



GeoHeritage Task Group

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

**Annual Report 2014
Plan of action for 2015**

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 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 them. Their list and content should be available from any computer.

2- To compile the regulations on trade of *ex situ* 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 that matter (customs ...).

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

This GTG is almost five years old (November 2010)

Steering committee, February 2014

Chairman

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

Vice-Chairman

Dr. Peter BOBROWSKY (Canada) president of 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)

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, Chief of Section, Global Earth Observation (Ireland)

Prof. Jose BRILHA, President of ProGEO (Portugal)

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

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

2- Activities 2014

During the IUGS meeting at UNESCO, it has been suggested to focus on sites dealing with GSSP. We follow this wish and worked mainly on that aspect this year.

Besides some action on Geoheritage properly, we joined other organisation dealing with Geoheritage at local, national and international level. That is why we participate to several meetings. Since we devoted all the financial resources to the GSSP project, we limited our participation to close meetings.

European Geological Union general Assembly, Vienna, Austria april 27- may 2nd 2014

Symposium: Educational and Outreach, session: Innovation in Geoscience and Engineering Education.



NAVEP2 (North African VERtebrate Palaeontology, Ouarzazate, Morocco, 2014 September 1st-7 October 1st -6th)

P DW : invited speaker for the topic : geoheritage

AMST (Moroccan association for Earth sciences, Rabat, 2014 18th -20th December)

International working group around M. Maamara, Moroccan minister of energy and environment : strategy and methodology for the inventory of main morrocan geosites

AGSO (Association des Géologues du Sud-Ouest) 50th anniversary, Toulouse 2014 September 26-28th.

P DW : invited speaker for the topic : geoheritage

Data base for regulations on geoheritage

As it was proposed in the Terms of reference, we began to set up a database dealing with the regulations occurring in different countries. At the moment we succeeded to get regulations, besides those of UNESCO, for about thirty countries (among which sixteen were documented in 2014: Iceland, Norway, Belgium, Nederland, South Africa, Poland, Greece, Slovakia, Austria, Russia, China, Australia, South-Korea, Papoua New-Guinea, Malaysia).

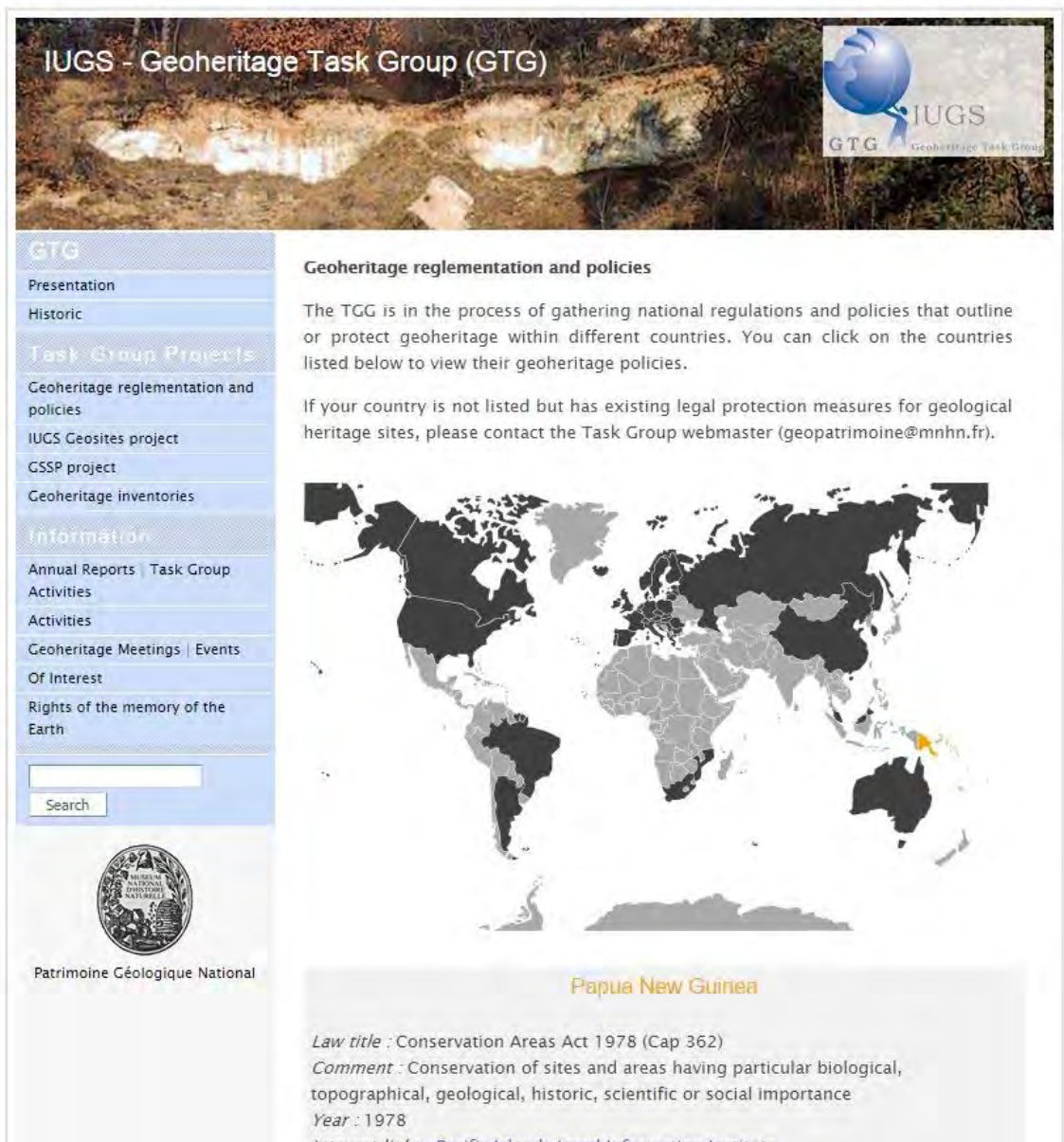
They are reported on the website:

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

A simple comparison reveals the strong implementation of data since last year

Countries with information on regulations are colored. A click on the country open a page with the laws and regulations

All the financial support was devoted to this target.



IUGS - Geoheritage Task Group (GTG)

GTG

Presentation

Historic

Task Group Projects

Geoheritage reglementation and policies

IUGS Geosites project

GSSP project

Geoheritage inventories

Information

Annual Reports | Task Group Activities


Activities

Geoheritage Meetings | Events

Of Interest

Rights of the memory of the Earth

Search



Patrimoine Géologique National

Geoheritage reglementation and policies

The TGG 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 webmaster (geopatrimoine@mnhn.fr).

Papua New Guinea

Law title : Conservation Areas Act 1978 (Cap 362)

Comment : Conservation of sites and areas having particular biological, topographical, geological, historic, scientific or social importance

Year : 1978

Internet links : [Pacific Islands Legal Information Institute](#)

General web page for regulation

These WEB pages are still not in their definitive format, but they are on the way ...

Geosite database

The GEOSITES programme was evoked by IUGS in 1994 and truly launched one or two years later (according to what is considered as the real beginning). This project involves the geological community in geoheritage : its aim 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 are not executive, but are designed to mesh with national and geocommunity 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 undergone in connexion with ProGEO, but for some reasons it ended in ca 1998-1999.

This is the reason why 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.

A list of 310 sites were more or less documented (120 with geographic coordinates).

We put our effort on the public accessibility of this information. The documented sites (with geographic coordinates) were reported on a Google map, see figures).

This year we added a page dealing with the inventories in the world with a link:
<http://geoheritage-iugs.mnhn.fr/index.php?catid=19&blogid=1>

IUGS - Geoheritage Task Group (GTG)

IUGS Geoheritage Task Group

GTG IUGS Geoheritage Task Group

GTG

Presentation

Task Group Projects

Geoheritage reglementation and policies

IUGS Geosites project

Information

Annual Reports | Task Group Activities

Activities

Geoheritage Meetings | Events Of Interest

Rights of the memory of the Earth

Search

Patrimoine Géologique National

IUGS Geosites project

Click on the picture below:

Plan Satellite Earth

Afficher les noms

1200 miles 2000 km

Imagerie ©2012 NASA, TerraMetrics - Conditions d'utilisation

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

Plan Satellite Earth

Afficher les noms

Mali

Bandiagara Natural Escarpment

1000 miles 1000 km

Imagerie ©2012 NASA, TerraMetrics - Conditions d'utilisation

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 Ouou 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

