



# PAGES AGADIR 2022

6th Open Science Meeting

Learning from the past for a sustainable future

**16 - 20 May 2022**

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## Mon 16 May 2022

07:30 - 08:00

### Opening Ceremony

**Location:** Plenary session**Session Type:** Ceremony

08:00 - 10:00

### OSM02: The last interglacial

**Location:** Virtual room 1**Chairperson:** Eric Wolff; Laurie Menviel; Alessio Rovere; Natasha L M Barlow**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Labrador Sea paleoceanography and paleodiversity across the Last Interglacial	Stijn De Schepper [ + ]	484
08:15	Patterns of winter climate change in northern and southern Europe over the Last Interglacial	J. Sakari Salonen [ + ]	413
08:30	A synthesis of last interglacial marine sites in the glaciated Northern Hemisphere	April S. Dalton [ + ]	221
08:45	Did the Ronne Ice Shelf and West Antarctic Ice Sheet retreat in the last interglacial?	Eric Wolff [ + ]	365
09:00	East Antarctic warming triggered by West Antarctic ice loss during the Last Interglacial	David K. Hutchinson [ + ]	283
09:15	East Asian climate response to insolation, CO <sub>2</sub> and ice sheets during MIS-5 and indication for the future	Anqi Lyu [ + ]	266
09:30	Weakened Indian Summer Monsoon rainfall during the Last Interglacial	Yiming V. Wang [ + ]	203
09:45	Orbital to millennial scale variation of the speleothem $\delta^{18}O$ during the Marine Isotope Stages 5 to 3 in southeast Chinese Loess Plateau and its climatic and environmental implications	YanJun Cai [ + ]	492

08:00 - 10:00

### OSM36: Quaternary climate change and human evolution in Africa

**Location:** Virtual room 2**Chairperson:** Asfawossen Asrat; Verena Foerster; Henry Francis Lamb; Frank Will Richard Schäbitz; Martin H. Trauth**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Northern Hemisphere Glaciation, African Climate and Human Evolution	Martin H. Trauth [ + ]	237
08:15	Deciphering environmental thresholds in the habitat of early humans: a new 620,000-year mineralogical proxy record from Chew Bahir in southern Ethiopia	Verena Foerster [ + ]	317
08:30	Explosive eruptions, tephrochronology and Homo sapiens in the Ethiopian Rift	Céline Vidal [ + ]	509
08:45	Hydroclimate changes in eastern Africa over the past 200,000 years may have influenced early human dispersal	Frank W.R. Schäbitz [ + ]	254
09:00	Paleoenvironmental reconstruction in East Africa at a critical period of hominin dispersion out-of-Africa (150-80 kyr)	Cécile A Porchier [ + ]	532
09:15	A spatiotemporally explicit paleoenvironmental framework for the Middle Stone Age of eastern Africa	Lucy Timbrell [ + ]	306
09:30	Climate change shapes 50,000-year-old social network in Africa	Yiming Wang [ + ]	202

09:45 The Great Lakes of Turkana – a Novel Perspective on the African Humid Period **Markus Lothar Fischer** [+] 323

08:00 - 10:00

## OSM19: Understanding Past Hydrological Changes in Africa since the Last Glacial Maximum

**Location:** Virtual room 3

**Chairperson:** Ilham Bouimetarhan; Rachid Cheddadi; Michael Neil Evans; Enno Schefuß

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Evidence for anthropogenic, climatic and oceanographic variability off southwestern Morocco during the last three millennia	<b>Xueqin Zhao</b> [+]	393
08:15	A predominantly tropical influence on late-Holocene hydroclimate variation in the hyper-arid central Sahara	<b>Dirk Verschuren</b> [+]	185
08:30	Middle to Late Holocene paleoenvironmental evolution of the Tahaddart lower estuary (NW of Morocco)	<b>Otmane Khalfaoui</b> [+]	141
08:45	Late Quaternary aeolian-fluvial paleoenvironmental archives in the Sinai-Negev erg margins	<b>Lotem Robins</b> [+]	249
09:00	Palaeohydrological changes recorded from a small Moroccan Middle Atlas pond during the last 6,000 cal. yr BP: a multi-proxy study	<b>Hanane Id Abdellah</b> [+]	111
09:15	Sub-decadal scale environmental responses to hydro-climatic changes in the Middle Atlas Mountains, Morocco – learning from historical archives and a high-resolution multi-proxy lake sediment record	<b>Cathleen Kertscher</b> [+]	414
09:30	Effects of Climate and land-use on hydrological and vegetation signals during the last three millennia in southwestern Morocco	<b>Asmae Baqloul</b> [+]	170
09:45	Spatiotemporal variations in precipitation isotopes and hydroclimate across Africa since the Last Glacial Maximum: a data-model synthesis	<b>Sloane Garelick</b> [+]	526

08:00 - 10:00

## OSM05: From the LGM to the Anthropocene: Environmental changes driven by climatic variability, sea-level fluctuations and human activities in East Asia

**Location:** Virtual room 4

**Chairperson:** Steve Pratte; JOHN DODSON; Fang Gu; Lydia Lattin Mackenzie

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Climate change and human impact- a view from central China	<b>JOHN DODSON</b> [+]	138
08:15	brGDGT and pollen-based Holocene temperature reconstruction from the Olgi Lake in the Tarvagatai Mountains (north-central Mongolia)	<b>Chéïma Barhoumi</b> [+]	143
08:30	Last Glacial Maximum to Holocene palaeoenvironmental records retrieved using lacustrine archives from the Kashmir valley, western Himalayas	<b>Rayees Shah</b> [+]	399
08:45	Late Holocene Climate variability from Ladakh Himalaya and its teleconnections	<b>Sakshi Maurya</b> [+]	295
09:00	Long term vegetation dynamics and its responses to the past monsoon climate and sea-level change in East Asia	<b>Fang Gu</b> [+]	456
09:15	Eolian dust in NE China since the Late Holocene: Monsoon driven or human induced?	<b>Steve Pratte</b> [+]	328

09:30	Strong human disturbance to vegetation in the southeast mountainous region of China during the last Millennium	<b>Chunzhu Chen</b> [+]	290
09:45	Relationship Between C4 Biomass and C4 Agriculture During the Holocene and its Implications for Millet Domestication in Northeast China	<b>Jian Wang</b> [+]	550

10:00 - 10:30

## Plenary session 1: R. Cheddadi-Glacial refugia and future microrefugia: an effective plan to save plant species?

**Location:** Plenary session

**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
10:00	Glacial refugia and future microrefugia: an effective plan to save plant species?	<b>Rachid Cheddadi</b> [+]	0

11:00 - 12:00

## Lightning talk session 1

**Location:** Virtual room 1

**Chairperson:** Ilham Bouimetarhan

**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Soils in the bipartite sediments within the Moscow (Late Saalian) Glacial Limits of the Russian Plain as a proxy for environmental trends of the last glacial-interglacial cycle.	<b>Pavel Kust</b> [+]	
	Pollen Record of Early to Mid-Holocene Vegetation and Climate Dynamics on the Eastern Coast of the Yellow Sea, South Korea	<b>Bing Song</b> [+]	
	Pollen distribution of surface sediments from the Liaodong Bay, China: Insights into pollen provenance, transport, deposition, and coastal-shelf paleoenvironment	<b>Shixiong Yang</b> [+]	
	Locating North African microrefugia for mountain tree species from landscape ruggedness and fossil records	<b>Yassine El Hasnaoui</b> [+]	
	Dust provenance analyses show changes in air-masses circulation over the North African desert margin during the Holocene	<b>Blaise Gravier</b> [+]	
	Abrupt vegetation transformation during the last deglacial period in southern Yunnan	<b>Kai Li</b> [+]	
	Last Interglacial record of Dead Sea temperature and hydrology: evidence for orbital-scale North Atlantic Oscillation	<b>Emmanuel Guillerm</b> [+]	
	Helicosphaera carteri resilience under different CO2 levels: living and fossil remains as a tool for studying past (MIS5) and future climate scenarios	<b>Manuela Bordiga</b> [+]	
	THE LAST TWO INTERGLACIALS IN AN EXPANDED BIOLOGICAL PROXY RECORD FROM THE COASTAL NORTHERN ADRIATIC (ISTRIA, CROATIA)	<b>Massimo Domenico Novellino</b> [+]	
	Testing the potential of phytolith analysis for improving paleoenvironmental reconstructions: El Cañizar de Villarquemado lacustrine sequence, NE Iberia.	<b>Javier Lara-Recuero</b> [+]	
	Holocene lake level, vegetation, and climate at the East Asian summer monsoon margin: records from Chagan Nur and Lake Wulanhushao, Inner Mongolia	<b>Wenwei Zhao</b> [+]	
	Comparison of abundance and distributions of elements and plant waxes in terrestrial and marine deposits of southern Morocco	<b>Asmae Baqloul</b> [+]	
	Surface temperature at Dome Fuji during the last interglacial period	<b>Ikumi Oyabu</b> [+]	
	Last Interglacial subsurface warming on the Antarctic shelf		

triggered by reduced deep-ocean convection

Nicholas K. H. Yeung [+]

Climate Change risks modeling

Tekla Nadiradze [+]

