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Geomorphological Sites

Research, protection and education

A Working Group of the International Association of Geomorphologists

Final Report 2005 – 2009

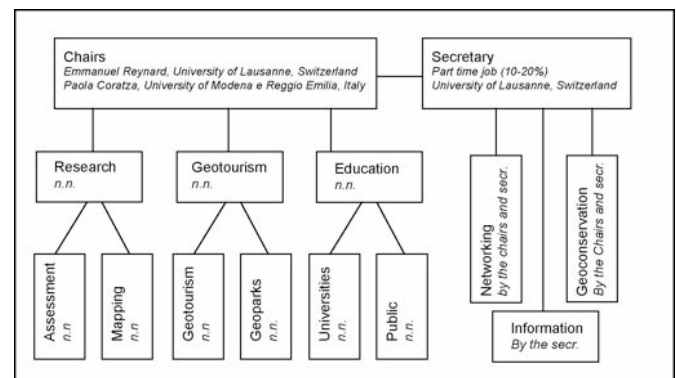
Introduction

The working group *Geomorphological Sites: research, assessment and improvement* was created in September 2001 at the 5th International Conference of Geomorphology held in Tokyo. Given that geosites, geotourism and geoconservation are very attractive research topics within the geoscientific community, the IAG Executive Committee and General Assembly accepted our request to continue the WG activities during a new four years period (2005-2009).

For the period 2005-2009 some changes in the organisation and the name of the working group were decided. The WG is now called *Geomorphosites: research, protection and education*. It is chaired by Emmanuel Reynard, University of Lausanne, Switzerland and Paola Coratza, University of Modena and Reggio Emilia, Italy. The Secretary is at the University of Lausanne (Géraldine Regolini). The distinction between full and corresponding members has been abolished and a committee has been created. Members of the committee are:

- Emmanuel Reynard, University of Lausanne, Switzerland, Chair
- Paola Coratza, University of Modena and Reggio Emilia, Italy, Chair
- Mario Panizza, University of Modena and Reggio Emilia, Italy
- Viola Maria Bruschi, University of Cantabria, Spain
- Diamantino Pereira, University of Minho, Portugal

- Nikolaus Zouros, University of the Aegean, Greece
- Valeria Panizza, University of Sassari, Italy



Organization of the committee of the working group on "Geomorphosites".

The activities developed in these four years allowed us to strengthen the network through continuous information exchange and collaboration in organising workshops and symposia at national and international level.

This report presents the activities of the working group during the period 2005-2009 and proposes a renewal for a new four-year activity.

Objectives

Five main objectives were proposed for the 4-year period:

- **Assessment and mapping.** The focus was put on *empirical studies* in various geomorphological contexts and on the development of assessment and mapping methods. The aim was to raise *funds* for research and to publish more papers in international journals.
- **Networking.** It was planned to develop relationships with other scientific groups dealing with geosites, geotourism and geoconservation. The *institutional networking* was considered as a high priority. IUGS, IUG, UNESCO and ProGeo were especially concerned. Networking with other IAG WGs was also a priority.
- **Geoconservation.** In most countries, protection of geosites and geomorphosites is poorly developed. On the other way, impacts and pressure of human activities on geomorphology is growing, both in developing and industrialised countries. More knowledge of geoconservation was therefore considered as important, both at the institutional and scientific level.
- **Geotourism.** The tourist sector is one of the economic sectors that could use the results of our researches. It was planned to develop several activities (e.g. scientific conferences, educative programs) in order to better anchor geomorphosite research in the development of eco- and geotourism. A particular attention was dedicated to the development of research activities within *geoparks*.
- **Education.** Education on geomorphosites, both at university and public levels, was the fifth priority of our program. In this sense, it was proposed for example the organization of a *Summer school on geomorphosites* under the auspices of IAG.

Activities by objectives

This section presents the main activities carried out with respect to the objectives:

- **Assessment and mapping.** Several PhD theses are in course, a specific workshop on mapping issues was organized (2008), and a special issue of a journal (*Geographica Helvetica* 2007) was published. We tried to raise *funds* for research by the EU without success.
- **Networking.** Networking with IUGS, IUG, UNESCO and ProGeo was improved and was applied with success in the Int. Geological Congress in Oslo (2008) with a common series of sessions. A close co-operation was also developed with the Italian Association on Geology and Tourism. Co-operation with the WG on Geoarchaeology succeeded with a common session in the Regional Conference

of Brasov (2008) and co-operation of the Geoarchaeology working group to our book for students (see below). Also the Geomorphological Hazards WG co-operated.

