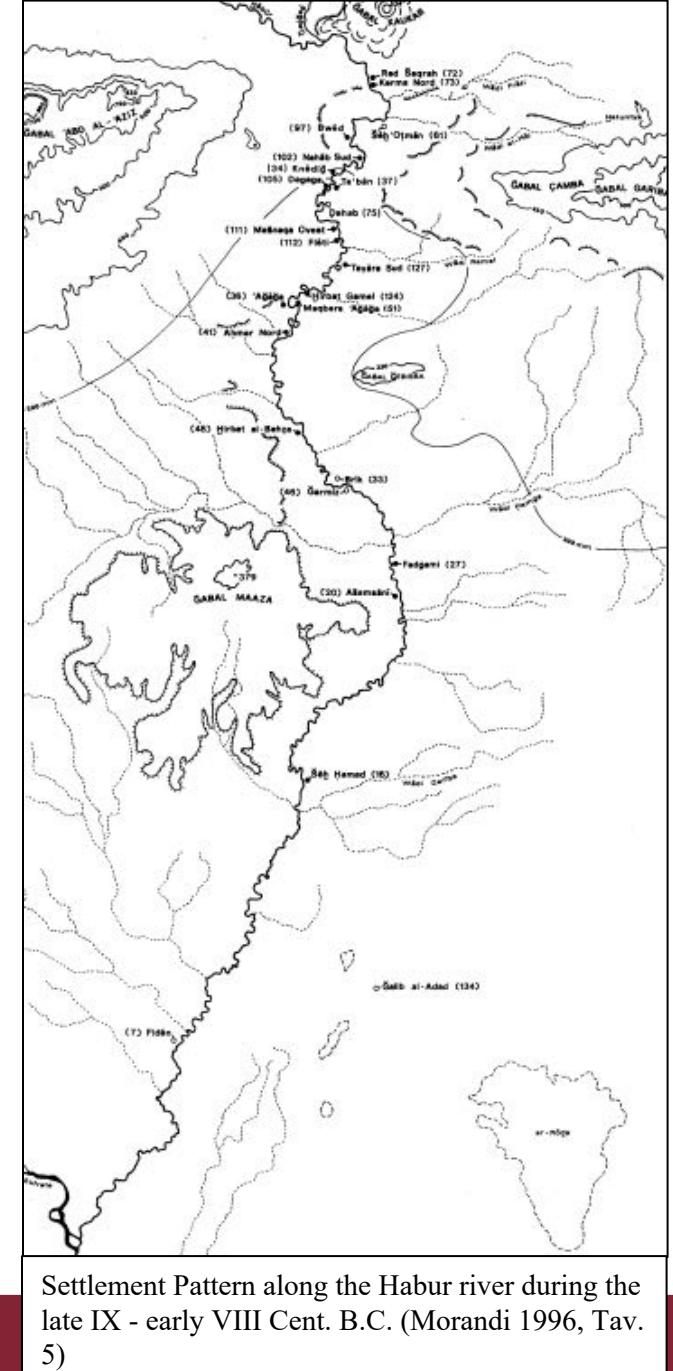
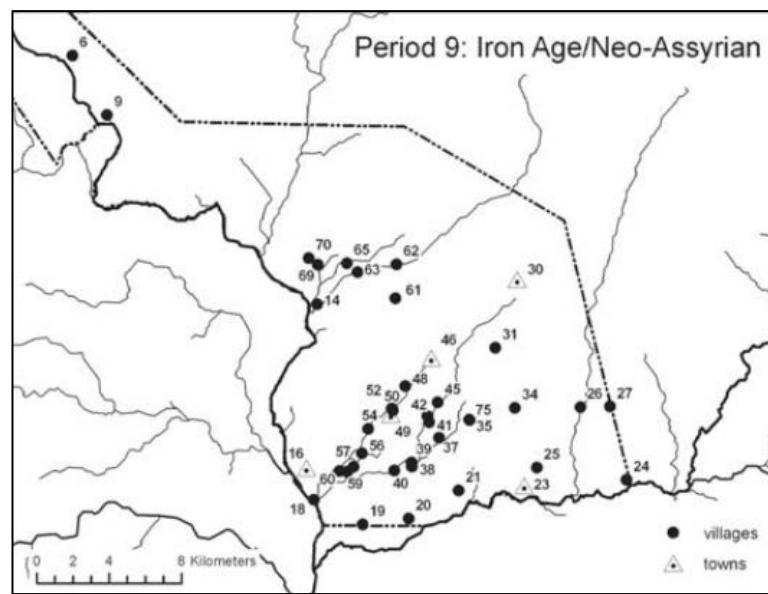
