

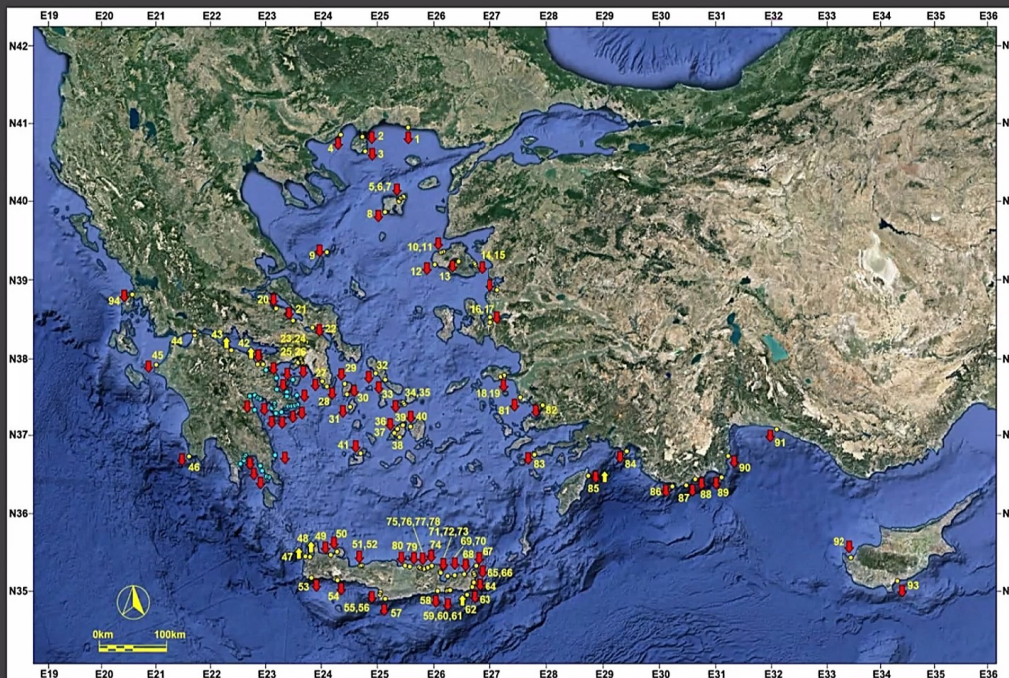


Roman and Late Roman harbours of the South Aegean: sea level rise and coastal landscape readings.

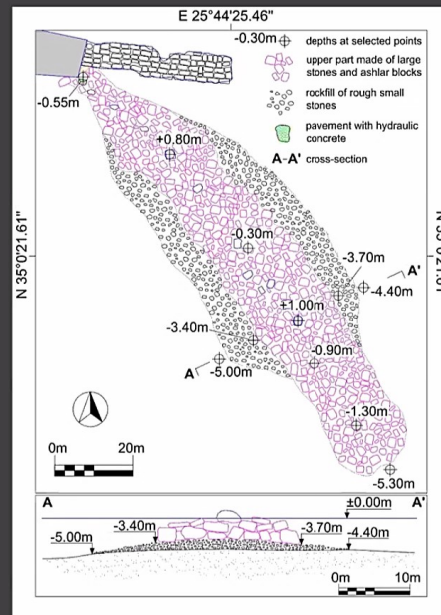
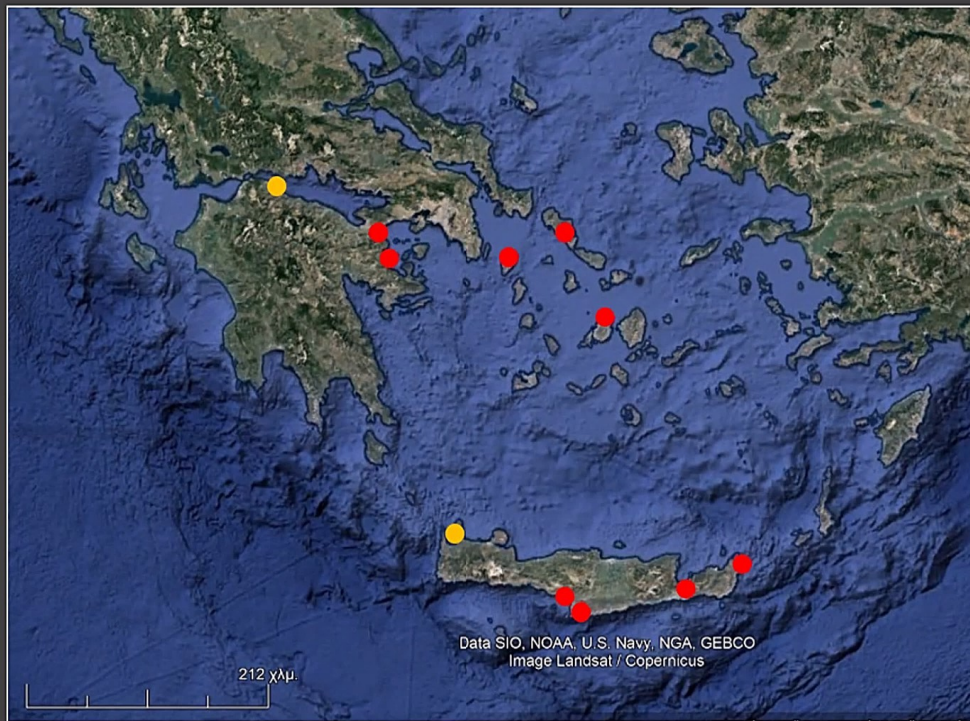
Dr Eleni Kolaiti



Online International Conference
Palaeogeography, history and sea level fluctuations:
Harbours and Ports of the eastern Mediterranean
4 May 2022



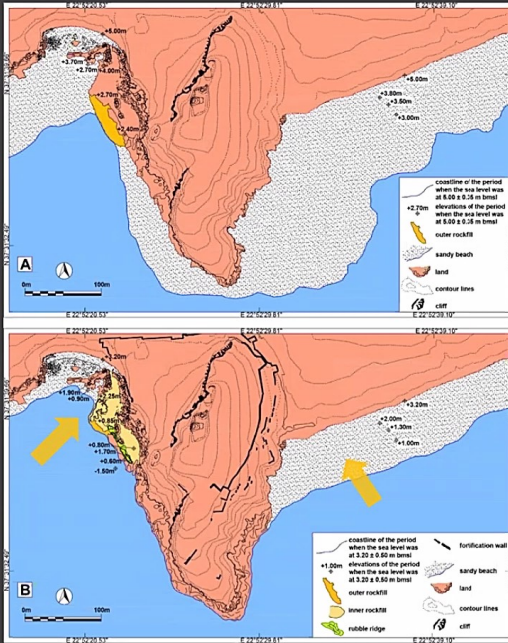
Map of 94 coastal archaeological sites with clear evidence of RSL change, after Kolaiti (2019)



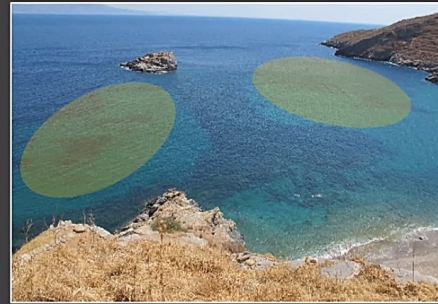
Rubble-mound



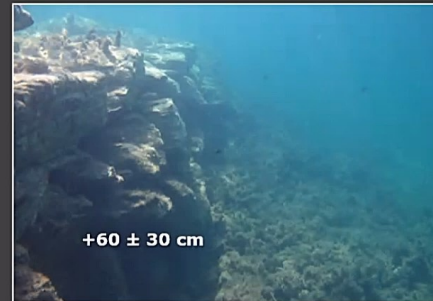
The Roman harbour of Ierapetra (SE Crete): the eastern breakwater. After Mourtzas and Kolaiti, 2017, *Méditerranée* [Online], <http://mediterranee.revues.org/7965>.



