## **TUESDAY, 12 FEBRUARY**

Ice breaker at Cidade de Goa 19.00

## **WEDNESDAY, 13 FEBRUARY**

**BLOCK 1 - Welcome & Plenary Session (Grande Sala)** 09:00-10:30 Chalr: S. Rajan 09:00-10:00 Welcome ceremony Invocation welcome addresses by representatives from politics, hosts, and organizers Inauguration and lighting of lamp Inaugural address 10:00-10:30 Plenary Talk: Ashok Singhvi - Land-sea correlation: Pitfalls and remedies

10:30-11:00 Coffee break

11:00-12:30 **BLOCK 2 - Oral sessions Grande Sala** Sala de Banquete

## OSM01 Monsoons in Space and Time: Patterns, Mechanisms and Impacts

Chair: Rajeev Saraswat, Ralph Schneider

History of the Indian Monsoon recorded in Andaman Sea sediments Ed Hathorne, Liviu Giosan, Tim Collett

Impact of insolation, fresh water fluxes and ice-sheet on Early Holocene monsoon characteristics

Pascale Braconnot, Charline Marzin, Masa Kageyala, Anne-Marie Lézine

Can South-West monsoon intensification develop a reduced condition in the Bay of Bengal sediments?

Jinnappa Pattan, Ishfaq Ahmad Mir, Gopal Parthiban, Supriya Karapurkar, Vishnu Matta, Pothuri Naidu, S W A Naqvi

The role of Asian monsoon dynamics for Late Quaternary lake level changes at the north-eastern Tibetan Plateau

Elisabeth Dietze, Gregori Lockot, Kai Hartmann, Bernd Wünnemann,, Bernhard Diekmann, Georg Stauch

What is the influence of Tibetan Plateau on the Asian summer monsoon? Barrier versus heating effect

Guangshan Chen, Zhengyu Liu, John Kutzbach

A high-resolution record of West African Monsoon variability for the past 530,000 years from Lake Bosumtwi, southern Ghana

Nicholas McKay, Jonathan Overpeck, Timothy Shanahan, Erik Brown, John Peck, Clifford Heil, John King, Chris Scholz

## OSM03 New Approaches to Data Assimilation and Data-**Model Comparison**

Chair: Hugues Goosse

Assimilation of time-averaged pseudo and real proxies for climate reconstruction Nathan Steiger, Gregory Hakim, Eric Steig, David Battisti, Gerard Roe

Skill and reliability of climate model ensembles at the Last Glacial Maximum and mid-Holocene

Julia Hargreaves, James Annan, Rumi Ohgaito, Andre Paul, Ayako Abe-Ouchi

Lake Isotope - Climate Model comparisons: an iterative approach to improved palaeoclimate understanding?

Matthew Jones, Steven Phipps

## OSM13 Past Warm Periods Informing the Anthropocene

Chair: Stijn De Schepper

About the difficulty to find a Pleistocene analogue to the Holocene and Anthropocene

André Berger, Qiuzhen Yin, Nicholas Herold

Pliocene Marine Isotope Stage (MIS) M: caused by a hiccup in the closure of the Panamanian Gateway

**Jeroen Groeneveld**, Stijn De Schepper, B. David A. Naafs, Martin J. Head, Jan Hennissen, Cederic Van Renterghem, Stephen Louwye

The relative roles of  ${\rm CO}_{\scriptscriptstyle 2^{\prime}}$  palaeogeography and vegetation in determining late Miocene climate: results from a terrestrial model-data comparison

Catherine Bradshaw, Daniel Lunt, Rachel Flecker, Ulrich Salzmann, Matthew Pound, Alan Havwood, Jussi Eronen

12:30-14:00 Lunch

14:00-15:30 **BLOCK 3 - Oral sessions** 

## Grande Sala

## OSM01 (Continued)

## Chair: Rajeev Saraswat, Ralph Schneider

Novel precipitation isotope records address a long-standing debate about East Asian cave oxygen isotope records

Elizabeth Thomas, Steve Clemens, Tim Herbert, Yongsong Huang, Warren Prell, Jaap Sinninghe Damsté, Youbin Sun

Deglaciation in the tropical Indian Ocean driven by interplay between the regional monsoon and global teleconnections

Rajeev Saraswat, David Lea, Rajiv Nigam, Andreas Mackensen, Dinesh Naik Assessing the severity of monsoon decline during Heinrich events

## Syee Weldeab

Long term Monsoon variability inferred from lake sediments on the Tibetan Plateau

Roland Mäusbacher, Zhu Liping, Daut Gerhard, Doberschütz Stephan, Wang Junbo, Haberzettl Torsten

Glacial to Holocene changes in African monsoon according to deuterium isotope signals from alkenones and n-alkanes

Ralph R Schneider, Guillaume Leduc, Yiming Wang, Julian Sachs, Nils Andersen

Monsoon Climate Sensitive Tree-Ring Chronologies of Teak (Tectona grandis L. F.) from central India and their teleconnection with ENSO

## Hemant Borgaonkar

## Sala de Banquete OSM16 Open Session on Latest Highlights in Paleoscience

## Chair: Denis-Didier Rousseau, Liping Zhou

A global reconstruction of temperature changes at the Last Glacial Maximum James Annan, Julia Hargreaves

A unique long proxy record from Sokli in the central area of Fennoscandian glaciations drastically changes classic concepts of glaciations, vegetation and climate in N Europe during the Late Pleistocene

## Karin F. Helmens

Mid-Brunhes shift in continental weathering intensity and its feedback with atmospheric CO2: insights from a new ice core proxy

Jochen Schmitt, Barbara Seth, Peter Köhler, Jane Willenbring, Hubertus Fischer Antarctic deglaciation rewritten - highly dynamic ice-sheet disintegration during

meltwater pulses and contribution to sea-level rise

Michael E. Weber, Peter U. Clark, Rupert Gladstone, Axel Timmermann, Gerrit Lohmann, Gerhard Kuhn, Daniela Sprenk

Is the current rapid warming of the Antarctic Peninsula unprecedented? Robert Mulvaney, Nerilie Abram, Richard Hindmarsh, Carol Arrowsmith, Olivier

Millennial and sub-millennial scale variations in rainfall revealed by chinchilla rat (Abrocoma) middens over the last 16,400 years in the central Atacama Desert Claudio Latorre, Francisco J. Gonzalez, M. Ignacia Rocuant, John Houston, Maisa Rojas

15:30-16:00 Coffee break

## WEDNESDAY, 13 FEBRUARY (continued)

16:00-18:00

**BLOCK 4 - Poster Sessions** 

### OSM01 Monsoons in Space and Time: Patterns, Mechanisms and Impacts

Chair: Rajeev Saraswat, Ralph Schneider

**OSM01-19** Abrupt changes in the strength of the Indian Summer Monsoon during late glacial to Holocene evidenced by episodic increases in Ayeyarwady outflow to the Andaman Sea

Sijinkumar A.V., B.N. Nath

OSM01-07 Documentary reconstruction of rainfall variability over western India, 1781-1860

George Adamson, David Nash

OSM01-30 Paleoclimatogy in the South Equatorial Indian Ocean

Celsa Almeida, Maruthadu Sudhakar, Manish Tiwari

OSM01-08 Monsoon circulation strength inferred from a multicentury tree-ring stable isotope chronology from southeast Asia

Kevin Anchukaitis, Mary Gagen, Brendan Buckley, Dario Martin-Benito, Caroline Ummenhofer, Le Canh Nam

OSM01-29 Indian monsoonal rainfall variation in last 100 ka: A case study from western part of India

Sayak Basu

OSM01-01 Investigation of extreme Phases of the Indian Summer Monsoon during the last Millennium using the Regional Climate Model COSMO-CLM Daniel J. Befort, Stefan Polanski, Gregor C. Leckebusch, Ulrich Cubasch

OSM01-05 Monsoonal variability during the Holocene: An integrated data and modeling study

Eli Biton, **Hezi Gildor**, Gabriele Trommer, Michael Siccha, Michael Kucera, Marcel van der Meer, Stefan Schouten

OSM01-33 Quantified paleo-seasonality of the West African Monsoon in Senegal

Matthieu Carré, Moufok Azzoug

OSM01-36 Intellectual Structure Of Monsoon Research- A Bibliometric Study

Prabir G Dastidar, Olle Persson

OSM01-32 History of terrestrial precipitation in the Amazon basin (South America) during the last 240 ka

Aline Govin, Janis Ahrens, David Heslop, Matthias Zabel, Stefan Mulitza, Cristiano M. Chiessi

OSM01-24 Climate instability and monsoon variability during the past 45,000 years in NW China derived from desert lake records

**Kai Hartmann**, Bernd Wünnemanr

OSM01-35 Glacial terminations and periodicities for the last 800 kyr: Constraints from the bulk magnetic susceptibility record, the southeastern South China Sea Selvaraj Kandasamy, Victor Manuel Velasco, Wille Soon, Min-Te Chen, Teh-Quei Lee, Shuh-Ji Kao

OSM01-18 Variation in the Indian Summer Monsoon intensity during the Bølling-Ållerød and Holocene

Pratima Kessarkar, V. Purnachadra Rao, S.W.A. Naqvi, Supriya Karapurkar

OSM01-23 Late-Pleistocene-Holocene basin filling by Himalayan sediments in Great Rann of Kachchh: A palaeoclimatic perspective

Nitesh Khonde, Deepak Maurya, Ravi Bhushan, Archana Das, Parul Joshi, Laxman Chamyal

**OSM01-16** Reconstruction of precipitation and primary productivity during Holocene using geochemical proxies from deep sea cores from the internal seas of the Philippines

Ronald Lloren, Fernando Siringan, Alyssa Peleo-Alampay

OSM01-17 High resolution Indian summer monsoon variability record during the last deglaciation

Mahjoor Ahmad Lone, Syed Masood Ahmad, Chuan Chou Shen, Anil Kuman

OSM01-02 Simulation of the East Asian Summer Monsoon during the Last Millennium with the MPI Earth System Model

Wenmin Man, Tianjun Zhou, Johann Jungclaus

OSM01-06 Do instrumental data co-vary with the paleoclimate proxy records of Southern India?

Busnur Manjunatha, Keshava Balakrishna, K.N. Prakash Narasimha

OSM01-12 Holocene climatic variability in lake Sonkul sediments (Kirghizstan, central Tien Shan): a monsoon influence in western Central Asia?

Marie Mathis, Philippe Sorrel, Stefan Klotz, Hedi Oberhänsli

OSM01-14 Increased transport of summer monsoon moisture to the Higher Himalaya in the early Holocene

Narendra Kumar Meena, Anil Kumar Gupta

**OSM01-11** Incrusions of shorther wetter phases of SW Monsoon in an overall dry middle to late Holocene palaeoenvironment of Pookode Lake, South India Veena Nair M.P., **Hema Achyuthan**, Christopher Eastoe

**OSM01-31** Nd-Sr-Hf isotopes in fine detritus material in Red Sea cores as tracers of Sahara – Arabia dust storms and monsoonal rains during the past 140 ka Daniel Palchan, **Ahuva Almogi-Labin**, Mordechai Stein, Yigal Erel, Steve L. Goldstein

OSM01-28 Sr isotope study of Kaveri river – a potential proxy to infer the paleo-intensities of SW and NE monsoon in south India

Jitendra Kumar Pattanaik, S. Balakrishnan, Rajneesh Bhutani

OSM01-10 Hydrological changes in the Gulf of California during the past 6200 cal yr BP and their relationship with ITCZ and North American Monsoon variability Ligia Pérez-Cruz, Jaime Urrutia-Fucugauchi

**OSM01-03** Analysis of the South American Monsoon for the mid-Holocene considering the results of 7 different PMIP3-model outputs **Luciana Prado**, Ilana Wainer, Cristiano Chiessi

OSM01-20 Stepwise strengthening of Indian Summer Monsoon in the Bay of Bengal during last Glacial-Interglacial: Possible North Atlantic Tele-connection Sanjeev Raghav, Manish Tiwari, Koushik Dutta, G V Ravi Prasad

**OSM01-26** Reconstruction of late Quaternary climate changes as derived from a pollen record from Lahaul Himalaya, Himachal Pradesh, India **Suman Rawat**, A. K. Gupta, S. J. Sangode, N. R. Phadtare, H. C. Nainwal

OSM01-04 Regional monsoon dynamics from small but complex paleoclimate networks

Kira Rehfeld, Bedartha Goswami, Nora Molkenthin, Franziska Lechleitner, Sebastian F. M. Breitenbach, Ola Kwiecien, Norbert Marwan, Jürgen Kurths

**OSM01-15** Holocene history of climate, vegetation and anthropogenic disturbance from core monsoon zone of central India as reflected in lacustrine sediments of Lonar Crater, Maharashtra

Nils Riedel, Martina Stebich, Philip Menzel, Ambili Anoop, Saswati Sarkar, Sushma Prasad, Martin Wiesner, Dirk Sachse, Nathani Basavaiah

OSM01-22 Millennial-scale proxy records of the North American Monsoon from the arid northern Mexico over the last glacial period and Holocene Privadarsi D. Rov

## WEDNESDAY, 13 FEBRUARY (continued)

#### 16:00-18:00

### **BLOCK 4 - Poster Sessions (continued)**

OSM01-09 Fluctuations in the Indonesian-Australian Monsoon: New insights from the Flores stalagmite record.

