

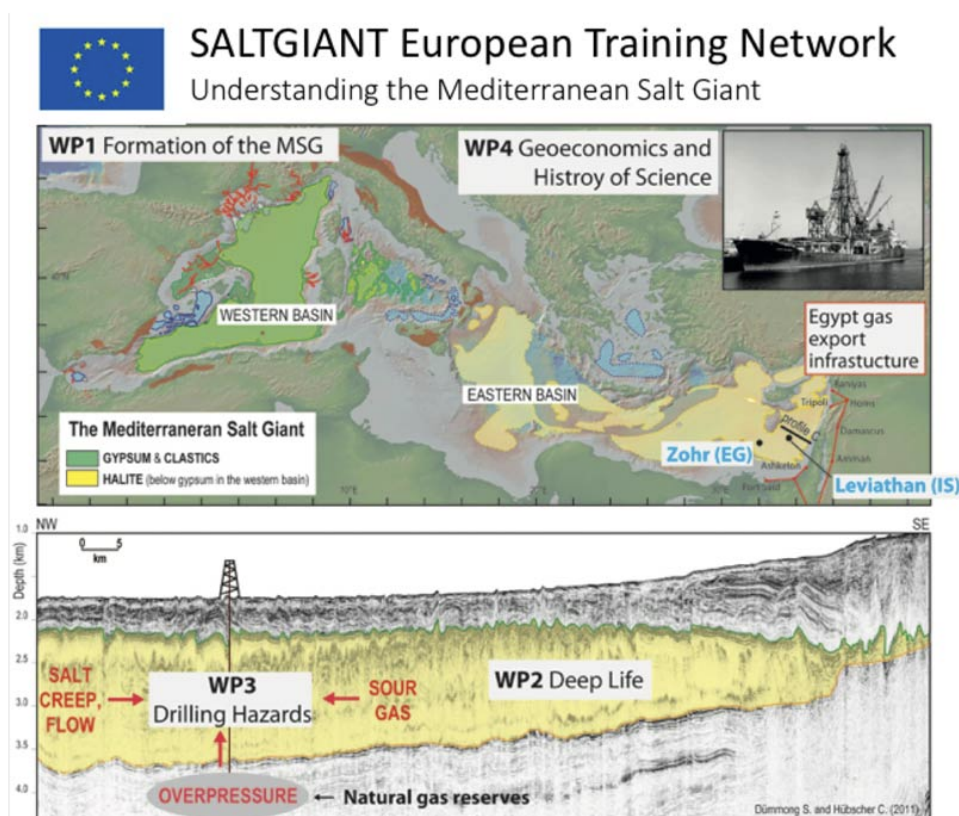


## SALTGIANT Newsletter #5 – January 2021

by Federico Andreetto (ESR 5), Gaia Travan (ESR 13) and the collaboration of the other SaltGiant ESRs

### ABOUT SALTGIANT

SALTGIANT is a rare cross-disciplinary network of natural and social scientists dedicated to understanding the formation of the Mediterranean Salt Giant, one of the largest salt deposits on Earth, and its implications for sub-seafloor microbial life, risk assessment in the oil industry, geo-economics of the Mediterranean region and the history of oceanography.



SALTGIANT contributes to respond to the growing demand for a new generation of scientists working in the interface between the natural and social sciences.

*SALTGIANT is an European project funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement n° 765256.*



SALTGIANT brings together 30 academic organizations (13 beneficiaries, 17 partners), 7 private sector Oil & Gas companies, 2 mining sector companies, 1 biotechnology company, 1 museum, 1 geotechnical institute and 1 specialist in transferable skills training from 12 countries to stimulate interdisciplinary and intersectoral knowledge exchange between geologists, geophysicists, geochemists, microbiologist, geographers and historians in a network with 15 PhD students at its core.

SALTGIANT is developed within the EU MEDSALT COST action: <https://medsalt.eu/the-project/>

## NEWSLETTER

1. **SaltGiant recent publications**
2. **Research highlight**
3. **First semester 2021 activities**
4. **Upcoming events**

### 1. SaltGiant recent publications

Notwithstanding the difficulties all Saltgiant fellows went through during this Covid 19-monopolized period, the hard work they carried out in the previous two years is paying off and the first SaltGiant-funded publications are showing up.

Fadl Raad (ESR3) from the University of Montpellier published his first scientific paper where he compares the MSC seismic expression in the Central Mallorca Depression (Balearic Islands) with outcrops from the Central Caltanissetta Basin (Sicily) and concludes that late Messinian sedimentation occurred in isolated lakes.

Federico Andreetto (ESR5) from Utrecht University followed with his study of the  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios from the ostracods sampled in marginal Spanish basins, suggesting that sedimentation during the wet precessional phases of the Lago-Mare phase occurred here in a relatively full Mediterranean rather than in isolated lakes.

Finally, Beatriz Martinez Rius (ESR14) recently issued her paper about Oceanography and Franco-American Scientific Diplomacy in the Cold War, pointing out that France's oceanographic diplomacy relied on the Centre National pour l'Exploitation des Océans (CNEXO) and on Yves la Prairie.

All the articles are open access and available on the [Saltgiant website dissemination page](#).

Stay tuned, because more has to come.



## 2. Research highlight – joint article

Remaining on the subject of publications, a joint effort of most the Saltgiant ESR's and PI's is about to see the light at the end of the tunnel.

Initiated approximately two years ago, the manuscript of review leaded by Federico Andreetto (ESR5) and his supervisors Wout Krijgsman (Utrecht University) and Rachel Flecker (University of Bristol) went through the first round of (positive) reviews and it is now ready for the re-submission.