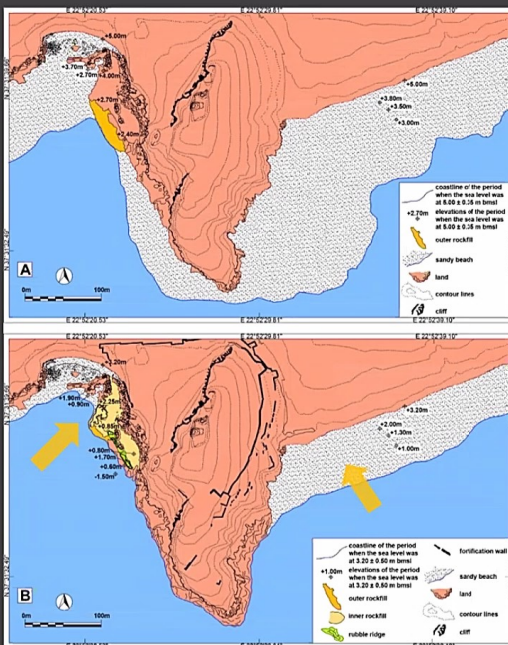
Ancient Asine, Argolis (Peloponnese): the rocky headland. After Kolaiti 2019, <http://hdl.handle.net/10442/hedi/44943>, Kolaiti, 2022 (in press).



Ancient Karthaia, Poles Bay, Keos Island (Cyclades): The double harbour. After Mourtzas and Mendoni, *Αρχαιογνωσία* 4, 1989, Παρνασσός, 1990).



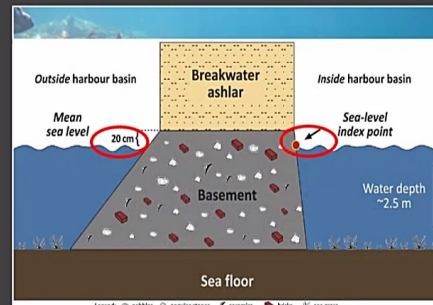
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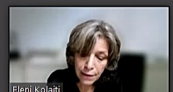
Ancient Asine, Argolis (Peloponnese): the rocky headland. After Kolaiti 2019, <http://hdl.handle.net/10442/hedi/44943>, Kolaiti, 2022 (in press).



Ancient Karthaia, Poles Bay, Keos Island (Cyclades): The double harbour. After Mourtzas and Mendoni, *Αρχαιογνωσία* 4, 1989, Παρνασσός, 1990).



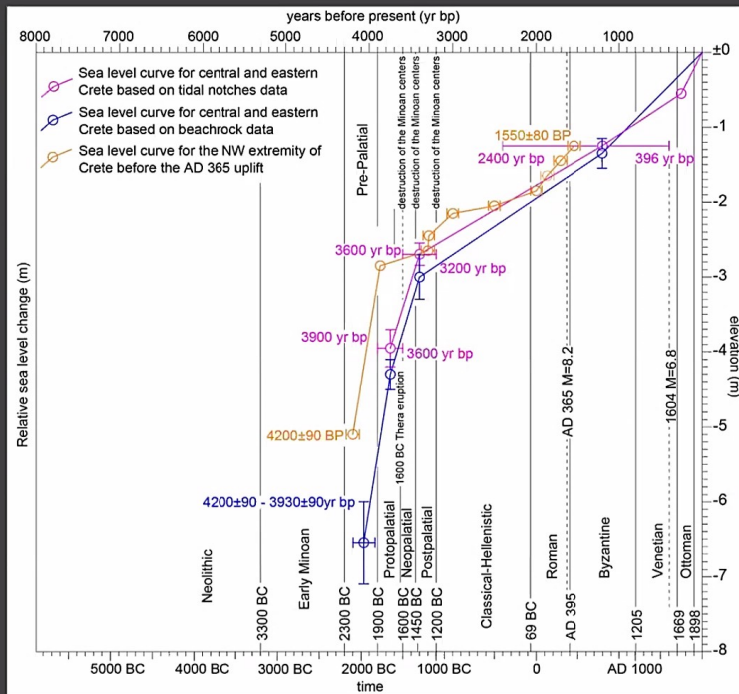
Functional height after Seeliger et al., 2017, *Palaeogeography Palaeoclimatology Palaeoecology*, 10.1016/j.palaeo.2017.05.017



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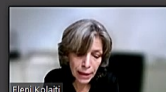
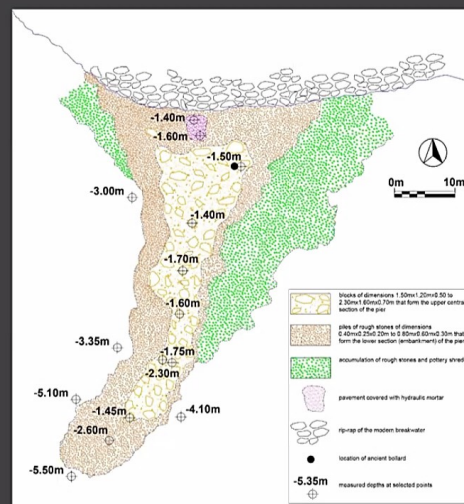
Curve of the RSL change for eastern Crete. After Mourtzas et al., 2016; Mourtzas and Kolaiti, 2020.



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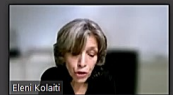
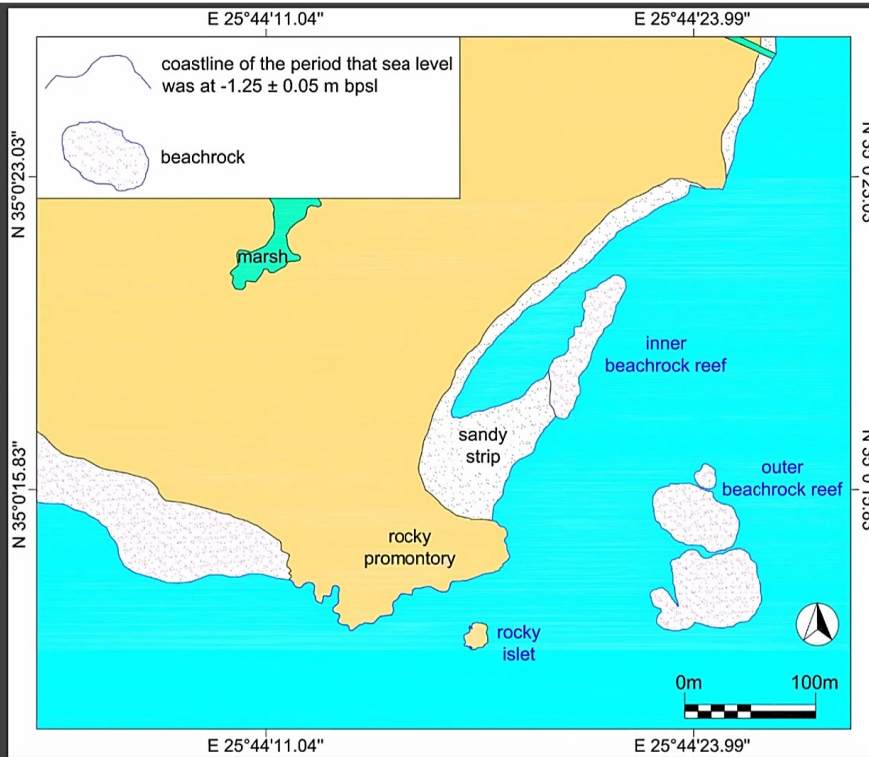
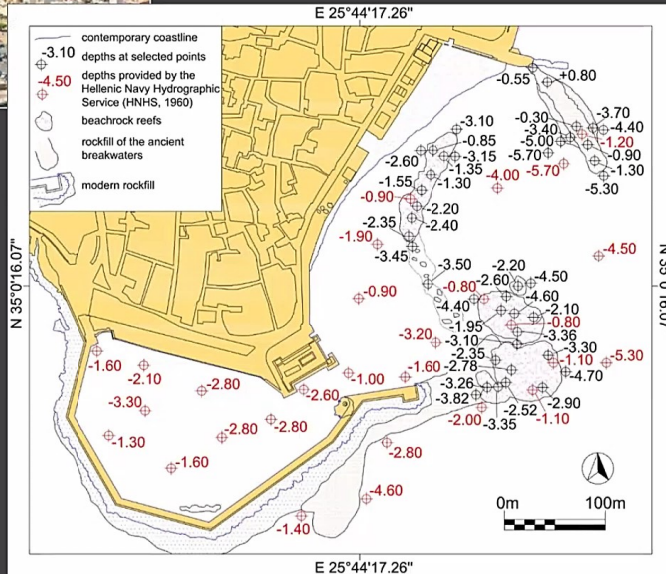
Breakwater of Kouremenos (NE Crete). After Mourtzas et al., 2016, Quaternary International, 10.1016/j.quaint.2015.08.008.2016.

