

# THE GREEK EXPERIENCE FROM THE AGIA ZONI II OIL SPILL INCIDENT

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Gerakaris V, Issaris Y, Katsiaras N, Kikaki K, Kouerinis N, Lardi P, Papageorgiou A, Pappas  
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# CHRONICLE



On September 10th 2017, the chemical/product tanker Agia Zoni II sank in the Piraeus anchorage area.

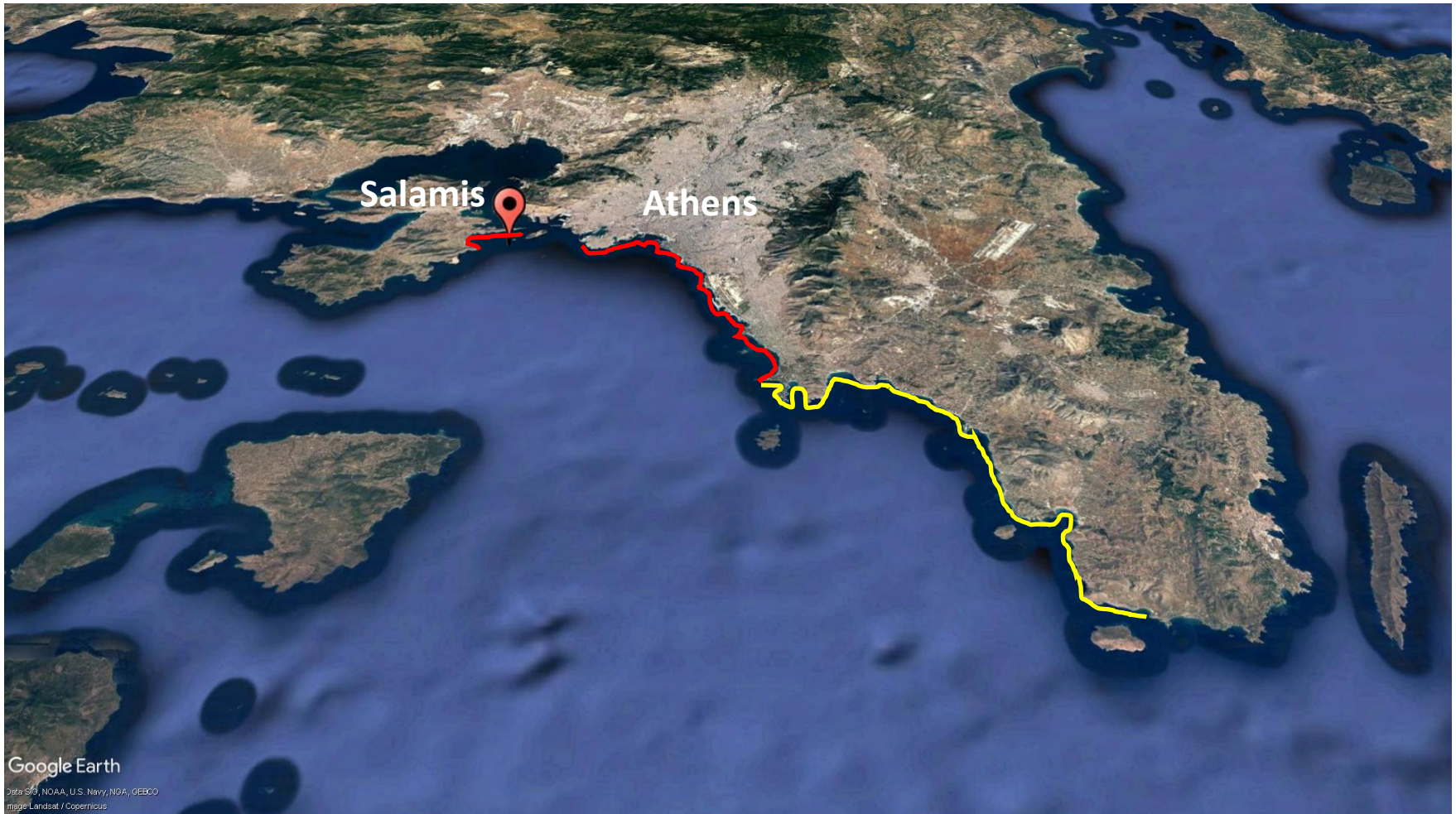
# CHRONICLE



On September 10th 2017, the chemical/product tanker Agia Zoni II sank in the Piraeus anchorage area.



# CHRONICLE



In the following days oil stranded along approximately 4 km of shoreline on Salmis Island as well as 25 km of the Piraeus/ Athens Riviera.



