

FLAWS

Minutes of Management committee (MC) and working group (WG) meeting, Bologna 12th – 14th February 2014

12th February

Field Trip to the mud volcanoes of the Salse di Nirano Natural Reserve

From 15:00

MC-meeting (MC members and Substitutes)

- Accepting the Agenda; welcome; election and confirmation of WG leaders.
- Marianne Nuzzo wants to resign as co-leader in WG4. A new co-leader could not be found on the meeting. This issue will be followed up in the near future.
- Approval of the Core Group (CG) composed of the WG leaders, chairs and STSM leader: Luca Gasperini, Eulàlia Gràcia, Pierre Henry, Christian Hensen, Rolf Kipfer, Mark Lever, Marianne Nuzzo, Marta Perez-Gussinye, Paola Vannucchi, Heiner Villinger
- The CG will be entitled to take quick decisions up an amount of up to 5000€. Activities exceeding 5000€ must be approved by MC.
- Next meeting in Athens 10th-12th September 2014: venue: near the institute in Saronida; field trip in Korinthos.
- FLOWs shall have the web address www.flows-cost.eu. FLOWs website: hidden, but will be published as soon as COST members distributed their input (Cruise data, documents and publications). The website will be published until May 1st at the latest and will be presented by Christian Hensen on ESSEM meeting on the 12th of May 2014 in Dubrovnik.
- Project deliverables for 2014: (1) Writing a technical paper (summarizing the MOU: contains technical developments, cruises, future projects) linked to Wikipedia articles about FLOWs topics. Not possible to “advertise” FLOWs by including a link to FLOWs website within Wikipedia articles, but relevant key words (FLOWs topics) and links to regional geology will be set up within existing Wikipedia articles and references.
- Future activities: give an overview of relevant cruises; using the community to write proposals for shiptime/cruises
- 2015: Possible conference in Turkey in March for 3 days + 3 day training course + 1 / 2 day(s) meeting, topics: Geohazards (Ankara), Geothermal Systems, Gas-Petroleum Reservoirs; Comment: training schools should last min. 3 days and could be combined with a workshop.

Presentation of WG members including background, field and area(s) of interests, goals and expectations regarding FLOWs (presentations will be made accessible on the internal part of the FLOWs webpage)

WG1: Heat and fluid flow at Transform Type plate boundaries: geophysical, geochemical, micro- and macro-biological data and modeling (WG leaders Henry/Lever)

- *Mark Lever (University of Aarhus, Aarhus, Denmark)*
- *Pierre Henry (CNRS Europle de l'Arbois, Marseille, France)*
- *Marjan Delipetrev (Faculty of technical and Natural Sciences, Stip, FYR Macedonia)*
- *Christian Hensen (Geomar, Helmholtz Center for Ocean Research, Kiel, Germany)*
- *Galip Yuce (Hacettepe University, Department of Geological Engineering, Ankara, Turkey)*
- *Marianne Nuzzo (Integrated Geochemical Interpretation Ltd, Bideford, UK)*
- *Gabriela Carrara (GEOPHI, Bologna, Italy)*
- *Luis Pinheiro (CESAM, University of Aveiro, Aveiro, Portugal)*
- *Carlos Garrido (IACT, CSIC – UGR, Granada, Spain)*
- *Francisca Martinez-Ruiz (CSIC – UGR, Granada, Spain)*
- *Grigoris Rousakis (Hellenic Centre for Marine Research, Anavissos, Greece)*

WG 2: Deep lithospheric structure, mechanical and seismic behaviour of Transform-Type plate boundaries (WG leaders Gracia/Perez-Gussinye)