After nearly 50 years of research on Stage 3 of the Messinian Salinity Crisis, still unsolved how the marine conditions, that still persist today, were restored at the base of the Zanclean. The amount of cross-disciplinary data that has been generated to date is of great value but, at the same time, data are heavily scattered and their interpretation in terms of Mediterranean-scale paleoenvironmental and paleohydrological significance is often vague. In light of the above, Federico and co-authors generated a comprehensive review document that summarizes the key (seismo)stratigraphic and sedimentological data from the onshore and offshore domains, the key faunal elements, the geochemical dataset and, finally, the different paleoenvironmental, paleoconnectivity and paleohydrological scenarios that have been proposed based on the available dataset.

## 3. First semester 2021 activities: participation to e-conferences

While the first peak of the pandemic in spring 2020 forced a majority of the ESR's to work from home, during the second peak the Universities were mostly accessible. This let the work proceed at a good rhythm, and the most recent results obtained will be presented at different conferences in the next months.

- **vEGU2021:** For the second year, the general assembly of the European Science Union will be completely online, this time in the form of short presentation of PICO (Presenting Interactive Content) posters. Far from letting the travel restrictions reducing their desire to share science, a good number of ESR's will participate to vEGU21, both to co-convene sessions and to present their work, on the 19th and 30th of April 2021.

Three salt-related session will be present at vEGU2021:

-Proxy applications in restricted basins; Mediterranean-Paratethys (Iuliana Vasiliev-Popa, Maria Magluilo, Simon Rouwendaal, Wout Krijgsman)

- Salt and Shale Tectonics : Recent advances and challenges (Virginie Gaullier, Gaia Travan, Bruno Vendeville)

- Evolution of restricted evaporitic basins: paleogeography, hydrogeochemistry, climate and ecosystems (Konstantina Agiadi, Vanni Aloisi, Daniel Garcia-Castellanos)

Francesca, Laetitia, Simon R., Athina, Simon B. and Gaia will present a Pico poster, consisting in the extreme synthesis of their work in a 2-minutes presentation. More material will be available for the public before and after the presentations, allowing a longer discussion about their results.

- **AAPG "Evaporite Processes and Systems: Integrating Perspectives":** another event that will see the participation of a good number of ESR's is the one organized by the American Association of Petroleum Geologists and scheduled for the 14-15th April 2021. Laetitia, Gaia, Jimmy, Francesca, Athina, Fadl and Simon B. will share their work, this time in the form of slides presentation.



## 4. Upcoming events : 2021 events

Some of the events planned for 2020 had to be re-scheduled due to COVID-related travel restrictions.

The actual program still suffer from the uncertainties about the evolution of the pandemic and the impossibility to predict the travel restrictions of all the country involved.

- SaltGiant workshop #4 (March, 2<sup>nd</sup> to 4<sup>th</sup>): The event will be online and restricted to the SaltGiant consortium. It will focus on updates of the ESRs results.
- Transferable skills 3 (starting end of March): Managing of research -restricted to ESRs and organized by Simona Cerrato from SISSA Medialab. It will provide ESR's knowledge on Marketing (Marketing in Research/Projects, Social Media & Personal Branding, Marketing Strategy, Learning to Interview, Basics of Design Thinking), Leadership development (What is leadership and what is not, Leadership styles, Leadership in scientific environment) and Finance and budget (Accounting basics, Financial statements, Cash flow, Financial plans, Metrics definition, Tips and tricks for practical use).
- May, 17th-21th in Banja Luka (Bosnia Herzegovina): Short course 5 « Salt History » (event restricted to the ESRs on Monday 17th and Tuesday 18th) + Workshop + SBM 4. This event will be held in Banja Luka (Bosnia) and will last 5 days (2 days of Short course on Salt History + 2,5 days of Workshop + 0,5 Supervisory Board Meeting). The participants will attend a course in "History of Salt" in the Museum of Republic of Srpska and will visit the Faculty of Mining, Geology and Civil Engineering (where one or two lectures will be taught), visit to the mines, salt factory (optional) and archaeological sites/museums. A second part of this week will be dedicated to SaltGiant workshop and supervisory board meeting.

*Depending on the travel restrictions, this event could be postponed or organized online.*



*Fortress of Banja Luka*

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- SaltGiant Short course 4 (Paris, 14-17 June 2021): Social sciences -restricted to ESRs. The Short course organized by Université Sorbonne and Sciences Po will focus on economic, social, historical, and philosophical aspects of salt giant science.
- SaltGiant Field course 2 (Sorbas in Spain, Late September - October 2021): Drilling Training School. The SaltGiant Field Course Drilling Training School, organized by the CNRS Montpellier, will convey basic knowledge on borehole drilling/coring and downhole logging methods to the ESRs. It will also provide hands-on experience on core data description and logging data acquisition, processing and interpretation. It will be an occasion to generate the first continuous record across the MSC deposits in the Sorbas basin and try to solve still open questions regarding the MSC in this important marginal basin.



MedSalt training [3: The Messinian Salinity Crisis from a field-work perspective](#) (Sorbas – Spain, April 22–27, 2019).

- SaltGiant Field course 3 (Israel, November 2021): Dead Sea hypersaline environments “From Evaporation to Evaporite”. Organized by the GSI, this trip will last 5 days and will deal with various topics related to the Dead Sea, considered to be a modern analogue to a Messinian salt basin. Some visits will be done to the Dead Sea Observatory and the GSI labs. Field trips are planned around the Dead Sea and the Negev Desert, with the objective to illustrate and understand the mechanisms related to salt accumulation and deformation within a recently formed salt basin. Some conferences will be held in between the field trips.





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