# CHRONICLE



SAR-SENTINEL image of oil stranding along Piraeus/ Athens Riviera  
(14/09/2017)



# CHRONICLE



SAR-SENTINEL image of oil stranding along Piraeus/ Athens Riviera  
(16/09/2017)

# CHRONICLE



SAR-SENTINEL image of oil stranding along Piraeus/ Athens Riviera  
(20/09/2017)





# Salmis Island







# Salamis Island





## Piraeus – Afrodite voe







# Palaio Faliro – Floisvos







# Ellhniko – Agios Kosmas







# Glyfada

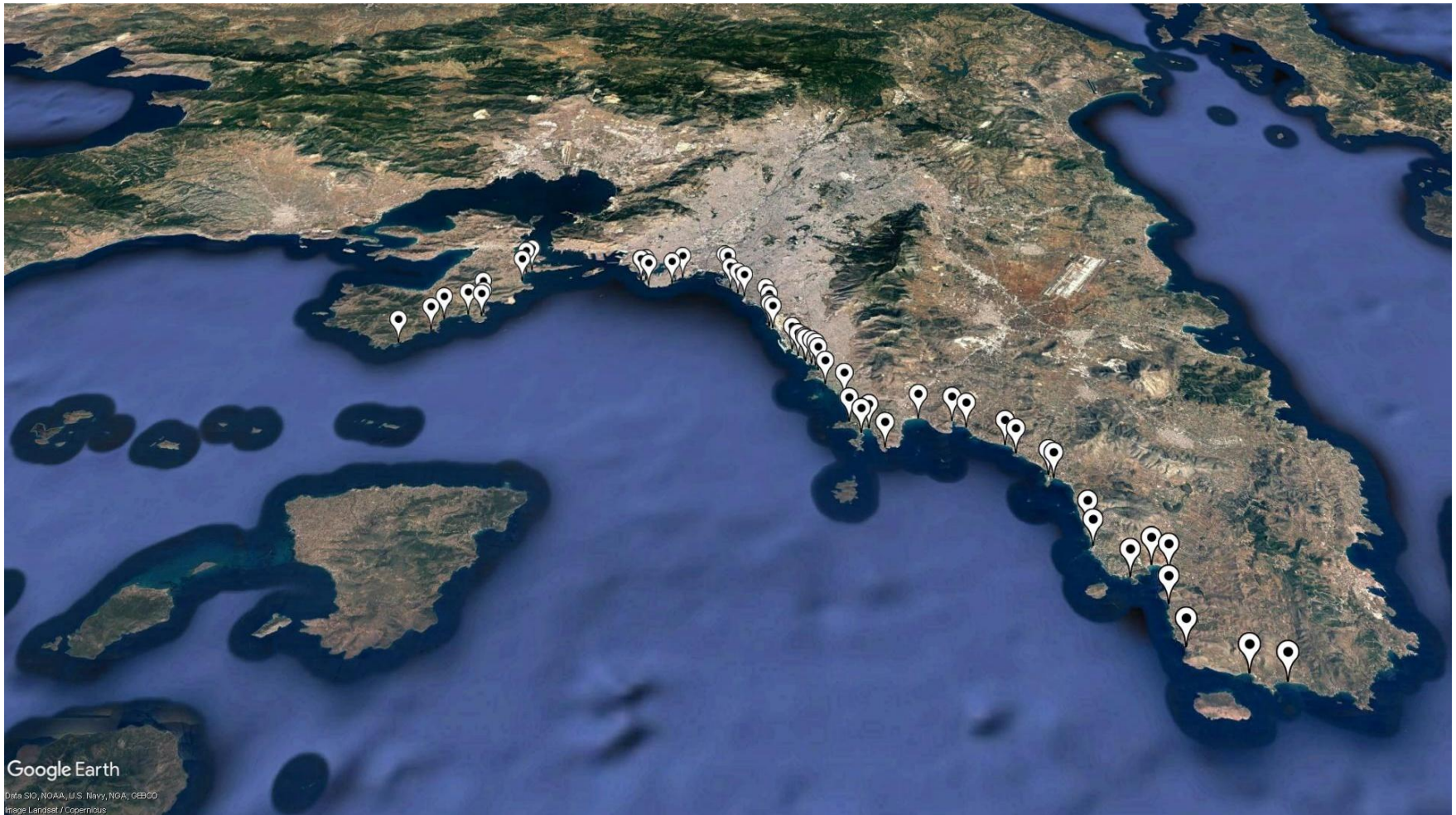


# STUDY OF THE ENVIRONMENTAL CONSEQUENCES ON THE MARINE ECOSYSTEM OF THE SARONIKOS GULF

1. Recording of chemical pollution in seawater and sediments,
2. Assessment of the ecological status of the Saronikos area following the incident,
3. Study of the possible bioaccumulation of pollutants from the accident and effects in marine organisms,
4. Mapping of the areas (mainly the seabed) affected by the oil spill.