12:00 - 14:00

## E-posters session 1 [ePosters]

**Location:** Virtual room 2

**Chairperson:** Hanane REDDAD

**Session Type:** Poster session

14:00 - 15:00

## Side event : Inclusivity round table

**Location:** Virtual room 3

**Chairperson:** Yassine Ait Brahim; Michael Neil Evans; Blas Lorenzo Valero Garcés

**Session Type:** Workshops and roundtable

16:00 - 18:00

## OSM02: The last interglacial

**Location:** Virtual room 1

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Understanding ice sheet evolution leading up to the Last Interglacial using a coupled climate-ice sheet model	Violet Patterson [+]	417
16:15	Astronomically-induced abrupt cooling at the end of the last interglacial	Qiuzhen Yin [+]	267
16:30	Global temperature and hydroclimate in warmer climates of the past and future: the Last Interglacial versus greenhouse scenarios	Paolo Scussolini [+]	346
16:45	Initial constraints on the rate and magnitude of Last Interglacial sea-level change in Northwest Europe	Amy McGuire [+]	347
17:00	Investigating climate variability during the Last Interglacial: Combined pollen and stable isotope analyses from the Fucino Basin, Central Italy.	Carole Roberts [+]	474
17:15	Introducing Version 1.0 of WALIS, the World Atlas of Last Interglacial Shorelines	Alessio Rovere [+]	491
17:30	Post-Eemian paleo-environmental analysis in the southern North Sea	Irene Waajen [+]	153
17:45	Extensive evidence for the Last Interglacial analog of the 8.2-ka event	Yuxin Zhou [+]	113

16:00 - 16:45

## OSM36: Quaternary climate change and human evolution in Africa

**Location:** Virtual room 2

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Vegetation and hydroclimate variability in tropical north Africa during the Pliocene-Pleistocene	Isla S. Castañeda [+]	166
16:15	Tropical East Africa became wetter at 3 Ma: A compound-specific leaf wax biomarker record from the Baringo-Tugen Hills-Barsemoi Basin, Kenya	Bryce Mitsunaga [+]	354

16:00 - 18:00

## OSM14: Past extremes and risks assessment: Linking the instrumental and the paleo record

**Location:** Virtual room 3

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Dendrogeomorphology of the avulsion event on the Pedregoso Creek alluvial fan (Argentina, Puelo Lake) triggered by the historic 1960 earthquake.	Agustín Quesada [+]	520
16:15	A 211-year moisture reconstruction in southern Quebec based on snowpack-sensitive trees	Alexandre Vincent Pace [+]	371
16:30	Analysis of the last 75 years of floods in a high-resolution sedimentary record from the Tschingelsee (Swiss Alps)	Miguel Angel Calero [+]	546
16:45	Rainfall Rescue: extending instrumental rainfall reconstructions backwards into the 18th century over the British and Irish Isles	Ed Hawkins, 16, 000 volunteers [+]	168
17:00	Extreme weather events recorded by daily to hourly resolution biogeochemical proxies of marine giant clam shells	Chengcheng Liu [+]	395
17:15	The Link Between Southern Portuguese Climate and the East Atlantic Mode from Highly Resolved Speleothem Records	Alaina Chormann [+]	383
17:30	East Asian summer monsoon over the past millennium	Feng Shi [+]	469

16:00 - 18:00

## OSM06: Sedimentary varves: High-resolution archives of past climate and environmental change

**Location:** Virtual room 4

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Into the mega-monsoon: yearly flood dynamics of the Nile River during the last African Humid Period	Cécile Blanchet [+]	162
16:15	Holocene spring and summer temperature variability inferred from Ca/Ti ratios, Lake Żabińskie, Poland	Paul D. Zander [+]	208
16:30	The hydrological and climatic significance of laminated sediments at the Dead Sea Basin: new evidence	Revital Bookman [+]	242
16:45	Calcite varve formation processes in Diss Mere, a lake in the UK: insights from lake monitoring	Celia Martin Puertas [+]	403
17:00	Transfer of the varve chronology from 1999 to a new sediment record from Holzmaar (West-Eifel Volcanic Field, Germany) and integration of Bayesian age-depth modeling	Stella Birlo [+]	312
17:15	Causes and impacts of the first global pandemic: high-resolution analysis of lake varves from central Anatolia reveals the climate and environment of the Plague of Justinian	C Neil Roberts [+]	161
17:30	Varve seasonality changes in response to orbital forcing through the Holocene	Celia Martin Puertas [+]	257

16:45 - 18:00

## OSM11: Tropical and subtropical interhemispheric teleconnections during the last 2000 years: A transatlantic approach

**Location:** Virtual room 2

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
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16:45	Holocene contraction of the Intertropical Convergence Zone over northeastern South America	<b>Cristiano Mazur Chiessi</b> [+]	109
17:00	Exploring the drivers and teleconnections of late-Holocene precipitation anomalies in the Altiplano, South America: Paleoclimate records and modern climate analysis	<b>Ignacio A. Jara</b> [+]	175
17:15	Coastal wetland responses to a century of Climate Change in Northern Saharan Environment	<b>Juliana Nogueira</b> [+]	276
17:30	Sahara as Amazon's main fertilizer: not that much! Exploring mineral dust sources for the Amazon Basin since the mid-Holocene	<b>Juliana Nogueira</b> [+]	279
17:45	Centennial-scale SST variability in the southeastern Caribbean Sea linked to regional hydroclimate changes during the Common Era	<b>Anastasia Zhuravleva</b> [+]	281

18:00 - 18:30

## Plenary session 2: J-J. Hublin-The origin of Homo sapiens: a North African perspective

**Location:** Plenary session**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	The origin of Homo sapiens: a North African perspective	<b>Jean-Jacques Hublin</b> [+]	0

19:00 - 20:00

## Lightning talk session 2

**Location:** Virtual room 1**Chairperson:** Michael Neil Evans**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Variations in calcareous nannoplankton assemblages and productivity during the Marine Isotope Stage 5 in South China Sea (IODP Site U1501).	<b>Stefania Bianco</b> [+]	
	Mean Ocean Temperature (MOT) during MIS5-6 Based on Noble Gas Ratios in the EDC Ice Core	<b>Markus Grimmer</b> [+]	
	Late Pleistocene sea-level indicators in west Luzon, Philippines	<b>Kathrine Maxwell</b> [+]	
	WAVELET ANALYSIS BETWEEN GEOMAGNETIC FIELD, CLIMATE, AND ORBITAL PARAMETERS: MAIN CHANGES IN THE MIS 5	<b>Luiggina Cappellotto</b> [+]	
	Paleoproductivity changes in the southeastern Arabian Sea over the last ~14,400 years	<b>Yoganandan Veeran</b> [+]	
	Temperature reconstruction highlights the multi-decadal solar forcing on middle Tibetan Plateau	<b>Kai Li</b> [+]	
	Exploring resilience and vulnerability of Mediterranean ecosystems using annually laminated sediments from Lago Grande di Monticchio (Southern Italy)	<b>Carolina Senn</b> [+]	
	Laminate sediments from the Al-Azraq Basin, Jordan: A reflection on regional climate perspectives	<b>Caroline Davies</b> [+]	
	Marine Isotope Stage 5e: A new view from the Brazil Margin	<b>David Lund</b> [+]	
	Hadley Cell Variability during the Last Millenium in the CMIP6 models	<b>Paulo Silva</b> [+]	
	Ecological responses to environmental changes revealed from a varved sequence of Lake Lubińskie (western Poland)	<b>Alicja Bonk</b> [+]	
	A 16,000-year multiproxy record from the varved sediment archive of Holzmaar, Germany	<b>Maria Lujan Garcia</b> [+]	
	Layer counting of the bottom sediments of the lake Kucherla (Altai, Russia).	<b>Viacheslav Novikov</b> [+]	



Last Interglacial (LIG) sea level proxies in Israel and Cyprus  
Penultimate glacial-to-interglacial transition in the western equatorial Atlantic Ocean

Zomenia Zomeni [+]

Marília de Carvalho Campos [+]

20:30 - 22:30

## E-posters session 2 [ePosters]

**Location:** Virtual room 2

**Session Type:** Poster session

**Tue 17 May 2022**

08:00 - 08:45

## OSM05: From the LGM to the Anthropocene: Environmental changes driven by climatic variability, sea-level fluctuations and human activities in East Asia

**Location:** Virtual room 1

**Chairperson:** Steve Pratte

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	MID TO LATE HOLOCENE SEA-LEVEL CHANGES IN SOUTHWEST COAST SRI LANKA: APPLIED COASTAL MANAGEMENT STRATEGIES FOR FUTURE SEA-LEVEL TREND	Amila Sandaruwan Ratnayake [+]	150
08:15	Forest dynamics and land-use history in the highland of Sumatra since AD 200: palaeoecological evidence from Danau Kecil in the Kerinci Seblat National Park	Chung Hoai Nguyen [+]	549

08:00 - 10:00

## OSM13: Climate variability across scales and climate states

**Location:** Virtual room 2

**Chairperson:** Raphaël Hébert

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	RAPID OCEANOGRAPHIC VARIABILITY RECORDED FROM THE SW IBERIAN MARGIN (IODP SITE U1385) ACROSS THE LAST THREE TERMINATIONS USING PLANKTIC FORAMINIFERA	Harshit Singh [+]	296
08:15	Post-LGM Caspian Sea paleogeography in the prospect of stable oxygen record	Alina Alekseevna Berdnikova [+]	423
08:30	Analysis of Rainfall Dynamics in Conakry, Republic of Guinea	Ibrahima Kalil KANTE [+]	105
08:45	Understanding the hypothesis "a warmer climate is a wetter climate"; the spatio-temporal evaluation	Shailendra Pratap [+]	122
09:00	Internal climate variability and inter-regional temperature correlations during the past 2000 years	Pepijn Bakker [+]	217
09:15	A southern Portuguese margin perspective of Marine Isotope Stage 47 – a very warm interglacial in the 41 kyr world	Antje Helga Luise Voelker [+]	222
09:30	Insolation and CO <sub>2</sub> induced variations in the sea ice of the last nine interglacials and their comparison with the future	Zhengtang Guo, Zhipeng Wu [+]	227
09:45	Multiscale fractal dimension analysis of a reduced order model of coupled ocean-atmosphere dynamics	Tommaso Alberti [+]	304