- *Alina Polonia (CNR-Institute of marine Sciences (ISMAR), Bologna, Italy)*
- *Paola Vannucchi (University of London, Royal Holloway, London, UK)*
- *Walter Kurz (University of Graz, Graz, Austria)*
- *Marta Perez-Gussinye (University of London, Royal Holloway, London, UK)*
- *Marc-Andre Gutscher (Institut Universitaire Europeen de la Mer, Brest, France)*
- *Christopher MacLeod (School of Earth and Ocean Sciences, University of Cardiff, UK)*
- *Luca Gasperini (CNR-Institute of marine Sciences (ISMAR), Bologna, Italy)*
- *Eulalia Gracia (Institute of Marine Sciences, Barcelona, Spain)*
- *Sonia Silva (University of Lisbon, Lisbon, Portugal)*
- *Luis Matias (University of Lisbon, Lisbon, Portugal)*
- *Sara Martinez Loriente (University of Birmingham, Birmingham, UK)*
- *Umberta Tinivella (OGS, Trieste, Italy)*
- *Pedro Terrinha (University of Lisbon, Lisbon, Portugal)*
- *Nevio Zitellini (CNR-Institute of marine Sciences (ISMAR), Bologna, Italy)*
- *Marco Ligi (CNR-Institute of marine Sciences (ISMAR), Bologna, Italy)*

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Presentation of WG members including background, field and area(s) of interests, goals and expectations regarding FLOWS (presentations will be made accessible on the internal part of the FLOWS webpage)

WG3: Technical Innovation in physico-chemical sensor development for the identification of precursory seismic activity in deep-oceans (WG leaders Kipfer/Villinger)

- *Heiner Villinger (University of Bremen, Bremen, Germany)*
- *Aristomenis Karageorgis (Hellenic Center for Marine Research, Annavyssos, Greece)*
- *Mark Schmidt (Geomar, Helmholtz Center for Ocean Research, Kiel, Germany)*
- *Franco Italiano (INGV, Palermo, Italy)*

WG4: Data integration and dissemination (WG leaders Gasperini/Nuzzo)

- *Luca Gasperini, Christian Hensen and Marianne Nuzzo: goals, background, and ideas for integration and dissemination*
- *Presentation by Pina Springer (Data management team, Geomar, Kiel, Germany): Data management opportunities at Geomar and first steps towards a FLOWS website and data exchange portal (presentation will be accessible on the internal part of the FLOWS webpage)*

Short term scientific missions (STSM) and training schools (TS)

Presentation on general guidelines concerning STSM and TS by Tania Gonzalez

STSM:

- Duration: 5 days (min.) to 6 months (max.)
- Participants: preferably young scientists (PhD students and post docs, no graduate and undergraduate students, only COST member countries!)
- fund: max 2500€ in Europe, max 3000€ in a IPC (New Zealand, South Africa, Argentina)
- A summary of most important rules will be provided by Tania and distributed to all participants.

Training school:

- Duration: min 3 days max. 15 days
- fixed fund: max. 1500€ (per person), 160€/Day for trainees
- Travel (trip, accommodation, etc.) reimbursed for trainers similar to meeting refunds
- venue: on a ship? (Tania will check)
- Participants: an expert from IPC can be invited as a trainer (no honorary fees possible), 1 or 2 participants from NNC as trainees (eligible), Participants from COST member countries

WG meeting results:

WG1:

- Topics: Episodicity of mud volcanism; develop models to geologically and geophysically characterize the environments; development of hypotheses and ways to test them; Age/Time and origin of fluids; Analysis of rock samples; interactions between lithosphere, coordination of research, seismics for multi-scale imaging; link to the deep biosphere
- Goals: apply/develop geochemical proxies and traces, to understand the origin of fluids, interactions of seismicity, fluid-flow paths and fluid release, to study interactions and model environments
- Future activities: Ship time: IODP, MEBO and gravity/piston cores; project program proposals for IODP, ICDP, Marie Curie; training schools in 2015: visit to Amik Basin (Dead Sea Fault), Potential training on serpentinization in the Ronda peridotites/serpentine (Spain) proposed by Carlos Garrido.