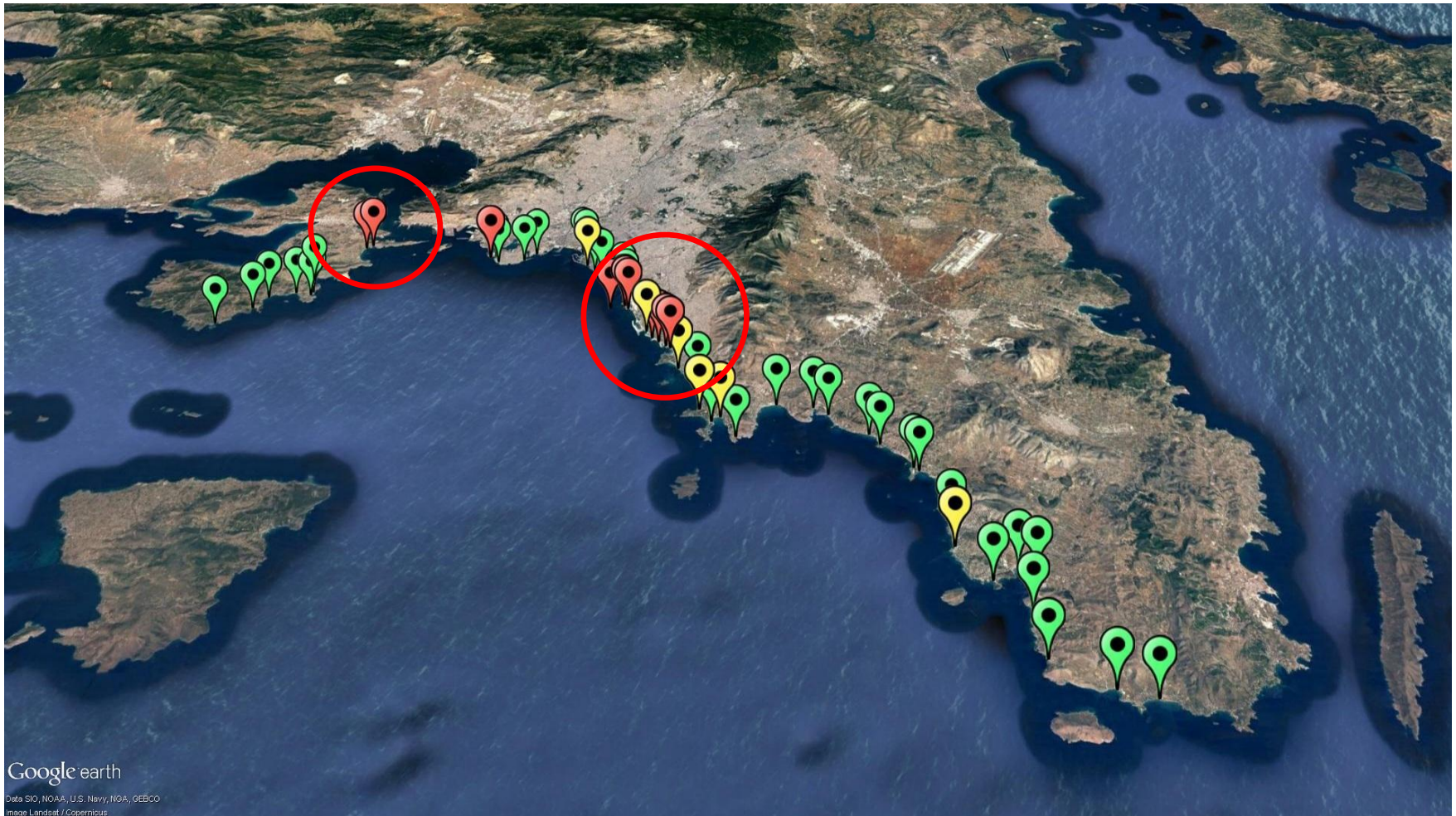
# 1) Recording of chemical pollution in seawater and sediments



