



Activity Report 2025 – Task Forces / Coordination Committees

Project Title: Task Force VI Sedimentary Basins

Project No.: VI

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1. Highlights of recent ILP Task Force work/results

The key highlight is the organisation of the 19th Workshop of the International Lithosphere Program Task Force VI Sedimentary Basins, hosted by King Abdulaziz City For Science And Technology (KACST) in Riyadh, Saudi Arabia, between November 30 – December 5 2025 with around 200 participants. Details are available at <https://ilp19.kacst.gov.sa>. The workshop was a success, mobilizing key academia and industry participants both from many countries across the Arabian Peninsula and from other international participation. The workshop included two full days of pre-conference fieldtrip in the Mesozoic sediments of the Arabian Platform north and south of Riyadh, including the North Riyadh Geopark, and three full days of excellent scientific presentations on sedimentary basins and their underlying lithosphere, as well as discussion panels on Topo-Arabia, ore deposits and geoparks.

The Task Force is in the final phases of editing the special volume for Global and Planetary Change: “Tectonics, sedimentation and magmatism in sedimentary basins – processes and societal relevance”, dedicated to the International Lithosphere Program Task Force VI Sedimentary Basins meetings 2024 in Abu Dhabi and 2024 in Krakow, Poland in collaboration and as a joint venture with ILP Topo-Europe. The volume heads for 25 high impact scientific contributions, which is an excellent success.

The Task Force is organising a new 2026 special volume entitled “Understanding the coupled evolution of orogens, sedimentary basins and their fluid-rock interactions”, dedicated to the 19th workshop of the International Lithosphere Program Task Force VI Sedimentary Basins in Riyadh, Saudi Arabia that just finished in December 2025. The journal and contributions are under construction.

2. Presence at international meetings/workshops (this year)

All efforts were dedicated to the 2024 19th Workshop of the International Lithosphere Program Task Force VI Sedimentary Basins in Riyadh, Saudi Arabia.

3. Important publications of ILP Task Force members (max. five)

Arts, J.P.B., Niemeijer, A.R., Drury, M.R., Willingshofer, E., Matenco, L.C., 2024. The frictional strength and stability of spatially heterogeneous fault gouges. *Earth Planet. Sci. Lett.* 628, 118586. <https://doi.org/10.1016/j.epsl.2024.118586>

Nader, F.H., Matenco, L.C., Haq, B.U., 2024. Conceptualizing fluid-rock interaction diagenetic models with focus on tectonic settings. *Earth-Sci. Rev.* 258, 104951. <https://doi.org/10.1016/j.earscirev.2024.104951>

Arts, J.P.B., Rodrigues, D., Nader, F.H., Drury, M.R., Matenco, L.C., Willingshofer, E., Niemeijer, A.R., 2025. Interaction between diagenesis and faulting in sandstone reservoirs:

Inferences from the Groningen gas field. *Journal of Structural Geology* 201, 105554. <https://doi.org/10.1016/j.jsjg.2025.105554>

Nistor, V., Matenco, L., Munteanu, I., Willingshofer, E., 2025. Defining the formation mechanism of regional scale-folds. *Global Planet. Change* 254, 105033. <https://doi.org/10.1016/j.gloplacha.2025.105033>

Randjelovic, N., Matenco, L., Krstekanić, N., Maleš, M., Stojadinović, U., Toljić, M., Willingshofer, E., Trivić, B., 2025. Crustal response to slab tearing and detachment: Inferences from the kinematics of the Dinarides-Hellenides transition. *Global Planet. Change* 252, 104837. <https://doi.org/10.1016/j.gloplacha.2025.104837>

4. New contacts (this year)

- Setup of new collaborations as a result of the ILP Riyadh Workshop with many academia and industry organisations in Arabian Peninsula, including the practical organisation of a Topo-Arabia initiative in collaboration with Sierd Cloetingh.
- Continuation of the large-scale international collaboration focussed on the East Mediterranean basins (Levant Basin, offshore Egypt), Central Europe and Arabian Peninsula. Academic groups: University of Utrecht, IFP Energies nouvelles, RWTH Aachen University, University of Cyprus, University of Thessaloniki (Greece), University of Lebanon, Sorbonnes University (France), Imperial College, London (UK); Cairo Univeristy (Egypt). Industrial groups: Total, Noble Energy, Cyprus Hydrocarbon Company, Eni, Shell, ExxonMobil, Equinor; Governmental groups: Cyprus Energy Service (Gov. Cyprus), Geological Survey Department of Cyprus, Lebanon Petroleum Administration (Ministry of Energy), Lebanese National Council for Scientific Research (L-NCSR).
- Continuation of the collaboration with ILP Topo-Europe and the Topo-Transylvania collaborative networks.

5. Usage of ILP funding (this year)

The entire ILP funding (2025) has been dedicated for the organization of 19th Workshop of the International Lithosphere Program Task Force VI Sedimentary Basins, hosted by King Abdulaziz City For Science And Technology (KACST) in Riyadh, Saudi Arabia, between November 30 – December 5 2025. The funding has been used entirely for the activities of the workshop.

6. Activities planned for 2026

The Task Force is organising a new 2026 special volume entitled “Understanding the coupled evolution of orogens, sedimentary basins and their fluid-rock interactions”, dedicated to the 19th workshop of the International Lithosphere Program Task Force VI Sedimentary Basins in Riyadh, Saudi Arabia that just finished in December 2025.

Organization of the 20th Workshop of the International Lithosphere Program Task Force VI Sedimentary Basins that will take between October 16-19, 2026, in Mendoza, Argentina in conjunction with 7th International Conference of Palaeogeography.

Note that outside the special volume dedicated with the Riyadh meeting, the 2026 activities of the International Lithosphere Program Task Force VI Sedimentary Basins will be organized by its new leadership, Piotr Krzywiec from the Polish Academy of Sciences Institute of Geological Sciences in Warsaw, Poland, and Xiumian Hu, Nanjing University, School of Earth Sciences & Engineering, Nanjing, China.

Appendixes:

Some of the participants to the 19th Workshop of the ILP Task Force VI Sedimentary Basins in Riyadh, Saudi Arabia, the conference days 3-5 December 2025.



Some of the participants to the 19th Workshop of the ILP Task Force VI Sedimentary Basins in Riyadh, Saudi Arabia, the first fieldtrip day 1 December 2025.



Some of the participants to the 19th Workshop of the ILP Task Force VI Sedimentary Basins in Riyadh, Saudi Arabia, the second fieldtrip day 2 December 2025.