**Nick Scroxton**, Linda Ayliffe, Mike Gagan, John Hellstrom, Wahyoe Hantoro, Hamdi Rifai, Bambang Suwargardi

**OSM01-25** Synchronous summer and winter monsoon breakdown in the Arabian Sea during glacial cold phases

Arun D. Singh, Simon Jung, Kate Darling, Raja Ganeshram, Tara Ivanochko, Dick Kroon

**OSM01-21** Variability in the strength of Monsoonal winds in the Western Arabian Sea since the Last Glacial Maximum: Evidence from Planktic Foraminifera and Oxygen isotope records

Ashutosh Singh, Manish Tiwari, R Ramesh, Devesh Sinha

OSM01-34 Tropical Variations of the Global Monsoon Precipitation during Last Interglacial (Eemian)

Umesh Singh, Qiuzhen Yin, Andre Berger

OSM01-13 Holocene vegetation and climate dynamics in Northeast China inferred from palynological analyses of the Sihailongwan maar lake sediments Martina Stebich, Frank Schlütz, Jens Mingram, Jiagi Liu

OSM01-27 First Sub-centennial to Centennial Scale SST Record from the Eastern Arabian Sea

Manish Tiwari, Siddhesh Nagoji, Kartik Thammisetti, Raja S. Ganeshram

## OSM03 New Approaches to Data Assimilation and Data-Model Comparison

Chair: Hugues Goosse

OSM03-05 Contrasting changes in vegetation and West African wind systems over the west African Sahel region during Heinrich Stadial 1

Ilham Bouimetarhan, Matthias Prange, Enno Schefuß, Lydie Dupont, Jörg Lippold, Stefan Mulitza, Karin Zonneveld

OSM03-11 Oceanographic data-model comparisons: What exactly are we doing? A late Miocene case study

Catherine Bradshaw, Rachel Flecker, Daniel Lunt, Ana Christina Ravelo, Eirik Vinje Galaasen, Howard Spero

OSM03-17 Exploring the causes of enhanced recent growth in high-elevation bristlecone pines using stable isotope dendroclimatology

Rory Clisby, Iain Robertson, Mary Gagen, Charles Hipkin

OSM03-13 Megadroughts in Millennium-Length Forced and Control Simulations and their Comparison to the Proxy-derived North American Drought Atlas Sloan Coats, Jason Smerdon, Richard Seager, Benjamin Cook, J. Fidel Gonzalez-Rouco

OSM03-06 Integrated climate-proxy modeling using the isotope-enabled SPEEDY-IER with a focus on tropical climate

Sylvia Dee, David Noone, Julien Emile-Geay, Nikolaus Buenning

OSM03-15 Reconstructions of the climate states over last centuries using particle filtering

Svetlana Dubinkina, Hugues Goosse, Violette Zunz, Yoann Sallaz-Damaz

OSM03-10 Data assimilation of climate proxies in a set of 30 model simulations using the Ensemble Kalman Filter

Jörg Franke, Jonas Bhend, Stefan Brönnimann

OSM03-07 Stable Water Isotopes in a Coupled Atmosphere-Vegetation Model:

Comparison of simulation results with observational and proxy data

Barbara Haese, Martin Werner, Britta Beckmann, Gerrit Lohmann, Enno Schefuß

**OSM03-03** The global ocean during the mid-Holocene: A multi-sensor sea surface temperature reconstruction (MARGO-6k) and evaluation of the CMIP5 mid-Holocene simulations

Ines Hessler, Sandy Harrison, Michal Kuchera, Stefan Mulitza, Claire Waelbroeck, data contributes MARGO-6k

OSM03-08 Modelling oxygen and deuterium isotopes over the last 120 ka in a fully-coupled atmosphere-ocean GCM

Ruza Ivanovic, Paul Valdes, Joy Singarayer

OSM03-01 A simple approach to assessing the accuracy of age models from Holocene sediment cores

Darrell Kaufman, Nicholas Balascio, Nicholas McKay, Hanna Sundqvist

OSM03-19 Biases in the diurnal temperature range in an ensemble of regional climate models and their possible causes

Jan Kysely, Eva Plavcova

OSM03-18 How did the late-glacial no-analog plant communities in eastern North America arise? Testing competing hypotheses through model-data comparison

Yao Liu, Simon Brewer, Stephen T. Jackson

OSM03-16 Using data assimilation to estimate the consistency between different proxies and model results

Aurélien Mairesse, **Hugues Goosse**, Pierre Mathiot, Svetlana Dubinkina

OSM03-02 Model-data comparisons of Holocene treeline dynamics in Fennoscandia and European Russia

Jesse Morris, Keyan Fang, Heikki Seppä, Sakari Salonen, Paul Miller, Hans Renssen

OSM03-12 The importance of external forcing on the climate of the last millennium

Andrew Schurer, Gabriele Hegerl, Simon Tett, Michael Mann, Steven Phipps

OSM03-04 Holocene thermal maximum in Europe: Data and model simulations

Heikki Seppä, Hans Renssen, Oliver Heiri, Thierry Fichefet, Hugues Goosse, Didier M. Roche

**OSM03-09** Triple water vapor isotopic ( $H_2^{18}O$ ,  $HD^{16}O$ ,  $H_2^{17}O$ ) measurements above the Greenland Ice Sheet and importance for interpretation of ice cores **Hans Christian Steen-Larsen**, Renato Winkler, Fredéric Prié, Amaelle Landais, Valérie Masson-Delmotte, Camille Risi, Barbara Stenni

OSM03-14 Evaluation of historical climate simulation with High-resolution global atmospheric model

Sumin Woo, Jai-Ho Oh, Kyoung-Min Lee

## **OSM13 Past Warm Periods Informing the Anthropocene**

Chair: Stijn De Schepper

OSM13-08 Surface ocean conditions in the eastern Nordic Seas during the Pliocene

Carin Andersson, Bjørg Risebrobakken, Erin McClymont, Lisbeth Jensen

OSM13-04 Modeled variability of land vegetation and carbon during the Holocene

Tim Brücher, Victor Brovkin, Veronika Gayler

OSM13-12 How to glaciate the Northern Hemisphere in a globally warm world?

Stijn De Schepper, Jeroen Groeneveld, B. David A. Naafs, Cédéric Van Renterghem, Jan Hennissen, Martin J. Head, Stephen Louwye

OSM13-06 Interglacial vegetation dynamics revealed from land-cover estimates and potential disturbance factors

Petr Kuneš, Piotr Kolaczek

**OSM13-05** Can variations in orbital and greenhouse gas forcing explain the North Atlantic sea-surface temperature evolution during the Last Interglacial? Petra M. Langebroek, **Kerim H. Nisancioglu** 

OSM13-14 Modelling the influence of evolving vegetation on past greenhouse climates

Claire Loptson, Dan Lunt

OSM13-13 The Miocene Mi-events: New paleobiological and paleotemperature data from Porcupine Basin, SW Ireland

Stephen Louwye, Willemijn Quaijtaal, Stefan Schouten, Timme Donders

OSM13-03 New insights into the Holocene Thermal Maximum: Feedback and triggering mechanisms

Francesco Muschitiello, Dan Hammarlund, Barbara Wohlfarth

OSM13-07 Investigating the Uncertainty in the HadCM3 Model using a Perturbed Physics Ensemble in a Warmer World Palaeoclimatic Setting

James Pope, Matthew Collins, Alan Haywood, Harry Dowsett, Daniel Lunt

OSM13-10 Characterizing conditions of the Nordic Seas water column through the Pliocene

Bjørg Risebrobakken, Carin Andersson, Erin McClymont, Lisbeth Jensen

**OSM13-15** Understanding the range of climates that can be simulated by perturbing uncertain climate parameters within their range of uncertainty for the early Eocene warm paleoclimate

Navjit Sagoo, Paul Valdes, Rachel Flecker

OSM13-02 Evaluation of the ratio of natural and anthropogenic forcing in the regression of the Aral sea during the Medieval Warm Period

Renato Sala, Jean-Marc Deom

OSM13-11 Refined pCO2 reconstruction in Pliocene warmth

Osamu Seki

OSM13-09 A comparative study of large scale atmospheric circulation in the context of future scenario (RCP4.5) and past warm climate (mid-Pliocene)

Yong Sun, Gilles Ramstein, Camille Contoux, Tianjun Zhou

OSM13-01 Multiple drivers of long-term hypoxia in the Baltic Sea: A pilot biomarker study

Lovisa Zillén, James Bendle, Christopher Gallacher

## OSM16 Open Session on Latest Highlights in Paleoscience

Chair: Hubertus Fischer

OSM16-01 Chronology of deposition of coastal Red dunes (Teri sands) in South India and its palaeoenvironmental implications

Linto Alappat, P. Morthekai, A.Vidyasagar, S. Srinivasalu, D. V. Reddy, A.K. Singhvi

OSM16-17 Dynamics of a Snowball Ocean

Yosef Ashkenazy, Hezi Gildor, Martin Losch, Francis Macdonald, Daniel Schrag, Eli Tziperman

OSM16-24 U-Pb age model for an Early Pleistocene stalagmite from Corchia Cave (Italy)

Petra Bajo, Russell Drysdale, Jon Woodhead, John Hellstrom, Giovanni Zanchetta

OSM16-22 Norwegian Research School in Climate Dynamics (ResClim)

Sarah Berben, Tore Furevik

**OSM16-09** Testing the tree-ring parameter Blue Intensity, a new inexpensive path towards robust low-frequency reconstructions of late Holocene summer temperatures?

Jesper Björklund, Hans Linderholm

OSM16-16 You are what you eat: Differences in the chemical composition of organic-walled dinoflagellate resting cysts and its implications for preservation Kara Bogus, Kenneth Neil Mertens, Johan Lauwaert, Ian C. Harding, Henk Vrielinck, Karin Zonneveld, Gerard J.M. Versteegh

OSM16-15 Climate controlled size variability of diatom Fragilariopsis kerguelensis in the Southern Ocean

Xavier Crosta, Sunil Shukla, Giuseppe Cortese, G.N. Nayak

OSM16-08 DNA barcoding from lake sediments: An unprecedented "deep" view of past vegetation dynamics and human land-use

Charline Giguet-Covex, Johan Pansu, Pierre Taberlet, Ludovic Gielly, Fabien Arnaud, Jérôme Poulenard, Philippe Choler, Pierre-Jérôme Rey, Fernand David, Isabelle Domaizon

OSM16-02 Nonlinear Method for Climate Field Reconstruction

Sami Hanhijärvi, Atte Korhola

OSM16-07 Intercontinental Ash: The correlation of the Alaskan White River Ash to the European AD 860B tephra

Britta Jensen, Sean Pyne-O'Donnell, Gill Plunkett, Duane Froese, Paul Hughes, Jonathan Pilcher, Valerie Hall

OSM16-18 Evidence of a wetter LIA (Little Ice Age) in the Indian Himalaya, India: Evidence from a ca. 400 yr. old stalagmite record

Bahadur Singh Kotlia, S. M. Ahmad, Jian-Xin Zhao, Ming Tan, Wuhui Duan

OSM16-10 Changes in sea level on the coast of São Paulo during the Holocene and landslides in the Serra do Mar – Brazil

Francisco Sergio Bernardes Ladeira, Regina Célia de Oliveira, Estéfano Seneme Gobbi

OSM16-11 Greenhouse effect of Upper Cretaceous - analysis by paleosols of Marília Formation/Bauru Group/Brazil

Francisco Sergio Bernardes Ladeira

**OSM16-06** The ice core record of atmospheric methane: Chemistry-climate interactions on tens to thousands of years

James Levine, Eric Wolff, Anna Jones, Manuel Hutterli, Louise Sime, Oliver Wild, Peter Hopcroft, Paul Valdes, Alex Archibald, Glenn Carver, Nicola Warwick, John Pyle

OSM16-05 Unraveling groundwater and surface water interaction in Central Kenya Rift lakes: Implications for Paleohydrology

Lydia A. Olaka, Andreas Musolff, Ulrich Kniess

OSM16-25 Species distribution and oxygen isotope composition in modern planktic foraminifers in the Fram Strait (Arctic Ocean)

Theodora Pados, Robert F. Spielhagen

OSM16-14 Multiproxy study of a Tertiary sedimentary section along Madhwali Nadi, western Kutch, Gujarat: Implications on Palaeoenvironment and Age

Parminder S. Ranhotra, S. K. Patil, Lalitha S., D. Senthil Nathan

OSM16-23 A brief history of climate - the northern seas from Last Glacial Maximum to global warming

Bjørg Risebrobakken, Tor Eldevik, Anne Bjune

### WEDNESDAY, 13 FEBRUARY (continued)

#### 16:00-18:00

#### **BLOCK 4 - Poster Sessions (continued)**

OSM16-21 Biomarkers – a new potential method to study highly humified peat components?

