

## Proposals for continuation of existing Working Groups

Following WG's applied for continuation in 2009 – 2013 (provisional list):

- **WG SEDIBUD**, convenor: Dr. Achim Beylich, University of Trondheim, Norway

### **Proposal for a Prolongation of the I.A.G./A.I.G. SEDIBUD – Sediment Budgets in Cold Environments Working Group (2009-2013)**

*I.A.G./A.I.G. Working Group SEDIBUD –  
Sediment Budgets in Cold Environments*  
<http://www.geomorph.org/wg/wgsb.html>

#### **SEDIBUD Steering Committee**

Achim A. Beylich (Chair) (Norway)  
Armelle Decaulne (Secretary) (France)  
John C. Dixon (USA)  
Scott F. Lamoureux (Vice-Chair) (Canada)  
John F. Orwin (New Zealand)  
Irina Overeem (USA)  
Þorsteinn Sæmundsson (Iceland)  
Jeff Warburton (UK)  
Zbigniew Zwolinski (Poland)

#### **Focus of the SEDIBUD Working Group:**

Projected climate change in cold regions is expected to alter melt season duration and intensity, along with total precipitation and the balance between snowfall and rainfall. Similarly, changes to the thermal balance are expected to reduce the extent of permafrost and increase active layer depth. These effects will change surface water environments in cold environments and alter the flux of sediment, solutes and nutrients, but the absence of quantitative data and analysis to understand the sensitivity of surface water environments are acute in cold regions.

The I.A.G./A.I.G. SEDIBUD programme (founded in 2005) is addressing this key knowledge gap. The central research question of this global programme is to **Assess the contemporary sediment fluxes in cold environments, with emphasis on both particulate and dissolved components**. Initially formed as ESF project SEDIFLUX, SEDIBUD has developed further to a global group of researchers with defined field research sites located in polar and alpine regions in the northern and southern hemisphere.

SEDIBUD has successfully developed a key set of primary research data requirements intended incorporate results from these varied projects and allow quantitative analysis across the network. Defined SEDIBUD Key Test Sites (catchments) report annual climate conditions as well as total annual runoff, annual yield of suspended sediments and annual solute yields corrected by atmospheric inputs. To support these efforts, the SEDIFLUX Manual and key Protocol have been produced to establish common methods and data standards.

SEDIBUD currently has identified 38 Key Test Sites (see list of Sites at <http://www.geomorph.org/wg/wgsb.html>) with the goal to extend this network to about 40-45 sites that cover the widest range of cold environments possible. Collected annual data from currently 26 of these Sites (see list of Sites and Table 1 below) are integrated in the SEDIBUD Metadata Database.

**SEDIBUD Key Test Sites providing Annual Data (see Table 1 below) for the SEDIBUD Metadata Database (by February 27, 2009):**

Laguna Potrok Aike (Argentina)  
Pasterze (Austria)  
Cape Bounty (Canada)  
Kidisjoki (Finland)  
Tana catchment (Finland/Norway)  
Reintal (Germany)  
Kangerlussuaq (Greenland)  
Mittivakkat glacier catchment (Greenland)  
Zackenbergl (Greenland)  
Austdalur (Iceland)  
Hrafnadalur (Iceland)  
Bleiksmýrardalur (Iceland)  
Botn in Dyrafjörður (Iceland)  
Fnjöskadalur (Iceland)  
Orravatnsrustnir (Iceland)  
Tindastöll (Iceland)  
East Dabka Watershed (Kumaon Himalaya) (India)  
Godley Valley (New Zealand)  
Erdalen (Norway)  
Bødalen (Norway)  
Vinstradalen (Norway)

Scottelva (Svalbard) (Norway)  
 Mezen (Russia)  
 Petuniabukta (Svalbard) (Norway)  
 Latnjavagge (Sweden)  
 Moore House (UK)