- **Geoconservation.** The activity in this field was quite low.
- **Geotourism.** The activity developed rapidly and succeeded with the organization of the session "Geomorphosites and Geotourism" at the IAG Conference in Melbourne (2009).
- **Education.** Educational University program was highly improved with the organization of three *Intensive course on geomorphosites* for PhD and Master students. A book for students is published in 2009.

Domains of activity

The WG's activities were organised in five main domains:

- Maintenance and growth of a network of interested people and diffusion of information through the Internet (e-mails to members, IAG website);
- Organisation of workshops and topical sessions in various international and national conferences;
- Participation to university courses on geomorphosites;
- Publications (books, papers) on geomorphosite issues;
- International contacts and associations.

Network

Meeting of the WG co-ordinators and committee meeting

Co-ordinators P. Coratza (Modena), E. Reynard (Lausanne) and secretary G. Regolini (Lausanne) met in spring 2006. It was decided to add more information about geomorphosites and the working group's activities on the website.

The same year (September 4th), members of the committee held a meeting in Sion (Switzerland). Besides current issues, the objectives for the coming years of the sub working-groups were discussed.

A third meeting of chairmen was held in Lausanne in April 2009. It allowed the preparation of the proposal for the four-year program 2009-2013.

Members

During the last years the WG could win several new members (total 162). Members come from 31 countries in Europe, North Africa, Asia, Australia and South America. Each year, several

newsletters were sent to inform the members about upcoming conferences and publications.

Workshops and Conferences

International Workshops and Conferences

At the international level, six workshops or symposia in geomorphological conferences were organised by the WG:

- 6th International Conference on Geomorphology, 7-11 September 2005, Zaragoza, Spain; Symposium *Geomorphological sites: research, assessment and mapping*; chair: Emmanuel Reynard (CH) and Paola Coratza (I).
- Workshop “*Geomorphosites, Geoparks and Geotourism*”, Lesvos (Greece), 30.9-3.10.2007. The workshop was organised by committee member N. Zouros (GR) and his staff and allowed the participants to exchange their results and experiences on geomorphosite, geopark and geotourism issues.
- Workshop “*Mapping Geoheritage*”, Lausanne (Switzerland), 17-20.6.2008. This workshop organised at the University of Lausanne (E. Reynard and G. Regolini, CH) joined together 20 scientists from six European countries interested in mapping geoheritage.



Participants of the workshop “*Mapping Geoheritage*” during a mapping exercise in the field.

- 33rd International Geological Congress, Oslo (Norway), 6-14.8.2008. The working group co-organised with ProGeo the session IES-03: *Geosites and landscape – conservation and management strategies* (Chair: J. Brilha, E. Reynard).
- IAG Regional Conference on Geomorphology in Brasov (Romania) 17-19.9.2008. The working group organised a common session with the Geoarchaeology IAG working group (chair: E. Fouache, E. Reynard) on “*Geomorphology and human heritage*”.

- IAG International Conference on Geomorphology in Melbourne (Australia) 6-11 July 2009. The working group will organise a session on “*Geomorphosites and Geotourism*”.

Support to conferences organised by WG members

The WG has been involved in various conferences organised by some members of the WG:

- *Italo-Maltese Workshop on “Integration of the geomorphological environment and cultural heritage for tourism promotion and hazard prevention”*, Malta, 25-27 April 2007. P. Coratza (I) co-organized this workshop. As president of the WG, E. Reynard (CH) gave a lecture on “*Tourist promotion of geomorphological heritage: the importance of scientific research*” and chaired a session.
- *Valorisation et vulgarisation du patrimoine géomorphologique – Objectifs et pratiques*, Nantes (France), 18th October 2008. The French Geographers Association organised this meeting, in which several French working group members gave talks.



One of the geomorphosites visited during the field trip on the Gozo island (Italo-Maltese Conference).

- *Geomorphosites 2009: raising the profile of geomorphological heritage through iconography, inventory and promotion*, Paris (France), 10-12 June 2009. The French Group of Geomorphologists organised this meeting, in which several working group members gave talks.

Participation to scientific conferences

Members of the WG’s committee participated to several national and international conferences:

- 4th Symposium ProGeo on Conservation of the Geological Heritage, Braga, Portugal, 13-16 September 2005. The symposium was organised by WG’s member José Brilha (P). P. Coratza (I) and E. Reynard (CH) presented a paper on *Assessing, mapping and protecting geomorphosites. A Working Group of the International Association of Geomorphologists (IAG)*.

- *ForumAlpinum 07 "Landscape Development in Mountain Regions"*, Engelberg (Switzerland), 18-21.4.2007. M. Panizza (I) gave a talk in the session "Values and valuation" and E. Reynard (CH) co-organised the workshop "Toponyms and Geoheritage in the Alps".
- *Workshop "New Practices in Geodiversity for the Sustainable Development of the Regions"*, Sibiu (Romania), 8.-10.2007. This workshop was organised by Hanneke van den Ancker – NL, member of the working group, and aimed at discussing geodiversity issues in Europe. D. Pereira, committee member, represented the WG and its activities.