08:00 - 10:00

## OSM26: Past climates in our changing mountains: Contributions from the paleoscience community

**Location:** Virtual room 3

**Chairperson:** Carolina Adler

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Fluctuations of Akkem, Korumdu and Gebler glaciers (Russian Altai) in the Little Ice Age	Irina Bushueva [+]	461
08:15	Disentangling drivers of environmental change in Alpine Australia: A multi-proxy paleolimnological approach to understanding climate- and anthropogenic-driven change in the Holocene	Lydia Lattin Mackenzie [+]	297
08:30	Late Quaternary Glacial History and Climatic Reconstruction in Zemu Valley, Sikkim Himalaya, India	Parvendra Kumar [+]	355
08:45	Climate controls on tufa deposition over the last 5000 years: A case study from Northwest Africa	Khalil Azennoud [+]	156
09:00	Changing natural conditions and their impact on Mt Śnieżnica landscape, Outer Western Carpathians	Łukasz Pawlik [+]	179
09:15	Long-term vegetation dynamics in Cofre de Perote volcano (east of Trans Mexican Volcanic Belt) between 10.3 and 4.9 cal. kyr BP	Erandi Tzayani Rodríguez-Pérez [+]	193
09:30	Vegetation history of the Gamo Highlands in the southern Ethiopian rift valley: palynological results from the wetlands Gelba and Chencha	Femke Augustijns [+]	211
09:45	First palaeoecological insights into long-term montane forest change in São Tomé island, the Gulf of Guinea	Alvaro Castilla-Beltrán [+]	231

08:00 - 10:00

## OSM37: Peatland ecosystem functioning and ecosystem services: How paleoscience and management can feed back to each other

**Location:** Virtual room 4

**Chairperson:** Angela Gallego-Sala

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Prescribed burning of peatland vegetation: assessing the role of charcoal in carbon accumulation rates	Andreas Heinemeyer [+]	130
08:15	Influence of melioration, peat exploitation and introduction of pine plantations ( <i>Pinus sylvestris</i> ) on the ecosystem of the Bagno Chlebowo	Daria Wochal [+]	269
08:30	Palaeoecological reconstruction of permafrost degradation in NW Siberia – a multiproxy approach	Agnieszka Halaś [+]	310
08:45	Modelling alluvial peatland development at Holocene timescales	Ward Swinnen [+]	311
09:00	Nineteenth century agricultural 'improvements' transformed moorland vegetation	Francis Rowney [+]	344
09:15	Repeated boreal permafrost peatland fires in Western Canada – implications for peatland ecosystem carbon functioning	Niina Kuosmanen [+]	430
09:30	Fire in tropical peatlands during the last 2000 years	Yuwan Wang [+]	472

08:45 - 10:00

## OSM15: Art and science in a changing planet: A past global perspective

**Location:** Virtual room 1

**Chairperson:** Graciela Gil-Romera

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:45	New ways of visualising palaeoenvironmental data	Benjamin Keenan [+]	108
09:00	Music of a Changing Planet: data musicalization and its potential for Earth Sciences outreach and education	Alvaro Castilla-Beltrán [+]	233
09:15	2A Earth Core: The Hominin Project: an art and science collaboration	Julian Ruddock [+]	240
09:30	Sky Islands: a past time travel at the Andes mountains	Suzette G.A. Flantua [+]	387
09:45	Film festivals as venue for science and environmental outreach and communication	Catalina Giraldo [+]	391

10:00 - 10:30

## Plenary session 3: H. Cheng-High and low latitude climate interactions at multiple timescales

**Location:** Plenary session**Chairperson:** Yassine Ait Brahim**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	High and low latitude climate interactions at multiple timescales	Hai Cheng [+]	0

11:00 - 12:00

## Lightning talk session 3

**Location:** Virtual room 1**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Characterization of interactions between groundwater and surface water in High Moulouya (MOROCCO)	Lahcen Alili, ELHASSAN BENSAID, Ahmed BOUKDIR, Hassan IKHMERDI [+]	
	Diagnosis of the physico-chemical and bacteriological quality of the preurban streams of Casablanca: case of the Merzeg wadi	Nachchach Badr [+]	
	11500 Years In 12 Metres - Palaeohydrology And Volcanic Dust In The Stable Growing Sphagnum Peatland In CE Europe	Patryk Fiutek [+]	
	The impact of climate change on the groundwater resources of the Sais deep aquifer (middle atlas, Morocco)	Latifa Bouib [+]	
	A regional late-Quaternary pollen dataset of the Tibetan Plateau and its surrounding area	Jian Ni [+]	
	A Phytolith Supported Biosphere-Hydrosphere Predictive Model for Southern Ethiopia: Insights into Paleoenvironmental Changes and Human Landscape Preferences since the Last Glacial Maximum	Markus Lothar Fischer [+]	
	Glacier dynamics and climatic variability since Last glacial Maximum in the Changme Khangpu valley, Eastern Himalayas, INDIA	Manasi Debnath [+]	
	Runoff assessment using SCS-CN Method and GIS in Arid areas: case study from the Toudgha Watershed-Morocco	Lamya ouali [+]	
	Development of lakes in recent de-glaciated areas in the central Pyrenees: the Arrablo Lake (Ordessa- Monte Perdido National Park)	Kilian Jungkeit-Milla [+]	
	Analysis of rainfall variability and its relationship with climate change: case study of the Merguellil Watershed, Central Tunisia.	Fadoua Hamrouni [+]	

Tracing human impacts from a multi-proxy perspective in the Central Pyrenees: the Tramacastilla lacustrine sequence

**Irene Julián-Posada** [+]

A multiproxy reconstruction of Holocene climate and land-use impacts on vegetation dynamics in the Eastern Swiss Alps.

**Laura Dziomber** [+]

A Global Assessment of Heatwaves since 1850 in different datasets

**Laura Hövel** [+]

Vegetation history and Indian summer monsoon variability during the past ~6000 years based on pollen record from Garhwal Himalaya (India)

**Varsha Rawat** [+]

One way to interpret decadal and secular climate variability

**Alexander Kislov** [+]

Multi-proxy temperature reconstruction and paleoenvironmental conditions during the Late Glacial and Early Holocene in the Černé lake, Central Europe

**Amanda Mateo Beneito** [+]

Assessment of summer macrocirculation processes over Europe in the 18-20 centuries

**Inna Semenova** [+]

Dynamics of seasonal patterns in proxy and meteorological records of the Elbrus region derived from functional data clustering

**Gleb Chernyakov** [+]

Planktic foraminiferal biozones and biochronological events in the Mediterranean Sea since the Late Glacial period

**sonda zouari** [+]

Climate and anthropogenic impact on vegetation of the southern Central Mediterranean from Siculo- Tunisian Strait during the last 5 kyr

**Emna GACEUR** [+]

12:00 - 14:00

## E-posters session 3 [ePosters]

**Location:** Virtual room 2

**Session Type:** Poster session

14:00 - 15:00

## Side event : PAGES-Ocean KAN

**Location:** Virtual room 3

**Session Type:** Workshops and roundtable

16:00 - 18:00

## OSM33: Quantifying and predicting terrestrial ecosystem responses to changing climates and land use

**Location:** Virtual room 1

**Chairperson:** Andria Dawson

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:15	Holocene fire, vegetation change, and ecological novelty in the high Colombian Cordillera Oriental	<b>Ismael G. Espinoza</b> [+]	259
16:30	Exploring timing and patterns of resilience in a prehistoric mixed beech-oak forest at the transition from natural to disturbed vegetation using a high-resolution sedimentary record from Lago di Mezzano, central Italy	<b>Giorgia Beffa</b> [+]	334
16:45	Simulating past and future vegetation dynamics and fire activity in Sardinia, Italy	<b>Christoph Schwörer</b> [+]	342
17:00	Brazilian biomes distribution: Past and future	<b>Jelena Maksić</b> [+]	409
17:15	Pollen-based reconstruction reveals the long-term impacts of the onset of agriculture on plant functional trait composition	<b>Annegreet Veeken</b> [+]	440
17:30	Quantifying rates of vegetation change of the last 18,000 years	<b>Ondřej Mottl</b> [+]	505
	Exploring land-use impacts on plant and insect diversity and		

17:45 the emergence of ecosystem novelty through synthesis of palaeoecological datasets from across the British Isles **Jessie Woodbridge** [+] 548

16:00 - 18:00

## OSM13: Climate variability across scales and climate states

**Location:** Virtual room 2

**Chairperson:** Raphaël Hébert

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	A hypothesis test on the nature of Holocene climate variability - A case study on replicated marine sediment records	<b>Hanna Dyck</b> [+]	324
16:15	Advances in reconstructing sea ice variability in the subpolar North Atlantic during the Glacial-Holocene transition	<b>Delia Segato</b> [+]	389
16:30	Forcing of the Holocene hydro-climatic variability at the North African desert margin inferred from multi-proxy frequency analyses: Lake Sidi Ali, Morocco	<b>Johannes Schmidt</b> [+]	402
16:45	Scaling interactions of macroevolution and the megacclimate – searching for temporal domains of the Court Jester and the Red Queen	<b>Andrej Spiridonov</b> [+]	406
17:00	Disentangling Internal and External Contribution to Atlantic Multidecadal Variability over Past Millennium	<b>Shih-Wei Fang</b> [+]	452
17:15	Climate and anthropogenic impact on vegetation of the southern Central Mediterranean from Siculo- Tunisian Strait during the last 5 kyr	<b>Emna GACEUR</b> [+]	408
17:30	Unraveling forced responses of extreme El Niño variability over the Holocene	<b>Allison E Lawman</b> [+]	294
17:45	A new approach to Climate modelling: the Fractional Energy Balance Equation	<b>Shaun Lovejoy</b> [+]	407