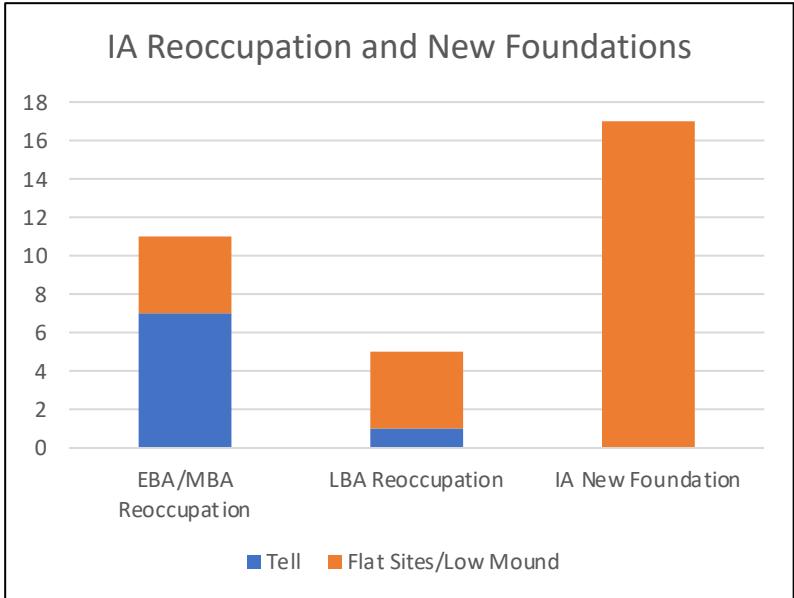
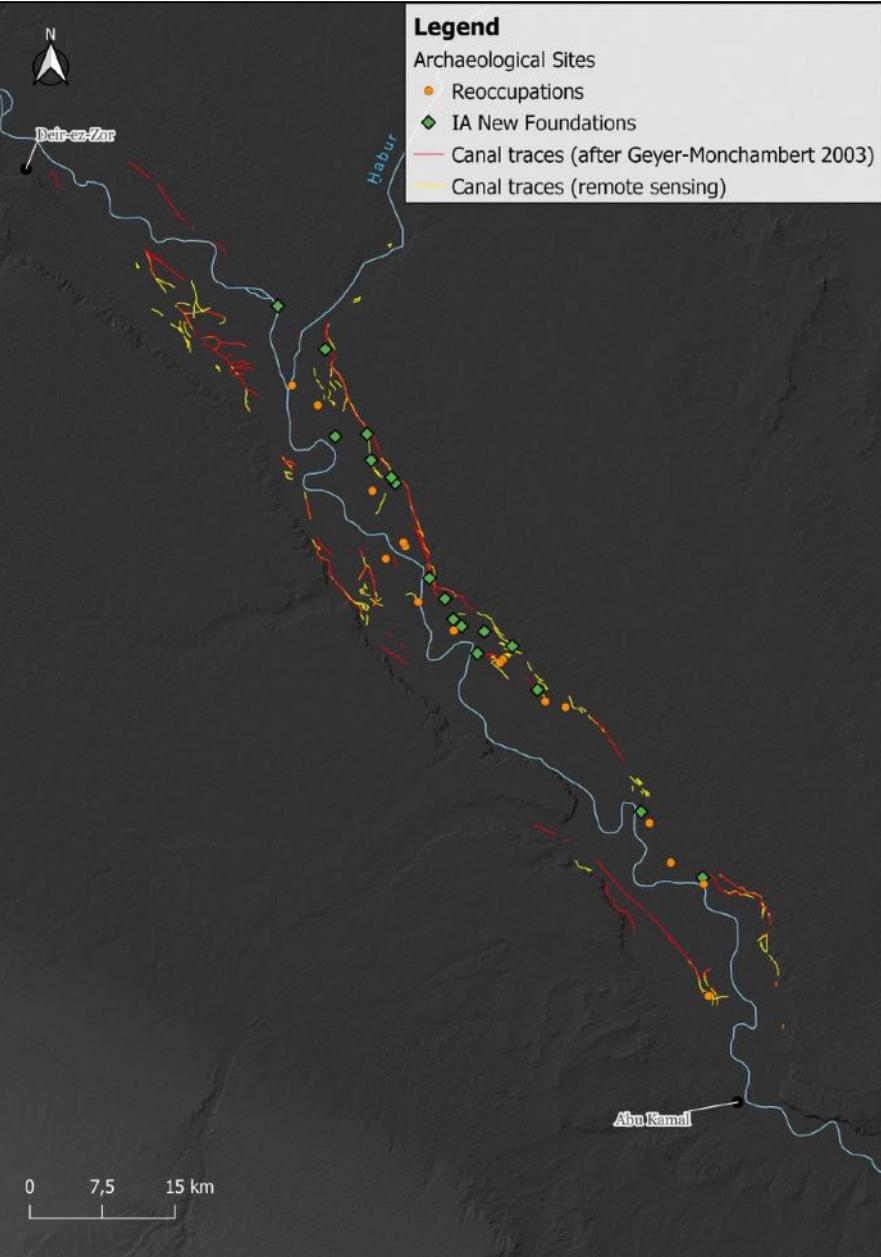
## Artificial (Assyrian-led) trends.

