Bottom sediments mineralogical and textural variability in the Madeira shelf

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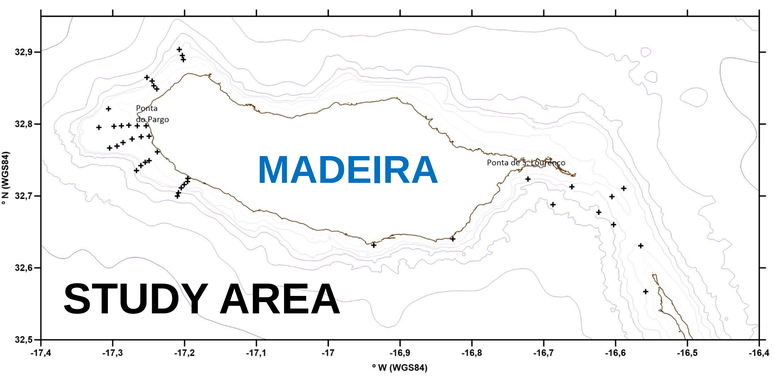
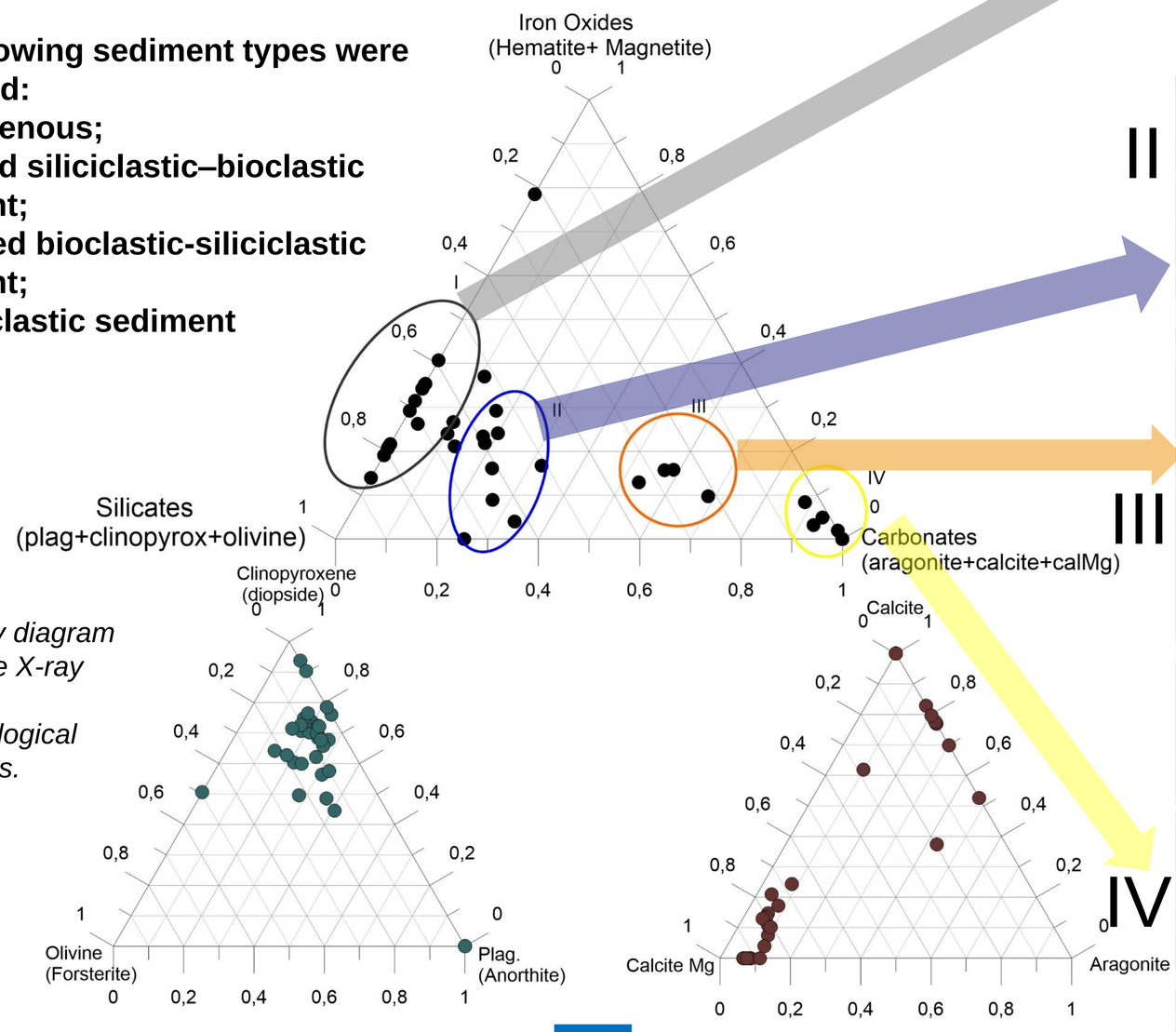


