

TRAINING COURSE ON SEA LEVEL MEASUREMENT AND INTERPRETATION

(13 - 24 November 2006, OOSTENDE, BELGIUM)

**REPORT OF THE ISLAMIC
REPUBLIC OF MAURITANIA**

Date of the report

The report drawn up in Nouakchott,
on October 4th, 2006.

Title of the report

**National report of
the Islamic Republic of Mauritania**

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PRESENTATION OF THE ISLAMIC REPUBLIC OF MAURITANIA

Geographical situation



Population :

3 000 000 inhabitants











Hydrodynamic data (AREA OF NOUAKCHOTT)

Dominant winds

- The dominant winds oscillate between north-north-west, the North-West and west (48% of the annual frequencies).
- Speed varies between 0,3 and 20,7 m/s.

Currents

- Under the influence of the Canaries, there is a current quasi-permanent North-South littoral of about 0,5 node (0,25 m/s. It is reversed a few days per annum.

Tides

The tide is semi-diurnal. The zero of the Wharf of Nouakchott constitutes the reference for the various sea level.

- maximum level of the full sea: 2,05 m
- minimum level of the low tide: 0,03 m
- average level of the sea : 0,97 m
- average level of the low tide : 0,51 m
- average level of the full sea : 1,44 m

Swell

- On the Mauritanian coast, the direction of the swell is more than 48% north-western oriented. Periodically, swells coming from the south-western sector develop June between en August.

Temperatures of the sea

The Mauritanian littoral is located in the zone of swinging of the intertropical face (IF) at the north of which a mode of trade winds is established. It results from it, in the maritime field, a two hydrological seasons alternation: one cold water season in winter (December - June) and a hot water season in summer (beginning in May-June). On the level of Nouakchott, the temperature of the sea varies between 15° and 30° C.

Tide gauge installation sites

Nouakchott Port Authority tide gauge :

The Nouakchott Port Authority called “Port de l’Amitie” has a Tide gauge located at the western end of the quay. Its position is as follows:

- Latitude: 17° 59' 20,95 N
- Longitude: 16° 01' 56, 20 W

The port itself is located at 18 km in the south-west of the town of Nouakchott, capital of the Islamic Republic of Mauritania



Tide gauge location

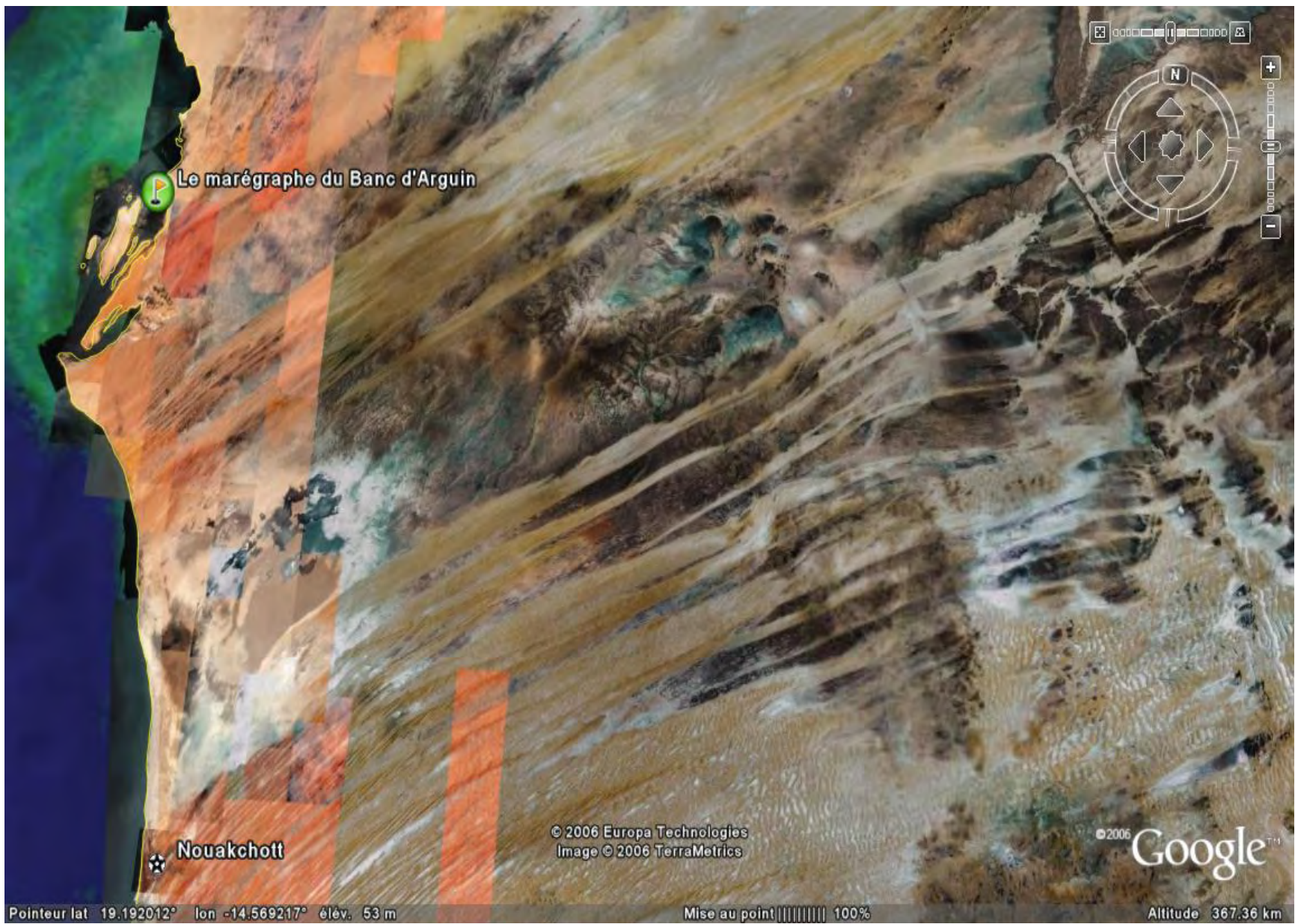
© 2006 Europa Technologies
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Pointer 17°59'24.03" N 16°01'46.08" W elev 10 ft Streaming ||||| 100% Eye alt 5569 ft