Tiina Ronkainen, Erin McClymont, Minna Väliranta, Eeva-Stiina Tuittila

OSM16-20 Coralline algal and larger benthic foraminiferal facies in an Upper Palaeocene shallow water, reefal carbonate platform (Meghalaya, North-Eastern India): Exploring the palaeoenvironmental implications

Suman Sarkar, Amit Ghosh

OSM16-12 Abrupt climate change during the last glacial cycle on the Qinghai-Tibetan Plateau reconstructed using multiple organic geochemical proxies from Lake Oinghai, China

Elizabeth Thomas, Jiangtao Zhao, Yongsong Huang, Steven Colman, Steven Clemens, Zhisheng An

OSM16-04 Modelling the Bolling-Allerod rapid warming event.

Paul Valdes. Peter Hopcroft

OSM16-13 Reconstructing peatland water tables using transfer functions for plant macrofossils and testate amoebae: A methodological comparison

Minna Väliranta, Antony Blundell, Dan Charman, Edgar Karofeld, Atte Korhola, Ülle Sillasoo, Eeva-Stiina Tuittila

OSM16-03 On the existence and the origin of the mid-Brunhes Event

Qiuzhen Yin, Andre Berger

18:30 Beach Soccer

### THURSDAY, 14 FEBRUARY

09:00-10:30	BLOCK 1 - Plenary Session	Chair: Michael Schulz		
09:00-09:30	Plenary Talk: David Sauchyn - Extending baseline hydrology fro water resource engineering	lk: David Sauchyn - Extending baseline hydrology from decades to centuries: Implications for urce engineering		
09:30-10:00	Plenary Talk: Anil Kulkarni - State of the Himalayan cryosphere	Talk: Anil Kulkarni - State of the Himalayan cryosphere		
10:00-10:30	Plenary Talk: James Syvitski - Rivers and deltas in the Anthropocene			
10:30-11:00	Coffee break			
11:00-12:30	BLOCK 2 - Oral sessions Grande Sala	Sala de Banquete		

## OSM12 Climate change: Physical forcings and biogeochemical feedbacks

Chair: James Levine, Jérôme Chappellaz

Continental-scale temperature variability over the Common Era

Chris Turney, Members PAGES 2K

The role of dust in glacial-interglacial cycles

Rotem Bar-Or, Hezi Gildor, Caryn Erlick

New CO<sub>2</sub> and  $\delta^{13}$ CO<sub>2</sub> ice core records on carbon cycle changes during the last glacial cycle

Hubertus Fischer, Jochen Schmitt, Robert Schneider, Bernhard Bereiter, Fortunat Joos, Markus Leuenberger, Thomas Stocker, Peter Köhler, Jerome Chappellaz

High resolution characterization of the Indian monsoon over the last glacial period from Bitoo Cave, northern India

Gayatri Kathayat, Hai Cheng, Ashish Sinha, R. L. Edwards

Were glacial-interglacial changes in the biological pump driven primarily by the marine ecosystem response to ocean temperature and iron fertilization?

Eric Galbraith

Silicon and carbon isotope reconstructions of Holocene productivity of the sea ice zone of the Southern Ocean (east Antarctica)

Virginia Panizzo, Julien Crespin, Damien Cardinal, Aldo Shemesh, Xavier Crosta, Nadine Mattielli

## OSM11 Biodiversity and Refugia - Lessons Learned from the Past

Chair: Sheri Fritz, Kathy Willis

Non-linear responses of vegetation to orbital forcing across the temperate to tropical transition in South America

Keith Bennett

Glacial refugia of Cedrus atlantica in Morocco: New records bring new interpretations

Rachid Cheddadi, Majda Nourelbait, Bruno Fady, Ali Rhoujjati

Using elevational gradients to discuss the origin of the highly biodiverse neotropical table mountains of northern South America

Sandra Nogué, Valentí Rull, Teresa Vegas-Vilarrúbia

## OSM14 Natural and Human Effects on Ecosystem Processes

Chair: Mukund Kajale

Regional-scale dynamics in humid, late Holocene broadleaf forests Neil Pederson, James Dyer, Ryan McEwan, Amy Hessl, Cary Mock, David Orwig, Harald Reider, Ben Cook

Long-term perspectives on landscape structure, ecological change and biodiversity during the Quaternary; comparisons between NW European Pleistocene fossil beetle assemblages

Nicki Whitehouse, David Smith, Danielle Schreve

Assessing the importance of climate and human activity on past and present fire dynamics

Cathy Whitlock, David McWethy, Virginia Iglesias, Janet Wilmshurst

12:30-14:00 Lunch

#### **BLOCK 3 - Oral sessions** 14:00-15:30

## **Grande Sala**

### OSM07 Sensitivity of the Cryosphere: Past and Future

Chair: Olga Solomina, Anders Carlson

What paleo ice sheets can say about future sea-level rise

**Anders Carlson** 

Melting of Northern Greenland during the last interglacial

Kerim Hestnes Nisancioglu, Andreas Born

## Sala de Banquete

## OSM08 Natural and Anthropogenic Transformation of Land Cover During the Holocene

Chair: Carsten Lemmen, Marie-José Gaillard

Human Impact on Vegetation and Soils in Northern Karnataka, India: Integrating Archaeological and Palaeoecological Data from the Last 5000 Years

Kathleen Morrison

Exploring the potential of sea salt as a proxy for sea ice extent on glacialinteralacial timescales

James Levine, Xin Yang, Anna Jones, Eric Wolff

Highly branched isoprenoid (HBI) biomarkers as a new Antarctic sea-ice proxy in deep ocean glacial age sediments

Lewis Collins, Claire Allen, Jennifer Pike, Dominic Hodgson, Kaarina Weckstrom, Guillaume Masse

Sensitivity of the Greenland ice sheet to the Holocene thermal maximum

Benoit Lecavalier, Leanne Wake, Glenn Milne,, Shawn Marshall, Matthew Simpson, Philippe Huybrechts

Global and regional patterns in the Holocene glacier fluctuations records Olga Solomina, Mikhail Alexandrin, Vladimir Matskovsky

From forest to farmland and moraine to meadow: Integrated modeling of Holocene land cover change

Jed O. Kaplan, Mirjam Pfeiffer, Kristen M. Krumhardt, Basil A. S. Davis, Marco Zanon, Pamela M. Collins, Achille Mauri

Assessing the early Iron Age landscape and human activities in southern India: phytolith and archaeological studies of a Megalithic burial site

Premathilake Rathnasiri, Prasad Srinivasan, Anupama Krishnamurthy, Rajan K., Yathees Kumar V.P

Land cover-climate interactions in NW Europe, 6000 BP and 200 BP - first results of the Swedish LANDCLIM project

Anna-Kari Trondman, Marie-José Gaillard, Shinya Sugita, Ralph Fyfe, Jed Kaplan, Laurent Marquer, Florence Mazier, Anne Birgitte Nielsen, Anneli Poska, Gustav Strandberg

Soil erosion processes and long-term human-environment-interactions in central Europe and SE-USA

#### Markus Dotterweich

Holocene Vegetation and Climate history of Peninsular India from terrestrial archives: Problems and Prospects

Anupama Krishnamurthy, Prasad Srinivasan

15:30-16:00 Coffee break

16:00-18:00

### **BLOCK 4 - Poster Sessions**

## OSM07 Sensitivity of the Cryosphere: Past and Future

Chair: Olga Solomina, Anders Carlson

OSM07-15 Mountain glaciers reaction on the Holocene climate changes in Central Asia in contrast to glaciers behavior in mountain systems of continental edges Anna Agatova, Roman Nepop, Andrey Nazarov, Ljubov' Orlova

OSM07-12 Glacier expansion during the Late Quaternary in the monsoon dominated Goriganga valley, Central Himalaya, India

Sheikh Nawaz Ali, Rabiul Biswas, Anil Shukla, Navin Juyal

OSM07-02 Projected 21st Century Decline Snow Cover Overlying the Arctic Sea Ice and Implications for the Sea Ice and Arctic Climate in CESM/CCSM Benjamin Blazev

OSM07-10 Detailed reconstructions of fluctuations of seven glaciers during the "Little Ice Age" in the Northern Caucasus Russian Federation Irina Bushueva

OSM07-17 Glacial response to environmental change in the upper Ravi basin of North Western Himalaya

**Pritam Chand** 

OSM07-18 Impact of De-glaciation and snow cover changes on the local water balance and develop adaptation strategies in the upper Ravi basin of North Western Himalava

**Pritam Chand** 

OSM07-07 Late Weichselian glacial history of the southern Yermak Plateau

Teena Chauhan, Riko Noormets, Tine. L. Rasmussen

OSM07-03 High-resolution reconstruction of southwest Atlantic sea-ice and its role in the carbon cycle during marine isotope stages 3 and 2 Lewis Collins, Jennifer Pike, Claire Allen, Dominic Hodgson

OSM07-04 Testing the GCM matrix method for indirectly coupling climate models to ice sheet models.

Edward Gasson, Dan Lunt, Mark Siddall, David Pollard

OSM07-16 Holocene Climate in Western Mongolia from an Altai Ice Core

Pierre-Alain Herren, Anja Eichler, Horst Machguth, Tatyana Papina, Leonhard Tobler, Alexander Zapf, Margit Schwikowski

OSM07-08 Data-model comparison of the Late Weichselian Svalbard-Barents Sea ice sheet - for better constraints of postglacial isostatic uplift Anne Hormes, Endre Gjermundsen, Willy Fjeldskaar

OSM07-20 Cataloguing of glaciers of the river basins Koksu Aan Kyunes (Chinese part of Ile River basin) by materials of space monitoring Larissa Kogutenko, Alexandr Kokarev, Alexandr Yegorov

OSM07-19 Change of glacial systems of Kazakhstan

Alexandr Kokarev, Alexandr Yegorov, Igor Severskiy

OSM07-06 Inferring the Source Distribution of Meltwater Pulse 1A using Near- and Far-Field Data and Modelling Constraints

Jean Liu, Glenn A. Milne, Robert E. Kopp, Peter U. Clark

OSM07-11 Glacier hazards caused by glacier shrinkage and climate change: Case study of Russian Caucasus

**Dmitry Petrakov** 

OSM07-14 Holocene Climate vis-à-vis Glacier history from Garhwal Himalaya: A Multiproxy approach

Parminder S. Ranhotra, Amalava Bhattacharyya, Indra Bir Singh, N. Basavaiah

OSM07-05 Environmental records in permafrost of East Siberian Arctic during the MIS2 Stadial and the MIS3 Interstadial

Natalia Rudaya, Andrei Andreev, Sebastian Wetterich, Vladimir Tumskoy, Lutz Schirrmeister

OSM07-09 Reconstruction of the past 2000 years of ocean and glacier variability in Sermilik Fjord, SE Greenland, based on sediment archives Andreea Stoican, Camilla S. Andresen, Marit-Solveig Seidenkrantz, Kurt K. Kjaer, Antoon Kuijpers, Guillaume Massé, Kaarina Weckström

OSM07-13 Reconstructing spatial and temporal patterns of former glaciation along the Tian Shan

Arjen P. Stroeven, Casey Beel, Robin L. Blomdin, Marc W. Caffee, Yixin Chen, Alexandru T. Codilean, Natacha Gribenski, Jonathan M. Harbor, Clas Hättestrand, Jakob Heyman, Mikhail Ivanov, Christine Kassab, Yanan Li, Yingkui Li, Nathaniel A. Lifton, Gengnian Liu, Dmitry Petrakov, Irina Rogozhina, Ryskul Usubaliev

OSM07-01 Evaluation of the sea ice proxy IP<sub>25</sub> against observational and diatom proxy data in the SW Labrador Sea Kaarina Weckström, Guillaume Massé, Lewis Collins, Sami Hanhijärvi, Ioanna Bouloubassi, Marie-Alexandrine Sicre, Marit-Solveig Seidenkrantz, Sabine Schmidt, Thorbjørn Andersen, Morten Andersen, Brian Hill, Antoon Kuijpers

## THURSDAY, 14 FEBRUARY (continued)

#### 16:00-18:00

### **BLOCK 4 - Poster Sessions (continued)**

### OSM08 Natural and Anthropogenic Transformation of Land Cover During the Holocene

Chair: Carsten Lemmen, Marie-José Gaillard

OSM08-02 Holocene Vegetation changes in the Cauvery Floodplains, southern India: A case study

Stephen A, P. P Mohapatra, Anupama Krishnamurthy, Prasad Srinivasan, Pramod Singh

OSM08-20 Holocene vegetation estimates for selected regions in Bohemia (Czech Republic)

Vojtech Abraham, Libor Petr, Helena Svitavská-Svobodová, Radka Kozáková, Petr Pokorný, Petr Kuneš

OSM08-13 A large-scale erosion anomaly (2nd c. BC-4th c. AD) in NW Alps: A locally-defined onset of the Anthropocene?