**Table 1. Key annual data collected from SEDIBUD key test sites.**

<u>Name of SEDIBUD Key Test Site:</u>	<u>Period of investigations (years):</u> (Hydrological Year (HY) or Calendar Year (CY); Published Data (PD) or Unpublished Data (UPD))
Mean annual temperature (°C):	
Total annual precipitation [mm]:	
Total annual runoff [mm]:	
Annual suspended sediment yield [t km <sup>-2</sup> ]:	
Annual solute yield (atmospherically corrected) [t km <sup>-2</sup> ]:	

**Main plans for the coming years (see more detailed information under "Minutes" and "Report", Third SEDIBUD Workshop, Boulder, September 9-13, 2008 at <http://www.geomorph.org/wg/wgsb.html> ):**

- Collection and compilation of comparable datasets (see Table 1 above) from SEDIBUD Key Test Sites and development of the SEDIBUD Metadata Database. Longer records and time series are needed.
- Organisation of one SEDIBUD Workshop per year and, connected to that, publication of one SEDIBUD Special Issue (International Journals) per year.
- Continuation of SEDIBUD Activities as described under <http://www.geomorph.org/wg/wgsb.html> and in SEDIBUD Publications Reports and Material (see below).

**SEDIBUD Publications, Reports and Material:**

**Beylich, A.A. (Ed.) (2006):** Fourth ESF SEDIFLUX Science Meeting & First Workshop of I.A.G./A.I.G. SEDIBUD: Source-to-Sink-Fluxes and Sediment Budgets in Cold Environments. October 29 – November 2, 2006, Trondheim, Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**, 2006. 85pp.

**Beylich, A.A. (Ed.) (2006):** Fourth ESF SEDIFLUX Science Meeting & First Workshop of I.A.G./A.I.G. SEDIBUD. *NGU Report* **2006.069**. 85pp.

**Beylich, A.A. (2008):** Sediment Budgets in Cold Environments. EDITORIAL. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, **62**(2): 49.

**Beylich, A.A. (Ed.) (2008):** Sediment Budgets in Cold Environments. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, **62**(2).

**Beylich, A.A. (2008):** Sediment budgets in cold environments: The global SEDIBUD programme. *33<sup>rd</sup> International Geological Congress 2008, Oslo, Norway. Abstracts.*

**Beylich, A.A. and the SEDIBUD Team (2006):** The I.A.G./A.I.G. Working Group SEDIBUD – Sediment Budgets in Cold Environments: Introduction and Overview. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**: 26-27.

**Beylich, A.A. and the SEDIBUD Team (2008):** The global SEDIBUD program: Sediment budgets in cold environments. *Náttúrustofa Norðurlands vestra NNV-2008-002, April 2008*: 79-80.

**Beylich, A.A. and the SEDIBUD Team (2006):** The I.A.G./A.I.G. Working Group SEDIBUD – Sediment Budgets in Cold Environments: Introduction and Overview. *NGU Report 2006.069*: 26-27.

**Beylich A.A. and the SEDIBUD Team (2008):** Sediment Budgets in Cold Environments: The global SEDIBUD programme. *3. Mitteleuropäische Geomorphologietagung, Salzburg, 23.-28.09.2008. Abstracts.*

**Beylich, A.A. and the SEDIBUD Team (2009):** Sediment Budgets in Cold Environments – the SEDIBUD programme. *NGF Abstracts and Proceedings*, **1**, 2009: 8-9.