16:00 - 18:00

## OSM26: Past climates in our changing mountains: Contributions from the paleoscience community

**Location:** Virtual room 3

**Chairperson:** Carolina Adler

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	First 10Be chronology of Late Holocene moraines of Maly and Bolshoy Aktru Glaciers, Russian Altay	<b>vincent jomelli</b> [+]	241
16:15	Following the footsteps of the Ésera glacier (Central Pyrenees) during the last glacial cycle	<b>Ixeia Vidaller</b> [+]	271
16:30	Conifer population dynamics during the Younger Dryas–Early Holocene transition in the southern Swiss Alps: combining paleoecological and paleogenetic approaches	<b>Maria Leunda</b> [+]	275
16:45	When fires rage in grasslands and there's limited sedimentary charcoal: a multipolar interpretation of charcoal records from the Drakensberg Mountain range, South Africa	<b>Abraham Nqabutho Dabengwa</b> [+]	308
17:00	The value of the Neotoma Palaeoecology Database to unfold effects of disturbances and environmental changes on mountain ecosystems	<b>Walter Finsinger</b> [+]	316
17:15	The REPLIM Network: integrating lake monitoring and paleolimnological analyses to improve our understanding of past global changes in the Pyrenees	<b>Bias Lorenzo Valero Garcés</b> [+]	353
17:30	Hydroclimate variability and an increase in severe droughts in recent decades revealed by a two-century precipitation record from the tropical Andes of Peru	<b>María Eugenia Ferrero</b> [+]	376
	Delta blue intensity chronologies of yellow pines (Pinus		

17:45 jeffreyi and P. ponderosa) in the Tahoe Basin of the Sierra Nevada, USA **Franco Biondi** [+] 134

16:00 - 18:00

## OSM03: New developments in speleothem paleoclimate and paleoenvironmental science

**Location:** Virtual room 4

**Chairperson:** Andrea Columbu

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Sub-millennial scale climate variability during the early last glacial period recorded in French speleothems	<b>Ellen Corrick</b> [+]	319
16:15	Marine isotope stage 4 changes in hydroclimate of southern Portugal	<b>Ryan A. Oeste</b> [+]	345
16:30	A comparative approach between tufa and speleothem records in a climatic key region (Northwest Africa) over the last 5000 years.	<b>Khalil Azennoud</b> [+]	496
16:45	Asynchronous suborbital fluctuations in Asian speleothems and their climatic implications	<b>Julien Emile-Geay</b> [+]	287
17:00	Behavior of the Azores High from 1200 Years of Proxy Records and Climate Model Simulations	<b>Diana L. Thatcher</b> [+]	369
17:15	Unlocking the Secrets Held by Organic Carbon Deposited within Speleothems: A Test Case in Northwestern Madagascar	<b>Robin Ruth Dawson</b> [+]	218
17:30	The decomposition of speleothems into subharmonic modes, a new approach to quantify changes in the past climate.	<b>Jean-Louis Pinault</b> [+]	<b>102</b>
17:45	SISAL speleothem database - link to modern monitoring data, trace element proxies and increased accessibility	<b>Nikita Kaushal</b> [+]	245

18:00 - 18:30

## Plenary session 4: T. Lenton-Learning from past climate tipping points to avoid future ones

**Location:** Plenary session

**Chairperson:** Michael Neil Evans

**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Learning from past climate tipping points to avoid future ones	<b>Timothy Lenton</b> [+]	0

19:00 - 20:00

## Lightning talk session 4

**Location:** Virtual room 1

**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Integrating paleolimnology and monitoring to understand current lake dynamics and future challenges: Lake Montmalus, central Pyrenees.	<b>Marcel-Saïd Galofré</b> [+]	
	Evidence of acid rock drainage in cores from Laguna Shallap, tropical Andes, Peru	<b>Pedro M. Tapia</b> [+]	
	PERIODICITIES OF THE GEOMAGNETIC FIELD DURING THE HOLOCENE. POSSIBLE FORCINGS	<b>Luiggina Cappellotto</b> [+]	

WAVELET ANALYSIS IN ROCK MAGNETIC PROPERTIES IN HOLOCENE AEOLIAN SEDIMENTS OF ARTURO DUNE, TIERRA DEL FUEGO, ARGENTINA

Dynamics of the Forest Fynbos Ecotone at Orange Kloof Table Mountain National Park, South Africa

Half-precession signals in marine and terrestrial records – connecting IODP/ICDP sites from the equatorial Atlantic to Greenland

Temperature, Rainfall, and Fire in the Alpine Zone of the Rwenzori Mountains, Uganda-D.R.C.

Tropical Atlantic stratification response to late Quaternary precessional forcing

Black carbon emissions from low-latitude lake sediments in the Southern hemisphere to quantify sources for Antarctic ice core records

Multiple effects of archive and proxy type on the dynamical characteristics of paleoclimate proxies and climate variability derived therefrom

Insights into the resilience of Neolithic forests under climate change and land use in Northern Greece

American Monsoon System variations during the Holocene

Sampling rate-corrected time series analysis of irregularly sampled palaeoclimate proxy records

Hidden paleosols inside periglacial blockfields can provide paleoenvironmental data in high-elevation Alpine areas

Pedogenic traits in paleosols help the Quaternary paleoclimate reconstruction in the SW Italian Alps

Stable isotopic ( $\delta^{13}\text{C}$  and  $\delta^{18}\text{O}$ ) analysis of late Miocene Siwalik herbivores from Kangra valley, Himachal Pradesh, India: implication for Palaeoecology and Palaeoclimate

Calibration of the relationship between stable carbon isotopes in leaf waxes and osmotic stress in recent and Cretaceous coastal ecosystems

Synchrony and asynchrony in the  $\delta^{15}\text{N}$  of organic matter in the Tropical Northeast Pacific over the last 1200 years

Bark beetle outbreaks and fire: recorded disturbance events and land-use change from Central Europe

Unprecedented recent regional increase in Carbon and Lithogenic fluxes in high altitude Pyrenean lakes

Romina Achaga [+]

Sabine Prader [+]

Arne Ulfers [+]

Andrea Lauren Mason [+]

Rodrigo Azevedo Nascimento [+]

Sandra O. Brugger [+]

Reik Donner [+]

Lieveke van Vugt [+]

Paula Ribeiro Bianchini [+]

Tobias Braun [+]

Michele Eugenio D'Amico [+]

Michele Eugenio D'Amico [+]

Abhishek Pratap Singh [+]

Petra Zahajská [+]

Yaima Dominguez-Samalez [+]

Nick Schafstall [+]

Alejandra Vicente de Vera García [+]

20:30 - 22:30

## E-posters session 4 [ePosters]

**Location:** Virtual room 2

**Session Type:** Poster session

**Wed 18 May 2022**

08:00 - 10:00

## OSM27: Variation and responses in fire regime behavior over time and space

**Location:** Virtual room 1

**Chairperson:** Carole Adolf

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Long-term fire dynamics mediated by herds, biomass and conflicts in Central Iberia.	Graciela Gil-Romera [+]	198

08:15	The shaping of Late Holocene fire regimes in mid elevation mountains: a peat-based multiproxy study in the Romanian Carpathians	<b>Ancuta Petras</b> [+]	434
08:30	Development of high diversity beech forest in the eastern Carpathians	<b>Marion Lestienne</b> [+]	<b>325</b>
08:45	Fire regime in Eurasian boreal forest	<b>Angelica Feurdean</b> [+]	527
09:00	Could fewer trees lead to more severe wildfires? Evidence from Holocene fire-vegetation dynamics at Lake Satagay, Central Yakutia, Siberia	<b>Ramesh Glückler</b> [+]	228
09:30	Climate changes and fire history in Central Siberia during the last 3400 years	<b>Elena Novenko</b> [+]	256
09:45	Dynamics of forest fires in the western part of the Putorana plateau (Northern Siberia) last 1300 years	<b>Dmitry Kupriyanov</b> [+]	299

08:00 - 10:00

## OSM18: Using high-resolution marine archives to investigate marine climate, marine environment, and maritime societies through the Holocene

**Location:** Virtual room 2  
**Chairperson:** Paul Butler

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	A 23.7-year long daily growth rate record of a modern giant clam shell from South China Sea and its potential in high-resolution paleoclimate reconstruction	<b>Nanyu Zhao</b> [+]	151
08:15	Pseudo-proxy assessment for extracting coral climate histories across the tropical oceans	<b>Nerilie Abram, the CoralHydro2k community</b> [+]	462
08:30	Development of the Nile Littoral Cell since 8 kyr BP	<b>Revital Bookman</b> [+]	239
08:45	PhD candidate	<b>Bar Feldman</b> [+]	251
09:00	Constraining sea-ice anomalies in the Little Ice Age using high-resolution marine archives and documentary historical records from the northern North Atlantic	<b>Martin W. Miles</b> [+]	479
09:15	Monthly resolved coral barium isotopes record increased riverine inputs during the South Asian summer monsoon	<b>Yang Yu</b> [+]	142
09:30	Dissolved heavy metal incorporation into the skeleton of Porites corals based on multi-element culturing experiments	<b>Ed Hathorne</b> [+]	255
09:45	200 year high resolution proxy record from NW Australian corals capturing Indo-Pacific hydroclimate variability	<b>Hedwig Krawczyk</b> [+]	313

08:00 - 10:00

## OSM30: Hydrology of arid regions

**Location:** Virtual room 3  
**Chairperson:** Lahcen Benaabidate

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Effects of Irregular water extraction on Hydrology of arid regions in Miqan sub-basin, Iran	<b>Tahereh Ensafi Moghaddam</b> [+]	381
08:15	Hydrogeochemical characteristics and water quality assessment of groundwater in the arid Zenaga plain (Central Anti-Atlas, Morocco)	<b>Athmane Khettouch</b> [+]	400
08:30	Dynamic interplay between local land use/land cover change and regional climate change: Implications on hydrology	<b>Wakjira Takala Dibaba</b> [+]	133
08:45	Assessing groundwater salinization under global changes, using hydrochemistry and multivariate statistics techniques : Case from Moroccan coastal aquifers	<b>Yassine EZ-ZAOUY</b> [+]	352



09:00	THE DYNAMICS OF RUNOFF OF AGHSTEV RIVER IN THE CONDITIONS OF CLIMATE CHANGE IN THE TERRITORY OF THE REPUBLIC OF ARMENIA	Varduhi Margaryan [+]	382
09:15	The effect of climate change on soil sensitivity erosion in a semi-arid environment	Hasna ELOUDI [+]	410
09:30	Groundwater potential mapping in a fractured arid zone using Frequency Ratio and Shannon's Entropy models (Case of the Ameln Basin, Kerdous Inlier, Western Anti-Atlas, Morocco)	KHALID BENJMEL [+]	425
09:45	Characterization of the meteorological drought in the Ziz watershed	Safae Dafouf [+]	427