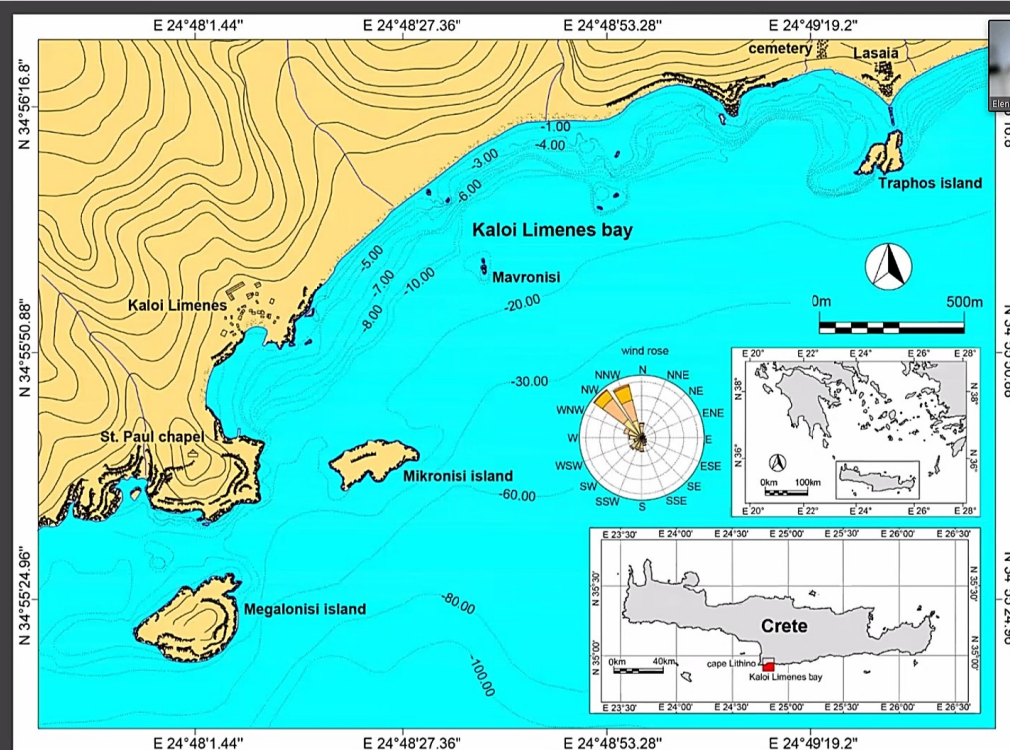
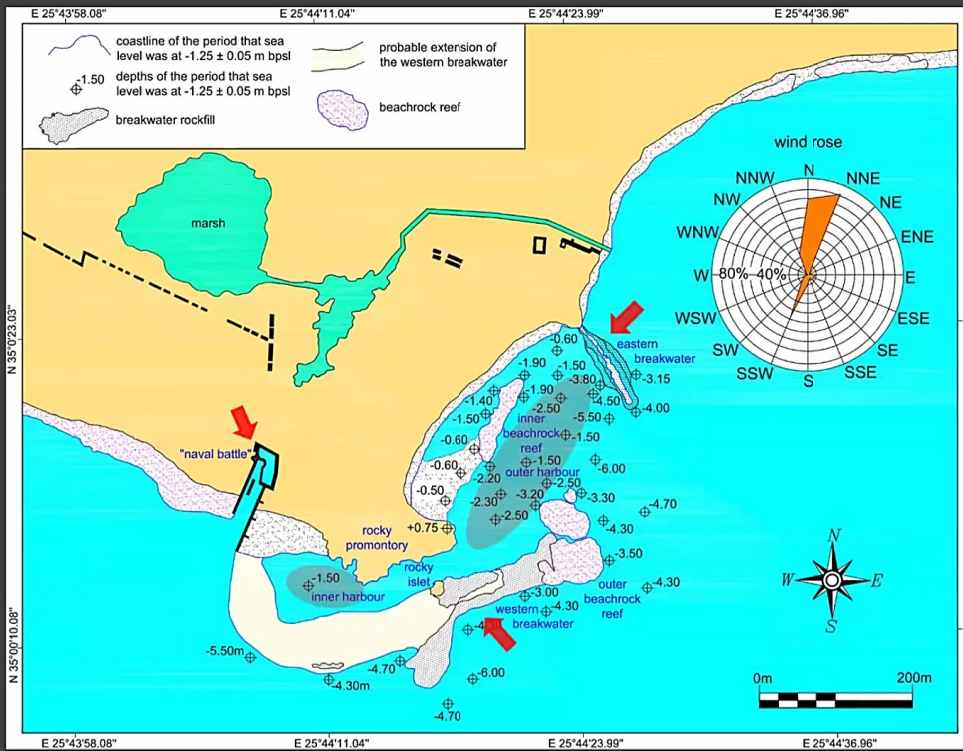


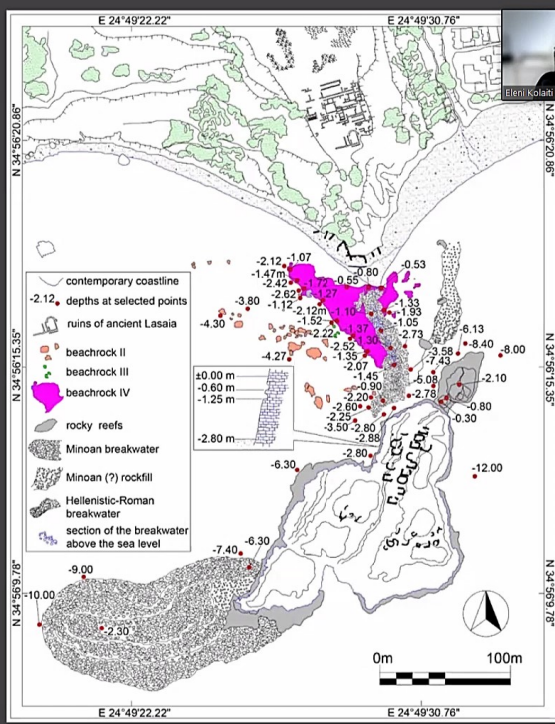
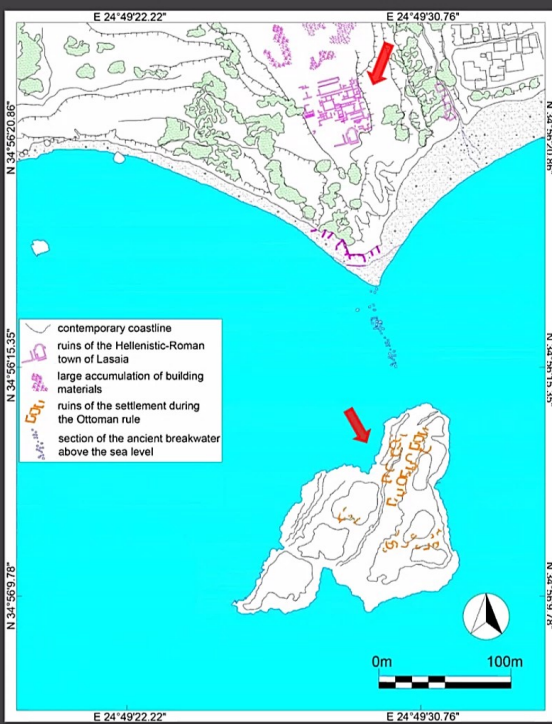
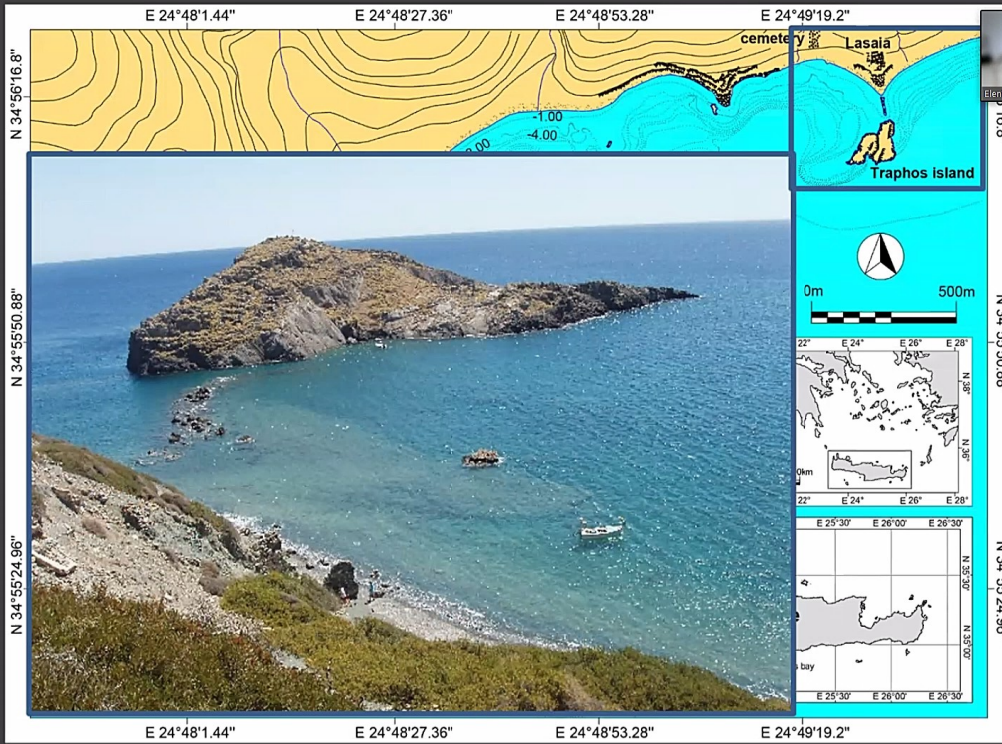
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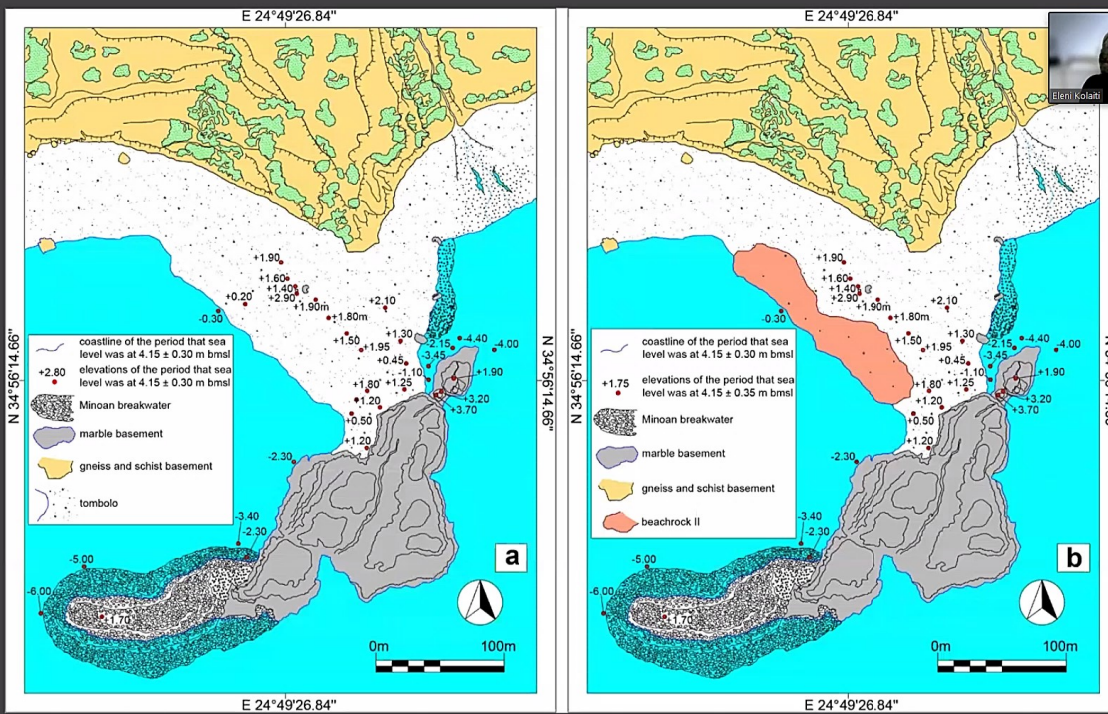