Fabien Arnaud, Laurent Astrade, Manon Bajard, Jean-François Berger, Yves Billaud, Emmanuel Chapron, Christian Crouzet, Fernand David, Philip Deline, Elise Doyen, Charline Giguet-Covex, Jérémy Jacob, Melaine Le Roy, Laurent Millet, Jérôme Poulenard, Sidonie Révillon, Pierre-Jérôme Rey, Pierre Sabatier, Anaëlle Simonneau, Pierre Taberlet, Boris Vannière

OSM08-10 Early Neolithic diets at Baijia, Wei River valley, China: Stable carbon and nitrogen isotope analysis of human and faunal remains

Pia Atahan, John Dodson, Xiaoqiang Li, Xinying Zhou, Songmei Hu, Liang Chen, Fiona Bertuch, Kliti Grice

OSM08-08 Impact of monsoonal variation on vegetation and climate change as inferred from late Holocene sediment of Garbhanga reserve forest, Assam, north east India: A pollen based study

Samir Kumar Bera, **Kanupriya Gupta**, Azizur Rahman

OSM08-12 Southern Westerlies postglacial dynamics at Central Chilean Patagonia (Rio Cisnes valley, 44°S)

María Eugenia de Porras, Antonio Maldonado, Flavia Quintana, Cesar Méndez, Omar Reyes

OSM08-09 Late Holocene vegetation vis á vis climate dynamics from Hasila wetland, western Assam, Northeast India: Pollen and diatom record

Swati Dixit

OSM08-14 Grazing activities and vegetation history in the Pyrenees inferred from palaeoecological data

Galop Didier, Mazier Florence, Cugny Carole, Rius Damien

OSM08-07 Palynological methods for land-cover reconstruction in semi-arid Peninsular India

Anupama Krishnamurthy, Prasad Srinivasan, Aravajy S, Ponnuchamy R, Stephen A, Anusree A.S.

OSM08-11 Climate and Vegetation Dynamics in the Lake Victoria Region of East Africa during the Holocene: Evidence from Phytolith analysis Julius Lejju Bunny

OSM08-15 Integrated prehistory of people and environment: Linking the global scale to regional narratives

Carsten Lemmen, Aurangzeb Khan, Kai W Wirtz, Detlef Gronenborn

OSM08-16 Towards an Earth System Model with Interactive Culture: Feedback effects between land use change and global climate change Carsten Lemmen, Kerstin Haberkorn

OSM08-19 REVEALS-based reconstruction of regional vegetation and land cover for evaluation of a dynamic vegetation model along N-S and W-E transects in NW Europe

Laurent Marquer, Marie-José Gaillard, Shinya Sugita, Anneli Poska, Anna-Kari Trondman, Florence Mazier, Anne Birgitte Nielsen, Ralph Fyfe, Bent Vad Odgaard, Teija Alenius, John Birks, Anne E. Bjune, Jörg Christiansen, Thomas Giesecke, Mihkel Kangur, Tiiu Koff, Malgorzata Latalowa, Jutta Lechterbeck, Heikki Seppä

OSM08-06 Late Holocene variations from Lake Rutundu, mount Kenya

Christine Omuombo, Daniel Olago, Stephen Rucina, David Williamson

OSM08-04 Holocene climate and environmental changes in the Horton Plains, Sri Lanka

OSM08-01 Human impact on lowland rainforest and early maritime dispersal of bananas: Evidence from Sri Lanka

Rathnasiri Premathilake

OSM08-18 Deforesting Europe: Towards a pollen-based reconstruction of Holocene land cover change

Neil Roberts, Jessie Woodbridge, Ralph Fyfe

OSM08-05 Lonar Crater, central India: Pollen transport processes and pollen vegetation relationships in tropical dry deciduous forests as reflected in modern lake sediments and surface soils

Martina Stebich, Nils Riedel, Philip Menzel, Ambili Anoop, Sushma Prasad, Saswati Sarkar, Dirk Sachse, Martin Wiesner, Nathani Basavaiah

OSM08-03 Changes in Land-use and Land-cover from the Iron Age to Medieval period in the Central Eastern Tamil Nadu: A preliminary investigation Selvakumar V, Ramji M.S., Gowrisankar S, Tangadurai T, Kalaiselvai J.

OSM08-17 Exploring the spatio-temporal archaeological and landscape dynamics of early farming communities using Bayesian approaches Nicki Whitehouse, Phil Barratt, M. Jane Bunting, Rick Schulting, Meriel McClatchie, T. Rowan McLaughlin, Rob Marchant, Amy Bogaard, Sue Colledge

## OSM011 Biodiversity and Refugia - Lessons Learned from the Past

Chair: Sheri Fritz, Kathy Willis

OSM11-01 Resilience of an ancient tropical forest landscape to 7500 years of environmental change in the Western Ghats, India Shonil Bhagwat, Sandra Nogue, Kathy Willis

OSM11-02 Biodiversity and land cover change in Europe over the Holocene: A functional approach based on pollen data Pam Collins, Basil Davis, Jed Kaplan

OSM11-12 Development and application of Australian lacustrine ostracod-based transfer functions

Chris Gouramanis, Stuart Halse, Patrick De Deckker, Daniel Wilkins

OSM11-11 Interglacial variability from the Middle Pleistocene up to the Holocene after molluscan assemblages and geochemical records from NW European tufa sequences

Nicole Limondin-Lozouet, Julie Dabkowski

OSM11-09 Genetic differentiation in the Patagonian-fueguian rodents Abrothrix olivaceus and A. Iongipilis (Rodentia: Cricetidae) associated to the major Pleistocene-Holocene climatic changes: Using molecular data to the global changing assessment

OSM11-08 Late Quaternary palaeoenvironments of the southern Cape, South Africa: Palynological evidence from three coastal wetlands

Lynne Quick, Michael Meadows, Brian Chase, Andrew Carr, Mark Bateman, Torsten Haberzettl, Jussi Baade, Roland Mäusbacher

**OSM11-13** The response of planctic foraminifera to oceanic environmental changes during cenomanian-turonian transition of Karai Shale, Uttattur group, southern India

Shanmugavalli G., Venkatachalapathy R.

**OSM11-07** Marine and terrestrial response of the Black Sea/Northern Anatolia region to rapid climatic variability during the marine isotope stage 3 **Lyudmila S. Shumilovskikh**, Helge W. Arz, Hermann Behling

**OSM11-04** Eastern Andean Patagonia (40°-51°S) vegetation and climate variability during the Holocene related to southern westerlies fluctuations and recent human interactions. Impacts on Patagonian forests and steppe plants communities

Gonzalo Sottile, Ma. Alejandra Marcos, Florencia P. Bamonte, Marcos E. Echeverría, Ma. Eugenia De Porras, Marcela S. Tonello, Ma. Virginia Mancini, Ma. Martha Bianchi

**OSM11-03** Late-Holocene climate and environmental history in the Lake Victoria basin: A sediment-based evidence from pollen, charcoal, δ<sup>13</sup>C isotope, spores and blue-green algae

Casim Umba Tolo, Julius B Lejju, Morgan Andama, David Taylor

OSM11-06 Using the fossil record to reassess the functioning of the southern Levant as a biodiversity pool during European glaciations Lior Weissbrod. Mina Weinstein-Evron

OSM11-10 Reviewing Late Quaternary Megafaunal Extinction: The case-study of Sri Lanka

Poorna Yahampath, Jinadasa Katupotha, Gamini Adikari, M.A.C.M. Kumari

## OSM012 Climate change: Physical forcings and biogeochemical feedbacks

Chair: James Levine, Jérôme Chappellaz

OSM12-02 A multiproxy examination of the toarcian oceanic anoxic event, Arroyo Lapa, (north and south) Neuquen Basin, Argentina

Aisha Al Suwaidi, François Baudin, Susana Damborenea, Stephen Hesselbo, Hugh Jenkyns, Miguel Manceñido, Richard Pancost, Alberto Riccardi, Chris Siebert

**OSM12-12** A multidisciplinary laboratory study using iron oxide 'markers' from modern drylands dust towards adapting this methodology for characterizing Quaternary dust, their source areas and transport paths

Subir Banerjee, Kimberly Yauk, Richard Reynolds, Harland Goldstein, Thelma Berquo, Bruce Moskowitz

**OSM12-14** Synchronous variations in terrigenous flux to the Bay of Bengal and solar insolation: Implications to solar forcing on monsoon system **Ravi Bhushan**, Sunil K Singh

**OSM12-10** Reconstruction of the Late Quaternary climatic change from glaciogenic varve deposits in Lahaul and Spiti, N-W Himalaya **Archna Bohra** 

OSM12-08 Precession forcing of fire activity in subtropical southern Africa over the past 170,000 years

Anne-Laure Daniau, Maria Fernanda Sánchez Goñi, Philippe Martinez, Dunia H. Urrego, Viviane Bout-Roumazeilles, Stéphanie Desprat, Jennifer R. Marlon

OSM12-07 Holocene carbon fluxes in the tropical peatlands of Southeast Asia: The contrasting roles of changing sea-level and climate René Dommain, Hans Joosten, Paul H. Glaser

OSM12-06 Biogeochemical constraints from carbon monoxide measured in firn air and ice cores

Xavier Faïn, **Jérôme Chappellaz**, Daniele Romanini, Zhihui Wang, Thomas Blunier, Christopher Stowasser, John Mak, Rachel Rhodes, Vas Petrenko, Ed Brook, Joe McConnell, Jeff Severinghaus, Matthias Bigler

OSM12-11 The lightning-biota climatic feedback

Hezi Gildor, Alon Shepon

OSM12-05 Effect of climate change on agriculture and health in India

Rabindra Kumar, J. Nagendra Babu

OSM12-04 Seasonal variability of atmospheric aerosol over the North Indian region during 2010

Sarvan Kumar, Abhay Kumar Singh

 $\textbf{OSM12-15} \ \textit{Plio-Pleistocene evolution of nutrient cycling in the Benguela upwelling system: A chlorin-specific } \delta^{15} \textit{N approach approach to the Benguela upwelling system: A chlorin-specific } \delta^{15} \textit{N approach approach approach to the Benguela upwelling system: A chlorin-specific } \delta^{15} \textit{N approach a$ 

Guillaume Leduc, Hisami Suga, Nana Ogawa, Johan Etourneau, Ralph Schneider, Nao Ohkouchi

**OSM12-20** Effects of Large Volcanic Eruptions on Global Summer Climate and East Asian Monsoon Changes during the Last Millennium: Analysis of MPI-ESM simulations

Wenmin Man, Tianjun Zhou

**OSM12-03** Tracking carbon dynamics and climate forcing through Holocene peatland development by combining palaeoecological information and modern carbon flux measurements

Paul Mathijssen, Minna Väliranta, Eerika Niemelä, Annalea Lohila, Juha-Pekka Tuovinen

OSM12-01 The late Pleistocene-Holocene climatic transition record in the alluvial sequences of central Argentina (33-38° S)

Adriana Mehl, Marcelo Zárate

OSM12-16 Variations in planktonic foraminifera shell calcification in the eastern Arabian Sea during the Holocene

Sushant Naik, Shijo Matthews, Shital Godad, Pothuri Divakar Naidu

**OSM12-19** Diatom based sea-ice reconstruction over the past 95,000 years in the Indian Ocean sector of Southern Ocean

Abhilash Nair, Rahul Mohan, M.C Manoj, Meloth Thamban

OSM12-21 High-resolution multi-proxy climatic reconstruction off Myanmar suggestive of climatic modulations due to solar forcing during the past ~489 years Rajani Panchang, Rajiv Nigam

OSM12-18 First results of the paleolimnological research in Tundra polygons (the project POLYGON)

Viktor Sitalo, Dmitry Subetto, Lutz Schirrmeister, Sebastian Wetterich, Andrea Schneider

**OSM12-13** Accelerator Mass Spectrometry: Revealing subtle signals in ice sheets

**Andrew Smith** 

OSM12-09 Late Glacial-Holocene Elemental and Stable Isotope Records from the Southeastern Arabian Sea

Yoganandan Veeran, Selvaraj Kandasamy, S.J Kao, Ravi Prasad G. V, Koushik Dutta, Krishnaiah C, Gangadhara Bhat H

OSM12-17 How can ice cores constrain our knowledge of the likelihood of damaging solar flare events?