### Shared features:

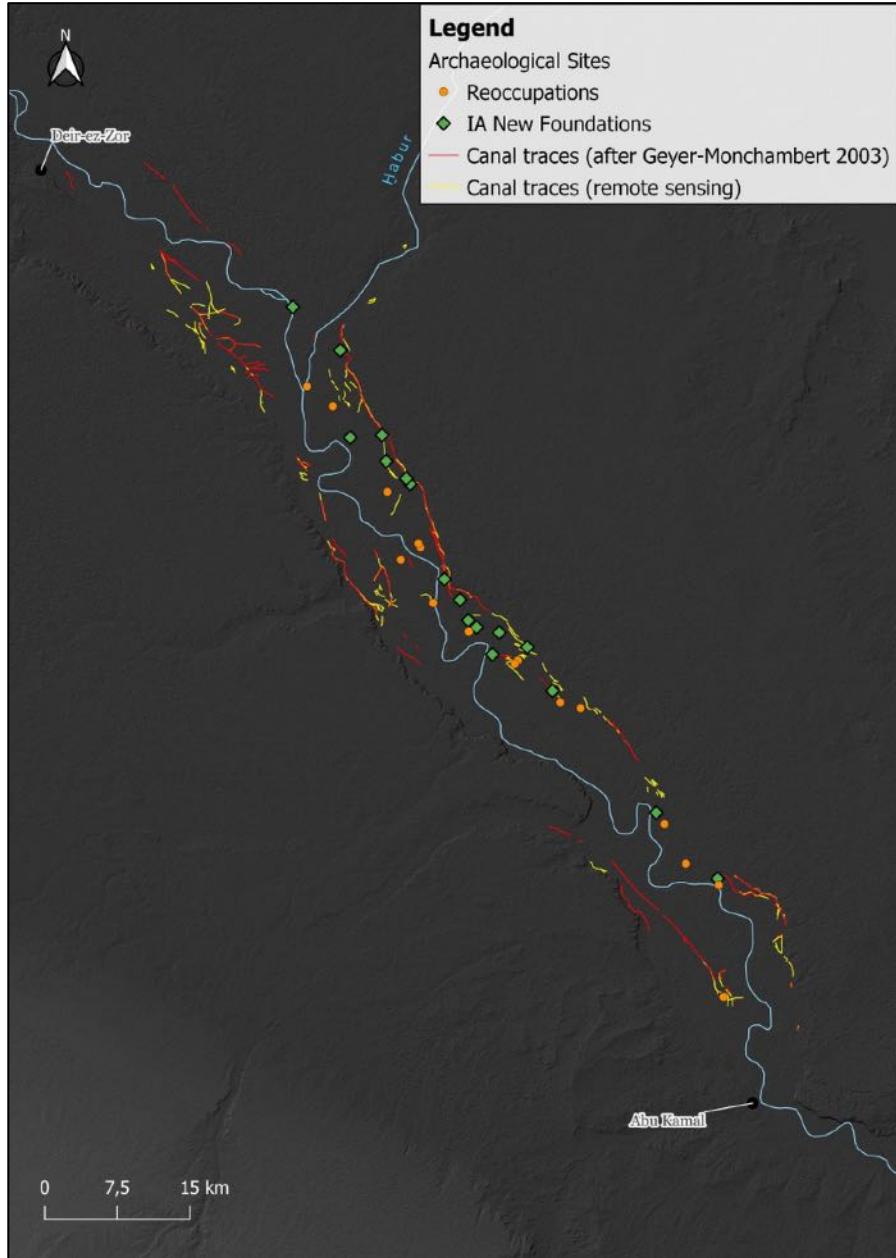
- Truncation/Disruption of pre-existing settlement systems
- Creation of regional administrative centers.
- Creation of regional infrastructure
- **Shifting settlement patterns along frontiers**
- **Local variations**

(adapted from Morandi-Bonacossi 2018; Parker 2018)