The National Park called Banc d'Arguin

- The National park “Banc d'Arguin acquired a tide gauge to be established, in collaboration with the University of Nouakchott, in the locality of **Iwik** (approximately 200 km in the north of Nouakchott).
- The position designed to establish the tide gauge is as follows:
 - - **Latitude: 19° 53' 02 N**
 - - **Longitude: 16° 17' 42 W**



Le marégraphe du Banc d'Arguin

Nouakchott

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Pointeur lat 19.192012° lon -14.569217° élév. 53 m

Mise au point ||||| 100%

Altitude 367.36 km

OVERVIEW OF THE TIDE GAUGE TECHNOLOGY

- **Tide gauge of the port authority of called « Port de l'Amitié »**
- Nouakchott Port Authority tide gauge is an **OTT R 16** model.
- The recording is done on a millimeter paper support : each sheet corresponds to a seven days period,
- The tide gauge OTT R 16 is equipped with a digital recorder (Thalimèdes)

A general view of the tide gauge and site



View of internal mechanism



The National Banc d'Arguin tide gauge is an under water type with a memory card of 32 MB for automatic data recording

General sight of the tide gauge



GPS TECHNOLOGY EMPLOYED

- The Nouakchott Port and the National Park tide gauges are connected neither to a GPS nor with a satellite.

DATA-GATHERING AND AVAILABILITY

An observer of the Port Hydrographic Service collects the recorded data and changes the sheets every week. He also checks the tide gauge (clock and height).

- The observer mentions the dates of beginning and of end of recording on the withdrawn sheets. The sheets corresponding to the period going of May 31, 1999 to May 21, 2005 are available. However, no system of consultation of these data is organized.

The tide gauge of the National park of the Bench of Arguin never functioned.

Contacts

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Nouakchott - Mauritania

Example of tide records

Microsoft Excel - janv-dec03.xls

Type a question for help

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5	1-déc.-03	1:30 AM	98												
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7	1-déc.-03	2:30 AM	114												
8	1-déc.-03	3:00 AM	119												
9	1-déc.-03	3:30 AM	123												
10	1-déc.-03	4:00 AM	125												
11	1-déc.-03	4:30 AM	127												
12	1-déc.-03	5:00 AM	127												
13	1-déc.-03	5:30 AM	123												
14	1-déc.-03	6:00 AM	118												
15	1-déc.-03	6:30 AM	112												
16	1-déc.-03	7:00 AM	105												
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18	1-déc.-03	8:00 AM	89												
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42	1-déc.-03	8:00 PM	90												
43	1-déc.-03	8:30 PM	84												
44	1-déc.-03	9:00 PM	79												
45	1-déc.-03	9:30 PM	75												
46	1-déc.-03	10:00 PM	72												
47	1-déc.-03	10:30 PM	70												
48	1-déc.-03	11:00 PM	68												

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