08:00 - 10:00

## OSM25: Tipping points in the Earth system: Can the past inform us about the future?

**Location:** Virtual room 4**Chairperson:** Paul Jonathan Valdes**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Simulated response of marine ecosystems to Last Glacial Maximum boundary conditions	Himadri Saini [+]	482
08:15	Role of polar stratospheric clouds in Arctic amplification	Deepashree Dutta [+]	489
08:30	Converging constraints on the glacial Atlantic overturning circulation from multiple proxies	Frerk Pöppelmeier [+]	119
08:45	Changing positive to negative temperature-moisture relationship at the start of the Holocene predicts future drying of East Africa	Allix Baxter [+]	154
09:00	Dansgaard-Oeschger events in climate models: Review and baseline MIS3 protocol	Irene Malmierca-Vallet [+]	158
09:15	Learning from past climate tipping points to avoid future ones	Tim Lenton [+]	182
09:30	Tipping points in the 620 kyr proxy record from Chew Bahir, S Ethiopia	Martin H. Trauth [+]	236
09:45	Decadal-scale onset and termination of Antarctic ice-mass loss during the last deglaciation	Michael E Weber [+]	263

10:00 - 10:30

## Plenary session 5: P. Braconnot-Thoughts on the role of paleoclimate model-data comparisons in assessing climate projection levels of confidence

**Location:** Plenary session**Chairperson:** Paul Jonathan Valdes**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Thoughts on the role of paleoclimate model-data comparisons in assessing climate projection levels of confidence	Pascale Braconnot [+]	0

11:00 - 12:00

## Lightning talk session 5

**Location:** Virtual room 1**Chairperson:** Lindsey Gillson**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Westerly drives long-distance transport of radionuclides from nuclear events to the Third Pole	JI DE [+]	
	Detecting a distant volcanic eruption in speleothems using synchrotron micro x-ray spectroscopy?	Kerstin Braun [+]	
	Using giant clam shell geochemistry to understand past environmental change and human-environment interaction in the South Pacific	Bohao Dong [+]	
	SEACHANGE: Quantifying the impact of major cultural transitions on marine ecosystem functioning and biodiversity	Paul Butler [+]	
	Loess deposits in southern Tajikistan (Central Asia): Magnetic properties and paleoclimate	Parviz Nazarov [+]	
	Species specific Sr/Ca- $\delta^{18}O$ relationships for three Tridacnidae species from the northern South China Sea	Chengcheng Liu [+]	
	Future research priorities in sclerochronological studies on past global changes: Findings from a community-based survey	Stella J. Alexandroff [+]	
	Decadal patterns of variability from a sclerochronological network	Diana E. Caldarescu [+]	
	Marine record of monsoon-related changes in the Bay of Bengal	komal verma [+]	
	Sulfur isotope ratio of sulfate aerosols in an Antarctic Dome Fuji ice core during the last glacial period: a potential contribution from the Atacama Desert	Ryu Uemura [+]	
	Coccolith Size variations of <i>Calcidiscus leptoporus</i> yield insights into palaeoecological preferences in the southwestern Atlantic during the last 135 kyr	Giulia Silveira Molina [+]	
	Reconstructing Holocene changes in growth rates of Adriatic gobies using coupled radiocarbon dating and sclerochronological analyses of fossil otoliths	Isabella Leonhard [+]	
	Building extensive high-resolution sclerochronological archives using Laser Induced Breakdown Spectroscopy (LIBS) and rapid elemental mapping	Niklas Hausmann [+]	
	Diverse response of global climate and vegetation to astronomical forcing and CO <sub>2</sub> during MIS-11 and MIS-13	Qianqian Su [+]	
	Sclerochronological signatures of giant clam shells from turbid coral reefs	Kimberley Mills [+]	
	Ten simple tips for publishing your research outside of the prefix "paleo"	Nick Schafstall [+]	
	Coral evidence for the underestimate of the 20th century warming in the Eastern Pacific cold tongue	Tao Han [+]	
	Oxygen isotope temperature calibrations for modern <i>Tridacna</i> shells in western Pacific	Guozhen Wang [+]	
	Different patterns and origins between northwestern and southeastern Tibetan ice core glaciochemical records over the past century	Dandan Yang [+]	
	Elemental cycles in the coralline alga <i>Neogoniolithon mamillosum</i> as a recorder of temperature variability in the Mediterranean Sea	Steffen Hetzinger [+]	

12:00 - 14:00

## E-posters session 5 [ePosters]

**Location:** Virtual room 2

**Session Type:** Poster session

14:00 - 15:00

## Side event : Expand the reach of your science: Archiving your data in community repositories

**Location:** Virtual room 3

**Session Type:** Workshops and roundtable

16:00 - 16:00

## OSM12: Volcanic impacts on climate and society

**Location:** Virtual room 1

**Chairperson:** Matthew Toohey

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:15	Did Volcanic Cooling Bring About the Fall of the Kingdom of Israel c.720 BCE?	Conor Kostick [+]	177
16:30	Multi-method, multi-proxy reconstructions of the Pacific Walker Circulation over the past 800 years	Georgina Maja Falster [+]	195
16:45	Modelling volcanically induced climatic perturbations in order to better understand vulnerability and resilience of Palaeolithic forager communities at the end of the Pleistocene in Europe	Laurits Andreasen [+]	204
17:00	Do volcanoes influence ENSO? A re-appraisal with paleoclimate data assimilation	Julien Emile-Geay [+]	288
17:15	Tropical ocean responses to large volcanic eruptions during the last millennium	Nerilie Abram [+]	303
17:30	Volcanism and human resilience during the Late Mesolithic in the Iberian Peninsula. New results from the La Garrotxa Volcanic Field (Girona, NE Iberia).	Jordi Revelles [+]	321
17:45	Climatic, weather and socio-economic conditions corresponding with the mid-17th century eruption cluster	Christophe Corona [+]	336

16:00 - 18:00

## OSM18: Using high-resolution marine archives to investigate marine climate, marine environment, and maritime societies through the Holocene

**Location:** Virtual room 2

**Chairperson:** Paul Butler

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Corals record deforestation in Malaysian Borneo through enhanced sedimentation	Walid Naciri [+]	199
16:15	Unlocking Western Tropical Indian Ocean temperature and hydroclimate back to the Little Ice Age, reconstructed from coral geochemistry	Manlin Zhang [+]	205
16:30	Dual Bivalve Analysis of Shellfishing and Palaeotemperature in Powell River, British Columbia (2682 cal. BP)	Sarah D. Kuehn [+]	178
16:45	Warming the cockles of El Niño's heart: Tracking ENSO in Trachycardium procerum from coastal Peru	Alan D. Wanamaker [+]	343
17:00	Developing multi-centennial shell-based records from the Mid-Atlantic region	Heeyeon Sun [+]	374
17:15	The El Niño-Southern Oscillation and its impacts on coastal Peruvian settlements ~2.4 ka: perspectives from two short-lived bivalve species	Jacob P. Warner [+]	439
17:30	Oyster Middens of Hogg Island, Prince Edward Island, Canada: 2000 years of human-environmental interactions	Megan MacKinnon [+]	424
17:45	Precise sea ice cover reconstruction with dendrochronology cross-dating methods applied to of Arctic coralline red algae <i>Clathromorphum compactum</i>	Natasha Leclerc [+]	132

16:00 - 17:00

## OSM30: Hydrology of arid regions

**Location:** Virtual room 3

**Chairperson:** Lahcen Benaabidate

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Estimation of rainfall inputs feeding the Liassic aquifer of the Fez-Taza corridor, Morocco.	Hassnae FAIZ [+]	437
16:15	Evaluation of the GPM-IMERG rainfall estimates at multiple spatial scales: The case study of the Tensift watershed, Morocco	Mounir Ouaba [+]	455
16:30	Apport de la fracturation, de l'isooopie et l'hydrochimie à l'étude du massif calcaire de Haouz (Nord du Maroc).	Jamal eddine STITOU EL MESSARI [+]	470
16:45	Comparison of three hydrological platforms to assess rainfall-runoff in the Mediterranean watershed in Morocco (North Africa)	Mourad Aqnouy [+]	530

16:00 - 17:00

## OSM25: Tipping points in the Earth system: Can the past inform us about the future?

**Location:** Virtual room 4

**Chairperson:** Paul Jonathan Valdes

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Persistent Iceland-Scotland Overflow Water formation during MIS 11	Jasmin M. Link [+]	422
16:15	Evidence for centennial-scale Mid-Holocene episodes of hypolimnetic anoxia in a high-altitude lake system from central Tian Shan (Kyrgyzstan)	Philippe Sorrel [+]	438
16:30	Regulation of atmospheric CO <sub>2</sub> by sea iron solubility impacts during the Last Glacial Maximum and Holocene in an Earth system model	Natalia Opazo [+]	534
16:45	Dichotomy between freshwater and heat flux effects on oceanic conveyor belt stability and global climate	Aixue Hu [+]	121

17:00 - 18:00

## OSM39: Obliquity vs precession: How long exactly is a 100-ka cycle and does it even exist?

**Location:** Virtual room 3

**Chairperson:** Martin Kölling

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
17:00	Precession at least as important as obliquity in pacing Late Pleistocene glacial terminations	Bethany Hobart [+]	194
17:15	Links between orbital eccentricity and Late Pleistocene 100-kyr glacial cycles	Lorraine Elissa Lisiecki [+]	243
17:30	On the Cause of the Mid-Pleistocene Transition	Tijn Berends [+]	493
17:45	"100ka" cycles as phases with increasing numbers of failed interglacials.	Martin Kölling [+]	514