Coastal waters



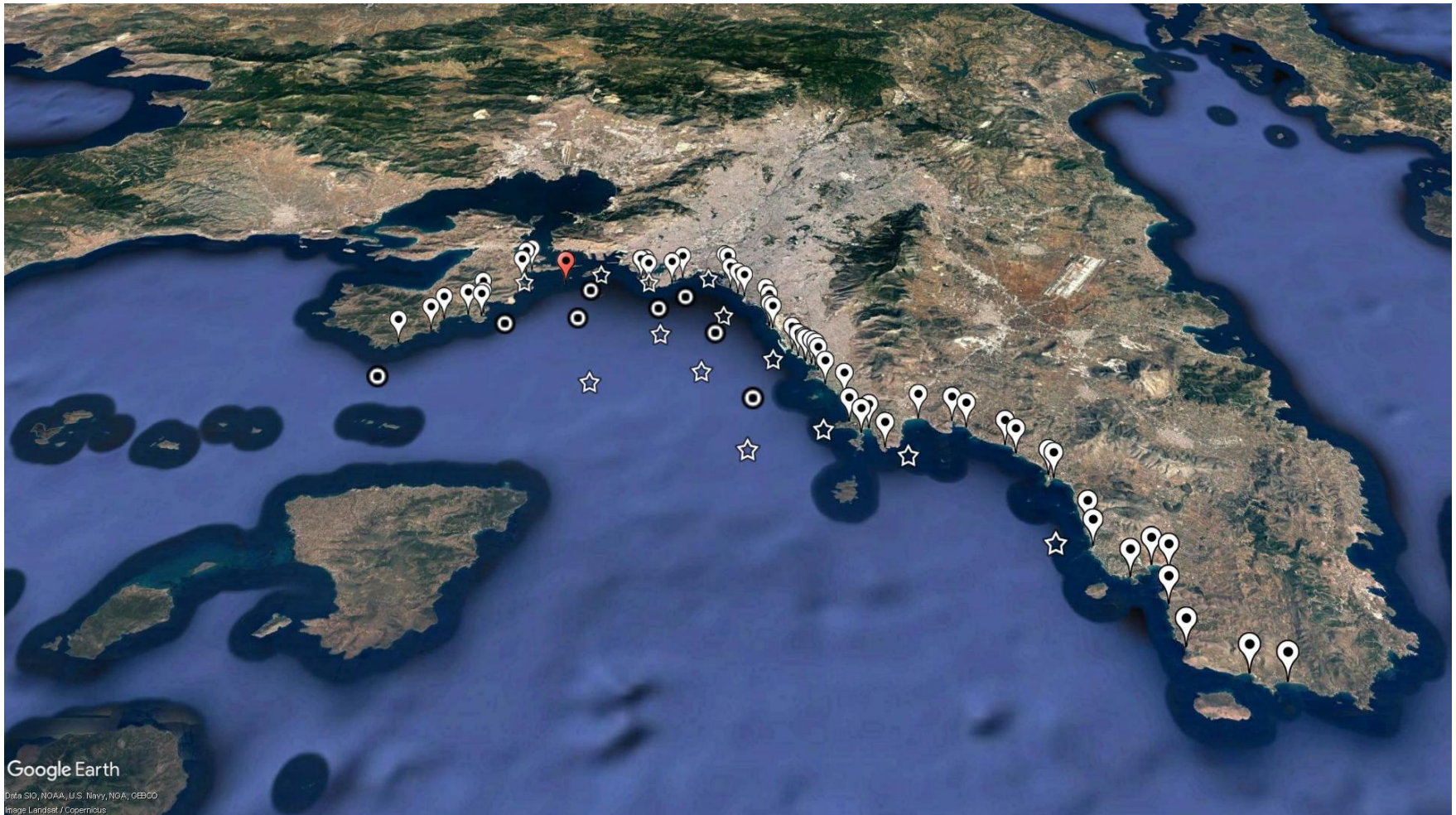
# 1) Recording of chemical pollution in seawater and sediments



Coastal waters (Initial situation on September 2017)