WG2:

- Goals: 1) What is the long term effect of transform faulting on the structure and evolution of oceanic lithosphere?; 2) What is the role of fluid-rock interaction on the rheology of oceanic lithosphere?; 3) How does serpentinization affect seismogenesis (EQ rupture nucleation, and propagation) along TTPB? Implications for geohazard assessment; (4) How do transform faults respond to different kinematic regimes and how do they terminate and/or link to other plate boundaries?; (5) What is the connection between deeply rooted tectonic processes and fluid expulsion phenomena?; 6) Can tremors and low-frequency earthquakes (indicative of fluid-fault interactions) be detected at the study sites?
- Future activities: Potential proposals for EUROFLEETS 2 at North Atlantic and proposed to submit a proposal (Deadline on 27th march 2014); joint cruise offshore Iberia within the SWIM-GLORIA project; Training School in Cyprus (5days), field trip based on a Workshop in Cyprus

WG3:

- Goal: Stimulate construction/deployment of in situ sensors for measuring/monitoring of temperature, fluid flow, dissolved constituents (e.g. noble gases)
- First step is to survey which sensors are available for long-term measurements and what are the requirements to the use of the sensors.
- To do list established to reach the goal: (1) Compilation of a list of parameters related to tectonic activity; (2) Compile available sensor data, which to be published on the data portal of the FLOWS website; (3) Define gaps, link groups e.g. to EMSO, encourage the exchange of instrumentation and people through STSM.

WG4:

- the FLOWS website is in preparation. Should be located at www.flows-cost.eu or similar
- Creation of a FLOWS flyer
- FLOWS members will send their relevant publications starting from 1st January 2013, pictures/figures, logo/banner proposals, as well as short captions illustrating the scientific work in the frame of FLOWS until the end of February
- An internal website/ portal will be provided at GEOMAR for data exchange, distribution of internal news (planned activities), and documents among WG members
- Links to relevant Wikipedia articles will be provided, as well as a direct link to PANGAEA
- Pierre Henry and Marco Ligi agreed to create/modify an article on oceanic transform faults
- Cruise tracks and related files can be displayed in GoogleEarth through network links

14th February

Final discussion:

- Logo: Each participant can make suggestions; they will be distributed. Decision will be taken with MC
- STSM: Has to be implemented by an institution of a COST member country. Each participant has to fill in an online application form and to write a scientific report after finishing the STSM. STSM should start at least 4 months before the end of the first project period (30.11.2014). STSM should predominantly aim at training of the applicant. Suggestion: STSM on a cruise in May from CNR on mud volcanism, STSM Call will be published on FLOWS website, Tania Gonzalez-Ovin will provide a summary of STSM guidelines. STSM will be collected by STSM manager Paola Vannucchi. Decision on STSM by CG. STSM are dedicated to PhDs and Post Docs; senior scientists can apply but no students.
- Upcoming activities: Athens meeting: plan topics/activities (e.g. Training school), plan for 2015: e.g. budget plan
- Budget: It is possible to deviate from the budget plan, e.g. to comply with unforeseen events.

Core Group meeting:

- Invitation of experts (possible up to 4 external experts) for the upcoming meeting in Turkey in March 2015. H. Villinger will enquire about current activities and interest of Andy Fisher (US colleague and expert for crustal hydrogeology).
- Future topics/current activities: Potential IODP-targets, drilling of mud volcanoes, coring targets in general, including satellites to show the hydrocarbon activity e.g. at the Black Sea. Cruise proposal possible at the Eric Schmidt Foundation, e.g. for Marmara Sea activities (Open Call in 2016); IODP pre-proposal in prep. to drill the Romanche FZ on the Brazilian Atlantic Ocean margin in course (Paola Vannucchi).
 - Research areas: Gulf of Cadiz (focus on Jurassic-Age Crust, kinematics), Marmara (focus on seismicity and fluids, monitoring), Madeira Abyssal Plain (normal crust, but heat flow anomalies)
 - Suggestion: to participate in the next cruise of Heidrun Kopp (GEOMAR) within the project DIONYSOS in 2015
 - Plans for 2015: MC/WG meeting and conference in Ankara/Turkey (March 2015);
 - Plans for 2016 Training schools/field trip to ophiolite complex on Cyprus
- Homework until the meeting in Athens:
 - Define major target research areas,
 - Explore funding possibilities for joint EU project, e.g. HORIZON 2020