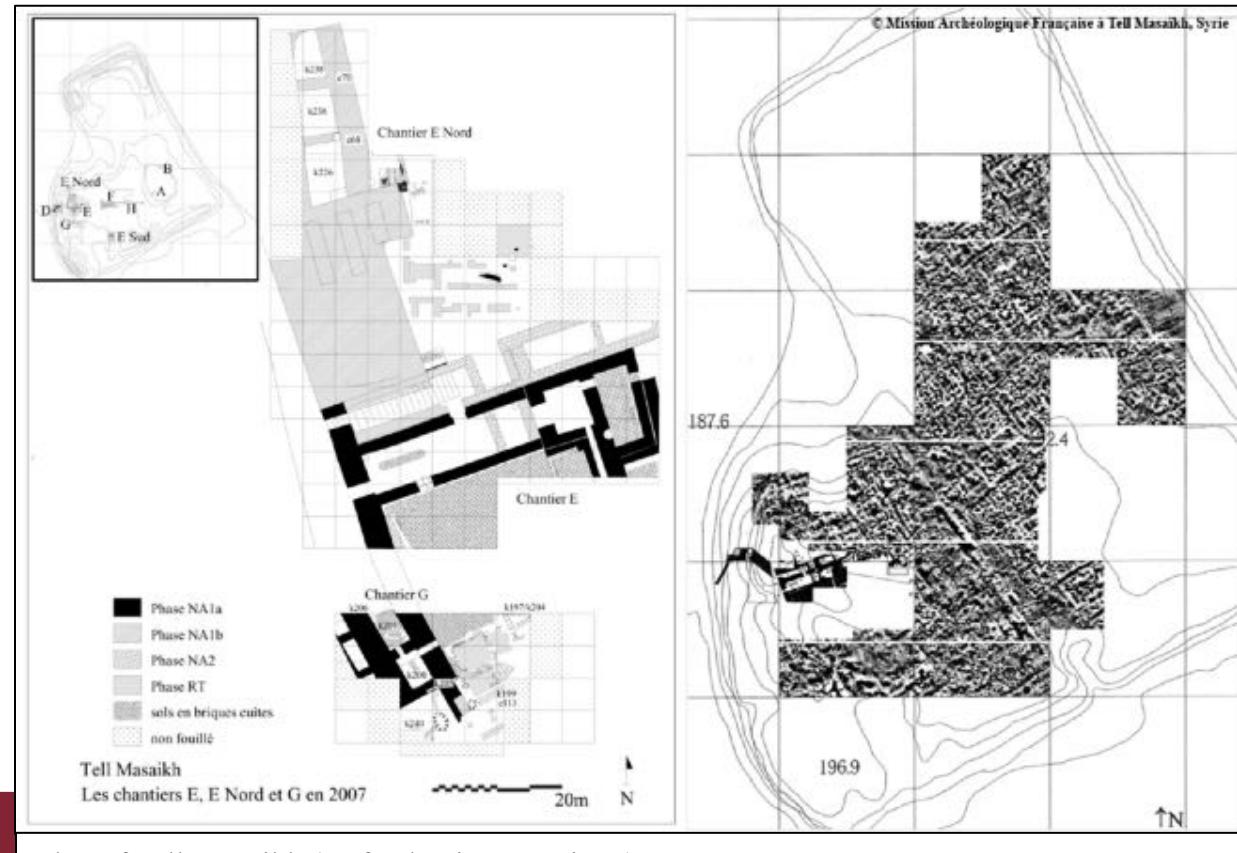


Results: Comparisons

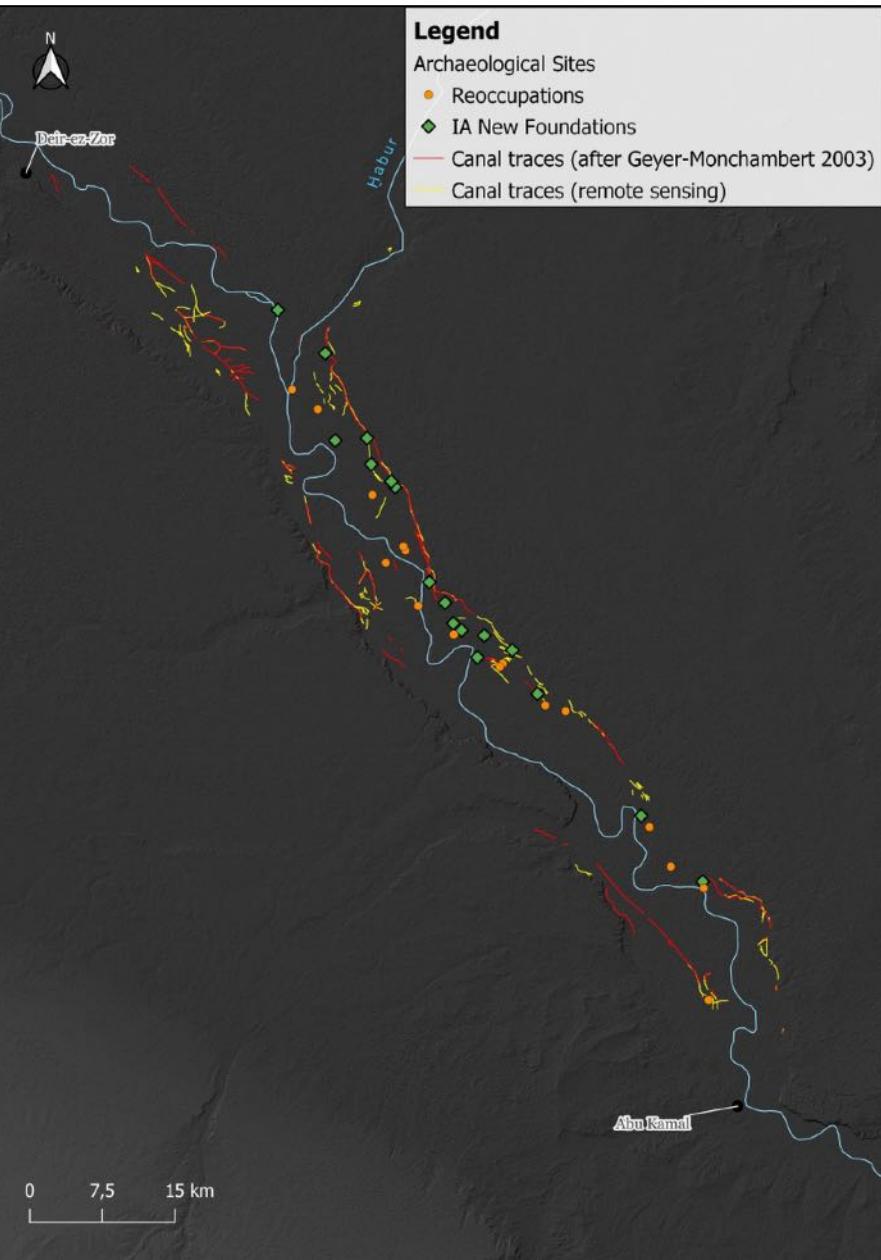


“At that time I decreed for Nergal-ēriš, governor of the lands Rasappa, Laqê, yindanu, Anat, Suhi, the city (Ana)-Aššur-(utēr)-asbat, my courtier: [...] **the city Dūr-Adad-nārāri with its 15 villages in the land Laqê** [...]