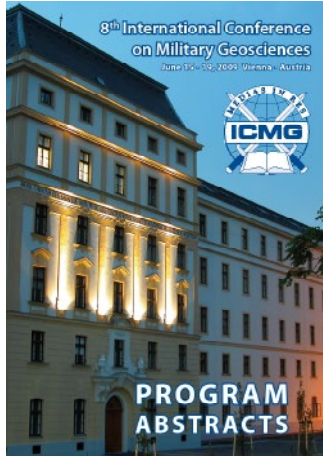


Editorial



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On the occasion of the “7^e Rencontre internationale sur la géologie et la géographie militaire” (7th International Conference on Military Geology and Geography), held in Quebec, June 18 - 21, 2007, the editors were requested to take over the organisation of the next conference in Vienna, 2009. It is a pleasure for us to thank the members of the advisory board, who supported our conference preparations, namely (in alphabetical order):

- Philippe **Boulanger**, University professor, Institute of Geography, Paris IV-Sorbonne, France
- Russell **Harmon**, Senior Program Manager for Terrestrial Sciences, Environmental Sciences Division, U.S. Army Research Office, North Carolina, USA
- Jean **Martin**, Directory of History and Heritage, National Defence Headquarters, Ottawa, Ontario, Canada
- Eugene **Palka**, Colonel, Deputy Head, Department of Geography and Environmental Engineering, Unites States Military Academy (USMA), West Point, New York, USA
- Edward P. F. **Rose**, Dr., Honorary Research Fellow, Department of Geology, Royal Holloway, University of London, UK
- Walter **Schmidt-Bleker**, Brigadier General, Head Geoinformationsdienst der Bundeswehr, German armed forces, Euskirchen, Germany

The Vienna Conference 2009 was jointly organized by the Institute for Military Geography (IMG) of the Austrian Armed Forces, and the Department of Environmental Geosciences of the University of Vienna. Central point of contact was our Conference Secretary General, Mag. Helene **Kautz**, IMG. The conference, titled “8th International

Conference on Military Geosciences”, was held June 15 - 19, 2009 at the National Defence Academy in the Vienna Stift Barracks.

As Austria is a landlocked country and as two thirds of Austria belong to mountainous areas, the overarching topic chosen for this conference was “War in Alpine Regions”. Military activities in history, but even up to the late days of the Cold War, were also influenced by all kinds of alpine terrain features. This can be shown by numerous examples of the last two World Wars. Therefore, we emphasized oral and poster presentations and excursions dealing with special environmental conditions in alpine regions, their impacts on military actions as well as lessons learned.

Beside this overarching topic, another aspect was dealt with in this conference. In **1989**, exactly 20 years before the Vienna ICMG 2009, a world historic event took place – the fall of the “Iron Curtain”. It all began – not far away from Vienna – in late June 1989, when the Iron Curtain was first opened between Austria and Hungary on occasion of the famous “Pan-European Picnic”. Since then, the world has changed its face – former enemies turned out to become partners. Formerly strictly forbidden contacts between military specialists have become everyday jobs. This was also true for the representatives of the Military Geographic Services of the former two German countries, the Federal Republic of Germany, and the German Democratic Republic. For this reason, we invited Col (retired) Dr. Ulrich **Barner** (Deutsche Bundeswehr, Military Geographic Service, Federal Republic of Germany) and Col. (retired) Dr. Werner **Gilleßen** (National People’s Army, Military Topographic Service, former German Democratic Republic) as keynote speakers to give first hand information and impressions of the time before and after 1989 – information never presented so far by such absolutely competent persons. For this reason we also accepted extended contributions of their oral presentations.

From 1989 to 1993 Col. Dr. Ulrich **Barner** was Chief Geographic Officer, Operations Branch, Operational- Logistics Division, Supreme Allied Headquarters Europe (SHAPE) in Mons, Belgium. From 1995 to 1997 he was head of the Bundeswehr Military Geographic Office in Euskirchen, Germany.

From 1988 to 1990 Col. Dr. Werner **Gilleßen** was head of the Military Topographic Service in the Ministry of National Defence in the city of Strausberg (near Berlin). After his transfer to the Deutsche Bundeswehr in 1990, he supported the creation of new military geographic structures (comprising personal, material and organisation) in the new federal states of reunited Germany including special relations to the new surveying offices in the new federal counties.

Generally, the 2009 Vienna Conference aimed at:

- **Enhancing MilGeo-research and MilGeo-development**
 - Promoting communication between various applied geosciences such as applied geology, applied geography, and other applied geosciences for military decision making
 - Enhancing applied geoscientific civil-military research projects at universities, academies, and other research institutions
 - Promoting Military Geoscientific activities and research in European countries
- **Supporting MilGeo-education and MilGeo-training**
 - Defining core competences and curricula for military geo-experts

- Disseminating information on methods and experiences in Military Geosciences
- **Promoting military use of MilGeo-products**
 - Increasing the awareness for applied geoscientific problems for military decision-makers
 - International networking
 - Strengthening regular Military Geoscientific meetings at national level
 - Discussing the introduction of an International Journal of Military Geosciences
 - Setting-up an Internet Platform for Applied Military Geosciences
 - Exchanging knowledge between Milgeo-organisations of armed forces

As stated by many contributors, ICMG 2009 was a great success. The conference welcomed 55 official participants, coming from (in alphabetical order) Canada, Croatia, France, Germany, Great Britain, Greece, Nigeria, South Africa, United States of America, and last but not least – Austria.