17:00 - 18:00

## OSM13: Climate variability across scales and climate states

**Location:** Virtual room 4  
**Chairperson:** Raphaël Hébert

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
17:00	The role of the external forcing for centennial climate variability	Juergen Bader [+]	498
17:15	Southern Hemisphere high-latitude controls on AMOC deep-water circulation sustaining the MBT	João M. Ballalai [+]	499
17:30	Contrasting Climatic Conditions and Internal Dynamics of the Mediterranean Sea	Angeliki Sampatakaki [+]	503
17:45	Characterizing climate nonstationarities in response to forcing across the CESM1 Large Ensemble, Last Millennium Ensemble, and observational products	Daniel Amrhein [+]	540

18:00 - 18:30

## Plenary session 6: Y. Maezumi-Legacies from the past as lessons for the future

**Location:** Plenary session  
**Chairperson:** Ilham Bouimetarhan

**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Legacies from the past as lessons for the future	Yoshi Maezumi [+]	0

19:00 - 20:30

## Conference dinner

**Location:** Plenary session

**Session Type:** Social events

## Thu 19 May 2022

08:00 - 10:00

## OSM34: Cryosphere change impacts on arctic coastal environments and ecosystems during the Holocene

**Location:** Virtual room 1  
**Chairperson:** Maija Heikkilä

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Biomarker characterization of the North Water Polynya, Baffin Bay: Modern and Holocene perspectives	David Harning [+]	372
08:15	Biogenic sea-ice proxies in ice, water column and sediment over spring melt in a Hudson Bay archipelago	Tiia Luostarinen [+]	360
08:30	Marine conditions and development of the Sirius Water polynya on the North-East Greenland shelf during the Younger Dryas-Holocene	Rebecca Jackson [+]	330
08:45	Impacts of southwest Greenland freshwater runoff on fjord productivity since the late 19th century	Mimmi Oksman [+]	270
09:00	A Holocene multiproxy record of environmental change in Nuup Kangerlua, the largest fjord in west Greenland	Anna Bang Kvorning [+]	274
09:15	Reconstructing the history of meltwater inputs into the Canadian Arctic Archipelago and Hudson Strait	Alexandra Filippova [+]	485
09:30	Tracing sea ice: protist DNA in marine sediment records from the Northeast Greenland Shelf	Sara Hardardottir [+]	501

09:45 Using sedimentary ancient DNA to reconstruct the impact of Holocene environmental change on Arctic ecosystems **Agnes K. M. Weiner** [+] 471

08:00 - 10:00

## OSM42: Open session on past global changes

**Location:** Virtual room 2

**Chairperson:** Marie-France Loutre

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Regional pteropod preservation records from the Indian Ocean: An overview	<b>Sreevidya E</b> [+]	487
08:15	Constraining paleo sea-level through inversion of marine terrace morphology	<b>Gino De Gelder</b> [+]	164
08:30	Severe cooling of the Atlantic thermocline during the last glacial	<b>Marleen Lausecker</b> [+]	475
08:45	Past summer sea-ice dynamics and ecosystem changes in the Weddell Sea recovered from novel snow petrel stomach-oil deposits	<b>Thale Damm-johnsen</b> [+]	368
09:00	Changes in mesopelagic fish body size during glacial–interglacial transitions	<b>Konstantina Agiadi</b> [+]	117
09:15	El Niño diversity during the Holocene in relation to mean state changes	<b>Isma Abdelkader Di Carlo</b> [+]	152
09:30	Modern Pollen Dataset of China	<b>Mengna Liao</b> [+]	429
09:45	Development of physicochemical and spectroscopic methods to characterize the in-situ chemical speciation of the inorganic contaminants & Innovative Technologies for Remediation of Water & Environmental Pollution By Catalytic Oxidants.	<b>VIRENDRA KUMAR GOSWAMI</b> [+]	188

08:00 - 10:00

## OSM28: Regional and transregional climate variability over the last 2000 years

**Location:** Virtual room 3

**Chairperson:** Steven John Phipps

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Announcing Phase 4 of PAGES 2k: Hydroclimate of the Common Era	<b>Matthew D. Jones</b> [+]	186
08:15	Volcanism and Climate during the Common Era and beyond	<b>Michael Sigl</b> [+]	214
08:30	Large ensemble particle filter for proxy-based spatial reconstructions of the last 2000-years climate variability	<b>Beyrem Jebri</b> [+]	405
08:45	Paleo-productivity changes and Indian Summer Monsoon variability during the Little Ice Age (LIA); Inferences from the Bay of Bengal sediments	<b>Ammoose K Jayan</b> [+]	488
09:00	Tropical Rainfall Belt trends and variability across the Southeast Tropical Indian Ocean over the last 200 years	<b>Jessica Ann Hargreaves</b> [+]	291
09:15	Summer temperature changes in Tierra del Fuego since AD 1765: atmospheric drivers and tree-ring reconstruction from the southernmost forests of the world	<b>Vladimir Matskovsky</b> [+]	307
09:30	East Antarctic temperature variability over the past 2000 years from the Aurora Basin North ice core	<b>Aymeric P. M. SERVETTAZ</b> [+]	418

08:00 - 10:00

## OSM17: Dendrochronology: A flashlight into an elusive past and a tool for

## an uncertain future

**Location:** Virtual room 4

**Chairperson:** Aster Gebrekirstos

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Climate-growth relationships of the most dominant agroforestry parkland tree species ( <i>Vitellaria paradoxa</i> C. F. Gaertner) in the Sahel of West Africa	Sanogo Kapoury [+]	128
08:15	Multi-parameter temperature reconstruction of the past 400 years for the Carpathian Mountains from tree rings	Miloš Rydval [+]	286
08:30	High-resolution wood surface imaging for dendrochronology: towards the development of unbiased reflected light timeseries	Miloš Rydval [+]	289
08:45	Tree-ring anatomy and climate models agree – recent warming unprecedented in the past millennium	Jesper Björklund [+]	454
09:00	Carbon isotope analysis in baobabs rings provides an insight into the past and future of the southwest Madagascar	Estelle Razanatsoa [+]	508
09:15	Aquatic and terrestrial primary production under climate warming conditions in a low atmospheric nitrogen deposition site in southern central Siberian mountains	Daniel Diaz-de-Quijano [+]	300
09:30	Partial least squares regression for dendroclimatic reconstructions: new perspectives	Vladimir Matskovsky [+]	314
09:45	Dendrochronological dating of wildfires in Mordovski Nature Reserve (Central Russia)	Tatiana Kharitonova [+]	258

10:00 - 10:30

## Plenary session 7: P. Srivastava-Flood history of the Himalaya: A geologists perspective

**Location:** Plenary session

**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Flood history of the Himalaya: A geologist's perspective	Pradeep Srivastava [+]	0

11:00 - 12:00

## E-soccer

**Location:** Plenary session

**Session Type:** Social events

16:00 - 18:00

## OSM12: Volcanic impacts on climate and society

**Location:** Virtual room 1

**Chairperson:** Matthew Toohey

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Sahel droughts induced by large volcanic eruptions over the last millennium in PMIP4/past1000 simulations.	Julian Villamayor [+]	415
16:15	The Interplay between Volcanic and Solar Cooling in the Early 19th Century	Shih-Wei Fang [+]	453
16:30	Estimation of Stratospheric Aerosol Optical Depth from Astronomical Observatories	Brennan Rodgers [+]	458
	Deconstructing the Big Ones: what more can tephra can tell		

16:45	us about volcanic eruptions with the greatest climatic and societal impacts	<b>Gill Plunkett</b> [+]	519
17:00	Mid to Late Holocene East Antarctic ice-core tephrochronology: Implications for reconstructing volcanic eruptions and their impacts over the last 5,500 years	<b>Peter M Abbott</b> [+]	125
17:15	Insights into volcano-climate impacts between 750 and 770 CE using the Greenland ice core records	<b>Imogen Gabriel</b> [+]	235
17:30	Tropical Atlantic variability after large volcanic eruptions during the Last Millennium	<b>Laura Verona</b> [+]	367
17:45	The Unidentified ~1809 Volcanic Event: Evidence from Tree Rings and Historical Data	<b>Caroline Leland</b> [+]	522

16:00 - 18:00

## OSM42: Open session on past global changes

**Location:** Virtual room 2**Chairperson:** Marie-France Loutre**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Absolute dating of deep ice cores with 40Ar and 81Kr	<b>Anais Orsi</b> [+]	384
16:15	Ground-penetrating radar data as a method to quantify the spatial representativeness of ice core surface mass balance records in Antarctica	<b>Marie Cavitte</b> [+]	426
16:30	Sea surface temperature and productivity gradients across the eastern equatorial Pacific during the Pliocene	<b>Kristin M. Kimble</b> [+]	<b>533</b>
16:45	Land-sea correlations during Late-Pleistocene abrupt climate changes in the of Cariaco Basin	<b>Jack William Oughton</b> [+]	350
17:00	Relationships Between Climate and Species Traits in Holocene Forests Along an Elevation Gradient in Pacific Canada	<b>Terri Lacourse</b> [+]	219
17:15	Is the Last Glacial Maximum a weak emergent constraint on climate sensitivity?	<b>Martin Renoult</b> [+]	<b>173</b>
17:30	Temporal resolution of multi-taxic fossil assemblages: challenges and opportunities for conservation paleobiology of continental shelf ecosystems	<b>Rafal Nawrot</b> [+]	363
17:45	The timing and ecological consequences of Pleistocene megafaunal collapse in the eastern Andes of Colombia	<b>Felix Conor Pym</b> [+]	264