— altogether 331 small cities, which Nergal-ēriš undertook to rebuild by the decree of his lord.” (Grayson 1996, 211)

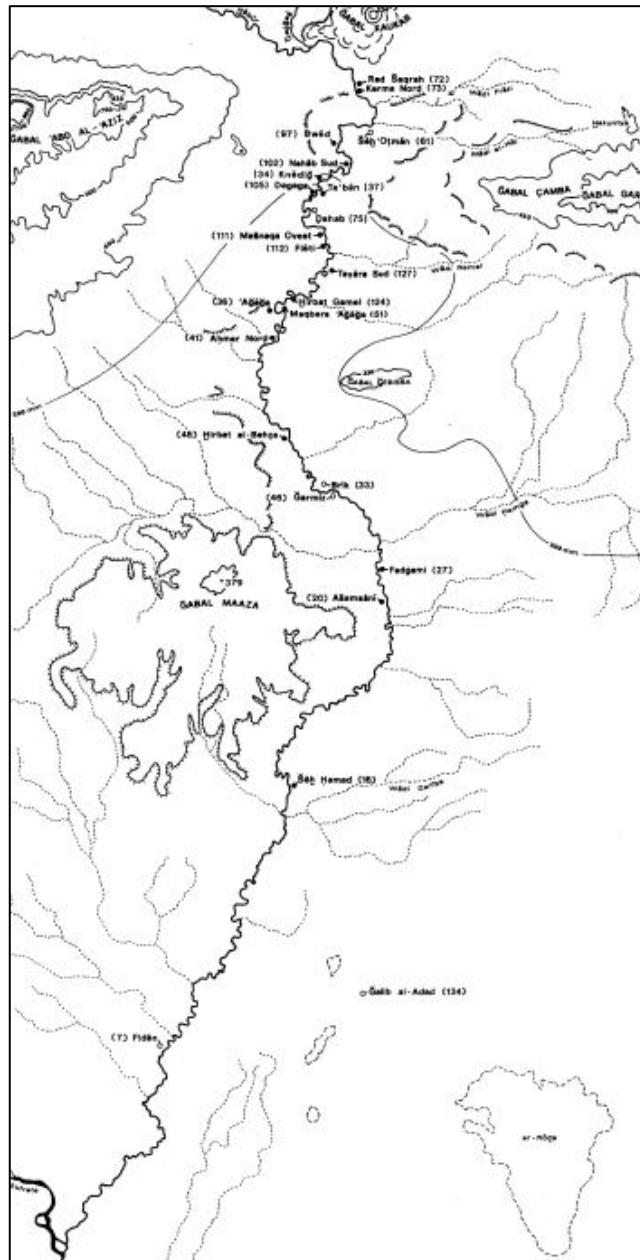
*“The inscribed stone of Nergal-ēriš, governor of the cities Nēmed-Ištar, Apku, Mari, the lands Rasappa, Qatnu, the cities Dūr-duklimmu, Kar-Ashurnasirpal, Sirqu, the lands Laqê, Hindānu, the city Anat, the land Suhi, (and) the city (Ana)-Aššur-(utēr)-asbat.”* (Grayson 1996, 209)



