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Royaume du Maroc  
Ministère de l'Enseignement  
Supérieur, de la Recherche  
Scientifique et de la Formation  
des Cadres

## Mediterranean Desert Margin and Drylands Workshop (MULTIPP)

6 - 9 March 2018, Leipzig, Germany

### Time schedule

#### Tuesday, 6 March 2018

18.00 – 22.00h **Icebreaker** (Registration)

#### Wednesday, 7 March 2018

8.30 – 9.00 h                    **Registration**

9.00 – 9.30 h

**Opening** of the workshop

*Welcome by Vice-Rector for Research and Young Academics – Prof. Dr. Erich Schröger*

*Welcome by Dean (Faculty of Physics and Earth Sciences) – Prof. Dr. Jürgen Haase*

*Welcome by MULTIPP organizers*

Prof. Dr. Christoph Zielhofer, Prof. Dr. Michael Vohland, Dr. Mathias Ulrich

9.30 – 11.00 h

**Oral Session 1:** (Chair: JAN ESPER, Mainz; DOMINIK FAUST, Dresden)

*Holocene time-scale – Reconstruction of Mediterranean climate and environmental changes*

9.30 – 9.50 h CHRISTOPH ZIELHOFER (Leipzig)

“MULTIPP project – a Mediterranean and global perspective”

9.50 – 10.10 h ABDELFAH BENEKADOUR (Marrakech), HENRY LAMB, MALANY LENG, ALI RHOJJATI, SAID ZEROUAL

“Palaeolimnological and palaeohydrological reconstruction during the last 4000 yrs in Tisli Lake system, High Atlas, Morocco”

10.10. – 10.30 h WILLIAM FLETCHER (Manchester)

“Quaternary palaeoecology in Morocco: recent advances and future perspectives”

10.30 – 10.45 h DANIEL WOLF (Dresden), DOMINIK FAUST

“Spatial scales in fluvial archive research - Challenges and opportunities”

10.45 – 11.00 h STEFFEN MISCHKE (Reykjavík)

“Analyses of stable oxygen and carbon isotopes of biotic and abiotic carbonates in lake sediments”

11.00 – 11.30 h

**Coffee break**

11.30 – 13.00 h            **Discussion sessions**

**Working Group 3 - Recent Past (Last 100 years) – Human Environment Interaction**

(Chair: N.N. / Minutes: DAVID KREUER, Leipzig)

**Working Group 5 - Rapid Climate Change during the Holocene**

(Chair: CHRISTOPH ZIELHOFER, Leipzig / Minutes: HANS VON SUCHODOLETZ, Leipzig)

13.00 – 14.00 h            **Lunch break**

14.00 – 15.30 h

**Oral Session 2** (Chair: ADEL FETTAH BENKADDOUR, Marrakech)

*Holocene time-scale – Reconstruction of Mediterranean climate and environmental change*

14.00 – 14.15 h JAN ESPER (Mainz)

„Tree-ring contribution to MULTIPP“

14.15 – 14.30 h ANDREAS VÖTT (Mainz), PETER FISCHER, HANNA HADLER, TIMO WILLERSHÄUSER

“Recognizing and analyzing Holocene extreme events and their triggers along a transect across the eastern Mediterranean – MEDXTREME”

14.30 – 14.45 h HANS VON SUCHODOLETZ (Leipzig), CHRISTOPH ZIELHOFER, SILVAN HOTH, JOSEFINE UMLAUFT, BIRGIT SCHNEIDER, CHRISTIAN ZEEDEN, LASHA SUKHISHVILI, DOMINIK FAUST

“Flooding research: The past is the key to the future - an example from the Greater Caucasus”

14.45 – 15.00 h DENIS SCHOLZ (Mainz), ALEXANDER BUDSKY, REGINA MERTZ-KRAUS, CHRISTOPH SPÖTL, LUIS GIBERT, KLAUS PETER JOCHUM, MICHAEL DEININGER, JASPER WASSENBERG

“Flowstones from Cueva Victoria, south-east Spain – a sensitive archive of past climate change during the last 450 ka in one of the driest regions of Spain”

15.00 – 15.15 h MICHAEL DEININGER (Mainz), FRANK MCDERMOTT, JÖRG LIPPOLD, JASPER WASSENBERG, MANFRED MUDELSEE, DENIS SCHOLZ

“Coherency of Holocene European speleothem  $\delta^{18}\text{O}$  records: implications for the Mediterranean hydroclimate”

