



GeoHeritage Task Group

<http://geoheritage-iugs.mnhn.fr>

**Annual Report 2013
Plan of action for 2014**

TITLE OF CONSTITUENT BODY

IUGS GeoHeritage Task Group. This GTG was created at the initiative of IUGS' board.

1- Overall objectives

Through the leadership of individuals and organizations with background in this particular issue, the IUGS Task Group on GeoHeritage works to facilitate the development of national and international awareness and understanding of the underlying concepts. The Task Group also helps to understand and recognize the various types of geosites (educative, recreative, protective...) around the world and to promote in developing countries the will strive to develop their own geoheritage.

The Task Group works mainly through modern means of communication including discussions, meetings and information exchange via email and teleconferences, although some meetings may be required from time to time to anchor some decisions. Consequently, this group will function at little cost to IUGS and member organizations.

Three main objectives address:

1- To develop an inventory of geoheritage sites. The large majority of these sites are isolated (a quarry, a single outcrop) and probably will never belong to any kind of geopark but they are valuable for education and for testimony of the history of the Earth. Several organizations (national, disciplinary i.e. palaeontologists) are working or have the will to work on this issue. The list and content should be made available for all interested parties.

2- To compile the regulations on trade of *exsitu* objects (fossils, mineral, meteorites) existing in different countries, which are usually difficult to obtain. The availability of this information on a website would be of a great help to geologists and other kind of people who have to deal with these matters (Customs Agencies ...).

3- To provide a single point of reference and coordination for the current diverse and disparate activities in geoheritage being undertaken by the Union and various partners.

This GTG is now almost four years old (November 2010)

Steering committee, February 2013

Chairman

Prof. Patrick DE WEVER (France) National Museum of Natural History

Vice-Chairman

Dr. Peter BOBROWSKY (Canada) Past President - Geological Association of Canada

Webmaster

Grégoire EGOROFF (France) National Museum of Natural History

Correspondents:

South-America

Prof. Marcos NASCIMENTO, Universidade Federal do Rio Grande do Norte, Natal (Brazil)

North-America

Dr. Vincent L. SANTUCCI, United States National Park Service, Geologic Resources Division (United States of America)

Dr. Marten GEERTSEMA, Ministry of Forests, Lands and Natural Resource Operations (Canada)

Africa

Prof. Ezzoura ERRAMI, contact with the African geoheritage (Morocco)

Europe and Asia

Prof. Roland DREESEN, Univ. Gent & Geological Survey of Belgium (Belgium)

Dr. Luca DEMICHELII, EuroGeoSurveys (Italy)

Dr. Patrick MCKEEVER, UNESCO Section Chief, Global Earth Observation (Ireland)

Prof. Jose BRILHA, President of ProGEO (Portugal)

Prof. Peng HUA, School of Geography and Planning (China)

2- Activities 2013

During the 2013 IUGS Annual Executive meeting at UNESCO HQ, it was suggested that the group focus on sites dealing with GSSP. We followed this wish and worked mainly on that aspect this past year.

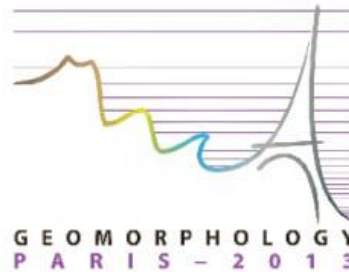
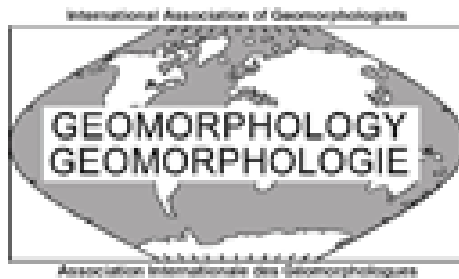
Besides some actions on Geoheritage properly, we joined other organisations dealing with Geoheritage at local, national and international level. This is why we continue to participate at numerous meetings. Since we devote all IUGS financial resources to the GSSP project, we have limited our participation to a few meetings and funded this independently.

International Congress of Geomorphology
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The 8th International Conference on Geomorphology of the International Association of Geomorphologists (IAG) took place in Paris at the Cité des Sciences de La Villette from

August 27 - 31, 2013. The main topic of this 8th Conference was “**Geomorphology and Sustainability**”.