16:00 - 18:00

## OSM28: Regional and transregional climate variability over the last 2000 years

**Location:** Virtual room 3**Chairperson:** Steven John Phipps**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Process-based Estimate of Global-mean Sea-level Changes in the Common Era	<b>Nidheesh Gangadharan</b> [+]	116
16:15	The Modern Era Reanalysis - ModE-RA	<b>Jörg Franke</b> [+]	<b>139</b>
16:30	A large-scale approach on (sub-)Arctic organic matter input to lacustrine environments over the Common Era	<b>Ana Lúcia Lindroth Dauner</b> [+]	196
16:45	North Atlantic Oscillation and Jet Stream Impacts on Water Isotope Proxies from the Iso2k Database	<b>Andrew Flaim</b> [+]	445
17:00	What climate characterised the Mediterranean during the past two millennia (2k)?	<b>Belen Martrat</b> [+]	504
17:15	A high resolution climate reconstruction during the late phase of the Little Ice Age in the Gulf of Taranto, central Mediterranean Sea, based on organic-walled dinoflagellate	<b>Runa Reuter</b> [+]	220



cysts

17:30	Contribution of Southern Ocean dynamics, climate variability and land-use to changes in atmospheric CO <sub>2</sub> concentration over the past two millennia	Hugues Goosse [+]	106
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16:00 - 18:00

## OSM07: Charting future pathways to sustainability using concepts of resilience and adaptation

**Location:** Virtual room 4**Chairperson:** Lindsey Gillson**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Reinstating variability to recover biodiversity in floodplain wetlands - the Murray-Darling Basin	Peter Andrew Gell [+]	223
16:15	crestr An R package to perform probabilistic climate reconstructions using fossil proxies	Manuel Chevalier [+]	144
16:30	Climate-driven Mediterranean fire hazard assessments for 2020–2100 on the light of past millennial variability	Marion Lestienne [+]	197
16:45	Quantifying resilience of socio-ecological systems through dynamic Bayesian networks: An application to high Andean Ecosystems in Colombia	Felipe Franco-Gaviria [+]	277
17:00	The whole is not the sum of the parts: building a synthesis database of past human-environmental systems in the Global South (pSESYNTH Project)	Xavier Benito Granel [+]	305
17:15	Endurability and transformability: what we can learn from societal resilience in society from sub-Saharan Africa	Anneli Ekblom [+]	315
17:30	Holocene vegetation and fire history in the Central Highlands of Madagascar and its conservation implication	Andriantsilavo Hery Isandratana Razafimanantsoa [+]	476

18:00 - 18:30

## Plenary session 8: M.E. Ferrero-Dendrochronology and climate in the tropical Andes and lower lands: What we know and what to expect

**Location:** Plenary session**Chairperson:** Aster Gebrekirstos**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Dendrochronology and climate in the tropical Andes and lower lands: What we know and what to expect	María Eugenia Ferrero [+]	0

19:00 - 20:00

## Lightning talk session 6

**Location:** Virtual room 1**Chairperson:** Marie-France Loutre**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Key Temperature Differences between the Northern and Southern Gulf of Mexico since 1800 CE Revealed by <i>Siderastrea siderea</i> Coral Sr/Ca Reconstructions	Kylie Palmer [+]	
	Reconstruction of bottom water conditions at the SW Iberian margin during the Early Pleistocene using benthic foraminifers	Ana Lopes [+]	
	Continuous Sublimation Extraction/Laser Spectroscopy - a novel method for greenhouse gas measurements in the	Florian Krauss [+]	

oldest ice

Reconstructing Holocene climate dynamics in Northern Greece using biomarker proxies in lake sediments

Shape, growth and individual variability: three inseparable components of shell sclerochronology

Coralline algal records of past ocean and sea-ice variability in northern Svalbard

Rare earth elements/Ca ratios in planktonic foraminifera as potential productivity proxies: The NW Iberia case study

Past, present and future societal risk arising from global change: a collaborative approach

Climate synchronicity in Tasmanian terrestrial and aquatic ecosystem over the Holocene

Past Climate Variations in Early Instrumental Data

Holocene paleoclimate of McMurdo Sound, Antarctica reconstructed from growth striations and  $\delta^{13}\text{C}$ ,  $\delta^{18}\text{O}$ , and  $\delta^{15}\text{N}$  values in shells of the Antarctic scallop *Adamussium colbecki*.

Palaeoecological investigations on environmental impact of Iron Ages societies in mid-Kama region (Russia)

Documenting Environmental and Oceanic Variability in the Down East Coastal Region of the Gulf of Maine using the long-lived bivalve *Arctica islandica*

Barium/Calcium Ratios in Eastern Oysters (*Crassostrea virginica*) as a Potential Environmental Proxy: Examining the Effects of Anthropogenic Freshwater Flooding on Development and Mortality of Oysters in the Pontchartrain Basin

Reconstruction of the Holocene temperature and productivity variability at the Portuguese margin

Exported organic carbon control over particle reactive element cycling during millennial-scale Holocene climate variability

Marine bivalves from northern Norway record persistent multidecadal climate variability at high latitudes

Paleo-construction of the Moroccan Atlantic coast

Usefulness of the local press as a weather research tool: the *Semanario Sóller* as an example in the final decades of the 19th century in Mallorca

**Antoine Thévenaz** [+]

**Jennifer Guarini** [+]

**Tamara Trofimova** [+]

**Emília Salgueiro** [+]

**Michael Neil Evans** [+]

**Kristen Beck** [+]

**Elin Lundstad** [+]

**Emma Puhalski** [+]

**Vlada Batalova** [+]

**Alexandra G. Walton** [+]

**Anna Elizabeth Stebbins** [+]

**Aline Mega** [+]

**Bruna B. Dias** [+]

**Madelyn Jean Mette** [+]

**Hasnaa NAIT HAMMOU** [+]

**Joan Rosselló-Geli** [+]

20:30 - 22:30

## E-posters session 6 [ePosters]

**Location:** Virtual room 2

**Session Type:** Poster session

**Fri 20 May 2022**

08:00 - 10:00

## OSM01: Quaternary paleoenvironments of southern Africa

**Location:** Virtual room 1

**Chairperson:** Lynne Julia Quick

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	High-Resolution Mid-to-Late Holocene Fire-Climate Links in the Hyper Biodiverse Fynbos, South Africa	<b>Stella G. Mosher</b> [+]	373
08:15	Consistent coastal versus inland hydroclimatic contrasts in South Africa with increasing glacial conditions during MIS 5-	<b>Margit H. Simon</b> [+]	392

	4 revealed by data-model comparison		
08:30	Using pedogenic weathering timescales as a Quaternary paleoclimate proxy	<b>Tebogo Vincent Makhubela</b> [+]	215
08:45	Quantitative climate reconstructions for the Drakensberg-Maloti region using a new synthesis of pollen records	<b>Annika V. Herbert</b> [+]	293
09:00	Long-term relationships between land-use, erosion and vegetation at a mountain site of the Cape Floral Kingdom Hotspot (South Africa). Implications for its conservation and management.	<b>Saúl Manzano</b> [+]	160
09:15	Reconstructing Late Quaternary Environmental and Climate Dynamics Using Palaeolake Sediments from Etosha Pan, Namibia	<b>Matjie Lillian Maboya</b> [+]	397
09:30	Holocene vegetation and fire dynamics in Mozambique's miombo woodland zone	<b>Ana Gomes</b> [+]	284
09:45	An abrupt temperature and hydroclimate transition in eastern Africa during Termination V (~430 ka)	<b>Briana Ramirez</b> [+]	216

08:00 - 10:00

## OSM16: Towards an improved understanding of past flood variability and examples on how such data can have a bearing on present and future flood risk management

**Location:** Virtual room 2**Chairperson:** Juan Ballesteros Canovas**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Resilience to future floods through flood memory approach: an example from West Bengal, India	<b>Sujay Bandyopadhyay</b> [+]	525
08:15	Paleoflood records of Western Himalaya, flood genesis and human remains.	<b>Pankaj Sharma</b> [+]	459
08:30	Impact of warmer climate periods on flood hazard in the European Alps	<b>Bruno Wilhelm</b> [+]	163
08:45	Lessons from the Ahrtal Flood 2021 and the Disregard of the Historical Dimension	<b>Michael Kahle</b> [+]	200
09:00	The rhythm of the river: a CPDF of Lower Meuse river deposits	<b>Willem Toonen</b> [+]	253
09:15	Looking at long-term debris flow activity in the Japanese Alps	<b>Juan Ballesteros Canovas</b> [+]	309
09:30	The temporal context of glacial lake outburst floods in Russian Altai – current state of research and future prospects	<b>Roman Nepop</b> [+]	478
09:45	Holocene chronology of the climatically driven Ureg-Nur lake level transformation, Inland Drainage Basin of Mongolia	<b>Anna Agatova</b> [+]	510

08:00 - 10:00

## OSM24: Regional synthesis of environment-climate-human interactions during the past 2000 years

**Location:** Virtual room 3**Chairperson:** Ilham Bouimetarhan; Hanane REDDAD**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	Bioindicators Monitoring using Soil & Plant Sediments to Measure Environmental Impacts In the Research Oak Forest of Ilam, Iran	<b>Tahereh Ensafi Moghaddam</b> [+]	380
08:15	Environmental evidence of metal smelting activities before, during, and post Roman period in the Carpathian borderlands	<b>Daniel Veres</b> [+]	500

08:30	The voyage of Humans in the South Pacific: the view from Lake Lanotō, Sāmoa	<b>Ronald Bernas Lloren</b> [+]	416
08:45	Paleoenvironmental changes in the lowlands of Transylvania (Central Eastern Europe) during the Late Holocene	<b>Gheorghe Badaluta</b> [+]	516
09:00	Human and climate impacts on crater lake hydrology in western Uganda over the past c. 1000 years.	<b>Laura H. Hunt</b> [+]	230
09:15	Distribution of modern pollen and its transport from the continent to the ocean in southern Morocco.	<b>Sokaina Tadoumant</b> [+]	167
09:30	Using Palaeoecology to Determine the Effects of Recent Human Impacts on a Shallow Lake in Madagascar	<b>Lilian Unger</b> [+]	<b>444</b>