# 1) Recording of chemical pollution in seawater and sediments



Coastal waters



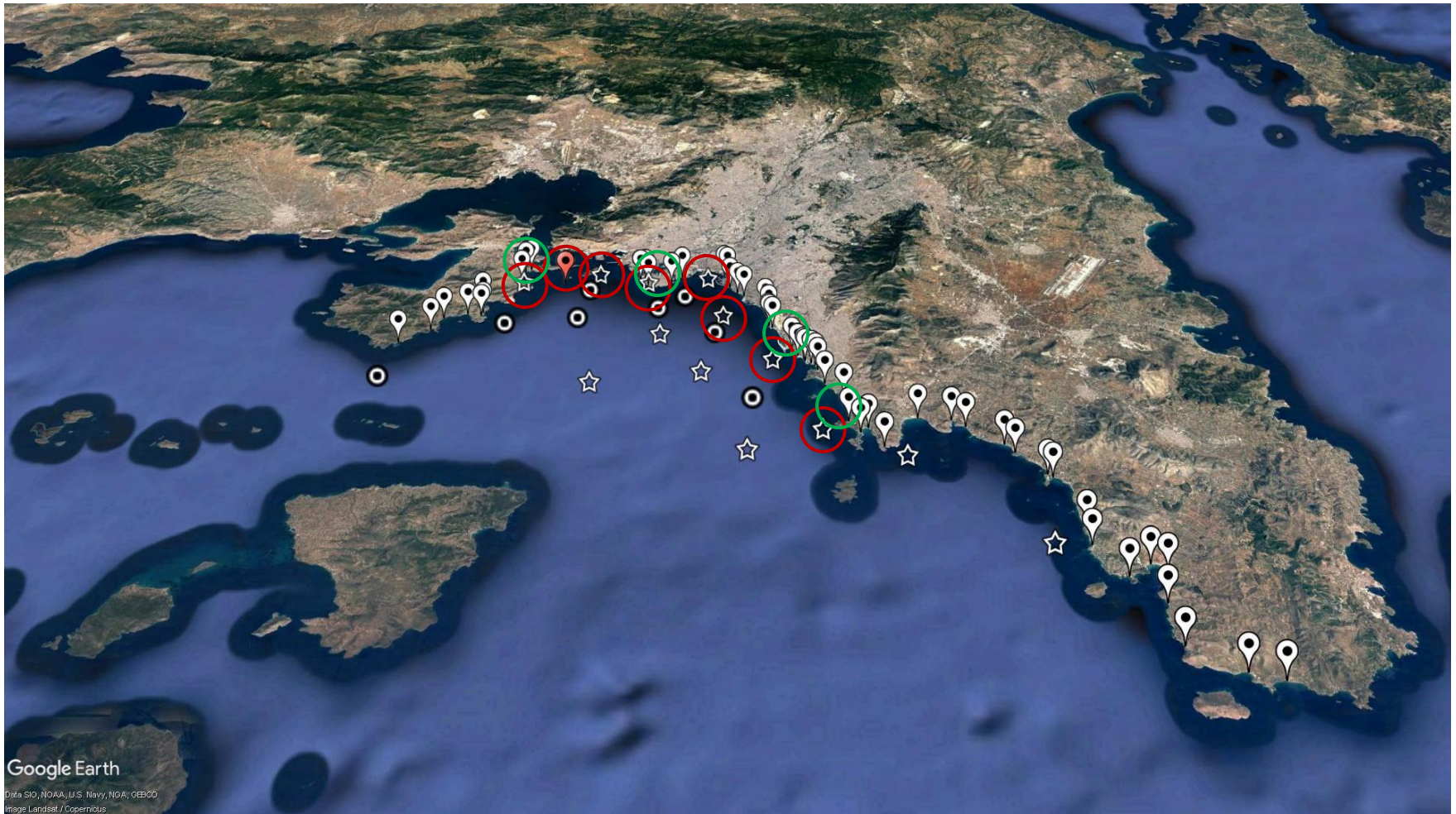
Open-sea sediments



Open-sea waters and sediments



## 2) Assessment of the ecological status



Coastal waters



Open-sea sediments



Benthos



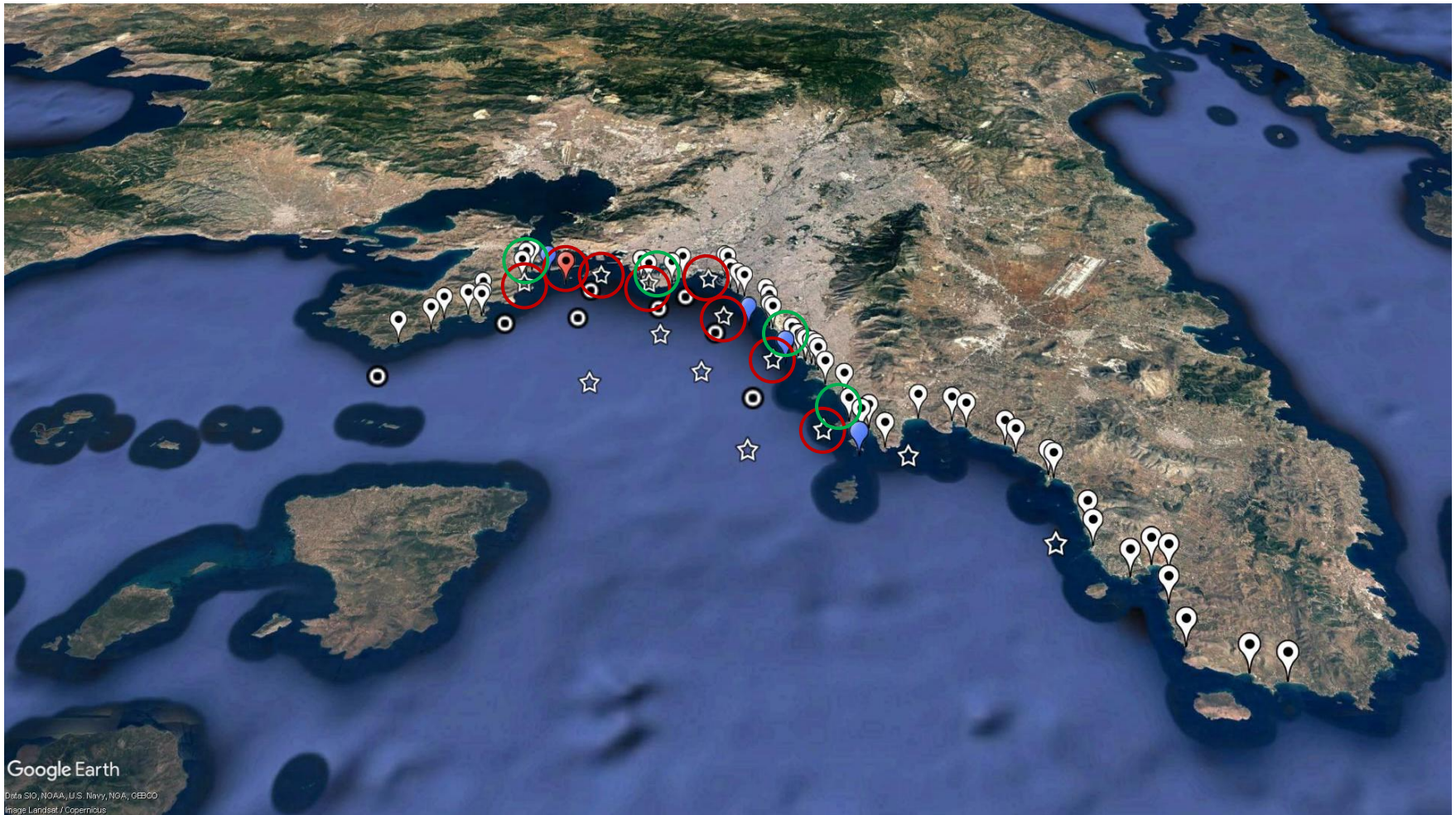
Macro algae



Open-sea waters and sediments



### 3) Bioaccumulation in marine organisms



Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat / Copernicus



Coastal waters



Open-sea sediments