Photo shooting of the participants of the 8th International Conference on Military Geosciences, June 2009 (© Heeres Bild- und Filmstelle, HBF; Austrian Armed Forces photo and video production-service).

Most of the participants contributed to the topics:

- Military geoscientific aspects and case studies of world wide Alpine and High Alpine war fare (terrain evaluation, implications on military activities, advantages, disadvantages, regional aspects, operations)
- Teaching, practice and experimentation of military geosciences (research, development, textbooks, techniques; terrain analysis/terrain evaluation; theory of military geosciences)
- Future challenges of worldwide operations
- Organisation of national military geoservices (offices, troops-support...)
- Open session (terrain evaluation relevant to military operations)

The basic slogan for the ICMG 2009 and thus for all presentations and papers was “Medias in Res” – highlighting that Military Geography always is amidst all military operations taking place in geospace.

In the following we give some short comments on the forty-five papers which then are presented in alphabetical order.

Hermann **Häusler** and Reinhard **Mang** (Austria) pose the question: “Why International Conference on Military Geosciences?” To contribute this discussion, Hermann **Häusler** (Austria) presents arguments: “Towards a Pragmatic Definition of Military Geosciences”, and he also reviews previous conference events in his “Report on Na-

tional and International Conferences on Military Geology and on Military Geography, respectively, held from 1994 - 2007". Reinhard **Mang** (Austria) presents a new insight to the "Theory of Military Geography".

Five papers of the proceedings refer to military actions in the **Alpine terrain**. In his contribution on "War in Alpine Regions" Reinhard **Mang** (Austria) does not describe alpine regions in terms of absolute altitudes but defines them by a fundamental change of special requirements for military training and equipment. Elizabeth **Byers** and Peter **Guth** (United States of America) contribute exactly to this discrepancy with the lecture on "The Battle of Attu Island: Mountain Warfare at Sea Level". Philippe **Boulanger** (France) reports on: "Military Geography of Mountainous Zones in the French Doctrine". Russell S. **Harmon**, W. Chris **King**, Eugene J. **Palka** and William W. **Doe III** (United States of America) give a "Characterization of Extreme Environments for U.S. Army Materiel and Human Performance Testing", and William W. **Doe III** (United States of America) focuses on: "Cold Regions and Mountain Testing and Training Areas in the United States".

Three papers reflect the present **discussion on climate change**, sometimes also referred to as climate variation, and its potential influence on military actions. Manfred F. **Buchroithner** (Germany) answers the question: "Glacier Changing in High-Alpine Regions – Worldwide Objective Glacier Measurements Versus Conjectures". Eugene J. **Palka** (United States of America) stresses the military relevance of: "Climate Change and Potential Effects on Future U.S. Military Operations", and Francis A. **Galgano** (United States of America) refers to security aspects in his contribution on: "An Environmental Security Analysis of Abrupt Climate Change Scenarios".

Global change is currently monitored by Remote Sensing and GIS technologies. Six contributions deal with dissemination of cartographic models, beginning with historical aspects. Franz Peter **Dammerer** (Austria) presents a contribution on "Early Cartography in Alpine Regions and the Wall-Map of the Alps created by the Austrian Cartographer Vinzenz von Haardt in 1882". Michael **Franzen** (Austria) continues with his paper "From Military Mapping to Civil-Military Cooperation in the Field of Geoinformation in Austria". Peter **Guth** and Justin **Jacks** (United States of America) highlight: "Using Keyhole Markup Language (KLM) to Disseminate Military Geography", and Carola **Braun** (Germany) follows with an expertise: "Satellite Image Maps: How to Ensure Quality?" Klaus **Börger** (Germany) presents a very challenging paper on: "Modern Military Geodesy", and he shows that relativity affects satellite geodesy and thus GPS is working properly only when the theory of relativity is considered.