The Roman harbour of Ierapetra
(SE Crete). After Mourtzas and Kolaiti,
2017, Méditerranée [Online],
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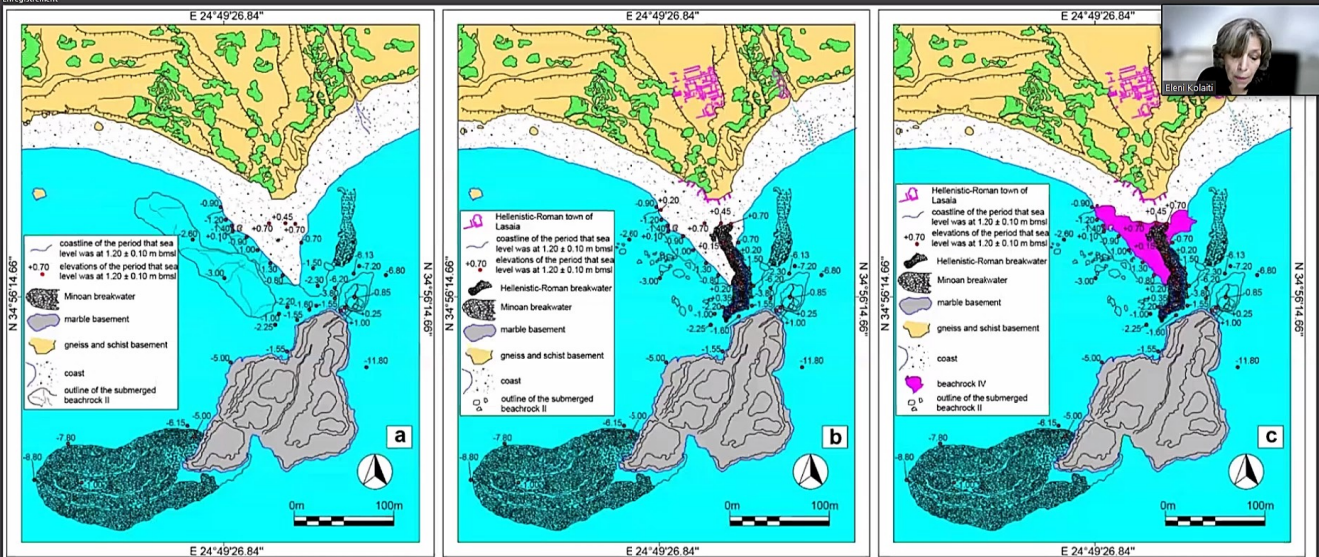




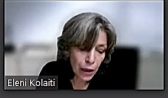




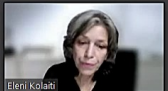
Protopalatial period (1900-1620 BC), sea level: 4.15 ± 0.30 m bmsl.

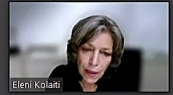
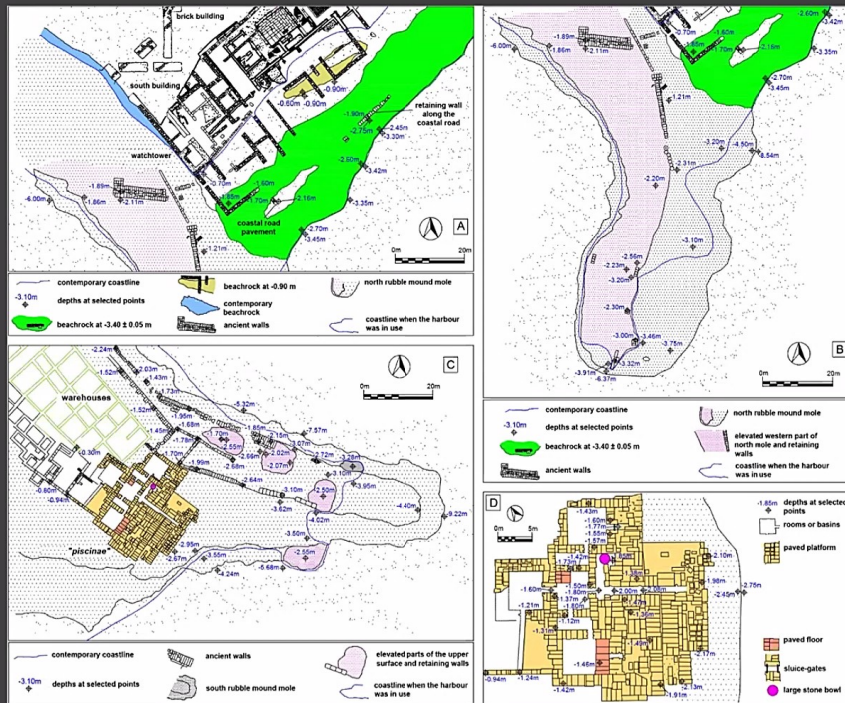


Hellenistic-Roman times, sea level: 1.20 ± 0.10 m bmsl.