This meeting gathered more than one thousand persons and a specific session was devoted to geoheritage, under the title “S15B. Geomorphosites (IAG-WG) including geoparks and WHS” over two days. Twenty three papers were presented during this meeting.



SIM Besançon, 2013 October 1st-6th

Industrial companies hold regular meetings to expose their own activities and progress. This year we succeeded to set up a specific session devoted to “memory and management of mining and geological heritage”. It has been a good opportunity to make sensitive a community of geologists, mainly engineers, to geoheritage who consider generally geoheritage more a problem for their activity rather than a chance for preserving geofeatures.

14^e ASF Colloquium Paris, November 5th-8th

During this meeting a session was devoted to geoheritage and building stones. Fifteen papers were presented among which two were from our Task Group and two field trips.

Journées Nationales du Patrimoine géologique, Caen, October 15th- 18th

During the Geoheritage national days in France twenty papers presented the state of art for inventory, preservation and outreach of various sites and collections (rocks, fossils, documents ...) and outreach which included education of pupils and a large public.

Data base for regulations on geoheritage

As proposed in the Terms of Reference, we began to establish a database dealing with the regulations of geoheritage occurring in different countries. At the moment we have succeeded to obtain regulations, besides those of UNESCO, for about twenty of countries (among which nine were documented in 2013: Iceland, Norway, Belgium, Nederland, South Africa, Poland, Greece, Slovakia, Austria).

They are reported on the website:

<http://geoheritage-iugs.mnhn.fr/index.php?catid=2&blogid=1>

Countries with information on regulations are shown in color. A click on the country in question opens a page with the laws and regulations

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IUGS - Geoheritage Task Group (GTG)

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Patrimoine Géologique National

The GTG is in the process of gathering national regulations and policies that outline or protect geoheritage within different countries. You can click on the countries listed below to view their geoheritage policies.

If your country is not listed but has existing legal protection measures for geological heritage sites, please contact the Task Group current Chair geopatrimoine@mnhn.fr or Secretary chidalgo@ujaen.es

SEGEMAR
SERVICIO GEOLÓGICO MINERO ARGENTINO

ISPRA
Istituto Nazionale per lo Studio e la Cura dei Beni Ambientali e Paesaggistici

Universidade do Minho

THE GEOLOGICAL SOCIETY OF AMERICA®

UNIVERSIDADE CABO VERDE

uni3

DRŽAVNI ZAVOD ZA ZAŠTITU PRIRODE

MUSEUM

ČESKÁ GEOLOGICKÁ SLUŽBA

NINA

General web page for regulation

These WEB pages are still not in their definitive format, but they are progressing.

Geosite database

The GEOSITES programme was evoked by IUGS in 1994 and actually launched one or two years later (according to what is considered as the real beginning). This project involves the geological community in geoheritage: it aimed to provide a factual basis (inventory and data set) to support any national or international initiative to promote outreach and/or protect the geological resource, our resource for research and education. Its aims were not executive, but are designed to mesh with national and geo-community initiatives and addressed the issue of how best to represent the diversity and richness of our key geoscience sites.

In 1995, IUGS and subsequently with the support of UNESCO, promoted the project to compile a global inventory, and related database. The president of IUGS wrote in 1996 to all national committees and affiliated bodies to enlist their support for the project.

IUGS's Global Geosites Working Group (GGWG) had the following published terms of reference:

- 1) To compile the Global Geosites list,
- 2) To construct the Geosites database of key sites and terrains,
- 3) To use the Geosites inventory to further the cause of geoconservation and thus support geological science in all its forms,
- 4) To support regional and or national initiatives aiming to compile comparative inventories,
- 5) To participate in and support meetings and workshops that examine site selection criteria, selection methods or conservation of key sites,
- 6) To assess the scientific merits of sites in collaboration with specialists, research groups, associations, commissions, subcommissions etc.
- 7) To advise IUGS and UNESCO on the priorities for conservation in the global context, including World Heritage.


This task was undertaken in association with ProGEO, but for some reasons it ended in ca 1998-1999.

Given the above history of events, the present GTG was established.

Geoheritage is an international responsibility. All geologists and related professionals, and all organisations, have a part to play in protecting this heritage. Geosites and geology are not confined by national borders; geology crosses them. Also, the best sites have regional and often even global significance, and sites in such areas have importance and relevance for all.

The objective of GEOSITES is to display an international list of the most important sites for geological science.

To date a list of 310 sites were more or less documented (120 with geographic coordinates). We have put our effort into the public accessibility of this information. The documented sites (with geographic coordinates) are reported on a Google map (see figures).