15.15 – 15.30 h DOMINIK FAUST (Dresden), JULIE DABKOWSKI, DANIEL WOLF

“SMALL but NICE – The Galera-System in E-Andalucía”

15.30 – 16.00 h            **Coffee break**

16.00 – 17.30 h            **Discussion sessions**

**Working Group 2 - Recent Past – Dust Cycles and Models**

(Chair: KERSTIN SCHEPANSKI, Leipzig / Minutes: STEFANIE FEUERSTEIN, Leipzig)

**Working Group 9 - Extended Steering Committee**

(Chair: STEFFEN MISCHKE, Reykjavík and WILLIAM FLETCHER, Manchester / Minutes: MATHIAS ULRICH and HANS VON SUCHODOLETZ, Leipzig)

**Working Group 6 - Young Scientist**

(Chair: DAVID KREUER, Leipzig / Minutes: JULIANE STEIN and MARKUS L. FISCHER, Leipzig)

17.30 – 19.00 h            **Poster session** (Chair: JAN ESPER, Mainz; DANIEL WOLF, Dresden)

20.00 h                    **Joint dinner**

**Thursday, 8 March 2018**

9.00 – 10.30 h

**Oral session 3** (Chair: DENIS SCHOLZ, Mainz)

*Methods, methodological approaches and modelling (past – present- future)*

9.00 – 9.15 h BIRGIT MÜLLER (Leipzig), GUNNAR DRESSLER, DAVID KREUER, KARIN FRANK  
“Analysis of land use change by using social-ecological modelling”

9.15 – 9.30 h KERSTIN SCHEPANSKI (Leipzig)  
“The north African dust life-cycle and its controlling factors”

9.30 – 9.45 h STEFANIE FEUERSTEIN (Leipzig), KERSTIN SCHEPANSKI  
“Characterization of alluvial dust sources and their temporal development for model applications”

9.45 – 10.00 h BERND SCHÖNE (Mainz), THE INCREMENTS TEAM  
“Mollusk sclerochronology contribution of MULTIPP – Scope for high-resolution paleoclimate and archaeological research in the Mediterranean”

10.00 – 10.15 h PETER DIETRICH (Leipzig), ULRIKE WERBAN, JÖRG HAUSMANN, JOHANNES VÖLLMER, CHRISTOPH ZIELHOFER, THOMAS VIENKEN  
“Direct Push – New Opportunities for the investigation of soils and sediments”

10.15 – 10.30 h ULRIKE WERBAN (Leipzig), MARCO POHLE, HANS VON SUCHODOLETZ, THORSTEN BEHRENS, PETER DIETRICH  
“Pedogeophysics – Challenges in near surface geophysics for the investigation of soils”

10.30 – 11.00 h            **Coffee break**

11.00 – 12.30 h            **Discussion sessions**

**Working Group 1 - (Paleo-)Climatic Models**

(Chair: DENIS SCHOLZ, Mainz / Minutes: WILLIAM FLETCHER, Manchester)

**Working Group 7 - Paleontology**

(Chair: BERND SCHÖNE, Mainz / Minutes: ANNE KÖHLER, Leipzig)

**Working Group 8 - Geoarchaeology**

(Chair: ANDREAS VÖTT, Mainz / Minutes: JOHANNES SCHMIDT and JOHANNES VÖLLMER, Leipzig)

12.30 – 13.45 h            **Lunch break**

13.45 – 15.30 h

**Oral session 4** (Chair: MATHIAS ULRICH, Leipzig)

*Sub-recent to modern time-scale - Man and environment interaction  
Challenges in bridging chronological and spatial scales*

13.45 – 14.00 h VERONIKA CUMMINGS (Mainz)  
“Water as a political and social capital in Northern Africa”

14.00 – 14.15 h SARAH RUTH SIPPEL (Leipzig) *brief talk*  
“Intensive agriculture and rural livelihoods in Morocco”

14.15 – 14.30 h DAVID KREUER (Leipzig)  
“Land use and models: a preliminary inventory of knowledge about the study area”

14.30 – 14.45 h KAI WELLBROCK (Lübeck), MATTHIAS GROTTKER  
“Archaeohydrology - The interrelation of water management, hydrology and landscape formation in arid to semi-arid environment”

14.45 – 15.00 h MARTIN BAUCH (Leipzig)  
“Societal reactions to erosion, drought and extreme precipitation from Central Italy in the Late Middle Ages”

15.00 – 15.15 h JÖRG GERTEL (Leipzig)

“Shifting Insecurities: Reconstructing Livelihoods in Rural Morocco”