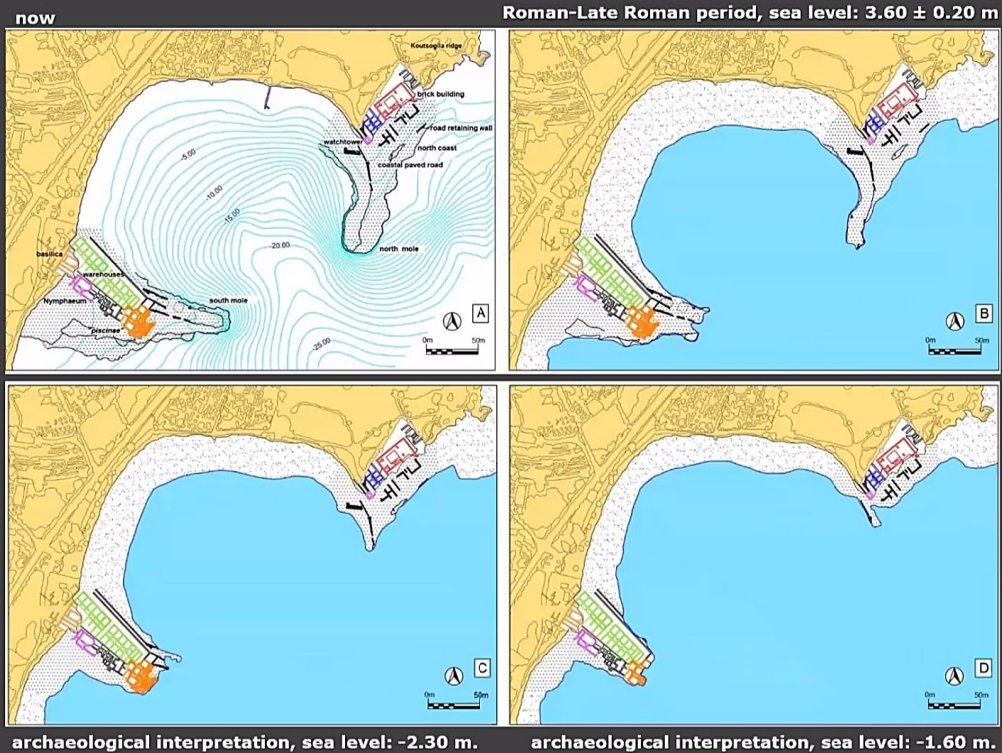


Kasteli Kissamou (W Crete). After Mourtzas et al., 2016, Quaternary International, 10.1016/j.quaint.2015.08.008.2016.



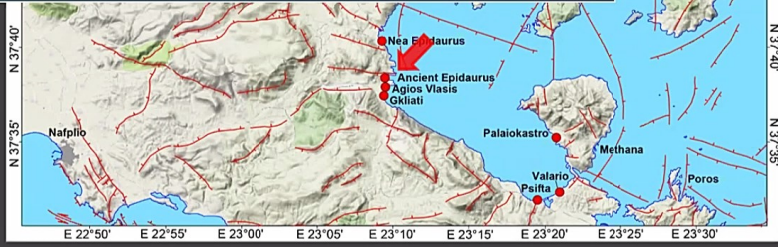
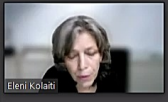
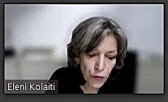


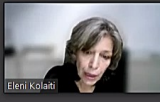
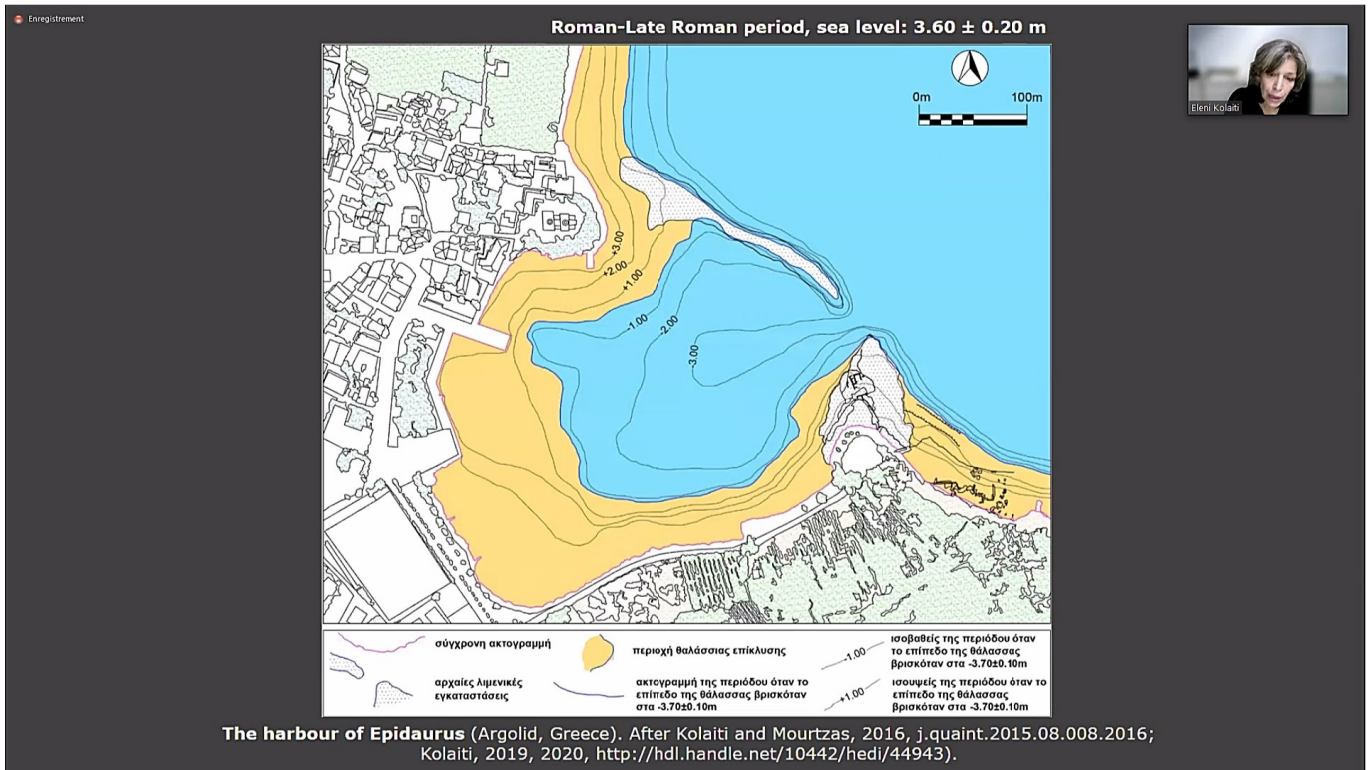
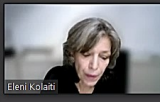
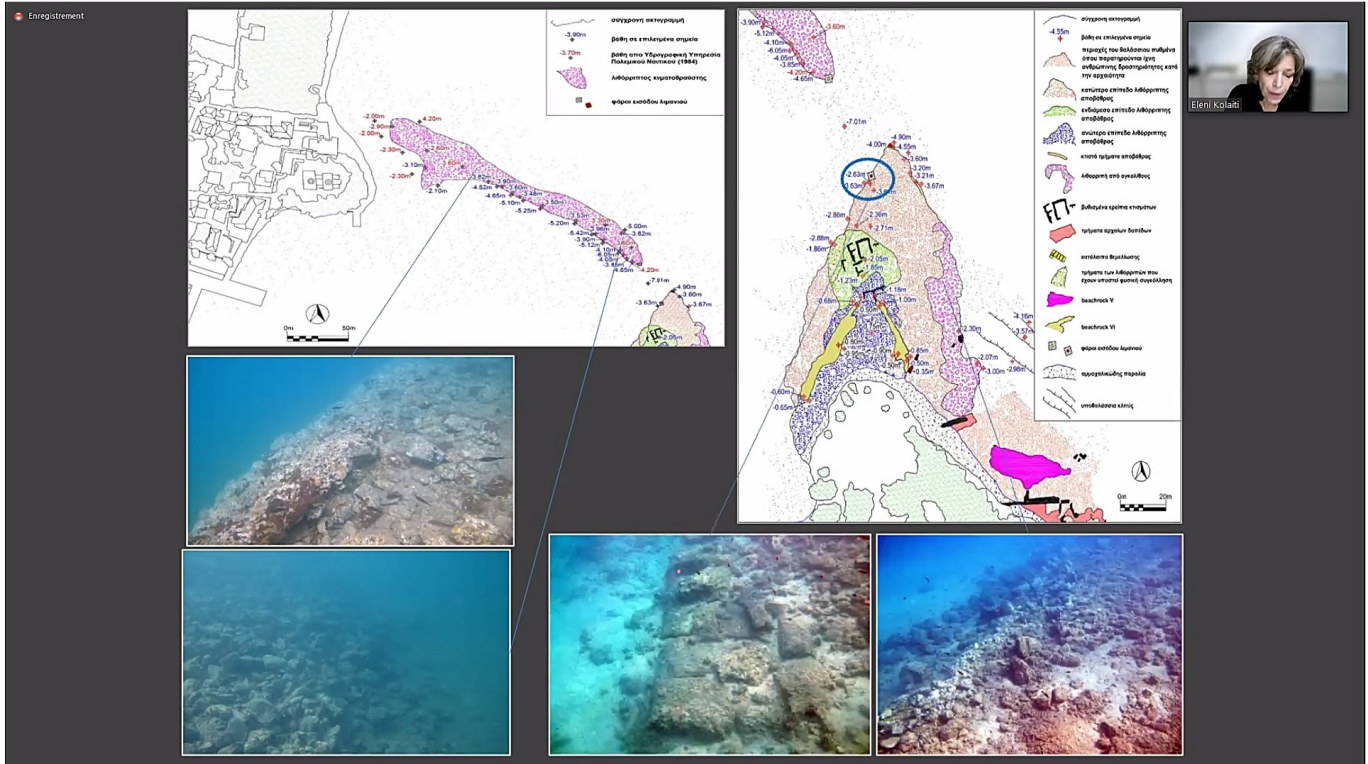
The Kenchreai Harbour (Corinth, Greece). After Kolaiti and Mourtzas, 2016, *J. Quaint.* 2015.08.008.2016; Kolaiti, 2019, <http://hdl.handle.net/10442/hedi/44943>; Kolaiti and Mourtzas, 2020, 10.1007/s42990-020-00034-5).