Eric Wolff, Juerg Beer, Matthias Bigler, Mark Curran, Jack Dibb, Markus Frey, Michel Legrand, Joe McConnell

## THURSDAY, 14 FEBRUARY (continued)

#### 16:00-18:00

### **BLOCK 4 - Poster Sessions (continued)**

### **OSM14 Natural and Human Effects on Ecosystem Processes**

Chair: Mukund Kajale

OSM14-04 Late Quaternary environmental change at Lake McKenzie, in subtropical eastern Australia: evidence from sedimentary carbon, nitrogen and biomarkers Pia Atahan, Henk Heijnis, Pierre Le Métayer, Kliti Grice, Kathryn Taffs, Sarah Hembrow, John Dodson

OSM14-06 Diatoms as Environmental Indicators to Infer Past Conditions in Relation to Acidity (Humedal de Batuco, Region Metropolitana, Chile Central)

Maria Laura Carrevedo, Claudio Latorre, Blas Valero Garcés, Ana Moreno

OSM14-11 Mapping biomes of India using Holdridge Life Zone Model - identifying footprints of climate change

Anusheema Chakraborty, Pawan Kumar Joshi, Aniruddha Ghosh, Gopala Areendran

**OSM14-07** Foliar and total soil  $\delta^{15}N$  as a proxy for precipitation in the Atacama Desert

Francisca P. Díaz, Claudio Latorre

OSM14-03 Treeline dynamics at high mountain of Manaslu Conservation Area, Central Nepal: Climate change or land use is the main driver?

Narayan Prasad Gaire, Dinesh Raj Bhuju

OSM14-08 Monsoon variability and carbon sequestration dynamics: Evidence from tree-rings

Suresh Hebbalalu, Hemant Borgoankar, Amar Sikder, Sukumar Raman

OSM14-09 Permafrost melting and ecotoxicological consequences in a periglacial lake in the Eastern Alps: Answers from the past and present

Boris Ilyashuk, Karin Koinig, Elena Ilyashuk, Richard Tessadri, Roland Psenner

OSM14-01 Late Holocene biological assemblages of Mansar Lake (District Nagpur, Maharashtra, India) in the context of Palaeoecology and neo-ecosystem dynamics Mukund Kajale, Sharayu Sathe, Sanjay Eksambekar, Sharad Rajaguru

**OSM14-05** Geochemical signals of organic matter in sediments of Pichavaram mangrove-estuarine complex, Southeastern coast of India: Implications of anthropogenic influence

Rajesh Kumar Ranjan, Joyanto Routh, AL. Ramanathan, J. Val Klump

OSM14-02 Holocene environmental variability – a high-resolution study from northeast Finland

Shyhrete Shala, Minna Väliranta, Karin F. Helmens, Tomi P. Luoto

OSM14-10 Mid to Late Holocene climatic history of rangelands from Spiti Valley, Trans-Himalayas Indrani Suryaprakash, Anusree A.S., Chandra Mohan Nautiyal, Charu Dutt Mishra, Mahesh Sankaran

19:00-21:00

Public lecture and discussion: Rajendra K. Pachauri - Climate Change and implications for global society Chair: S. Rajan, Expert panel: Cathy Whitlock, Gavin Schmidt, Robert Wasson, Stefan Rahmstorf, Ashok K. Singhvi (moderator)

Followed by a panel discussion and a "high tea" arranged by NCAOR Venue: The Cardium, National Institute of Oceanography, Dona Paula

## FRIDAY, 15 FEBRUARY

09:00-10:30	BLOCK 1 - Plenary Session	Chair: Alan Mix
09:00-09:30	Plenary Talk: Jessica E. Tierney - Indo-Pacific climate during the Common Era: New perspectives from land and sea	
09:30-10:00	Plenary Talk: Martin Claussen - Tipping points in biogeophysics	
10:00-10:30	Plenary Talk: Martin Visbeck - Selected topics on ocean dynamics in the wider context of climate variability and global sustainability	
10:30-11:00	Coffee break	
10:30-11:00	Coffee break	

11:00-12:30 BLOCK 2 - Oral sessions

## Grande Sala

## OSM02 Regional Climate Variability Over the Last 2000 Years

Chair: Steven Phipps

Antarctic temperature changes during the last millennium: evaluation of simulations and reconstructions (solicited talk)

**Hugues. Goosse**, M. Braida, X. Crosta, A. Mairesse, V. Masson-Delmotte, P. Mathiot, R. Neukom, H. Oerter, G. Philippon, H. Renssen, B. Stenni, T. van Ommen, E. Verleyen

A 2000-year synthesis of marine-derived SST records: Results from the Ocean2k project

Working Group PAGES/Ocean 2k, Guillaume Leduc

Temperature and moisture variability across Africa during the last 2000 years **David J. Nash**, Brian M. Chase, Asfawossen Asrat, Stefan W. Grab, Anne-Marie Lézine, Sharon E. Nicholson, Timothy M. Shanahan, Mohammed Umer, Dirk Verschuren

A 2000-yr European Summer Temperature Reconstruction from the PAGES 2k Regional Network and Comparisons to Millennium-Length Forced Model Simulations

Jason Smerdon, Johannes Werner, Ulf Buntgen, Fredrik Charpentier Ljungqvist, Jan Esper, Laura Fernandez-Donado, J. Fidel Gonzalez-Rouco, Juerg Luterbacher,

## Sala de Banquete

# OSM06 Past Changes in Fluvial Systems, Floodplains and Estuaries

Chair: Onkar S. Chauhan, Peter Gell, Rajiv Sinha

Deciphering landscape dynamics from the Late Quaternary stratigraphic records of the interfluves and valleys of the southern Ganga plains (solicited talk)

Sampat K. Tandon, Rajiv Sinha, Martin R. Gibling, Mayank Jain

Exploring the Channel Connectivity Structure of the August 00 Avulsion Belt of the Kosi River: Application to Flood Risk Assessment

Rajiv Sinha, Kumar Gaurav, Shashwat Chandra, Sampat Tandon

Channel forming discharge and longitudinal rivers profiles as drivers of landscape diversity in the Ganga plains

N.G. Roy, R Sinha

Forests, large floods and sediment transport (solicited talk)

## Robert Wasson

Evidence for transformation of floodplain lake and wetland ecosystems at a regional scale due to agriculture and water resource development in south east Australia

Michael Reid, Peter Gell, John Tibby, Jennie Fluin, Matthew Tighe

## MFFTING PROGRAM

Danny McCarroll, Sebastian Wagner, Eugene Wahl, Heinz Wanner, Eduardo Zorita

Mechanisms for European summer temperature response to solar forcing over the last millennium

Didier Swingedouw, Laurent Terray, Jérôme Servonnat, Joel Guiot

On the role of sea ice at the onset of the Little Ice Age

Flavio Lehner, Andreas Born, Christoph C. Raible, Thomas F. Stocker

Late Holocene Hypolimnetic Anoxia in Lake Victoria at Napoleon Gulf as inferred from Geochemical Proxies

Morgan Andama, Julius B. Lejju, Casim Umba Tolo, Grace Kagoro-Rugunda, Immaculate Ssemmanda, Janet Ayebare

12:30-14:00 Lunch

14:00-15:30

#### **BLOCK 3 - Oral sessions**

### **Grande Sala**

## OSM02 (continued)

#### Chair: Guillaume Leduc

Covariability of precipitation and sea surface temperature changes in Northern Chilean Patagonia during the last 2000 years

Sebastien Bertrand, Konrad Hughen, Julio Sepúlveda, Silvio Pantoja

Solar and volcanic forcing of the Southern Hemisphere climate over the past 1500 years

Steven Phipps, Duncan Ackerley, Josephine Brown, Mark Curran, Matt Fischer, Ailie Gallant, Joelle Gergis, Helen McGregor, Raphael Neukom, Christopher Plummer, Samantha Stevenson, Tas van Ommen

Data and model perspectives on the Indian Ocean Zonal Mode over the past

Bronwen Konecky, James Russell, Mathias Vuille, Yongsong Huang

Simulated and reconstructed Atlantic gyre circulation and its relationship with the North Atlantic Oscillation during the past 600 years

Odd Helge Otterå, Trond Dokken, Øyvind Lie, Helene R. Langehaug, Iselin Medhaug, Carin Andersson

Shifting winds over the North Sea: how Anglo-Dutch documentary evidence enables the reconstruction of changes in prevailing wind during the Little Ice Age, 1630-1700

#### **Dagomar Degroot**

Reconstruction of tropical ocean SST trends during the last millennium: Results from the PAGES/Ocean2K project

Nerilie Abram, Jessica Tierney, Kevin Anchukatis, Cyril Giry, Kelly Kilbourne, Casey Saenger, Henry Wu, Jens Zinke, the PAGES/Ocean2K working group

## Sala de Banquete

## OSM15 The Role of Ocean Circulation in Climate Dynamics

Chair: Arun D. Singh, Devesh K Sinha

Influence of the tropical hydrologic cycle on Atlantic meridional overturning at the end of the last interglacial

Benjamin Blazey, Matthias Prange, Andrè Paul, Aline Govin

Stability of the thermohaline circulation during MIS in a comprehensive climate model: Towards a dynamical understanding of Dansgaard-Oeschger events Matthias Prange, Xiao Zhang, Ute Merkel, Michael Schulz

Increase proportion of Antarctic Intermediate Water off northern Chile (7°S) in glacial periods over the past million years

Gema Martínez-Méndez, Dierk Hebbeln, Mahyar Mohtadi, Mieke Thierens,, Frank Lamy, Tim Freudenthal

Mid-Holocene amplification of century scale climate variability - potential interhemispheric linkages

Eystein Jansen, Carin Andersson, Jostein Bakke, Dokken Trond, Øyvind Lie, Matthias Moros, Atle Nesje, Odd Helge Otteraa, Bjørg Risebrobakken

Millennial scale variability in the upstream Agulhas Current

Margit H. Simon, Ian R. Hall, Kristina L. Arthur, Benjamin R. Loveday, Frank J. C. Peeters, Stephen Barker, Martin Ziegler

Reduced flow of North Atlantic Deep Water into the Arabian Sea during Last Glacial Maxima: Evidence from 187 Os/ 188 Os of the Arabian Seawater Goswami Vineet, Sunil Kumar Singh, Ravi Bhushan

15:30-16:00 Coffee break

16:00-18:00

## **BLOCK 4 - Poster Sessions**

## OSM02 Regional Climate Variability Over the Last 2000 Years

Chair: Steven Phipps, Guillaume Leduc

OSM02-01 An Expanded Archive Facilitating Temperature Reconstructions of the Past Two Millennia from Paleo Proxies

David Anderson, Eugene Wahl, Anju Shah, Bruce Bauer, Charles Buckner, Edward Gille, Carrie Morrill

OSM02-34 How subsurface temperature data may help to reconstruct past climate

Vladimir Cermak

OSM02-35 Results of Long-Term Temperature-Time Monitoring at the Geothermal Observatory Sporilov, Prague (The Czech Republic)

Vladimir Cermak, Jan Safanda, Petr Dedecek, Milan Kresl

OSM02-25 Last 2000 years environmental changes in Lake Pa Kho, Northeast Thailand

Sakonvan Chawchai, Barbara Wohlfarth, Akkaneewut Chabangborn, Maarten Blaauw, Paula J Reimer, Sherilyn Fritz, Malin Kylander, Ludvig Löwemark, Carl-Magnus

OSM02-26 Tree-ring reconstructed boreal summer temperature anomalies for temperate East Asia since 800 C.E.