15.15 – 15.30 h MICHAEL VOHLAND (Leipzig), CHRISTOPHER HUTENGs

“How to bridge spatial scales with optical remote sensing? Downscaling land surface temperatures with random forest regression”

15.30 – 16.00 h                    **Coffee break**

16.00 – 17.30 h                    **Discussion sessions**

**Working Group 4 – Recent Past (Last 1000 years) - Human Environment Interaction**

(Chair: PETER FRENZEL, Jena / Minutes: JAN AHLRICHS, Leipzig)

**Working Group 9 - Extended Steering Committee**

(Chair: STEFFEN MISCHKE, Reykjavík and WILLIAM FLETCHER, Manchester / Minutes: MATHIAS ULRICH and HANS VON SUCHODOLETZ, Leipzig)

**Working Group 6 - Young Scientist**

(Chair: DAVID KREUER, Leipzig / Minutes: JULIANE STEIN and MARKUS L. FISCHER, Leipzig)

17.30 – 19.00 h

**Working group reports and open discussion** (Chair: Steering Committee and Advisory Board)

20.00 h                                **Joint dinner**

**Friday, 9 March 2018**

9.00 – 10.30 h

**Oral Session 5** (Chair: DOMINIK FAUST, Dresden; MARTIN BAUCH, Leipzig)

*Anthropogenic time-scale - Mediterranean ecosystems and landscapes*

9.00 – 9.15 h ABDESLAM MIKDAD (Rabat), FADOUA NEKKAL

“Cultures matérielles holocènes du Rif oriental et contexte environnemental”

9.15 – 9.30 h LUKAS WERTHER (Jena, London), ABDESLAM MIKDAD, FEDOUA NEKKAL, CHRISTOPH ZIELHOFER

„Lakesides in a dryland environment: The archaeological record around Lake Sidi Ali from the palaeolithic to the modern period (Middle Atlas, Morocco)“

9.30 – 9.45 h JAN AHLRICHS (Leipzig), HANS VON SUCHODOLETZ, ULRICH VEIT, LUKAS WERTHER, PETER ETTTEL, PIERRE FÜTTERER, ULRIKE WERBAN, CHRISTOPH ZIELHOFER

„Assessing human impact on sediment dynamics in river catchments using an archaeological, historical and geoarchaeological multi-scale approach“

9.45 – 10.00 h MOHAMED MAHDI (Meknes)

„Eléments d’histoire du pastoralisme dans le Moyen-Atlas“

10.00 – 10.15 h JAGO JONATHAN BIRK (Mainz), SABINE FIEDLER, BJÖRN BUGGLE, GÜNTHER SCHÖRNER, NORA VOB, HUSSEIN AL-SABABHA, SUFYAN AL KARAIMMEH, BERNHARD LUCKE

„Land-use history in northern Jordan analysed with biomarkers“

10.15 – 10.30 h ELISABETH DIETZE (Potsdam)

„Fire, water, erosion - driven by climate and human, mediated by vegetation“

10.30 – 11.15 h                    **Coffee break**

11.15 – 13.00 h

**Open discussion and planning of future activities – Closing**

(Chair: Steering Committee and Advisory Board)

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### Poster Presentation by Author and Title

1. MARKUS LOTHAR FISCHER (Leipzig), FELIX BACHOFER, CHRISTOPH ZIELHOFER, ANNETT JUNGINGER  
*Wet feet or walking on sunshine? A hydro-modelling-approach of the East-African rift-basin and paleo-lake Chew Bahir (Ethiopia) to estimate paleo-precipitation and ecosystem dynamics*
2. KATHRYN FITZSIMMONS (Mainz) and the RESEARCH GROUP FOR TERRESTRIAL PALAEOCLIMATES  
*Human-environmental interaction in the Willandra Lakes region, semi-arid southeastern Australia*
3. PETER FRENZEL (Jena), ANNA PINT, EILYN BECHER, JUDITH EWALD, BIRGIT PLESSEN, MAX ENGEL  
*Marginal marine calcareous fossils as proxies in athalassic waters of arid regions: The oasis of Tayma, Saudi Arabia*
4. FELIX HAGEMEYER (Leipzig)  
*Philistine land and water management in the Late Bronze Age and Iron Age: Tel Ashdod and Ashdod-Yam as a case study*
5. ANNETT JUNGINGER (Tübingen), ELENA ROBAKIEWICZ, CHRISTOPH ZIELHOFER  
*Diatoms in modern swamps, springs and lakes of the Sidi Ali catchment (Morocco)*
6. ANNE KÖHLER (Leipzig), STEFFEN MISCHKE, CHRISTOPH ZIELHOFER  
*Millennial shifts in Western Mediterranean hydroclimate*
7. VICTORIA KRIPPNER (Leipzig), STEFFEN MISCHKE, ANNETT JUNGINGER, ABDESLAM MIKDAD, CHRISTOPH ZIELHOFER  
*Analysis of recent and Holocene ostracods from Lake Sidi Ali (Middle Atlas, Morocco)*
8. MAXIMILLIAN LANGE (Leipzig), DANIEL DOKTOR  
*Extraction of phenological metrics from EO satellite data and their potential for climate and land-use change depiction*
9. RENATE MATZKE-KARASZ (Munich)  
*Previous research on Ostracoda (Crustacea) in Circum-Mediterranean Northern Africa*
10. BURGHARD MEYER (Leipzig), GÁBOR MEZŐSI, FERENC KOVÁCS  
*Landscape degradation at different spatial scales caused by aridification*
11. FADOUA NEKKAL (Meknes)  
*Préservation, mise en valeur et valorisation des sites archéologiques du Rif oriental (Maroc)*
12. JOHANNES QUAAS (Leipzig), MARC SALZMANN  
*Precipitation- and surface radiation changes and the role of anthropogenic emissions*