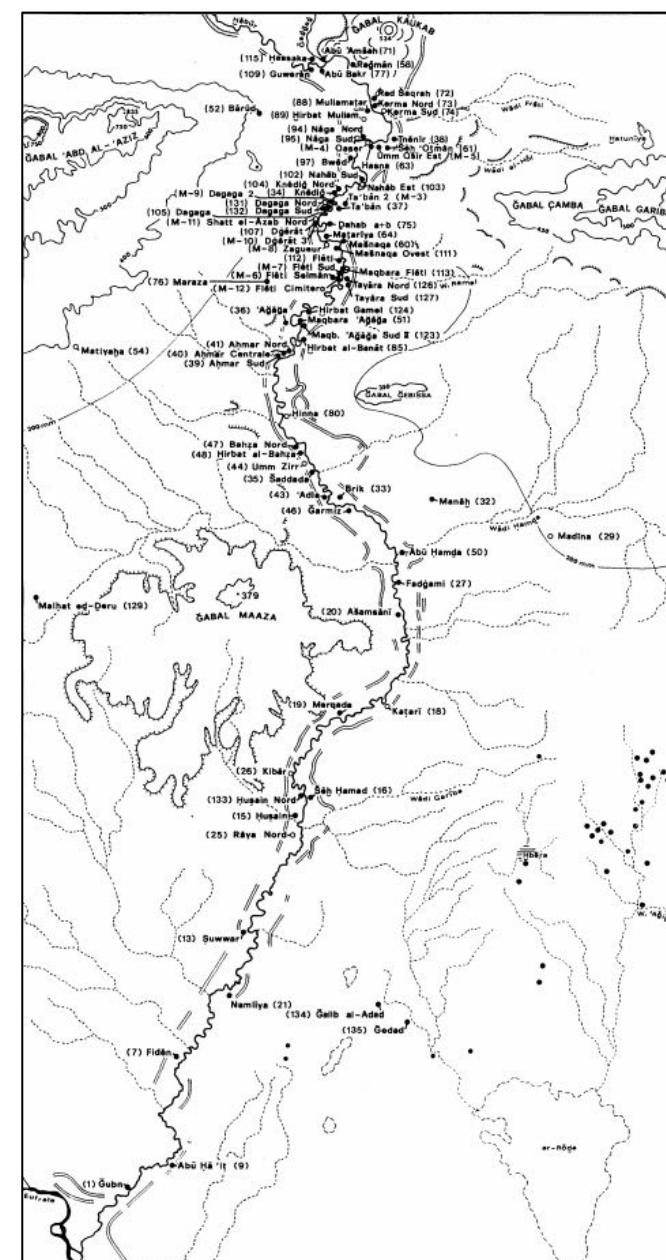
Plan of Tell Masaikh (Defontenay 2016, Fig. 3)