University Courses

The WG participated to the organisation of several university courses:

- *1st Intensive Course "Geomorphosites and landscape"*, Bagnes (Switzerland), 4-8 September 2006). 13 Participants from 7 countries followed this first edition of intensive course. Several Members of the committee were involved in the educational program: E. Reynard (CH), P. Coratza (I), Valeria Panizza (I).



Participants and Staff from the intensive course "Geomorphosites and Landscape" during the field-trip in Val de Bagnes (Switzerland).

- *2nd Intensive Course "Geoparks management and geotourism"*, Lesvos (Greece), 25-29.9.2007. This second edition was organised by the committee member N. Zourous and placed under the auspices of UNESCO and the European Geoparks Network. 25 participants (PhD and master students) coming from 10 countries attended this course.
- *3rd Intensive Course "Geoconservation and Geoparks: Interpretation and Communication"*, Lesvos (Greece), 23-28.9.2008. 33 PhD and Master students as well as Geopark staff members from 10 countries took part to this course. It was again organised by N. Zourous

(GR) and under the auspices of UNESCO and the European Geoparks Network.

- *Post-graduation Course Geoconservation*, University of Minho, Braga, Portugal (resp. J. Brilha). This program of education was held annually from 2006 to 2008. E. Reynard (CH) was repeatedly invited to give 10 hours of seminar.



Participants of the Intensive Course "Geoconservation and Geoparks: Interpretation and Communication" in front of a gigantic petrified trunk in the Lesvos Petrified Forest, (Greece).

A new Intensive course "Geodiversity and Geological Heritage Assessment" is organised in 2009. It will take place in Portugal (University of Minho, Braga), from 9-13 September 2009.

Publications

Three special issues about geomorphosites were published between 2005 and 2007:

- *Il Quaternario*, Italian Journal of Quaternary Sciences, 18 (1), 2005 – Volume Speciale (Geomorphological Sites and Geodiversity). A cura di Sandra Piacente & Paola Coratza. This volume constitutes the Proceedings of the workshops co-organized by the Working Group and the MIUR-COFIN project in Modena (2002) and Cagliari (2003).
- *Géomorphologie* – relief, processus, environnement, Juillet-Septembre 2005 – n° 3. This volume focuses on the different issues in current geomorphosites research, i.e. assessment, mapping, protection and promotion.
- *Geographica Helvetica*, Swiss Journal of Geography, Jg. 62, 2007/Heft 3, – Special issue "Geomorphosites and geodiversity". Several working group member published in this special issue.

The working group has published in May 2009 a book on geomorphosites. It is written by a panel of selected authors and is published by Pfeil Verlag (Munich, Germany). It will be presented at

the International Conference on Geomorphology in Melbourne (2009).

References on geomorphosites

A list of references on geomorphosites has been prepared. It collects the existing literature concerning the protection, assessment and promotion of geomorphosites. The bibliography is available in pdf format on the IAG website www.geomorph.org or on CD-rom. The CD-rom containing the list of references in three different formats (Endnote, Word, pdf) is available for 5 € at the WG secretariat.

Publications for 2009

Two publications are planned for 2009:

- The proceedings of two sessions held in international conferences (IGC in Florence (2004) and IAG in Zaragoza (2005), as a thematic volume "Geomorphology and Cultural Heritage", published by P. Coratza, O. Nesci, L. Pallí, M. Panizza & E. Reynard in the *Memorie Descrittive della Carta Geologica d'Italia*.
- *The proceedings of the workshop "Mapping Geoheritage"*, held in Lausanne in 2008 that will be published by the Institute of Geography of Lausanne University.

International contacts and associations

The WG has scientific contacts with the UNESCO (Geoparks initiative, N. Zouros, E. Reynard), the European Geoparks Network (N. Zouros), the Italian Association Geologia e Turismo (M. Panizza, P. Coratza), ProGeo (J. Brilha).

Conclusions on the period 2005-2009

After a first four-year period, the period 2005-2009 was again very active and allowed the consolidation of a new community of work on the geoheritage and geotourism issues. The work was extended to new countries – e.g. France – and several key-publications could be published, especially a book on Geomorphosites that propose a synthesis of knowledge on the topic.

We ask therefore for a new four-year activity of the WG (see attached letter).

Lausanne/Modena, 9th June 2009

Emmanuel REYNARD, Paola CORATZA, Géraldine REGOLINI



Participants of the workshop "Mapping Geoheritage" admiring Lake Derborence (Valais, Switzerland) at the end of a day of mapping (Picture: B. Erhartic).