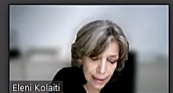
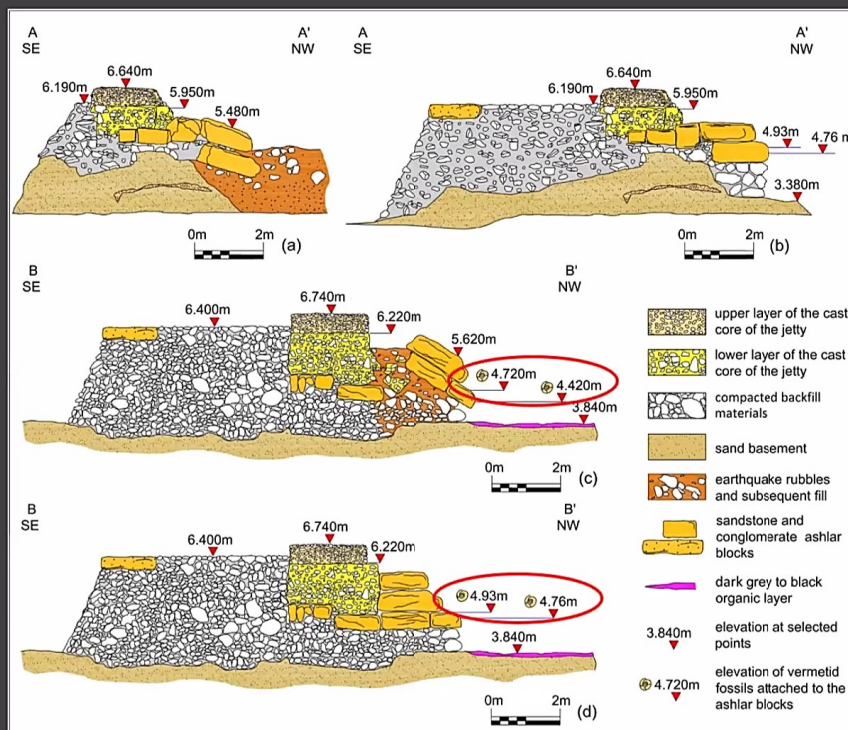
archaeological interpretation, sea level: -2.30 m.

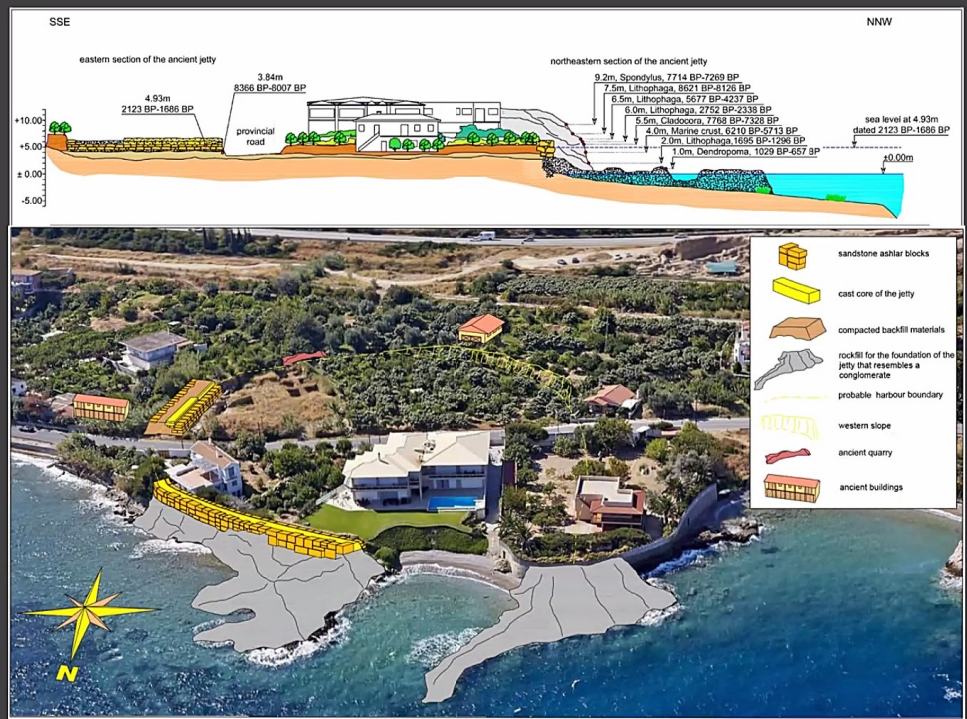
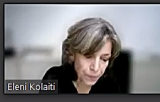
archaeological interpretation, sea level: -1.60 m.



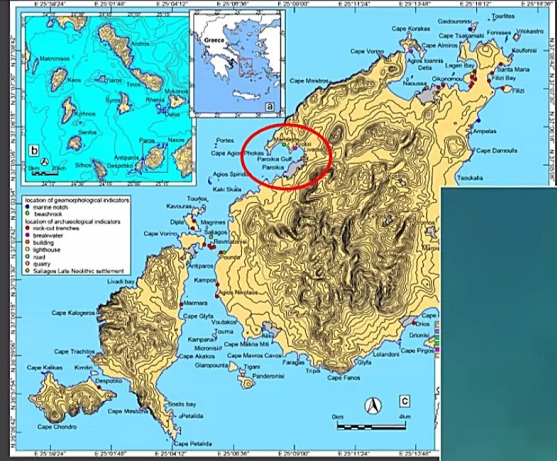
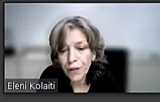


The harbour of Epidaurus (Argolid, Greece). After Kolaiti and Mourtzas, 2016, j.quaint.2015.08.008.2016; Kolaiti, 2019, 2020, <http://hdl.handle.net/10442/hedi/44943>.

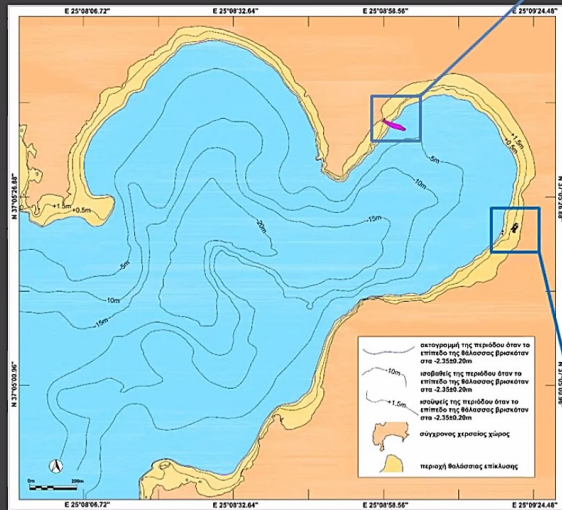




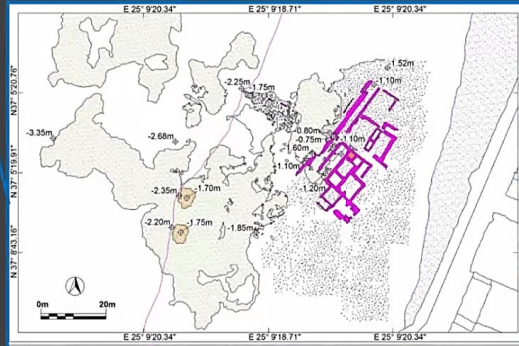
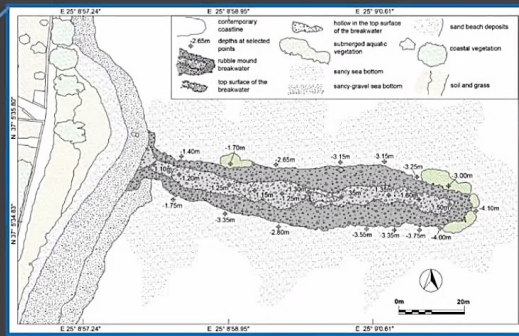
Two uplift episodes (264 AD and 1300 AD) caused the uplift of the ancient jetty by 5.35 ± 0.37 m.