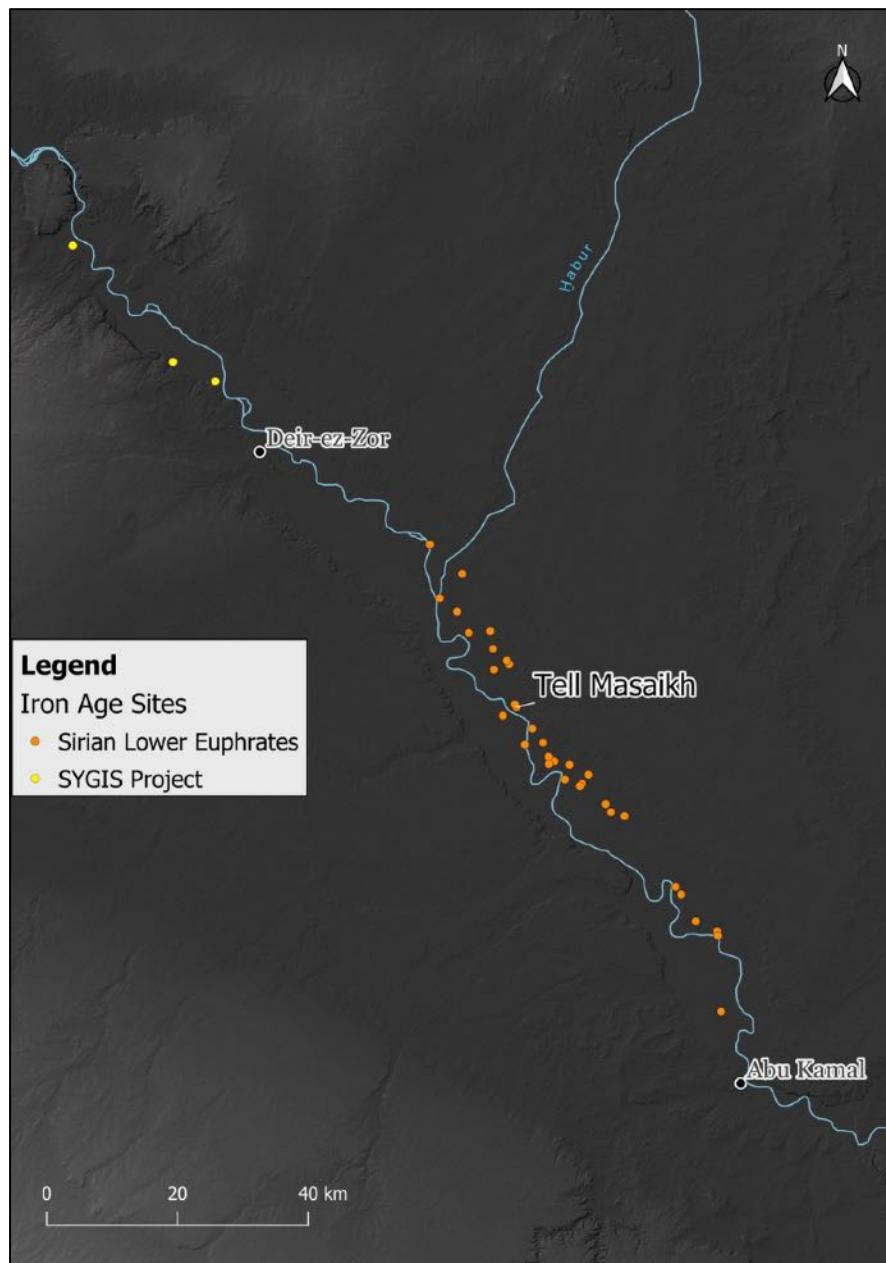
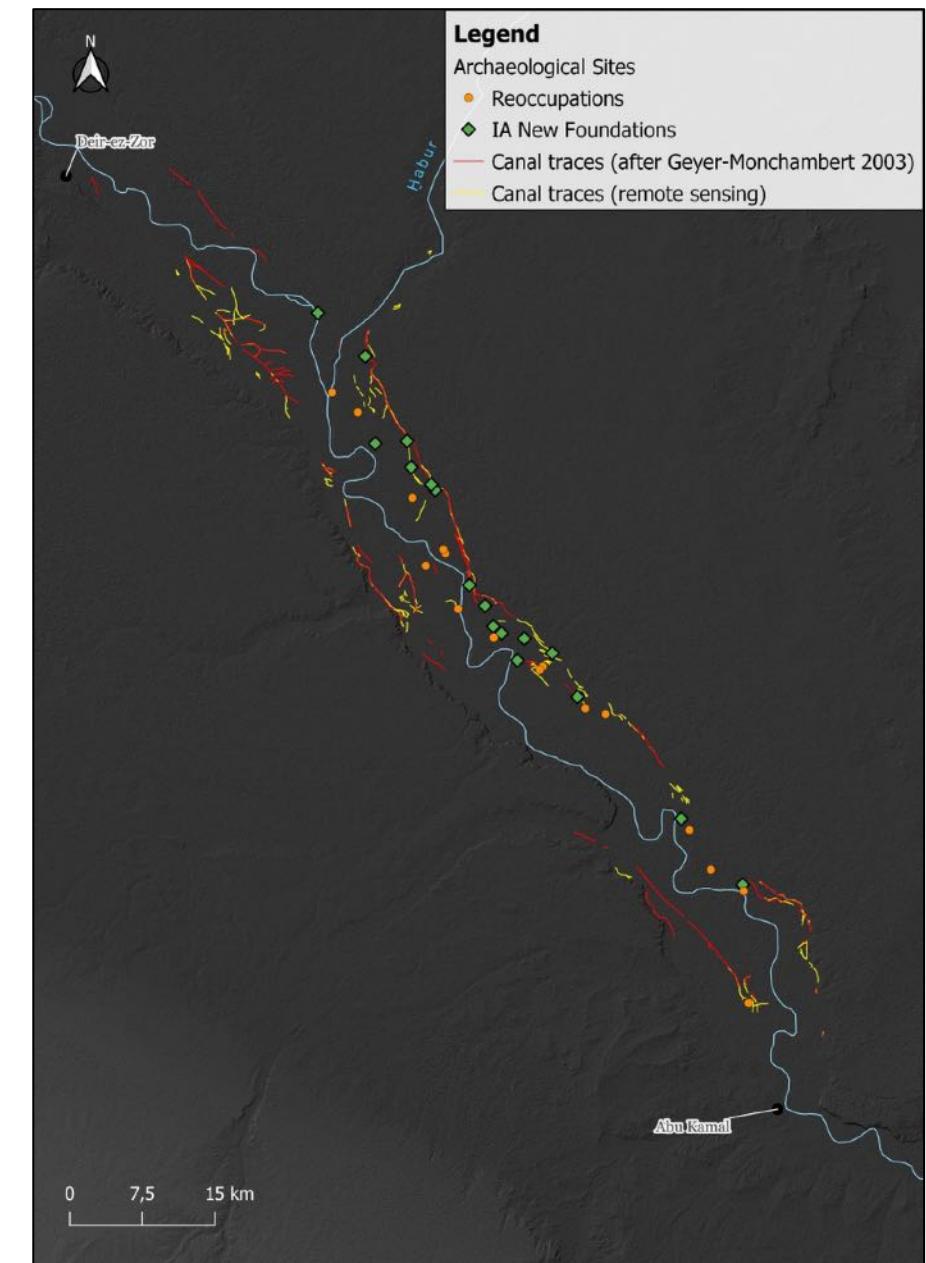
Results: Comparisons



Settlement Pattern along the Habur river during the late IX - early VIII Cent. B.C. (Morandi 1996, Tav. 5)