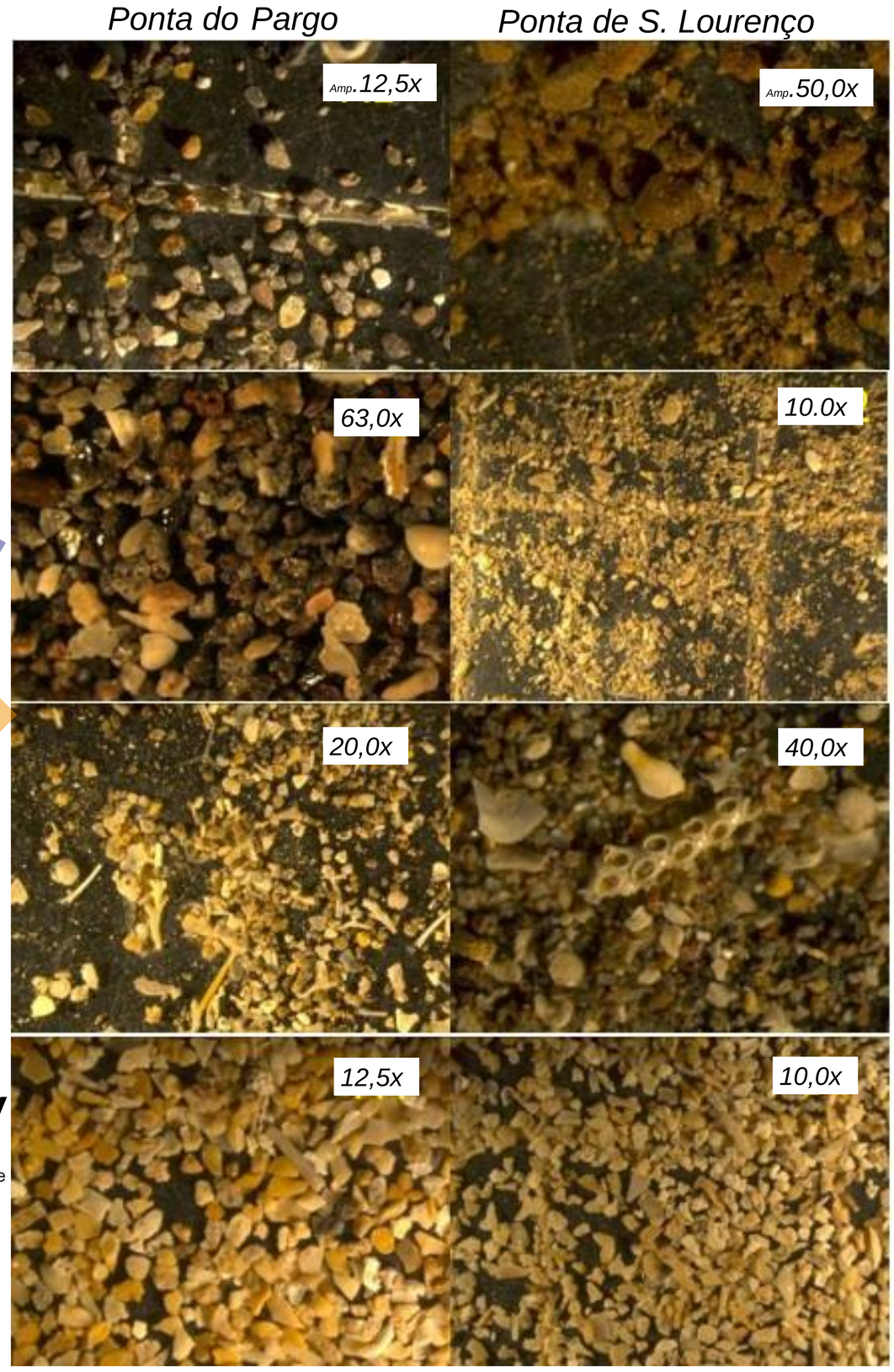
47 superficial samples from the Madeira shelf were classified according to their mineralogical composition (X ray diffraction) and sediment sources (marine and terrestrial).