Edward Cook, Paul Krusic, Kevin Anchukaitis, Brendan Buckley, Takeshi Nakatsuka, Masaki Sano, Asia 2k Group Members

OSM02-02 Relationship between sea ice variability and atmospheric circulation during the last millennium in Antarctic Peninsula

Xavier Crosta, Loic Barbara, Sabine Schmidt, Johan Etourneau, Guillaume Massé

OSM02-13 Two-thousand-year climate reconstruction of the Altai region with annual time resolution and the search of natural cycles with length from 3 to 1,000 vears

Andrey Darin, Ivan Kalugin, Natalya Maksimova, Tatiana Markovich, Aleksandr Mordvinov, Dmitryi Ovchinnikov, Yakov Rakshun

OSM02-14 Garabashi glacier (Central Caucasus) mass balance reconstructions inferred from tree-rings

Ekaterina Dolgova, Vladimir Matskovsky

OSM02-05 Sea ice, biological production and nutrient cycling reconstructed at an unprecedented time resolution in the Adélie Basin, East Antarctica, for the last 2.000 vears

Johan Etourneau, Philippine Campagne, Francisco Jimenez, Irina Djouraev, Nana Ogawa, Carlota Escutia, Rob Dunbar, Naohiko Ohkouchi, Xavier Crosta, Guillaume

OSM02-06 Multi-annual variability of the Peruvian Oxygen Minimum Zone across the last millenium

Sophie Fleury, Philippe Martinez, Xavier Crosta, Karine Charlier, Olivier Ther, Thomas Blanz, Ralph Schneider

OSM02-24 Dendrochronological studies in Nepal: Current status and future prospects

Narayan Prasad Gaire, Dinesh Raj Bhuju

### FRIDAY, 15 FEBRUARY (continued)

#### 16:00-18:00

#### BLOCK 4 - Poster Sessions (continued)

OSM02-15 High altitude tree-ring chronology from Malari Glacier, western Himalaya, India, and its climatic implications

Naveen Gandhi, H.P. Borgaonkar

OSM02-30 Northern alpine ecosystems: Is temperature one climate factor, influencing to spruce and larch light-ring formation?

Marina Gurskaya

OSM02-38 Climatic and environmental changes in the Barents Sea during the last 2ka: Response to variations in the Atlantic water inflow and NAO index Elena Ivanova, Ivar Murdmaa, Bjørg Risebrobakken, Anne de Vernal

**OSM02-37**  $\delta^{13}C$  and  $\delta^{15}N$  in Soledad Basin and Magdalena Margin of Baja California, Mexico for the last 2 ky

Miryam Juarez, Alberto Sanchez, Oscar González

OSM02-12 Paleorainfall variations in Southern India during the past 3154 years: Evidence from Pookot Lake record

Sandeep K, Shankar R, Warrier A K, Weijian Z, Xuefeng Lu

OSM02-39 Unraveling the mysteries of chrysophyte resting stages – distribution of chrysophyte cysts in Finland

Sanna Korkonen

OSM02-23 Climatic Fluctuations in the last ~2,000 years from Garhwal Himalaya (India) by using multi-proxy analyses

Bahadur Singh Kotlia, Lalit Mohan Joshi, Nathani Basavaiah, N. C. Barui

OSM02-27 Isotope composition of the deep ice core from Elbrus Western plateau (the Caucasus)

Anna Kozachek, Vladimir Mikhalenko, Alexey Ekaykin

OSM02-33 Lake Geneva sediments as archive for past environmental changes and human activity since the last 3000 years

Katrina Kremer, Juan Pablo Corella, Stéphanie Girardolos

OSM02-28 Climatic signal in tree-ring width chronologies of European Russia: Spatial change and perspectives for paleoclimatic reconstructions

Vladimir Matskovsky

OSM02-07 Landscape (Palaeo)limnology: A multi-lake approach to understanding climate change and human disturbance in south-eastern Australia over the last 500 years

Keely Mills, Peter Gell

**OSM02-40** Hydrological and Climatological Changes in the Trondheimsfjord/Norway during the late Holocene inferred from Benthic Stable Isotopes and Dinocyst Assemblages

Gesa Milzer, J. Giraudeau, S. Schmidt, J. Faust, J. Knies, F. Eynaud, C. Rühlemann

OSM02-22 A 576-year annual minimum temperature history for the source region of the Yangtze River

He Minhui, Yang Bao

OSM02-04 2k ice core records from the Weddell Sea region of Antarctica

Robert Mulvaney

OSM02-10 Late Quaternary paleoceanography of the southwestern Indian Ocean

Dinesh K. Naik, R. Saraswat, N. Khare, A.C. Pandey, A. Mackensen, R. Nigam

OSM02-18 Pluvials, Droughts, Energetics, and the Mongol Empire

Neil Pederson, Amy Hessl, Baatarbileg Nachin, Oyunsanaa Byambasuren

OSM02-11 Was the Medieval Warm Period Global? Evidences from the Gulf of Kachchh Coast, Western India

S. P. Prizomwala, Nilesh Bhatt, W Winkler, I Hajdas, A. M. Hirt

OSM02-19 Correlation between pollen spectra and vegetation of southwestern Madhya Pradesh, India

M. F. Quamar, M.S. Chauhan

**OSM02-03** Dust, sea salt and moisture source variability in central Draonning Maud Land, East Antarctica during the last millennium: Role of Southern Annular Mode and El-Niño-Southern Oscillation

Waliur Rahaman, Meloth Thamban

OSM02-32 Marine records of environmental change in the NE Atlantic (west coast of the Iberian Peninsula) over the past 150 years – a dinoflagellate cyst perspective Sofia Ribeiro, Ana Amorim, Fátima Abrantes, Marianne Ellegaard

**OSM02-09** Reconstructing the past millennium of hydrologic variability in the Western Tropical Pacific using the hydrogen isotopes of lipid biomarkers **Julie Richey**, Julian Sachs

OSM02-08 Late-Holocene climate variability in southern New Zealand:

A multi-proxy study of laminated lake sediments from Lake Ohau to reconstruct regional climate

Heidi Roop, Marcus Vandergoes, Richard Levy, Gavin Dunbar, Sean Fitzsimons, Jamie Howarth, Bob Ditchburn, Gary Wilson, Jennifer Purdie

OSM02-20 Climate change in south India during the past two centuries inferred from geothermal and meteorological observations Sukanta Roy, David S. Chapman

OSM02-16 Variations in discharge from the Oilian mountains, northwest China, and its effect on the agricultural communities of the Heihe basin, over the last two millennia

Akiko Sakai, Mitsuyuki Inoue, Koji Fujita, Chiyuki Narama, Jumpei Kubota, Masayoshi Nakawo, Tandong Yao

OSM02-41 The missing ocean - Generation of high resolution records of sea surface temperature for the Common Era

Jeff Salacup, Timothy Herbert, Warren Prell

OSM02-31 Millennial-length drought reconstructions for southern and central Fennoscandia

Kristina Seftigen, Edward Cook, Hans Linderholm, Jesper Björklund

OSM02-21 Climatic response of tree-ring density parameters of conifers from western Himalaya, India: Implications in dendroclimatology

Amar Sikder, Hemant Borgaonkar

OSM02-17 Tree ring inferred seven century long Satluj river discharge records from the Indian Himalaya

Jayendra Singh, Ram R. Yadav

OSM02-43 Do baobabs have annual tree rings for high-resolution palaeoclimatology?

An approach using wood anatomy and stable isotopes

Franziska Slotta, Gerd Helle, Ingo Heinrich, Karl-Uwe Heußner, Elisha Shemang, Frank Riedel, Pavel Tarasov

OSM02-36 Sensitivity of the forest-grassland ecotone to historical rainfall variation in pristine open woodland savanna of equatorial East Africa

Immaculate Ssemmanda-Nakimera, Vanessa Gelorini, Dirk Verschuren

OSM02-29 Multiproxy evidence of environmental changes during last 1800 years recorded in coastal peatland of Puck Lagoon (southern Baltic) Szymon Uscinowicz, Wojciech Jeglinski, Grazyna Miotk-Szpiganowicz, Jacek Pawlyta, Natalia Piotrowska, Mariusz Galka, Malgorzata Witak

**OSM02-42** An updated pseudoproxy evaluation of four climate field reconstruction methods using improved emulations of real-world conditions **Jianghao Wang**, Julien Emile-Geay, Dominique Guillot, Jason E. Smerdon

## OSM06 Past Changes in Fluvial Systems, Floodplains and Estuaries

Chair: Onkar S. Chauhan, Peter Gell, Rajiv Sinha

**OSM06-01** Response and recovery from the effects of 100 years flood: Significance of long term slope-channel coupling in Damodar River, North-Eastern India **Sujay Bandyopadhyay**, Ritendu Mukhopadhyay, Debasis Ghosh

OSM06-03 Hydrological and Nutrient budget of Bhitarkanika Mangrove Estuary, East coast of India

Rita Chauhan, AL Ramanathan, TK Adhya

OSM06-04 Rapid ecological changes following altered hydrological connectivities with the Yangtze River in Zhangdu Lake (China) over the past 200 years Xuhui Dong, Min Yao, Xiangdong Yang, Qinghui Zhang, Yangmin Qin

OSM06-05 Sedimentary archives of wetland-river interactions: The lower Murray River, Australia

Peter Gell, Rosie Grundell, Michael Reid

**OSM06-09** To study the chemical weathering and clay mineralogy of the sediments in Brahmaputra river and two of its tributaries to understand the carbon sequestration by weathering

Sumi Handique, Jyotilima Saikia, Seema Talukdar

OSM06-10 A Preliminary study on the removal of earth materials from the river basins in Sri Lanka

Upali De Silva Jayawardena

OSM06-22 River channel response to climate change and human impact: Case study of Russian plain

Irina Kargapolova

OSM06-11 A simulation of the Neolithic transition in the Indus valley

Carsten Lemmen, Aurangzeb Khan

OSM06-15 Submarine fill of a drowned large incised valley. The legacy of eustatic and climatic forcing

Vittorio Maselli, Fabio Trincardi, Alessandra Asioli, Alessandro Ceregato, Federica Rizzetto, Marco Taviani

OSM06-12 Mid-Holocene environmental changes deduced from sedimentary records in the lower reaches of the Yeongsan River, Korea

Wook-Hyun Nahm, Jaesoo Lim

OSM06-06 Neogene Palynofloral evolution of Ramganga Basin, Uttarakhand, India

Samir Sarkar

**OSM06-21** The development of sand dunes around Lake Balkhash and Ili delta in Southeast Kazakhstan: the effects from hydrological environment changes and the Holocene Climate changes, in Central Eurasia

Akio Sato, Toshihiko Sugai, Kunihiko Endo, Reisuke Kondo, Hitoshi Shimizu, Tatsuro Chiba, Jean-marc Deom, Takashi Chiba, Yasunori Nakayama

OSM06-13 Geochemistry of buried river sediment in Ghaggar plains, NW India: Inferences on Late Quaternary palaeoclimate

Ajit Singh, Debajyoti Paul, Sunil K. Singh, Rajiv Sinha

OSM06-14 Stratigraphic response to Late Quaternary monsoonal fluctuations in a buried valley complex in Ghaggar plains, NW India

Ajit Singh, Kristina Thomsen, Rajiv Sinha, Sanjeev Gupta, Jan-Peter Buylaert, Andrew Murray, Mayank Jain

OSM06-16 Sea level and coastal changes during the Holocene in the Cauvery River delta, southern India

Pramod Singh, P.P. Mohapatra, Z.A. Malik, S. Doradla, A.H. Laskar, J. Saravanavel, C.J. Kumanan, M.G. Yadava, S. Balakrishnan, Anupama Krishnamurthy

**OSM06-17** The rise and fall of palaeo-megalake Bungunnia and the birth of the Murray-Darling basin in southeastern Australia: New palaeomagnetic and cosmogenic nuclide constraints on rates of geomorphological change

lan Snowball, Eeva Haltia-Hovi, Sandra McLaren, Ala Aldahan, Per Sandgren

OSM06-02 Main stem- tributary sedimentation in response to flood events during last 1000 years in lower Narmada basin, India

Alpa Sridhar, Ravi Bhushan, Shraddha Band, Laxmansingh Chamyal

OSM06-18 Fluvial response to 3-2 ka sea-level lowering: An example of the latest Pleistocene to Holocene incised-valley fills in the Tokyo Lowland, central Japan Susumu Tanabe, Yoshiro Ishihara

OSM06-19 Early diagenetic processes of clay matters in decadal time-scale in tropical coastline sediments – case study in Vietnam

Nguyen Thi Minh Ngoc

OSM06-20 Fluvial packages as archives to the Late Quaternary climatic fluctuations in SW Saurashtra, western India

Vishal Ukey, Nilesh Bhatt

OSM06-07 Depositional Environment of intertidal Mudflat and Mangrove Environments with Time within a Tropical (Vaitarna) Estuary, West coast of India