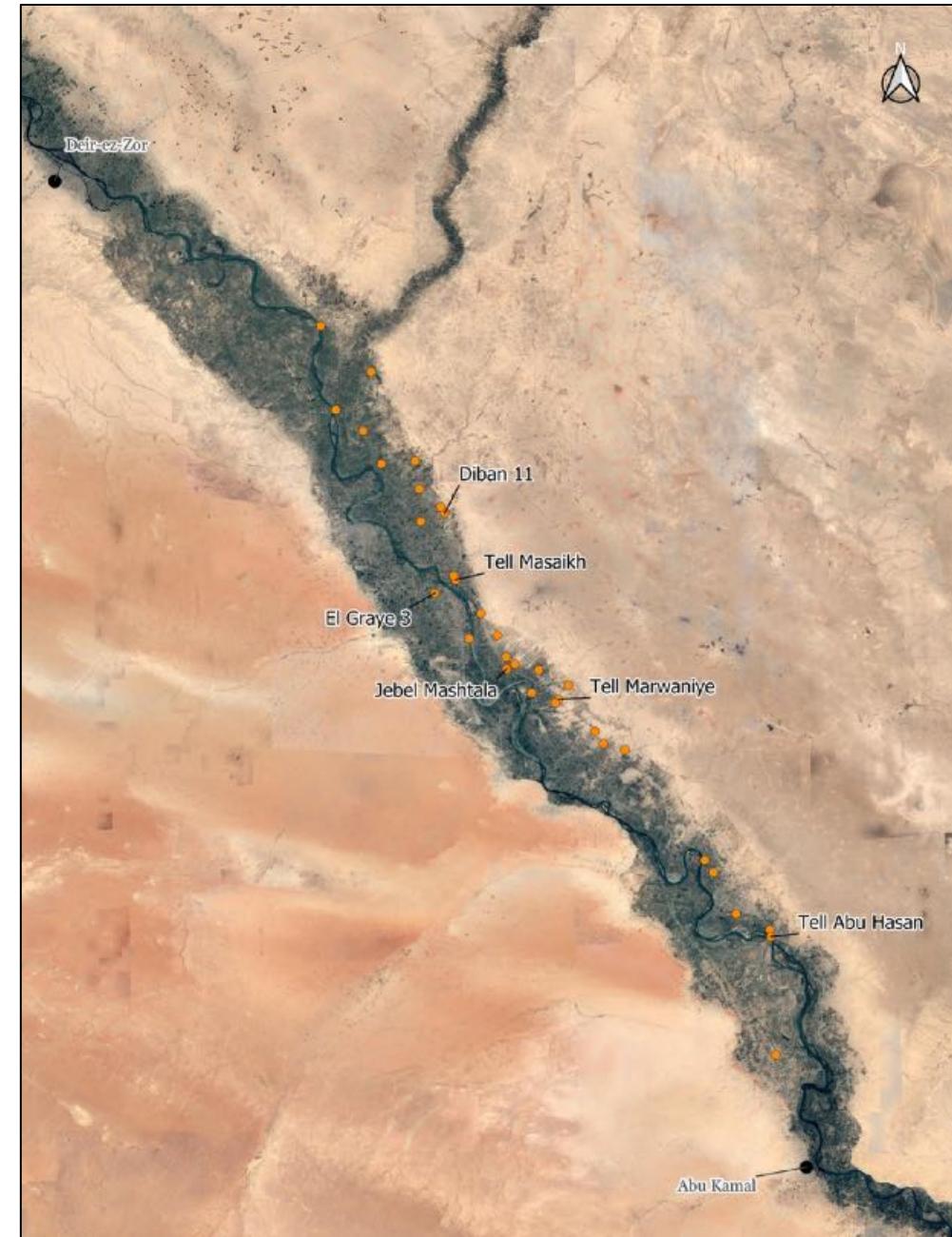
Settlement Pattern along the Habur river during the 750-600 B.C. (Morandi 1996, Tav. 6)



Results: Comparisons

## Conclusions:

- General trends characteristic of Iron Age (rise in settlement numbers, many flat sites, shifting occupation from tell-based).
  - Evidence of Assyrian-led reorganisation (regional infrastructure in the form of a canal, a new foundation as political reference for the valley).
  - Difficult to attribute the reorganisation to a single individual (Nergal-Eresh).
- Long-term analysis of settlement patterns and geomorphology showed how the location on outcrops was a trend in settlement choices, starting in EBA or earlier, and reaching full expression later during IA/Hellenistic period.
- Possible evidence of two overlapping settlement patterns, hard to distinguish because of difficulties in differentiation between IA subphases.
- Diachronic long-term analysis helped understand major periods of use of the regional canal and settlement patterns in general.
  - Similar conclusions about dating to Reculeau 2018.
- Comparison with ANE Iron Age context
  - Similar development to other frontier regions of Assyria and investment in regional infrastructures as Lower Habur.
  - Location on the left bank probably influenced by political center of reference (Assyria).



The background of the slide is a grayscale aerial photograph of a river delta. The river network is highly branched, creating a complex pattern of white and light gray channels against a darker, textured landscape. The delta extends from the bottom center towards the top left.

Thank you for your  
attention!

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