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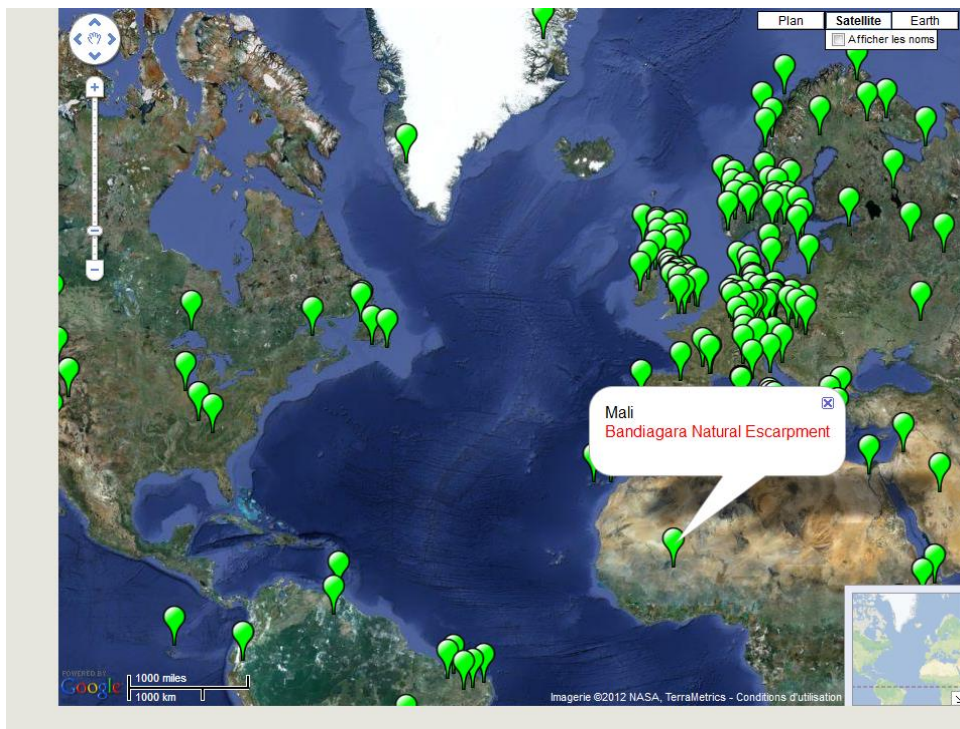
Patrimoine Géologique National

IUGS Geosites project
Click on the picture below:



23 / 11 / 2013

<http://geoheritage-iugs.mnhn.fr/index.php?catid=11&blogid=1>



Mali
Bandiagara Natural Escarpment

http://geoheritage-iugs.mnhn.fr/geosites_iugs.php

Site name : Bandiagara Natural Escarpment
IUGS Geosite N° : 10
Country : Mali
National sovereignty : Government of Mali
Date of initial entry : 1994-04-06
Date of changes : 1997-09-04
Proposer name : Government of Mali (Mopti)
Proposer address : Gouverneur de Mopti, 5ème region, Direction Régionale de la Jeunesse, des Sports des Arts et de la Culture, Mali
Ownership : Le Sanctuaire Naturel et Culturel de la Falaise de Bandiagara
Active status : Natural and Cultural Sanctuary
Area of site: 400,000 ha
Conservation value : The area exhibits three distinctive geomorphological features: Bandiagara plateau, Bandiagara escarpment and the plaine du Séno. The escarpment and plateau extend beyond the sanctuary to the Mossi Massif, which separates the Séno plain from the low-lying wetlands of the inner delta of the Niger. The site consists of an ancient eroded terrain of flat tablelands, mesa and sandstone buttes. Rocks are predominantly upper sandstone of the Cambrian and Ordovician periods, horizontally bedded and characterised by a great variety of facies. Exposed horizontal strata periodically result in rock polygonation. In some areas the plateau is crowned by a hard layer of laterite, ironstone shield or impervious conglomerates. Bandiagara plateau is sandstone, with rock slabs riddled with holes, faults and caves that link up with spring lines along the base of the cliffs. At low levels the ravines are blocked by immense detached blocks of rock. The escarpment extends over 150 km in a south-west to north-east direction from Douentza in the north to Ouo in the south, and varies in height from 100 m in the south to over 500 m in the north. The escarpment has been shaped into numerous irregularities, indentations, and promontories, and is pierced by thalweg ravines, gorges, and rocky passages connecting the plain and plateau. It is noted for the abrupt escarpment near Sangha-Bongo. Thalwegs feature a humid and shaded microclimate which supports dense vegetation. Water is also retained in rock fissures, resulting in seasonally boggy areas on horizontal or gently sloping rock strata. CLIMATE: No recent data are available, but mean annual precipitation was 580 mm at Bandiagara up to the early 1960's. Droughts last for up to eight months of the year. Rain falls irregularly mainly from June to September. Shade temperatures in May are reported to be some of the highest in the Sahel region (Pern, 1985).

