

Environmental catastrophes in Mauritania, the desert and the coast

IGCP 490, ICSU and GEOINDICATORS

Objectives

The main structural questions to be answered in this meeting are

- *Chronology of Changes* in the broad theme of Climatic, Ecological and Health Catastrophes
- *Causes and mechanisms of past environmental catastrophes/rapid changes*
- *Impacts on past civilisations and ecosystems*
- *Mechanisms of recovery*

For Mauritania, the relevant indications of these changes are coastal wetland regions, upwelling strength, groundwater, tsunamis, lakes, desertification, health, dust, collapse of ancient civilisations.

Where and why

The Islamic Republic of Mauritania is a desertic and sahelian country between Senegal and Western Sahara, with abundant traces of climatic changes with wetter and drier periods. The desert around Atar holds abundant lake beds and other traces of past wetlands (e.g. travertines ore or less active in the last century in relation to varying rainfall), a centre of attraction for human occupation. We will also walk to the crater left by the meteoritic impact of Aouelloul. Chingueti, a medieval holy city, is now nearly covered by sand; however its family libraries still contains ancient scientific, religious and philosophical books (Leroy and Stewart, 2002).

Also Mauritania has on its coast a large wetland area protected by the RAMSAR Convention: the national park of the Banc D'Arguin (PNBA) which contains the remnants of a diverse Pliocene mangrove and is the home of plentiful of wildlife. This area was already used by Neolithic inhabitants, as it can be seen by the very large shell middens, and is still the home of the Imraguen, fishing in the rich upwelling waters with the help of dolphins.

The role of Saharan dust in climate, health and

Too little research is going on in Mauritania on “The role of Holocene environmental catastrophes in human history”. This meeting attempts to show to the participants the state-of-the-art of the present knowledge and aims at enticing new research projects in Mauritania by the involvement of the local scientific community (University of Nouakchott).

Humans living in these transitional areas (in space and time) are very sensitive to aridification and sea level changes. Human migration patterns through the Sahara further north (Gibraltar) and south (sub-sahelian Africa) have and often are still directly related to environmental change.

When

Sunday 4-Sunday 18 Jan. 2004 with the option of selecting only one of the two weeks.

Scientific programme

Field conference

Week 1: The banc d'Arguin, protection problems, one day/2 days boat trip on the shallow area of the Banc, the beach rock, the remains of the mangrove at Cape Timiris, the Neolithic middens.

Week 2: The biodiversity and human occupation in the cordon de Zerga (Palaeozoic esker) (between Atar-Chinguetti), the Holocene lake sediment, rock art, the travertines (active and dead) of Tergit (near Atar) and the recent desertification, the meteoritic impact crater of Aouelloul.

With presentations on catastrophic and rapid environmental changes: Desertification (6000 yrs to present); cultural collapse (Garamantes); groundwater changes; dust transport; sea-level change; palaeoecology, palaeo-health.

Travel funds

The cross-disciplinary participation of scientists from West Africa as well as from other developing nations within the region will be facilitated. Some travel funds will be available for young scientists or scientists from developing countries.

Scientific committee

- Suzanne Leroy (Geography and Earth Sciences, Brunel University, West London),
- Aziz Ballouche (Geographie, Universite de Caen),
- Mohamed Salem Ould Sabar (Geologie, Universite de Nouakchott),
- Nick Brooks (Saharan Studies Programme, Department of Environmental Sciences, University of East Anglia),
- Iain Stewart (Geography and Earth Sciences, Brunel U. and Department of Geography & Topographic Science, U. of Glasgow)
- Eric Odada, Nairobi, Kenya

Organising Committee

- Suzanne Leroy,
- Aziz Ballouche,
- Mohamed Salem Ould Sabar,
- Sylvain Philip (Hommes et Montagnes travel agency)

Presentation of scientific results

An unusual format has been chosen, well adapted to the country. This is due to the lack of electricity in the field and due to the damaging effect of sand on optical and electronic devices. The participants, contrary to usual, once arrived at the camp at lunch or in the evening, will speak about their results in the open (standing up surrounded by participants sitting on the floor). The participants will be helped to follow the talk by detailed figures given in the volume of abstracts and by a flipchart.

Volume of abstracts

Because of the unusual setting, we require a short abstract (no more than 500 words excluding title and references) but with 4-5 diagrams selected in order to support your talk (no electronic/electric medias).

Publication

Publication of the results will be encouraged in a special issue of the Geological Society of London.

Travel

To Mauritania: charter flight from Paris (often night flights!) is recommended. Schedules flights to Nouakchott are possible but more expensive.

In Mauritania:

Week 1: some travel in 4-wheel drive, sleeping under simple communal tents, in the PNBA

Week 2: some local travel by hiking and sleeping in the open (luggage and food on dromedaries) around Atar, Zerga, Tergit.

All through the travel Agency: Hommes et Montagnes (www.hommes-et-montagnes.com/); Sylvain PHILIP <sylvain@hommes-et-montagnes.fr>: charter, food and local transportation.

Sponsors

IGCP 490 The role of Holocene environmental catastrophes in human history

ICSU DARK NATURE - RAPID NATURAL CHANGE AND HUMAN RESPONSES

IUGS- Geoindicators

Pending: START, MEDIAS-France

Potential: UEA, INQUA

The sponsor will go firstly for travel expenses of young scientists and scientists from emerging countries.

Links

- Hommes et Montagnes travel agency: www.hommes-et-montagnes.com/
- IGCP 490: www.brunel.ac.uk/depts/geo/igcp490/igcp490home.html
- Leroy S. and Stewart I., 2002 - 'Environmental Catastrophes and Recoveries in the Holocene'. PAGES [News: 10](#), 3: 26, newsletter available at www.pages.unibe.ch.

- Leroy S. and Stewart I., 2003 - 'Environmental Catastrophes and Recoveries in the Holocene'. Episodes. 26, 2: 124-125.
- GEO-indicators initiative of IUGS www.lgt.lt/geoin/

Registration

1- Registration fees for all participants (even those receiving a grant):

20 Euros before 1 Dec. (to be paid with your travel booking)

60 Euros after 1 Dec. (to be paid with your travel booking)

2- Travel booking with “Hommes et Montagnes” (asap to benefit from cheaper charter flights from Paris)

week one only: 1310 euros

week two only: 930 euros

weeks one and two: 1510 euros

These prices are full pension and flights from Paris, taxes, visa, local guides, camels, 4 x 4 toyotas.

3- abstract submission fee: free before 1 Dec., 40 euros after that date.

Send abstract to Suzanne Leroy, fees to “Hommes et Montagnes”

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