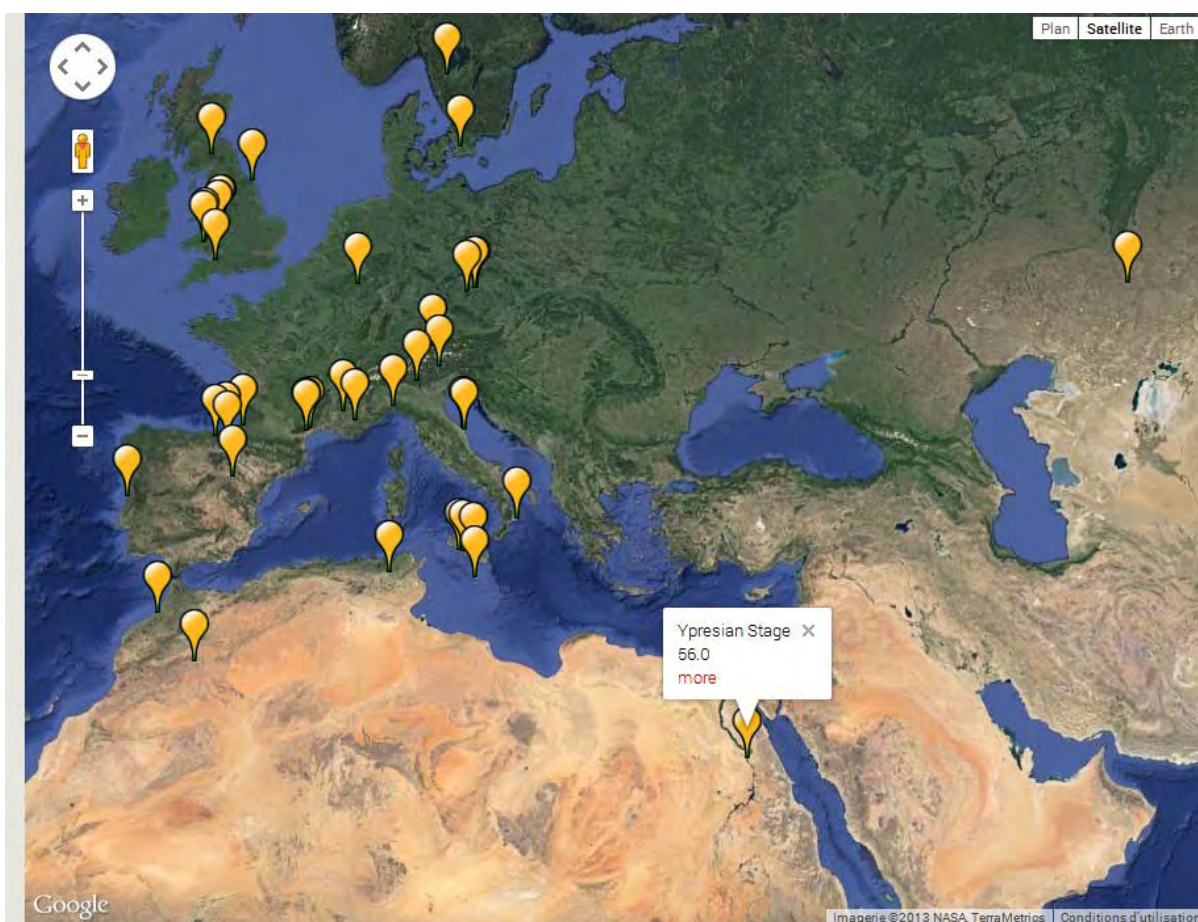
GSSP Geosites

During the IUGS meeting at UNESCO in February 2013 it has been suggested to focus on sites dealing with GSSP. We follow this wish and worked on that aspect.

These sites are on the 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) : <http://www.stratigraphy.org/GSSP/Ypresian.html>

Beside these specific activities we manage the GTG Web site:
<http://geoheritage-iugs.mnhn.fr/>

3- Budget 2014

5000 US\$ were devoted to GTG by IUGS for 2014.
 This amount correspond to 3576.65 euros (received April 2014)

Expanses 2014	
Overhead	315
Salaries (for WEB site)	3 261,65

	3 576.65 euros

4- Plan action for 2015

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 geologist and other kind of people who have to deal with that matter (customs ...).

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:

We plan to continue to develop the pages with databases on geoheritage, particularly the page with links to national inventories projects.

4.3- Future meetings:

1- The VIII International Symposium of ProGEO in Reykjavík, Iceland – September 8-12 2015 “GEOCONSERVATION STRATEGIES IN A CHANGING WORLD”

The symposium will discuss strategies to meet geoconservation through issues that benefit and strengthen geological conservation from different angles.

The main themes of the Symposium will be linked to four key questions:

- How to secure integrity of geosites under threat?
- What is sustainable use of a geosite?
Is mining and quarrying compatible with geo-conservation?
- How to incorporate geological heritage in Environmental Impact Assessments?

2- Geo Inv 2015 Toulouse, september 22nd - 26th 2015. co-organized by IUGS/GTG and in connexion with the IUGS/HSTG (heritageStones lead by Dr Dolores Pereira)

Geological Heritage Inventories: Achievements, Challenges and Perspectives, an international approach under the patronage of :



The concept of geological heritage initially arose in 1991, following an international conference on the protection of geological heritage in Digne-les-Bains. Since then several European countries are engaged in this process to raise interest and protect geological heritage.

The aim of this conference is to review the various regional, national and international actions that have been undertaken so as to understand how European public policies approach geological heritage.

Presentations may deal with national or regional scale syntheses or local examples showing various types of actions undertaken and methodological presentations illustrating the wide range of possible approaches at an international level.

This will focus our effort for this year

4.4- Managing the GTG Website

Continued

4.5- Estimated Budget 2015:

Budget	
1- Meetings specifically this year (Toulouse)	5 300 €
3- Running costs, overhead, housing, management of database	500 €
4-Temporary Job internship	3 000 €
Total	8 800 €

Patrick De Wever