08:00 - 10:00

## OSM41: Towards a global past human land-use and land-cover synthesis over the Holocene

**Location:** Virtual room 4**Chairperson:** Nicki J. Whitehouse**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
08:00	A late-Quaternary sedimentary pollen dataset of China	<b>Borui Zhou</b> [+]	432
08:15	Holocene vegetation history of the Pontic Steppe in southern Ukraine under changing land use and climate	<b>Kathrin Ganz</b> [+]	135
08:30	Reconstructing the Holocene land cover evolution of NE Belgium: an evaluation of population-based and pollen-based approaches in contrasting settings	<b>Renske Hoevers</b> [+]	181
08:45	Uncovering regional land-cover changes in Australia using pollen-based models	<b>Michela Mariani</b> [+]	209
09:00	Chemical fingerprinting of grass pollen: a tool for wild and domesticated species discrimination?	<b>Faidra Katsi</b> [+]	260
09:15	Postglacial changes of the East-European forest-steppe	<b>Ekaterina Lukanina</b> [+]	262
09:30	Holocene vegetation, fire, and land-use history in Northern Greece: the Limni Vegoritida record revisited	<b>César Morales-Molino</b> [+]	483

10:00 - 10:30

## Plenary session 9: L. Gillson-A past-present-future perspective on using paleoecology to conserve African ecosystems

**Location:** Plenary session**Chairperson:** Willy Tinner**Session Type:** Plenary session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	A past-present-future perspective on using paleoecology to conserve African ecosystems	<b>Lindsey Gillson</b> [+]	0

11:00 - 12:00

## Lightning talk session 7

**Location:** Virtual room 1**Chairperson:** Asfawossen Asrat**Session Type:** Lightning talk

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
	Late Holocene vegetation changes in the Zackenberg area, NE Greenland: the lake Lomsø record	<b>Rodrigo Osorio</b> [+]	
	MODERN POLLEN-VEGETATION RELATIONSHIPS IN NORTHEASTERN SOUTH AFRICA	<b>Jerry Olatoyan</b> [+]	

Millennium length tree-ring anatomy from the iconic Yamal chronology

Dendroclimatological studies in Solovki Islands.

Late Quaternary palynological Studies at Lake St Lucia, KwaZulu-Natal

Seeking seasonality in serial sampled equid teeth from late Middle Stone Age levels at Sehonghong Rockshelter, highland Lesotho

Vegetation succession in the Middle Stone Age at three sites from ~ 250 000 to ~ 35 000 years ago

Investigating sediments supplying the Southeast African Margin: a multiproxy study

Applying charcoals from iron smelting furnaces for dendrochronological investigations in Russian Altai

The "Modern Era Reanalysis" data assimilation system

Diatom and dinoflagellate cyst succession over four annual cycles in a high Arctic fjord, Northeast Greenland

What can be learned from marine archives about the current warming in the Mediterranean Sea?

Groundwater-fed Plot-and-Berm agroecosystems in aeolian sand hinterlands around the Mediterranean basin since medieval times: Regional agricultural connectivity in a stable late Holocene climate

Synchronous natural climate cycles within the past ~3ka observed in six temperature proxies from the poles, central Europe, east Asia and North America

Investigating the sensitivity of Ugandan crater lakes to drivers of (hydro)climatic change in the Common Era using an isotope mass balance approach.

Closing in on a unified global ice-core chronology by merging cosmogenic radionuclides, sulfur isotopes, cryptotephra and tree-rings. Chances and limitations.

Middle MIS 3 multi-proxy study of a speleothem from Bloukrantz cave, South Africa

A new, user-friendly and ecologically relevant pollen type classification for the Southern African Asteraceae

Climate-growth relationships of two valuable Anacardiaceae species in Burkina Faso, West Africa

Coeval Drying Across the Central Tropical Pacific Over the Last Millennium

**Jesper Björklund** [+]

**Ekaterina Dolgova** [+]

**Angela Effiom** [+]

**Alexandra L. Norwood** [+]

**Sandra Janet Lennox** [+]

**Ellie Pryor** [+]

**Anna Agatova** [+]

**Veronika Valler** [+]

**Meri Mäkelä** [+]

**Bassem Jalali** [+]

**Joel Roskin** [+]

**Michael William Asten** [+]

**Laura H. Hunt** [+]

**Michael Sigl** [+]

**Jenny Maccali** [+]

**Saúl Manzano** [+]

**Larba Hubert Balima** [+]

**Davina Wyman** [+]

12:00 - 14:00

## E-posters session 7 [ePosters]

**Location:** Virtual room 2

**Session Type:** Poster session

14:00 - 15:00

## Side event : 2k Network townhall

**Location:** Virtual room 3

**Session Type:** Workshops and roundtable

16:00 - 17:00

## OSM38: Ice-sheet variability and behavior through the lens of geologic data and numerical modeling

**Location:** Virtual room 1

**Chairperson:** Aaron Barth

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Net effect of ice-sheet-atmosphere interactions reduces simulated transient Miocene Antarctic ice sheet variability	Lennert B. Stap [+]	129
16:15	Using Parametrically and Temporally Varied Ensembles to Reconstruct the Greenland Ice Sheet of MIS-11	Brian Crow [+]	302
16:30	Patagonian Ice Sheet reconstruction through the Marine Isotope Stages 3 and 2 using numerical modeling and geological constraints.	Andrés Castillo Llarena [+]	348
16:45	Ocean temperature forcing in glacial-interglacial Antarctic Ice Sheet simulations	David Chandler [+]	497

16:00 - 18:00

## OSM16: Towards an improved understanding of past flood variability and examples on how such data can have a bearing on present and future flood risk management

**Location:** Virtual room 2**Chairperson:** Juan Ballesteros Canovas**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	The disastrous River Ahr flood of July 2021 - Learning from the past to prepare for the future	Thomas Roggenkamp [+]	318
16:15	Analysis of an extreme hydrological event in a semi-arid region. The case of the 2012 flood in the Antas River, Spain.	Carlos Sánchez-García [+]	332
16:30	Pattern of severe alpine floods of the last 540 years reconstructed from temporal-spatial analysis of natural and documentary archives	Lothar Schulte [+]	338
16:45	Extraordinary floods and climatic variability in southern New Zealand from 1862 to 2020	Lothar Schulte [+]	351
17:00	The risk of marine flooding along the Mohammedia coastline (Morocco).	CHTIOUI Taoufiq [+]	385
17:15	Assesing flood frequency with botanical evidence: a case study from the Asco valley, Corsica, France	Yihua Zhong [+]	513
17:30	Dendrogeomorphological variability of the Eistlenbach, Tschingelsee and Spreitlouwi alluvial fans, Bernese Alps	Laia Casanovas-Arimon [+]	542
17:45	Climate-driven alluvial fan history and a record historical flood in western Washington	Daniel G Gavin [+]	502

16:00 - 16:45

## OSM24: Regional synthesis of environment-climate-human interactions during the past 2000 years

**Location:** Virtual room 3**Chairperson:** Hanane REDDAD; Ilham Bouimetarhan**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Tropical lake ecosystems in the Anthropocene: Twin lakes from western Uganda	Tessa D Driessen [+]	192
16:15	Past human-ecosystem dynamics in Vanuatu	Giorgia Camperio [+]	539
16:30	The peopling of mangroves in Senegal in the late Holocene: relationship with climate and political changes in West Africa	Matthieu Carré [+]	420

16:00 - 17:00

## OSM42: Open session on past global changes

**Location:** Virtual room 4

**Chairperson:** Marie-France Loutre

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:00	Geographic distribution and parameters influencing the presence of lacustrine alkenones	Céline Martin [+]	349
16:15	GDGTs and n-alkane isotope compositions in modern fluvial sediments of the Amazon River Basin: Insights for paleoenvironmental reconstructions	Dailson J. Bertassoli Jr. [+]	238
16:30	Exploring the combination of sedimentary lipid biomarkers and novel hyperspectral imaging techniques: A Holocene-length multiproxy reconstruction from Lake 578, Southern Greenland	Tobias Schneider [+]	248

16:45 - 18:00

## OSM22: Historical climate reconstruction and impacts utilizing written records

**Location:** Virtual room 3

**Chairperson:** Samuel Aaron White

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
16:45	The REACHES high-resolution gridded temperature and humidity index datasets 1368-1911 in eastern China	Elaine KH Lin [+]	359
17:00	A Decade of Cold Eurasian Winters in the Early 19th Century	Stefan Brönnimann [+]	191
17:15	Droughts in Mozambique and Angola since 1550	Matthew Hannaford [+]	280
17:30	Analysis of the correlation between climate and historical extreme flood events in the southeastern Iberian Peninsula: The case of the Andarax River	Carlos Sánchez-García [+]	320

17:00 - 18:00

## OSM20: Societal risk arising from global change: Past, present, future

**Location:** Virtual room 1

**Chairperson:** Michael Neil Evans

**Session Type:** Oral session

Pres Time	Presentation title/Abstract title	Speakers/Authors	Abstract Id
17:00	Linked molecular and isotopic indicators of fire history, population, vegetation and climate change in the Maya lowlands	Benjamin Keenan [+]	107
17:15	Holocene environmental and hydrological changes in sub-millennial-scale from southwest Mexico and associated climatic forcing	Agesandro Garcia Arriola [+]	544
17:30	Risk of marine submersion in the bay of Agadir (Morocco)	Abdelhaq AANGRI [+]	335
17:45	Economic Damages from Weather and Climate Extremes	Christian Franzke [+]	398

18:00 - 18:30

## Closing Ceremony

**Location:** Plenary session

**Session Type:** Ceremony

## Chairpersons and Speakers index

### Chairpersons and Speakers index

[Aaron Barth](#)

[Alessio Rovere](#)

[Andrea Columbu](#)

[Andria Dawson](#)

[Angela Gallego-Sala](#)

[Asfawossen Asrat](#)

[Aster Gebrekirstos](#)

[Blas Lorenzo Valero Garcés](#)

[Carole Adolf](#)

[Carolina Adler](#)

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[Eric Wolff](#)

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