13. MARKUS REUTER (Leipzig), MATHIAS HARZHAUSER, WERNER E. PILLER  
*Coastal landscape evolution in NW Sri Lanka linked to the late Quaternary monsoon variations*
14. ALI RHOJJATI (Marrakech), ABDELFAHATTAH BENKADDOUR, MAJDA NOURELBAIT, RACHID CHEDDADI  
*Past climate change inferred from lacustrine sedimentary sequence, Middle Atlas, Morocco*
15. CHRISTOPHER-B. RÖTTIG (Dresden), THOMAS KOLB, DANIEL WOLF, LUDWIG ZÖLLER, DOMINIK FAUST  
*From archive to successive processes: Aeolianite-paleosurface-sequences in northern Fuerteventura*
16. FLORIAN SCHIMMER (Mainz)  
*Agriculture in the pre-desert of Roman Tripolitania (1<sup>st</sup> c. BC – 5<sup>th</sup> c. AD)*
17. JOHANNES SCHMIDT (Leipzig), LUKAS WERTHER, CHRISTOPH ZIELHOFER  
*Premodern Digital Terrain Models – Modelling the human impact*
18. BIRGIT SCHNEIDER (Leipzig), HANS VON SUCHODOLETZ, CHRISTOPH ZIELHOFER  
*Applications and perspectives of XRF-based element analyses*
19. JULIANE STEIN (Leipzig)  
*Late Bronze Age agriculture at the margins of the Negev desert*
20. MATHIAS ULRICH (Leipzig), CHRISTOPH ZIELHOFER, MICHAEL VOHLAND, HANS VON SUCHODOLETZ  
*Combining multi-temporal remote sensing and paleoenvironmental studies - Potential and perspectives of an integrated approach*
21. HANS VON SUCHODOLETZ (Leipzig), MARCEL BLIEDTNER, PETER KÜHN, BIRGIT SCHNEIDER, CHRISTOPH ZIELHOFER, ROLAND ZECH  
*Assessing new ways to reconstruct paleovegetation patterns: The potential of leaf wax-based biomarker analyses in fluvial sediment-paleosol sequences*
22. MICHAEL VOHLAND (Leipzig), CHRISTOPHER HUTENGES, FELIX OERTEL, MICHAEL SEIDEL, BERNHARD LUDWIG  
*Quantification of soil properties with soil spectroscopy (vis-NIR, MIR) and hyperspectral imaging*
23. JOHANNES VÖLLMER (Leipzig), CHRISTOPH ZIELHOFER, PETER DIETRICH, ULRIKE WERBAN, STEFANIE BERG, LUKAS WERTHER  
*A new geoarchaeological approach for site investigation with Direct-push-Technology*
24. CLAUDIA WROZYNA (Graz), THOMAS A. NEUBAUER, JULIANE MEYER, MARIA INES F. RAMOS, WERNER E. PILLER  
*Impact of climate and hydrochemistry on shape variation – a case study on Neotropical cytheroidean Ostracoda*
25. CHRISTOPH ZIELHOFER (Leipzig), BERNHARD WENINGER, LUKAS WERTHER, CLEMENS PASDA, WILLIAM FLETCHER, MATHIAS ULRICH  
*Early Holocene abrupt hydro-climatic shifts and human response at the North African desert margin*

**Overview map of most important workshop locations**