The following sediment types were identified:
(I) terrigenous;
(II) mixed siliciclastic–bioclastic sediment;
(III) mixed bioclastic-siliciclastic sediment;
(IV) bioclastic sediment

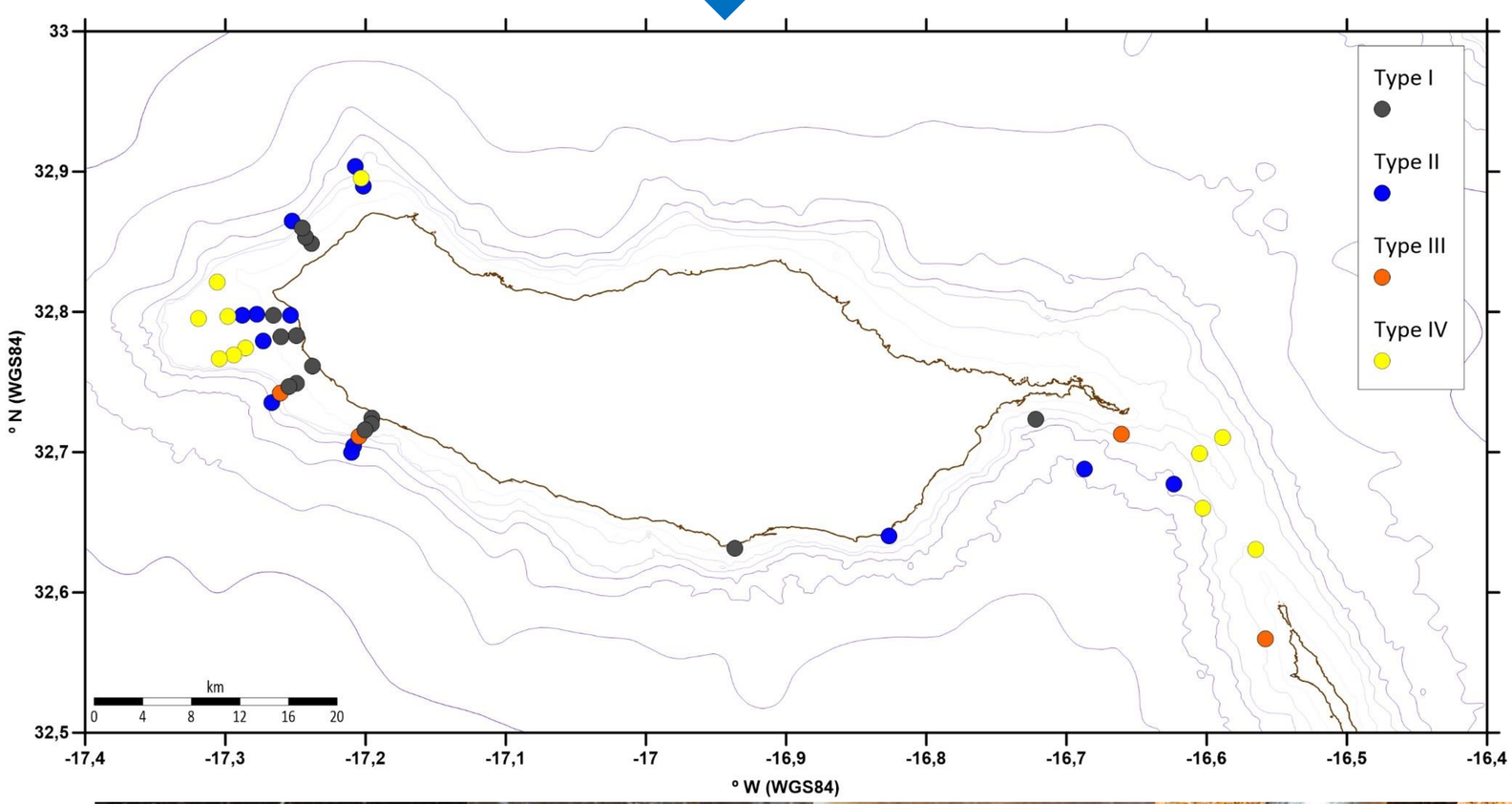


Ternary diagram with the X-ray main mineralogical analysis.