http://geoheritage-iugs.mnhn.fr/geosites_iugs2.php?recherche=Bandiagara%20Natural%20Escarpment

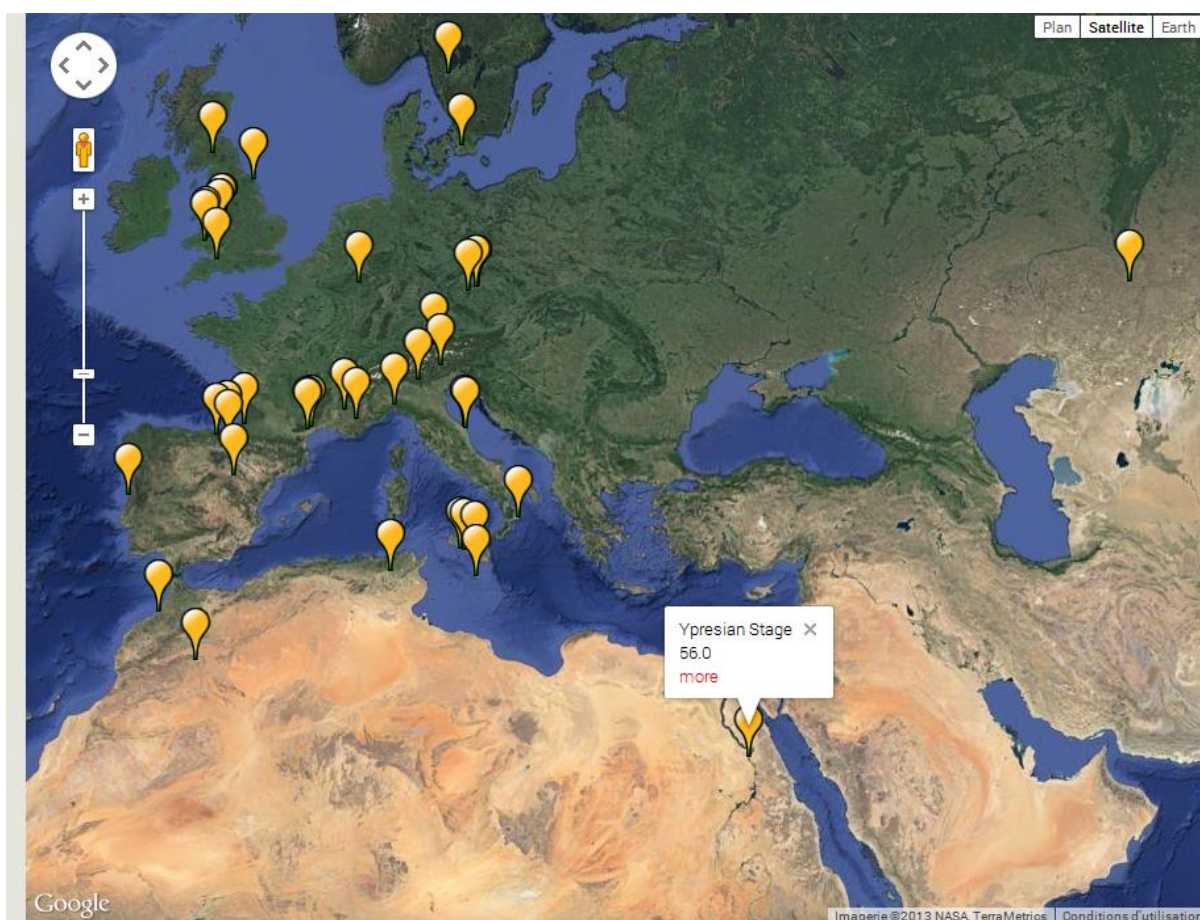
GSSP Geosites

As noted above, during the IUGS Annual meeting at UNESCO in February 2013 it was also suggested to focus on sites dealing with GSSP. The GTG followed this suggestion and worked mainly on that aspect during this year. All the financial support from IUGS was devoted to this target.