Archaeological markers along the coast of Paros Island. After Kolaiti and Mourtzas, 2022.



Palaeogeography of Paros Island. After Kolaiti and Mourtzas, 2021, Annals of Geophysics, Annals of Geophysics, OC669, 10.4401/ag-8504INGV.



Palaeogeographic reconstruction of the coast of Palai Island. After Mourtzas, 2018, Palaiopolis, Kaireios Library,

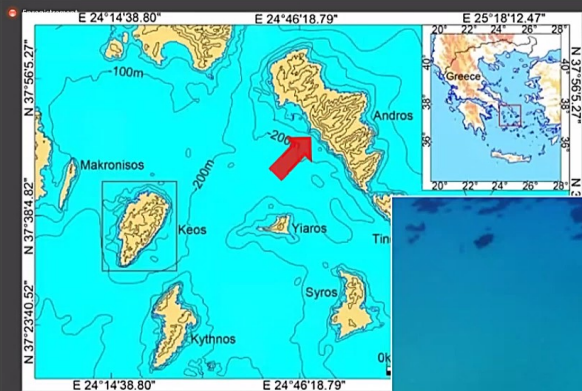
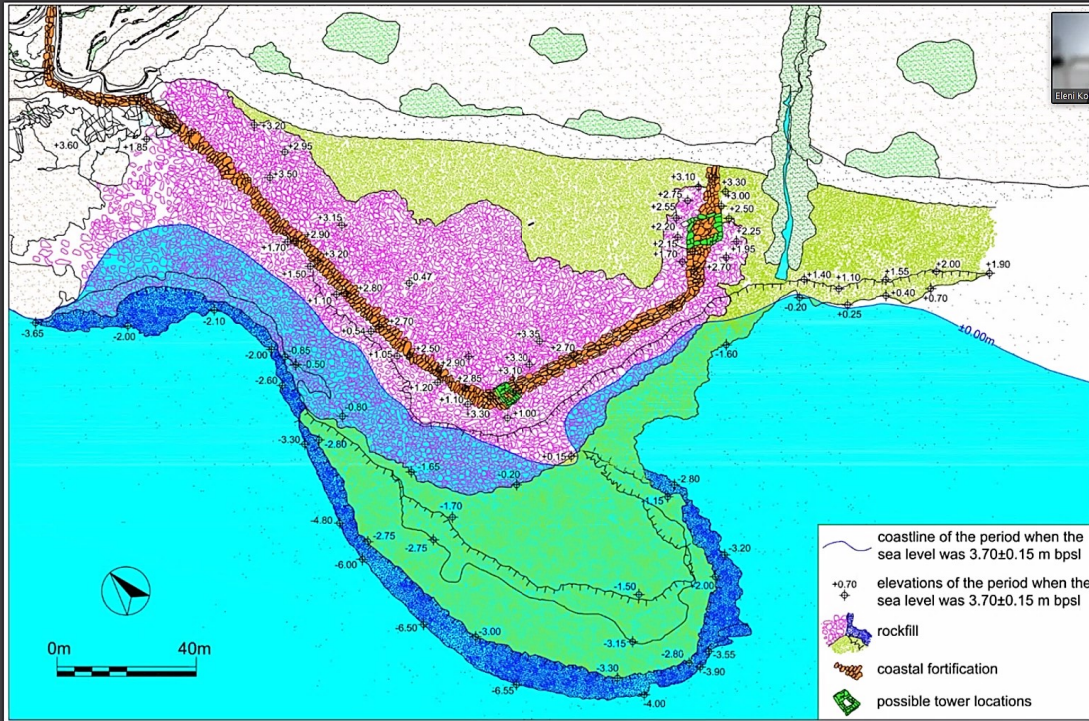
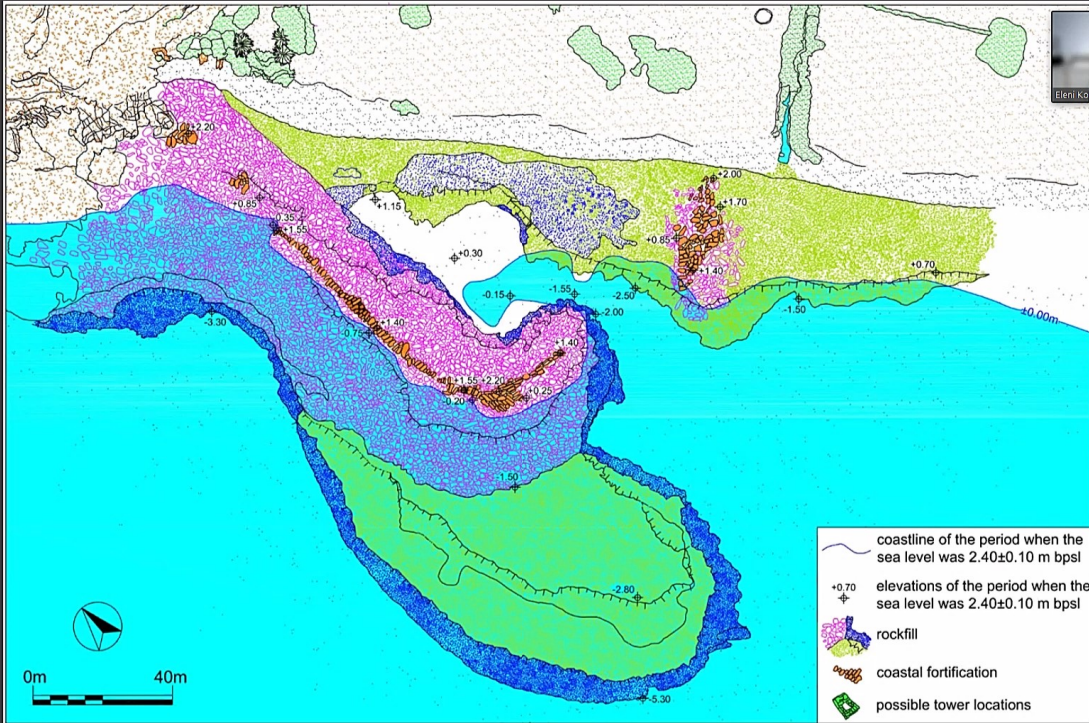