**Beylich, A.A. and the SEDIBUD Team (2009):** Quantitative analysis of sediment budgets in cold environments: The global SEDIBUD programme. *Geophysical Research Abstracts*, Vol. **11**, EGU2009, 2009.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2007):** Coordinated quantitative studies on sediment fluxes and sediment budgets in changing cold environments – examples from three SEDIBUD key test areas in Canada, Iceland and Norway. *Landform Analysis*, Vol. **5**: 11-12.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2007):** Sediment fluxes and sediment budgets in changing cold environments – examples from coordinated quantitative studies in three SEDIBUD key test areas in Canada, Iceland and Norway. *NGU Report*, **2007.052**: 26-27.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (Eds.) (2007):** Second Workshop of I.A.G./A.I.G. SEDIBUD – Sediment Budgets in Cold Environments: Sediment Fluxes and Sediment Budgets in Changing High-Latitude & High-Altitude Cold Environments. *NGU Report*, **2007.052**. 57pp.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2008):** SEDIBUD – Sediment budgets in cold environments: Introduction. *Zeitschrift für Geomorphologie N.F.*, **52** (1): 1-2.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2008):** Quantitative analysis of source-to-sink-fluxes and sediment budgets in changing cold environments – the global SEDIBUD program. *Geophysical Research Abstracts*, Vol. **10**, EGU2008-A-01652, 2008.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2008):** The global I.A.G./A.I.G. SEDIBUD (Sediment Budgets in Cold Environments) programme: Introduction and overview. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, **62**(2): 50-51.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (Eds) (2008):** Third I.A.G. / A.I.G. SEDIBUD Workshop, Boulder, U.S.A.: Sediment Fluxes and Sediment budgets in Changing High-Latitude and High-Altitude Cold Environments. *NGU Report*, **2008.058**: 41pp.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (Eds.) (2009):** Source-to-sink fluxes and sediment budgets in changing high-latitude and high-altitude cold environments – SEDIBUD. *Arctic, Antarctic and Alpine Research, Special Issue*.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2009):** Sediment budgets in cold environments – the SEDIBUD programme. *Arctic, Antarctic and Alpine Research, Special Issue*.

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2009):** Developing quantitative frameworks for studies on sedimentary fluxes and budgets in changing cold environments. *Polish Polar Research* (accepted).

**Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2009):** Quantitative analysis of sediment budgets in cold environments: The I.A.G./A.I.G. SEDIBUD programme. *IAG-AIG Geomorphology 2009 Conference, Melbourne. Abstracts*.

**Beylich, A.A., Lamoureux, S.F., Decaulne, A., Dixon, J.C., Orwin, J.F., Overeem, I., Sæmundsson, Þ., Warburton, J. & Z. Zwolinski (2008):** Sediment Budgets in Cold Environments: The I.A.G. / A.I.G. SEDIBUD programme. *NGU Report*, **2008.058**: 19-20

**Beylich, A.A. & K.-H. Schmidt (Eds.) (2008):** Sedimentary source-to-sink-fluxes and sediment budgets in changing cold environments. *Zeitschrift für Geomorphologie N.F.*, **52** (1).

**Beylich A.A. & J. Warburton (Eds.) (2007):** Analysis of Source-to-Sink-Fluxes and Sediment Budgets in Changing High-Latitude and High-Altitude Cold Environments. SEDIFLUX Manual. First Edition. *NGU Report*, **2007.053**. 158pp.

**Decaulne, A., Beylich, A.A., Lamoureux, S.F., Caine, N.T. & I. Overeem (2008):** Sediment fluxes and sediment budgets in changing high-latitude and high-altitude cold environments. Sediment Budgets in Cold Environments (SEDIBUD) Third

Workshop; Mountain Research Station, INSTAAR, Boulder, Colorado, 9-13 September 2008. *IAG/AIG Newsletter* No. **24** (3/2008).

**Lamoureux, S.F., Beylich, A.A. & A. Decaulne (2007):** Sediment Fluxes and Budgets in Changing High-Latitude and High-Altitude Cold Environments. Sediment Budgets in Cold Environments (SEDIBUD) Second Workshop; Abisko, Sweden, 15-19 September 2007. *EOS, Transactions, American Geophysical Union, Volume 88 (52)*, 25 December 2007: 580.

**Lamoureux, S.F., Decaulne, A. & A.A. Beylich (Eds.) (2008):** SEDIBUD Test Sites: Fact Sheets. 1<sup>st</sup> Edition, June 2008. *ID 3111308*, [www.lulu.com](http://www.lulu.com).