Eight more articles deal with recent or ongoing MilGeo-activities on a regional or international level. Beatrice **Puyo** (France) and Peter **Dammerer** (Austria) report on: "Mapping in the Golan Peacemaking Missions: The Case of UNDOF". Friedrich **Teichmann** (Austria) presents: "Military Geo-Products: A New Focus for Application in International Peace Support Mission". Mickaël **Aubout** (France) reports on: "The Geographical Interactions Between an Airbase and its Environment" in Central Asia. Gerald **Duma**, Edmund **Moshhammer** and Johannes **Reisinger** (Austria) analyse: "Trends of Strong Earthquake Activity and Military Disaster Relief", and Marc André **Rapp** and Helene **Kautz** (Austria) give a "Report on Disaster Control Operations in Styria, Austria". Josef Michael **Schramm** (Austria) presents "The Military Geological

Outline Map of Austria 1 : 2 000 000". Henni A. P. **Smit** (South Africa) summarizes: "The Development of an Environmental Approach in the South African Department of Defence", and Marko **Zečević** (Croatia) calculates: "The Geological and Geotechnical Aspects of Deeply Buried Military Targets in the Perspective of Network Centric Warfare Doctrine".

The majority of contributions deals with historical aspects of terrain evaluation, basically representing a time span of 2000 years. Three papers go back beyond the 19th century. Kurt A. **Schroeder** (USA) focuses on the "Mountainous Terrain and Prussian Invasions of Bohemia in 1757 and 1866". William C. **Mahaney** (Canada), Pierre **Tricart** (France) and Peter **Doyle** (United Kingdom) present a joint paper on "Terrain Evaluation of the Hannibalic Alpine Invasion Route", and Judy **Ehlen** (United States of America) writes on: "Topography and Fortification: 400 Years on The Garrison, St. Mary's, Isles of Scilly, Southwest of England".

Three articles deal with the geographic and geologic environment of European First World War battlefields. Dierk **Willig** (Germany) reports on: "Mining Warfare in the Wyttschaete Ridge 1914 - 1917 – Advantages and Disadvantages of High Ground Emplacements". Josef-Michael **Schramm** (Austria) summarizes: "Geology and High Alpine Warfare During World War I", and Michael B. **Barrett** (United States of America) and Iulia **Bădoi** (Romania) present a joint paper on: "Geography and the Campaign in the Transylvanian Alps, 1916".

Five more papers refer to Second World War military geology and military geography respectively. Edward P. F. **Rose** (United Kingdom) gives "Credit Due to the Few: British Field Force Geologists of World War II", Hermann **Häusler** (Austria) introduces "The «Forschungsstaffel z.b.V.», a Special Geoscientific Unit of the German Counter Military Intelligence Service During the Second World War", and Peter **Doyle** (United Kingdom) summarizes: "Geology of World War II Allied Prisoner of War Escape-Tunnels". Finally Thomas F. **Bullard** (USA) presents a joint paper with six other U.S. American colleagues on "Geology, Geomorphology and the Vertical Dimension of the World War II Battlefield", and Hugh **Hamilton** (United Kingdom) introduces "Michael Spender: a British Pioneer of Military Aerial Photographic Mapping in World War II".

Two contributions on the Cold War era refer to the Military Geographic Services in the two "Germanies" separated by the Iron Curtain. As already stated above, Werner **Gilleßen** (Germany) briefs on the: "Military Geography in the Cold War: The Military Topographic Service of the National People's Army of the former German Democratic Republic". His counterpart at that time was Ulrich **Barner** (Germany) presenting: "The German Military Geographic Service during the period of the «Cold War»".

One paper deals with the era after the Cold War. Jean **Martin** (Canada) presents his considerations on the "Nature-Military Alliance: Nature Protection and Military Control of Land in the Post-Cold War Era" with examples from Canada, the United States of America and Europe.

Two half day excursions to the Vienna Globe Museum and to the Museum of Military History, as well as the post-conference excursion to Salzburg were organized and guided by Helene **Kautz** (Austria).

Two full day excursions were offered to First and Second World War battle fields in Austria, namely to the Carinthian town Kötschach-Mauthen and to the Semmer-

ing region in Lower Austria. Two authors respectively introduce the military aspects and the geoscientific aspects of these excursions to Kötschach-Mauthen and to the Semmering. Reinhard **Mang** (Austria) presents details on: “World War I at the actual Austro-Italian Border” whereas Josef Michael **Schramm** (Austria) reports on: “A Flight Excursion Crossing the Eastern Alps and Along the Former Austro-Italian Front Line”. Accordingly for the Semmering excursion, Gerald **Gnaser** (Austria) briefs the: “End of World War II in the Semmering Region”, and Hermann **Häusler** (Austria) presents the: “Geological Outline of the ICMG 2009 Semmering Excursion”.

In the final session of the Vienna 2009 Conference, the UK military geologist Ted **Rose** was honoured – the only person who actively has contributed all eight national and international conferences on military geology, military geology and geography, and military geosciences respectively. Dedicated to him, Hermann **Häusler** (Austria) wrote another contribution entitled: “Congratulations to the 70th anniversary of the British Senior Military Geologist Dr. Edward P. F. Rose”.

To close this editorial: The benefit of the 2009 Vienna Conference on Military Geosciences exceeded by far the expectations and outcome of oral lectures and poster presentations, and of the contributions printed in these proceedings. We are looking forward attending the 2011 Conference on Military Geosciences in Las Vegas, Nevada (USA).