Photo: Archive of the Palaiopolis excavation

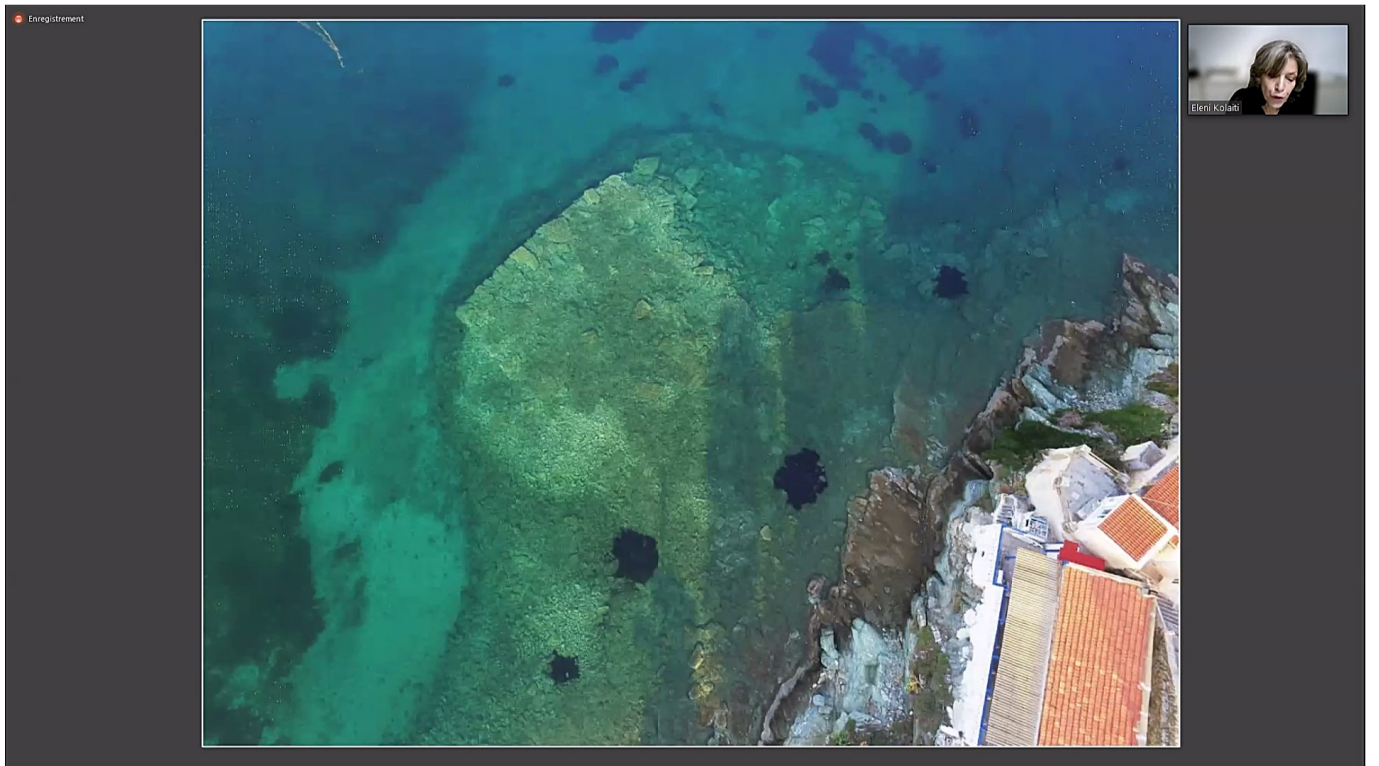
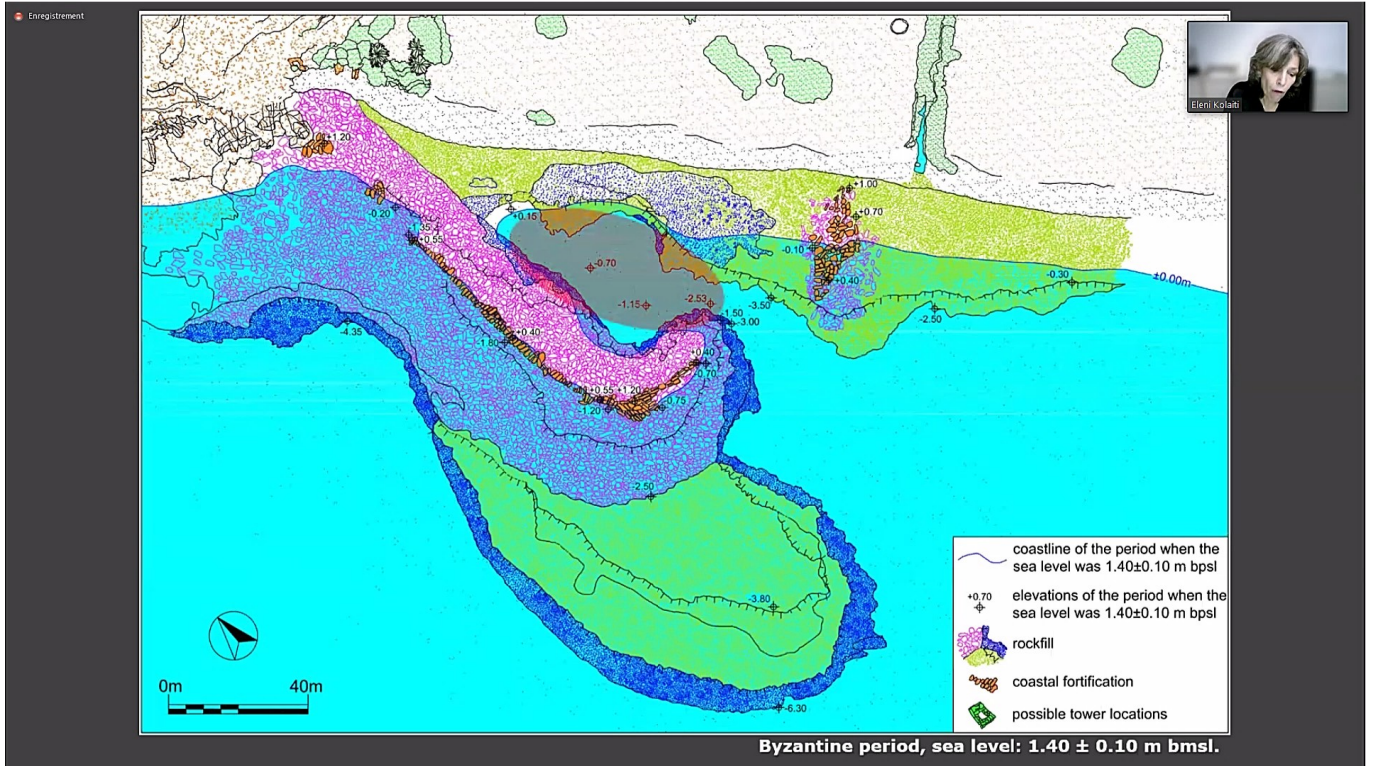


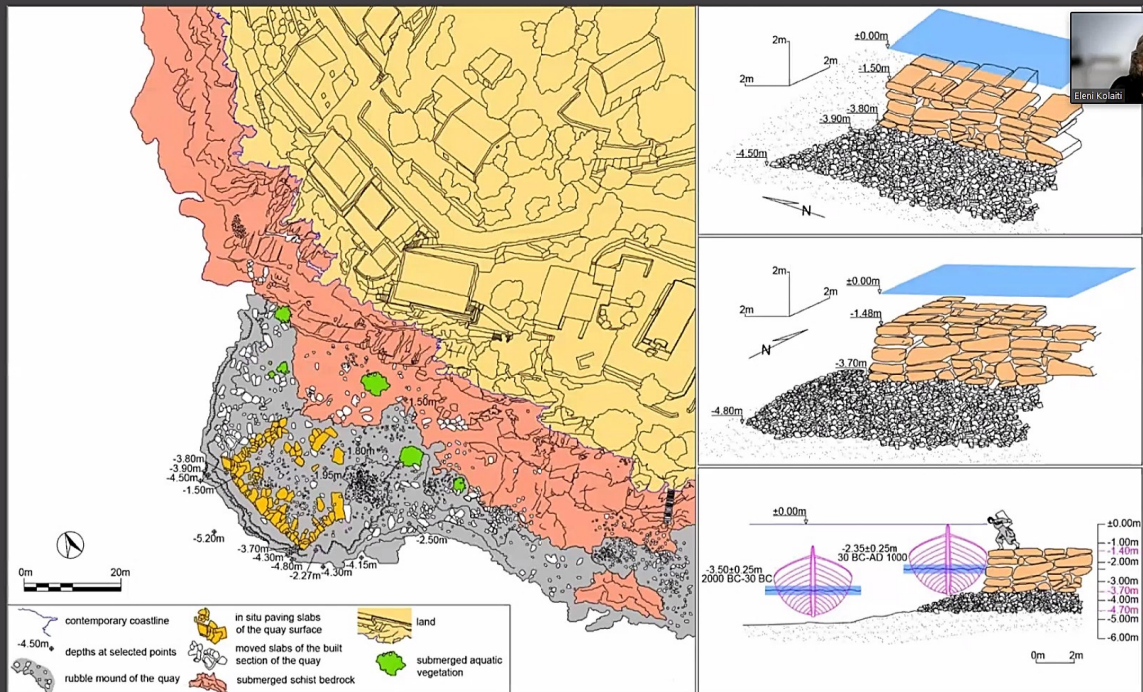


Classical period, sea level: 3.70 ± 0.15 m bmsl.



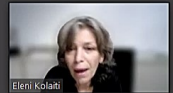
Roman period, sea level: 2.40 ± 0.10 m bmsl.





Eleni Kolaiti

a holistic geoarchaeological approach to the coast can help with archaeological dating



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- Why was a coastal settlement abandoned?
- When was a coastal town drowned by the sea?
- What forced ancient people to make defensive or protective coastal works?
- Just when did the coastline retreat making a harbour useless?

1 we determine the former sea level

2 we examine whether during this sea level a harbourwork could function