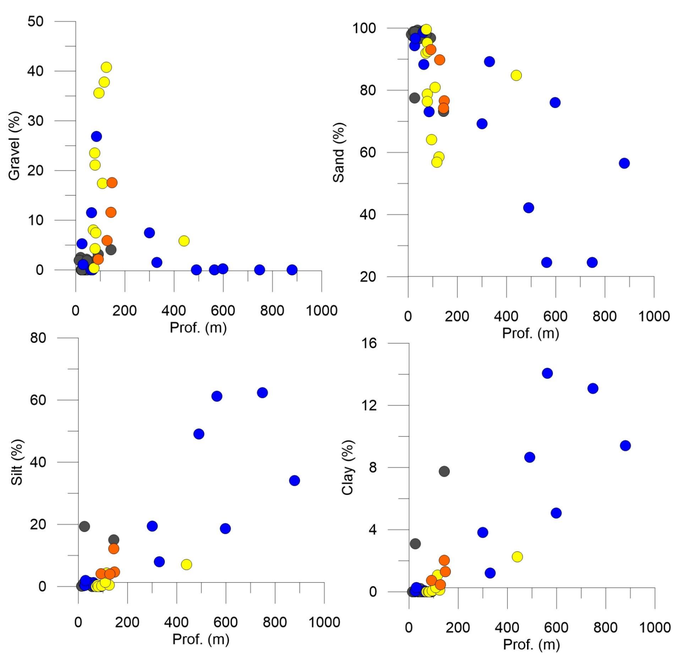
Sediment types: stereomicroscope photos



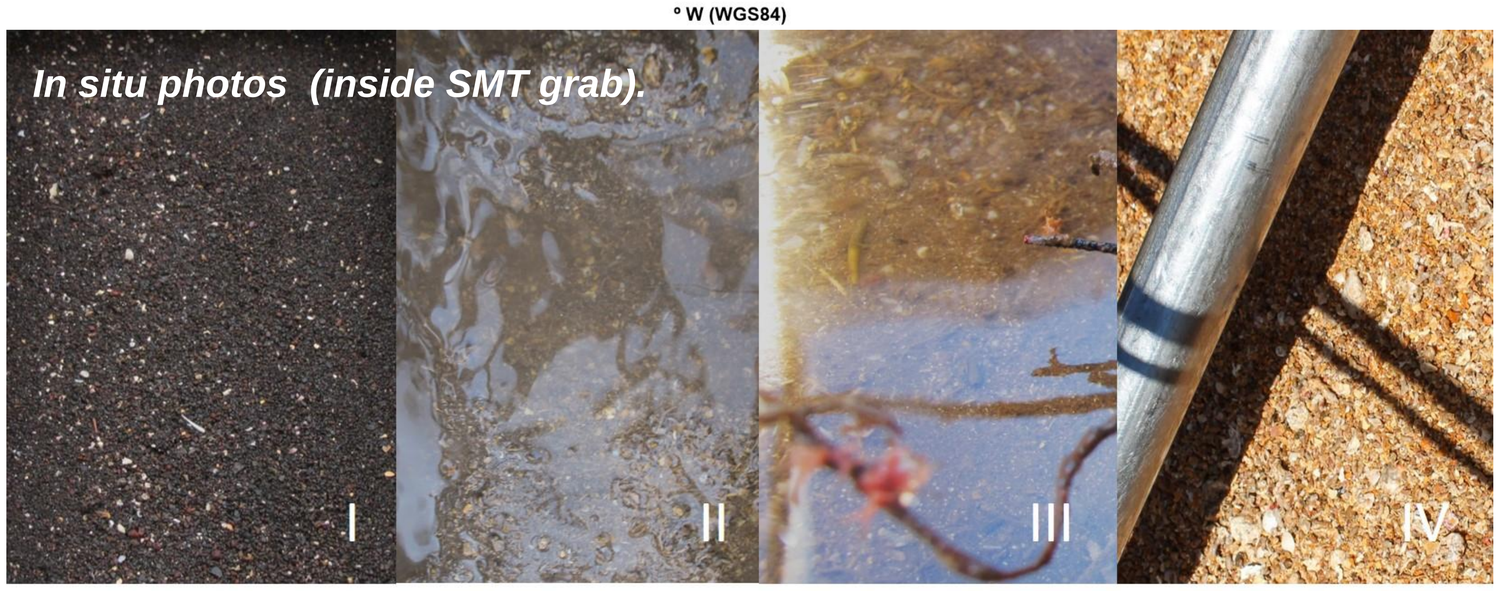
Distribution map of the identified sample types



Sediment types according to depth and textural distribution



In situ photos (inside SMT grab).



FINAL CONSIDERATIONS:

- In **future work** other subtypes will be considered, taking into account the textural variability and carbonate percentage;
- Particle characteristics (color, shape) can also be useful for the **discrimination of modern *versus* relic deposits**;
- The **contribution of biogenic particles** to the carbonate content highlight the need to better understand the biodiversity of the organisms present in the sedimentary cover;
- This sediment classification, can now **be applied to previously collected samples** (2002 and 2007).

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