Samida Volvoikar, Ganapati Nayak, Aninda Mazumdar

OSM06-08 Fossil Diatoms as a flood indicator in a large shallow floodplain lake

Xiangdong Yang, Qian Wang

### OSM15 The Role of Ocean Circulation in Climate Dynamics

Chair: Arun D. Singh, Devesh K Sinha

OSM15-09 Sub-centennial Holocene fluctuations of Atlantic water inflow and sea ice distribution in the western Barents Sea, European Arctic Sarah Berben, Katrine Husum, Patricia Cabedo Sanz, Simon Belt

OSM15-04 Location of the Marine ITCZ in the Atlantic Ocean over the last 30 ka

Caroline Cleroux, Peter deMenocal, Jennifer Arbuszewski

**OSM15-07** Eastern South Pacific water mass geometry during the last glacial-interglacial transition

Ricardo De Pol-Holz, Dharma Reyes, Mahyar Mohtadi

**OSM15-06** Reconstructing Plio-Pleistocene Intermediate Water Temperatures Using Mg/Ca of Infaunal Foraminifera (Uvigerina peregrina)

Aurora Elmore, Erin McClymont, Harry Elderfield, Sev Kender, Benjamin Petrick

OSM15-08 Holocene Atlantic bottom water inflow at the western Barents Sea margin, European Arctic

Diane Groot, Steffen Aagaard-Sørensen, Katrine Husum

OSM15-12 Suborbital ice-sheets variability in the subpolar North Atlantic during the Early and Mid-Pleistocene (MIS 31–19) as a response of low-latitude forcing Iván Hernández-Almeida, Francisco Javier Sierro, Isabel Cacho, José Abel Flores

### FRIDAY, 15 FEBRUARY (continued)

### 16:00-18:00

#### **BLOCK 4 - Poster Sessions (continued)**

OSM15-03 Antarctic linkages to the deep water flow variability during the past 95000 years in the Indian sector of the Southern Ocean

M C Manoj, Meloth Thamban, Rahul Mohan

OSM15-02 Cold-water corals of the West: North Carolina contribute to a North Atlantic basin study

Lelia Matos, Furu Mienis, Norbert Frank, Claudia Wienberg, Dierk Hebbeln

OSM15-01 Mo isotopes in tropical estuaries: Implication to paleo-redox proxy

Waliur Rahaman, Sunil K. Singh, Vinai K. Rai

**OSM15-05** Evolution of the Mediterranean Outflow Water and its oceanographic - climatic implications: Preliminary Results of IODP Expedition 339 in the Gulf of Cadiz and west off Portugal

Arun D Singh, F Javier Hernández-Molina, Dorrik Stow, Carlos Alvarez-Zarikian, Scientists Expedition IODP 339

**OSM15-13** Late Neogene planktic foraminiferal events of ODP Site 762B, Exmouth Plateau, eastern Indian Ocean: Regional Diachrony and evidence of late Pliocene Ocean Circulation Changes

Ashutosh Singh, Devesh Sinha

OSM15-15 Meeting the challenge of global high resolution paleoclimate modelling.

**Paul Spence** 

OSM15-14 Oxygen Isotope–Salinity Relationship for Paleosalinity estimation in distinct water masses of Indian & Southern Ocean

Kartik Thammisetti, Manish Tiwari, Siddhesh Nagoji

OSM15-11 Oceanographic and climate variability in the Bay of Bengal over the last 60 kyr BP: Foraminiferal evidences

Komal Verma, Santanu Bhattacharya, Mirtunjay Chaturvedi, Subhradeep Das, Sumit Jaiswal, Arun D. Singh

OSM15-10 Seasonality reconciles the discrepancies of sea surface temperature evolution in the Indian Ocean during the last deglaciation

Yiming Wang, Guillaume Leduc, Marcus Regenberg, Nils Andersen, Thomas Blanz, Thomas Larsen, Ralph Schneider

OSM15-16 Control of the Northern Hemisphere Ice Sheets on Glacial Climate Stability

Xu Zhang, Gerrit Lohmann

19:00-22:00

Conference Dinner & Cultural Event (International Centre Goa)

### **SATURDAY, 16 FEBRUARY**

### 09:00-10:30

#### **BLOCK 1 - Oral sessions**

#### **Grande Sala**

# OSM09 Climate Impact on Human Evolution and Civilizations

Chair: Dhananjay A. Sant, Martin Ziegler

Early human speciation, migration and brain expansion driven by African climate pulses

Mark Maslin, Susanne Shultz

Variable Impact of climate change on populations of archaic humans and modern humans inferred from archaeological evidence

Sheila Mishra, Navin Chauhan, Ashok Singhvi

Late Pleistocene to Holocene climate and seasonality in North Africa from  $\delta^{18}$ O,  $\delta^{13}$ C and Mg/Ca analysis of marine and terrestrial mollusc shells (Haua Fteah, Libva)

Amy Prendergast, Rhiannon Stevens, Tamsin O'Connell, Chris Hunt, Graeme Barker

Integration of regionally resolved decline models for the Indus Valley Culture Carsten Lemmen, Aurangzeb Khan

Central American rainfall changes over the past ka and implications on the Classic Maya society

**Sebastian Breitenbach**, Douglas Kennett, Valorie Aquino, Yemane Asmerom, Jaime Awe, James Baldini, Patrick Bartlein, Brendan Culleton, Claire Ebert, Christopher Jazwa, Martha Macri, Norbert Marwan, Victor Polyak, Keith Prufer, Harriet Ridley, Harald Sodemann, Bruce Winterhalder, Gerald Haug

Medieval climate change and the end of the Norse settlements in Greenland **Sofia Ribeiro**, Antoon Kuijpers, Marit-Solveig Seidenkrantz, Naja Mikkelsen

## Sala de Banquete

## **OSM04 Climate Modes in the Past**

Chair: Ed Hathorne, Nerilie Abram, Manish Tiwari, Thomas Felis

Historical mega-droughts in the medieval Levant and Nile Valley

Mordechai Stein, Kate Raphael, Yochanan Kushnir

Shifts in sea surface temperature on centennial to interannual timescales in the Gulf of Mexico since 1734 CE

**Kristine DeLong**, Christopher Maupin, Jennifer Flannery, Terrence Quinn, Ke Lin, Chuan-Chou Shen

 ${\it Holocene\ history\ of\ ENSO\ in\ the\ Eastern\ Tropical\ Pacific\ reconstructed\ from\ Peruvian\ mollusk\ shells}$ 

Matthieu Carré, Sara Purca, Rommel Angeles Falcon, Julian P. Sachs

The Tropical Pacific climate response to the changing forcing over the last glacial cycle

William Roberts, Paul Valdes

Regional differences in Indonesian rainfall and their relation to ENSO and IOD mode

**Eva M. Niedermeyer**, Mahyar Mohtadi, Alex L Sessions, Sarah Feakins

Proxy and model evidence for ENSO-mediated coupled Pan-Pacific drought and pluvial modes in North America and Asia

**Kevin Anchukaitis**, Edward Cook, Brendan Buckley, Jessica Tierney, Johann Jungclaus

10:30-11:00 Coffee break

11:00-12:30

## **BLOCK 2 - Poster Sessions**

### **OSM04 Climate Modes in the Past**

Chair: Ed Hathorne, Nerilie Abram, Manish Tiwari, Thomas Felis

OSM04-01 Climate variability and warming on the Antarctic Peninsula during the last millennium

Nerilie Abram, Robert Mulvaney, Jack Triest, Eric Wolff, Sepp Kipfstuhl, Luke Trusel, Francoise Vimeux, Louise Fleet, Carol Arrowsmith

OSM04-02 SST and Salinity Variations Associated with ENSO and IOD: Records from Indonesian Corals

Sri Yudawati Cahyarini, Intan Suci Nurhati, Miriam Pfeiffer, Jens Zinke, Mutiara Putri, Edvin Aldrian, Wolf-Chr. Dullo

**OSM04-03** Low frequency variability of the Arctic Oscillation (AO) and ENSO during the Holocene recorded in the spatial pattern of Northern Hemisphere extratropical temperatures

Basil Davis, Achille Mauri, Jed Kaplan, Christoph Raible, Flavio Lehner

OSM04-04 Sub-seasonally resolved coral records of northern Red Sea climate during the Holocene and the last interglacial

Thomas Felis, Norel Rimbu, Saber Al-Rousan, Henning Kuhnert, Martin Kölling, Gerrit Lohmann

OSM04-05 The Holocene climatic fluctuations in the Ukrainian steppe based on multidisciplinary study of the banded deposits of the lake Saki (Crimea) Natalia Gerasimenko, Dmitriy Subetto, Volodymyr Bakhmutov, Lidia Dubis

OSM04-06 Recent accumulation rate and impurity seasonality derived from NEEM firn cores

Gideon Gfeller, Matthias Bigler, Daiana Leuenberger, Olivia Mini, Hubertus Fischer

OSM04-07 Developing South Atlantic Coral Paleoclimate Records from Rocas Atoll, Brazil

K. Halimeda Kilbourne, Ruy Kenji Papa de Kikuchi

OSM04-08 Mid-Holocene regional reorganization of climate variability: Analyses of proxy data in the frequency domain

Carsten Lemmen, Kai W Wirtz, Gerrit Lohmann

OSM04-09 The Summer North Atlantic Oscillation: Character and teleconnections over the last millennium

Hans Linderholm, Jee-Hoon Jeong, Chris Folland, Baek-Min Kim, Tinghai Ou

OSM04-10 Mid- to Late Holocene temperature and salinity changes in the Southwestern Atlantic

Renata Hanae Nagai, Cristiano M. Chiessi, Silvia H.M. Sousa, Henning Kuhnert, Stefan Mulitza, Michel M. Mahiques

OSM04-11 Coral Records of South China Sea Throughflow's Thermohaline Variations over the Last Century

Intan Suci Nurhati, Sri Yudawati Cahyarini, Ed Boyle

OSM04-12 Multi-proxy study of a Lake from mainland Gujarat: Understanding mid-late Holocene climatic fluctuations

Rachna Raj, Vandana Prasad, Anjum Farooqui, Anupam Sharma, Binita Phartiya, Supriyo Chakraborty, Subhash Bhandari, Abha Singh

**OSM04-13** A 65 ka stalagmite paleoclimate record from northern Venezuela: A record of Caribbean climate change **Julie B. Retrum**, Luis A. González, R. Lawrence Edwards, Stacy M. Tincher, Hai Cheng, Franco Urbani

OSM04-14 Relationship between the variations of the location of the ITCZ in the West Pacific and ENSO in different climatic contexts

Marion Saint-Lu, Pascale Braconnot, Matthieu Lengaigne, Olivier Marti

OSM04-15 High resolution climatic record from the Kumaun Himalaya: A speleothem study

Jaishri Sanwal, B.S. Kotlia, S.M. Ahmad, C.P. Rajendran, Kusala Rajendran

OSM04-16 Late Quaternary climatic signals from the Kumaun lesser Himalaya: Evidence from a fluvio-lacustrine deposit

Jaishri Sanwal, C.P. Rajendran, M.S. Sheshshayee, Kusala Rajendran

OSM04-17 New insights on last glacial ice-sheet dynamics and retreat deduced from Southeastern Weddell Sea sediment

Daniela Sprenk, Michael E. Weber, Gerhard Kuhn

OSM04-18 Indian Ocean dipole mode and its relation with the Indian summer monsoon variability at multi-centennial to millennial timescales

Manish Tiwari, Siddhesh Nagoji, Kartik Thammisetti, Rahul Mohan

OSM04-19 Sub-centennial to centennial scale changes in productivity in the Eastern Arabian Sea: Implications to the Indian summer monsoon variability since mid-

Manish Tiwari, Siddhesh Nagoji, Kartik Thammisetti

OSM04-20 Response of planktic foraminifera to oceanic environmental changes during cenomanian - Turonian transition in SE India

Raju Venkatachalapathy, G Shanmugavalli

## OSM05 Abrupt Changes and Extreme Events - Assessment and Risks

Chair: Pierre Francus, Pierre Antoine

**OSM05-04** Abrupt climatic events in continental Europe during MIS 5 (Early-glacial / 112-70 ka): Highlighting a new reference record at Dolni Vestonice (Czech Republic)

Pierre Antoine, Denis-Didier Rousseau, Markus Fuchs, Sebastian Kreutzer, France Lagroix, Olivier Moine, Christine Hatte, Caroline Gauthier, Jirí Svoboda, Lenka Lisa

OSM05-01 Analysis of tree-ring data of fir (Abies densa) in relation to climate vis-à-vis movement of Zemu glacier, Eastern Himalaya

