

:: Deep-sea Record of Mediterranean Messinian events (DREAM-II) - 20th - 23rd January 2014 Paris (France)

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The MagellanPlus DREAM-II workshop held in Paris in January 2014 follows only 6 months after the DREAM workshop held in Brisighella (Italy) (See *ECORD Newsletter #21*). The goal of the DREAM initiative is to prepare a **Multi-phase Drilling Project (MDP)** to address a variety of exciting scientific themes that include the formation of one of the largest salt deposits (salt giants) in Earth's history, and are extended to the tectonic, hydrological and biological consequences of this extraordinary event. The fact that the Mediterranean Salt Giant is the youngest - it was formed about 6 million years ago during the Messinian stage of the Miocene - is still contained in the sedimentary basin where it formed and has suffered limited deformation, offers a unique opportunity to investigate geological, geochemical and biological processes in action. We acknowledge the participation of Gilbert Camoin, Director of EMA (ECORD Managing Agency), in the Paris workshop, who underlined the strong support offered by ECORD to drilling initiatives in the Mediterranean Sea.

In Paris we worked on preparing the Mediterranean MDP called "Uncovering

a Salt Giant". A presentation by Dick Kroon (Chair of the Science Evaluation Panel (SEP)) was particularly useful in directing our MDP preparation and submission strategy. We formulated the fundamental scientific questions that are addressed in four pre-proposals: **Messinian Salinity Crisis, Salt Tectonics and Fluids, Surface to Deep Earth Connections** (derived from the *GOLD drilling project*) and **Deep Biosphere**. We will submit the umbrella proposal and three pre-proposals for the April 1st 2014 deadline. The deep biosphere proposal, which is the most recent, will be prepared for the following deadline. We also worked on developing a Sapropel theme that will evolve into another pre-proposal in the near future.

The first day of the workshop was dedicated to reviewing the state of the drilling proposals. A presentation by Sierd Cloething (Utrecht University) made it clear that DREAM will benefit from collaborating with the European network TOPOEUROPE ("The Geoscience of Coupled Deep Earth - Surface Processes" - <http://www.topo-europe.eu/>), specifically on the link between vertical tectonics and the rapid loading and unloading

of the upper lithosphere during the emplacement of the Mediterranean Salt Giant. We then divided into four working groups to further develop our drilling proposals. The complex task of choosing drilling sites, including alternate sites, which are adapted to tackle the wide range of questions addressed by this MDP was carried out. Based on our database of 2-D and 3-D seismic surveys, we located one deep drilling target in the Levantine Basin (eastern Mediterranean) and a shallow-to-deep transect comprising four drilling targets in the western Mediterranean basin. Our approach is multi-platform, with some sites accessible only with the *Chikyu* in riser mode, and others accessible with the riserless *JOIDES Resolution*.

The road to Mediterranean scientific drilling is still long, but an important step forward was made in Paris. The actions we are considering for the coming months include organising a workshop in Japan (JAMSTEC) and the submission of a COST action for long-term scientific networking.

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DREAM-II Workshop participants: 1 Nicolas Waldmann, 2 Angelo Camerlenghi, 3 Terry McGenity, 4 Dick Kroon, 5 Lucien Montadert, 6 Marc de Rafelis, 7 Agnès Maillard-Lenoir, 8 Andrea Moscariello, 9 Daniel Garcia-Castellanos, 10 Rachel Flecker, 11 Christian Gorini, 12 Marina Rabineau, 13 Veronique Gardien, 14 Francisco-Javier Sierro, 15 Daniel Aslanian, 16 Speranta Popescu, 17 Antonio Caruso, 18 Fabrizio Lirer, 19 Vinicio Manzi, 20 Stefano Lugli, 21 Andrea Arguani, 22 Alessandra Negri, 23 Johanna Lofi, 24 Francisco José Jimenez-Espejo, 25 Gert deLange, 26 Junichiro Kuroda, 27 Vanni Aloisi, 28 Nobu Eguchi, 29 Lucas Lourens. Not on the photo: Christian Hübscher, Gilbert Camoin, Richard Hedley, Rolf Kipfer, Sierd Cloething, Zohar Gvirtzman, Catherine Pierre, Jeffrey Poort and Jean-Marie Rouchy.