Benthos



Macro algae



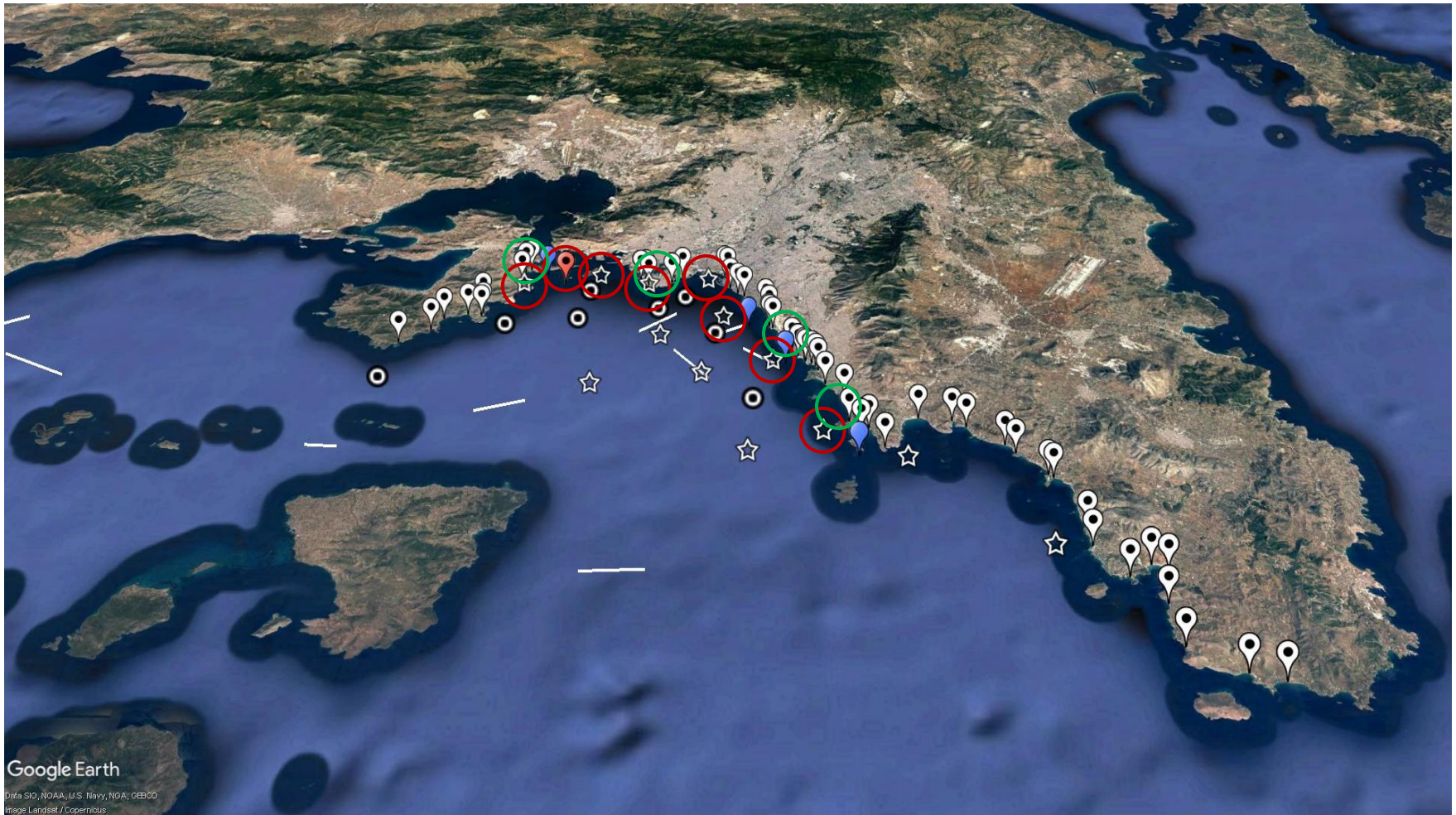
Open-sea waters and sediments



Mussels



### 3) Bioaccumulation in marine organisms



Coastal waters



Open-sea sediments



Benthos



Macro algae



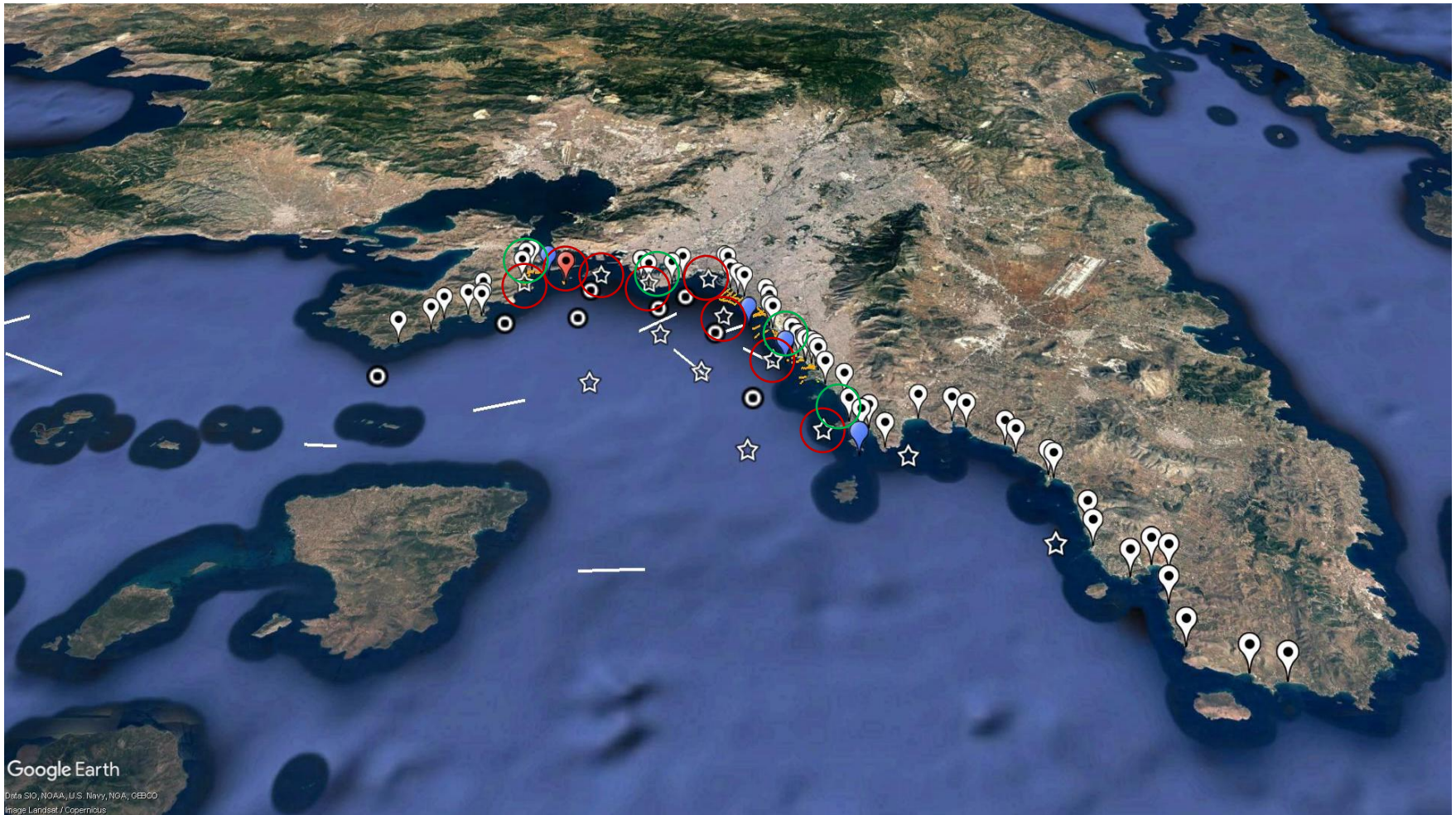
Open-sea waters and sediments



Mussels



## 4) Seabed mapping by optical means (drop camera)



Coastal waters



Open-sea sediments



Benthos



Macro algae



Open-sea waters and sediments



Mussels



Seabed mapping

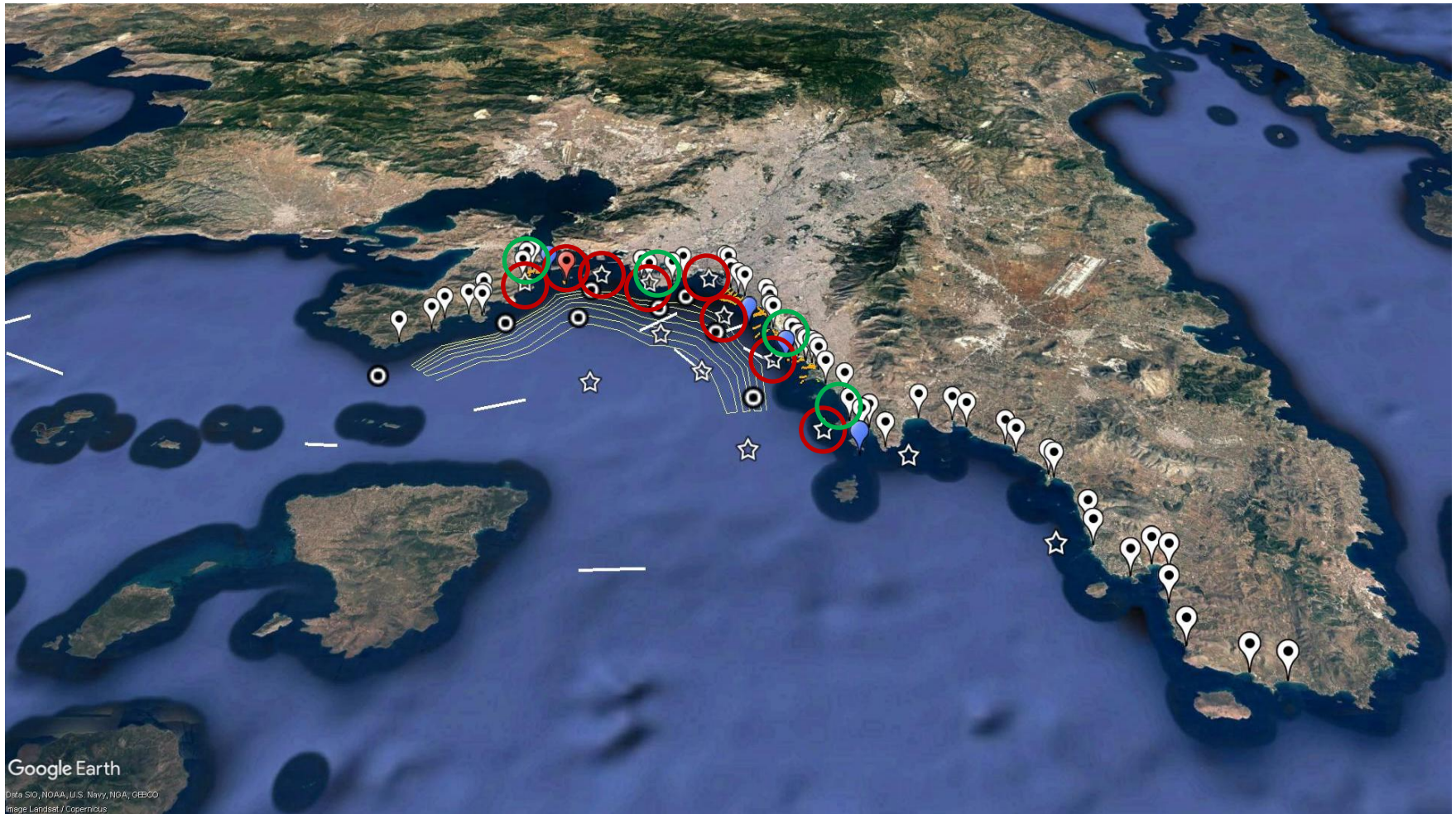
# Outcomes

**The general outcomes** from our monitoring program are:

- The major consequences of the oil spill were constrained along the shoreline and specifically in the areas of Salamis, Ellhniko and Glyfada for a period of three months following the incident.
- After December 2017 there were not major findings along the shoreline regarding the presence of petroleum hydrocarbons.
- Marine organisms seem unaffected by the incident, while also there are no evidence of bioaccumulation in respect to the incident.
- Regarding seabed mapping there were no petroleum residues detected in the zone of 0 to 20 m depth of the studied areas following the conclusion of cleaning operations.



# Proposed: Seabed mapping (>20 m depth) by optical means (ROV)



Coastal waters



Open-sea sediments



Benthos



Macro algae



Open-sea waters and sediments



Mussels



Seabed mapping

**A short slide show on a h#\$@ of a ride...**

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**Thank you for your attention!**