Amalava Bhattacharyya, **Mayank Shekhar**, Santosh K. Shah, Vandana Chaudhary

OSM05-09 Abrupt Climate Change- Past and Present and Future Meet

Peter Carter

OSM05-06 Abrupt changes in lake sediment properties are not always reflecting regional abrupt changes: Example from varved Lake Yoa, Northern Chad. Pierre Francus, Hilde Eggermont, Dirk Verschuren, Stefan Kröpelin

OSM05-03 4100 years long tree-ring record of extreme temperature events in the Yamal Peninsula

Lyudmila Gorlanova, Rashit Hantemirov

OSM05-05 Gravel beaches: Signals of changing

Helena Granja, José Pinho

**OSM05-07** Seasonal and centennial cycles of carbonate mineralisation during the past 2500 years from varved sediment in Lake Shira, South Siberia Ivan Kalugin, Andrey Darin, Denis Rogozin, Gennady Tretyakov

OSM05-08 Millennial and orbital climate variability in West Antarctica

Bradley Markle, Eric Steig, Ed Brook, WAIS Divide Project Members, Todd Sowers, T. J. Fudge, Spruce Schoenemann, Andrew Schauer, Cecilia Bitz, Qinghua Ding, Emily Newsom, Ken Taylor

OSM05-02 Tree-ring-based long-term snowfall records for Western Himalaya, India

Ramratan Yadav, Mahendra R Bhutiyani

### **OSM09 Climate Impact on Human Evolution and Civilizations**

Chair: Dhananjay A. Sant, Martin Ziegler

OSM09-10 Correlation between the climatic and geological events and changing of archaeological cultures in SE Altai (Russia) during the Late Holocene Anna Agatova, Roman Nepop, Igor Sljusarenko, Vladimir Myglan, Valentin Barinov, Andrey Nazarov

OSM09-07 Regional integration of lake sediment and archaeological archives: Holocene climate variability and socio-evolutionary pathways in Cappadocia, central Anatolia

Samantha Allcock

OSM09-04 Dating the earliest human occupation of Western Europe: New evidences from the fluvial terraces system of the Somme basin (North France)
Pierre Antoine, Nicole Limondin-Lozouet, Marie-Hélène Moncel, Jean-Luc Locht, Jean-Jacques Bahain, Pierre Voinchet, Patrick Auguste

## SATURDAY, 16 FEBRUARY (continued)

#### 11:00-12:30

### **BLOCK 2 - Poster Sessions (continued)**

OSM09-01 Megalake Chad occurrences in the Pliocene: An insight into early hominid environment

Camille Contoux, Gilles Ramstein, Anne Jost, Mathieu Schuster, Pierre Sepulchre, Pascale Braconnot

OSM09-08 Impacts of climate variability and Maya settlement on Laguna Tuspán (Petén, Guatemala) during the past 5000 years

Sophie Fleury, Bruno Malaizé, Philippe Martinez, Viviane Bout-Roumazeilles, Jacques Giraudeau, Didier Galop, Alexandre Torneberg, Kees Nooren, Karine Charlier, Pierre Carbonel, Marie-Charlotte Arnauld

OSM09-17 Extreme Weather, Famine, Dynasty Revolution, and the Possible Connection to Volcanic Activities over the Past 1500 years in China Chaochao Gao

**OSM09-11** Assessing impacts of climate variability on the demography of pre-Hispanic societies from the Atacama Desert over the past three millennia **Eugenia Gayo**, Claudio Latorre, Calogero Santoro

OSM09-16 History of climate: 2000 Leagues overseas

Alain Gioda, Mike Baker

OSM09-22 Mineral Magnetic studies to indicate Paleo-anthropogenic loading of particulate matters in the

Mumbai and Delhi metropolitan regions

Swapnil Guadadhe, Satish Sangode, Shiva Kumar Patil, Dilip Chate, Dhananjay Meshram

OSM09-21 Regime shifts in past ecosystems of maar lakes: Lessons for building ecological resilience to future climate change

Giri Kattel, Frank Sirocko, Paul Augustinus

OSM09-02 Palaeoenvironments of the Olorgesailie Basin during Mid-Late Pleistocene inferred from Phytolith analyses

Rahab Kinyanjui, Michael Meadows, Lindsey Gillson

OSM09-15 On the sensitivity of the simulated European Neolithic transition to climate extremes

Carsten Lemmen, Kai W Wirtz

OSM09-06 Modeling and simulation of Holocene hunter-gatherer and agro-pastoral groups to explore the role of climate in population behaviour

Marco Madella, Andrea Balbo, Carla Lancelotti, Bernardo Rondelli, Xavi Rubio, Alexis Torrano, Matthieu Salpeteur, Victoria Reyes-Garcia, P. Ajithprasad, Andreas Angourakis

OSM09-09 Human responses to monsoon variability in South East Asia: Cambodian pre-Angkor and Angkor periods

Naoko Nagumo, Toshihiko Sugai, Sumiko Kubo

OSM09-20 Recent climate change in West Africa and adaptation strategies proposed by rural population

Timothee Ourbak, Benoit Sarr

OSM09-12 Peat in the desert: A local environmental history for the Holocene in semi-arid Jordan, and its comparison to the evolution of societies Claire Rambeau

Claire Rambeau

OSM09-14 Climate change and the Plague of Justinian

Neil Roberts, Matthew Jones, Warren Eastwood, Jessie Woodbridge, Samantha Allcock, Jonathan Dean

OSM09-05 The effect of late Holocene precipitation changes on natural resources and human society in northern Europe

Gunhild Ninis Rosqvist, Melanie Leng

OSM09-18 Evidence of Human-Animal-Climate interaction in lower reaches of Narmada Valley, Western India

Dhananjay Sant, K Krishnan, Vijay Sathe, S. N. Rajaguru, Prabhin Sukumaran, Parth Chauhan

OSM09-19 Examining the relationships between Holocene climate change, hydrology and human society in Ireland

**Philip Stastney** 

OSM09-13 The impact of environmental change on past human societies in the Central Peloponnese (Greece)

Ingmar Unkel, Helmut Brückner, Walter Dörfler, Timothy Filley, Jeannette Forsén, Christian Heymann, Haydn Murray, Oliver Nelle, Arndt Schimmelmann, Christine Shriner, Helen Zagana

**OSM09-03** Development of modern human behaviour linked to rapid climate change

Martin Ziegler, Margit Simon, Ian R. Hall, Stephen Barker, Chris Stringer, Rainer Zahn

### OSM10 Sea Level Change and the Coastal Zone: Threats for Human Societies

Chair: Yusuke Yokoyama

OSM10-07 Diversity of mangrove plants in relation to palaeoenvironment during Quaternary Period in Bengal Basin

Nimai Chandra Barui, Payel Roy

OSM10-16 Effects of sea level changes and tectonics on scalping the Late Quaternary deposits along the Southern Saurashtra coast, Western India Subhash Bhandari

OSM10-01 Deciphering natural trends from anthropogenically induced changes in coastal areas: Example of the hypoxia in the Lower Estuary of St. Lawrence, eastern Canada

Anne de Vernal, Claude Hillaire-Marcel, Benoit Thibodeau, Dhahri Nouha

OSM10-14 Chemical Fractionation of Metals in Sediment cores of Intertidal regions along Ulhas Estuary, Mumbai, India

Lina Fernandes, Ganapati N Nayak

**OSM10-10** Identification of Tsunami deposits and their impact on coastal zones: A study case of the Boca do Rio estuary (Algarve, Portugal) Eric Font, **Cristina Veiga-Pires**, Manuel Pozo, Silvia Nave, Susana Costa, Francisco Ruiz Muñoz, Manuel Abad, Nuno Simões, Silvia Duarte

OSM10-03 Anthropogenic impact in coastal Baltic Sea over the last 2000 years using biological proxies

Anupam Ghosh, Wenxin Ning, Helena L. Filipsson

OSM10-04 Late Holocene environmental change inferred from coastal lake and estuarine sediments in the Wilderness area, southern Cape, South Africa
Torsten Haberzettl, Roland Mäusbacher, Bastian Reinwarth, Siegfried Clausnitzer, Sarah Franz, Kelly Kirsten, Jussi Baade, Thomas Kasper, Lynne Quick, Gerhard
Daut. Michael Meadows

OSM10-13 Postglacial-Holocene relative sea level data from the White Sea Coast, Russia

Vasily Kolka, Olga Korsakova

OSM10-11 Postglacial RSL changes of White Sea according the lithological and micro-paleontological data (Kandalaksha Bay, NW Russia)

Olga Korsakova, Vasily Kolka, Nadezhda Lavrova

OSM10-15 Tectonic geomorphology of the Holocene marginal marine basin of the Great Rann of Kachchh, Western India: Implication for pattern of emergence during

Deepak Maurya, Nitesh Khonde, Archana Das, Laxman Chamyal

OSM10-08 Analysis of Mangroves vegetation history from Kanjani (Kerala), the South West coast of India Sandhya Sharma, Amalava Bhattacharyya

OSM10-06 Mangrove and coastal environment changes during the Holocene in the Mahanadi Delta, India Shilpa Singh

OSM10-09 Persistent non-solar forcing of Holocene storm dynamics in coastal sedimentary archives

Philippe Sorrel, Maxime Debret, Isabelle Billeaud, Samuel L. Jaccard, Jerry F. McManus, Bernadette Tessier

OSM10-12 Holocene sea-level change in Sri Lanka and melting history of Antarctic ice sheet

Yusuke Yokoyama, Yosuke Miyairi, Jun'ichi Okuno, Kazuhisa Goto, Tsuyoshi Haraguchi, Hiroyuki Matsuzaki

OSM10-05 Holocene evolution of Qing'ao embayment, Southern China

Fengling Yu, Adam D Switzer, Bishan Chen, Zhuo Zheng, Deli Wang

OSM10-02 Assessment of the Possible Impact of Climate Change on Fresh Water – Saline Water Interaction in the Coastal Aquifers of Bangladesh due to Sea-level Rise

Anwar Zahid, Khurshid Jahan

12:30-14:00 Lunch

14:00-15:30 **BLOCK 3 - Oral sessions** 

## OSM10 Sea Level Change and the Coastal Zone: Threats for Human Societies

**Grande Sala** 

Chair: Yusuke Yokoyama

Uncertainty on future sea level rise - implications for planning and the role of scientist qua advisor

#### Per Wikman-Svahn

Anthropocene changes in particulate and dissolved fluxes from major rivers and their impact on coastal processes: methodological issues (solicited talk)

#### Claude Hillaire-Marcel

Erosion of Arctic permafrost coasts and mobilization of dissolved organic carbon (DOC) from ground ice

Michael Fritz, Nicole Couture, Hugues Lantuit

The probable drivers of contemporary Effective sea level rise rate in southwest Bangladesh

John Pethick, Julian Orford

What can we learn from recent catastrophic coastal events in Vietnam, India, Philippines and Thailand?

Adam Switzer, Christos Gouramanis, Ying Sin Lee,, Charles Bristow, Charles Rubin, Kruawun Jankaew, S. Srinivasalu, Lam Dinh Doan, Fernando Siringan, Que Dinh Hoang

Using sea-level proxy data to constrain future sea-level rise

Stefan Rahmstorf

## Sala de Banquete OSM05 Abrupt Changes and Extreme Events - Assessment

Chair: Pierre Francus, Pierre Antoine

Regional reconstructions of the past extreme flood activity from Alpine lake sediments

Bruno Wilhelm, Fabien Arnaud, Pierre Sabatier, Jean-Jacques Delannoy

The Indian Monsoon anomaly at 4k; dynamical analogs and cultural implications Max Berkelhammer, Ashish Sinha

A high resolution dust flux record of the last glacial period from northwestern Chinese Loess Plateau

Liping Zhou, Jintang Qin

and Risks

The last rapid decline of lake levels on the Tibetan Plateau

Torsten Haberzettl, Thomas Kasper, Sascha Fürstenberg, Thomas Grau, Karoline Henkel, Hao Long, Sabine Miehe, Youliang Su, Gerhard Daut, Peter Frenzel, Junbo Wang, Liping Zhu, Roland Mäusbacher

Extreme Events: Himalayan Floods

Shipra Chaudhary, Y.P. Sundriyal, Navin Juyal, R. J. Wasson

15:30-16:00	Coffee break	
16:00-18:00	<b>BLOCK 4 - Plenary Session and Future Earth Discussion</b>	Chair: Liping Zhou
16:00-16:30	Plenary Talk: Martin Jones - Food economics in (pre-)historical times	
16:30-17:00	Plenary Talk: Kathy Willis - Climate change and biodiversity	
17:00-17:45	Plenary Discussion: Future Earth	
17:45-18:00	Closing	

## **SUNDAY, 17 FEBRUARY**

**Field Trips**