These sites are on now the following web page

<http://geoheritage-iugs.mnhn.fr/index.php?catid=8&blogid=1>) :






Stage : Ypresian Stage
Numerical Age (Ma) : 56.0
GSSP Location : Dababiya, near Luxor, Egypt
Latitude, Longitude : 25.5000°N 32.5311°E
Boundary Level : Base of Bed 1 in DBH subsection
Correlation Events : Carbon Isotope Excursion base, initiation of basal Eocene Thermal maximum (?PETM?)
Status : Ratified 2003
Reference : Micropaleontology 49/1, p.41 ? 59, 2003; Episodes 30/4, p. 271 - 286, 2007
link to ICS site : <http://www.stratigraphy.org/GSSP/Ypresian.html>

Besides these specific activities we manage the GTG Web site:

<http://geoheritage-iugs.mnhn.fr/>



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Background on the IUGS – Geoheritage Task Group (GTG)

The IUGS – Geoheritage Task Group (GTG) was formed by the International Union of Geological Sciences (IUGS) Executive Committee in November 2010 in order to assist IUGS with coordinating the many global programmes dealing with recognition, conservation, education and protection of geological heritage.


Through individuals and organizations who are global leaders in geoheritage, the IUGS – Geoheritage Task Group (GTG) will facilitate national and international awareness and understanding of underlying geoheritage concepts. The Task Group will assist in recognizing and promoting important geosites, Geoparks, World Heritage sites, and other globally significant sites recognised for their geologic values. The GTG will also work to initiate and promote geoheritage programmes in developing countries.

- [Board](#)

The GTG will work with other existing IUGS Task Groups, Commissions, Joint Programmes, and Affiliated Organizations which also promote global geoheritage, including:

- [UNESCO World Heritage Programme](#)
- [Global Geoparks Network](#)
- [European Geoparks Network](#)
- [ProGeo](#)
- [IUGS Commission on Geoscience Education](#)

15/01/2013



Patrimoine Géologique National

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3- Budget 2013

5000 US\$ were devoted to GTG by IUGS for 2013.
 This amount corresponded to 3767.66 Euros (received April 2013)

Expanses 2013	
Overhead	274
Salaries (for WEB site input)	3 493.66

	<u>3 767.66 Euros</u>

4- Plan of Action for 2014

4.1- Regulation data base:

To compile the regulations on trade of *ex situ* objects (fossils, minerals, meteorites) existing in different countries, which are usually difficult to obtain. The availability of this information on a website would be of a great help to geologists and other kinds of people who have to deal with this matter (Customs Agencies...).

Acting as an oily mark we will try to extend our contacts for regulation (more complete data for each country and more countries involved (specifically trying to get answers from English-speaking countries) and set up a more appropriate presentation of the database presenting (This will be continued).

4.2- Geosites database:

The large majority of these sites are isolated (a quarry, a single outcrop) and probably will never belong to any kind of geopark but they are valuable for education and for testimony of the history of the earth (continued).

4.3- Future meetings:

1) 6th International UNESCO Conference on Global Geoparks

Stonehammer Geopark is preparing contributions and a meeting at the Saint John, Canada region in September 19th-22nd 2014 as part of the 6th International UNESCO Conference on Global Geoparks.



2) European Geosciences Union General Assembly 2014 Vienna, Austria, 27 April – 02 May 2014.

Session: Educational and Outreach Symposia, and more specifically - EOS5: Innovation in Geoscience Education: E-Learning, Virtual Reality and Gamification

4.4- Managing the GTG Website

Continued

4.5- Estimated Budget 2014

Proposed Budget	
1- Meetings	1 100 €
3- Running costs, overhead, housing, management of database	1 000 €
4-Temporary Job internship	4 600 €
Total	6 700 €

The GeoHeritage Task Group is requesting an unprecedented one time support of **6 700 €** to cover extraordinary contributions. In the past 4 years the Task Group has not used any of the funds to support meetings. At this time we request a minor funding of this component. The support of a temporary job intern will provide critical contribution to ensure that we can complete a number of key efforts in data compilation. As a leader in the topic, IUGS will be hosting an up to date and current source of data and information on GeoHeritage issues.

Patrick De Wever Chair GTG