**Lantuit, H., Beylich, A.A. & S.F. Lamoureux (2007):** Sediment budgets in coastal settings: On the necessity to create a common framework for SEDIBUD and ACCO / Net activities during the International Polar Year (IPY). *NGU Report*, **2007.052**: 41.

**See SEDIFLUX Publications, Reports and Material at:**  
<http://www.ngu.no/sediflux>

On behalf of the SEDIBUD Steering Committee,

Achim A. Beylich  
Chair of SEDIBUD

Trondheim, February 27, 2009

- **WG Rock Coasts**, convenor: Dr. Larissa Naylor, Exeter University, UK  
*Motivation expected soon.*

- **WG Applied Geomorphological Mapping**, convenor: Dr. Paolo Paron, FAO, Nairobi, Kenya

Motivation.

The Applied Geomorphological Mapping WG was formed one year after the Zaragoza Conference and since then has gathered more than 70 scholars and practitioners from all around the world (e.g. Europe, US, Australia, Iran, Iraq, India, Myanmar).

One of the major objectives of the WG is the publication of a handbook on Applied Geomorphological Mapping; initial work sought contact and discussion with Elsevier concerning the potential for publication. Despite a series of unavoidable delays, we are currently now finalizing an agreement with Elsevier with an initial timetable looking at a first full draft by November 2009 and publication by the end of 2010. All royalties from the book will be allocated to the IAG.

The volume will be published by Elsevier as part of the "Developments in Earth Surface Processes" series edited by Professor John Shroder (University of Nebraska). The volume would be fully peer-reviewed and edited to a high standard. The editors are Mike Smith (Kingston University, UK), Paolo Paron (Freelance Consultant, Kenya) and Jim Griffiths (University of Plymouth, UK).

During 2007 we placed a call for papers on geomorphological mapping to form a special issue in the Journal of Maps. Seven papers were successfully reviewed and published in 2008. We have also organized several conference sessions and field excursions, including the IAG meeting in Addis Ababa on "Environmental Analysis and Geomorphological Mapping for a Sustainable Development" (Professor Dramis, Rome). Eleven papers from this meeting have been submitted to the Journal of Maps for publication in 2009. We also have a session at Melbourne for which we have received 35 abstracts, showing a strong interest in the topics covered by the WG.

We are currently working on a pamphlet outlining the applications of geomorphology, targeting policy makers and administrators. This is an "outreach" publication that is designed to describe to a lay person how important it is to integrate a geomorphological study into activities such as land planning, construction and forest management.

With this letter we kindly ask to you and the IAG EC to consider an extension of the working group for another four years after the Melbourne conference.

Yours Sincerely

Paolo Paron

Mike Smith

**- WG HILS – Human Impact**, convenor: Prof. Denes Loczy, Pécs University, Hungary

Hereby, I would like to inform that the Working Group Human Impact on the Landscape wishes to continue activity in the next four years. All the more so, because our final project, the Atlas of Human Impact on Topography, has just started and is still rather far from completion. And that constitutes our plan for the immediate and near future. We would like to spend the IAG grant on preparing the first sample maps for the atlas (Macedonia is ready, Hungary, Germany, Romania and the Ukraine are under preparation). As soon as we can present these samples, we hope we could get grants from other sources to finish the project and publish the Atlas.

I trust this plan meets approval from the IAG and we can work further towards this end.

Denes Loczy

**- WG Geo-archaeology**, convenor : Prof. Eric Fouache, Université Paris XII, France

*Motivation expected soon.*

**- WG Geomorphosites**, convenor: Prof. Emmanuel Reynard, Université de Lausanne, Switzerland

*Motivation expected soon.*

Dear Members of the IAG Executive Committee,

We are glad to send you in attachment the Annual report 2008 of the working group "Geomorphosites" of the IAG. This year the main focus was on workshops and scientific sessions in several conferences (workshop in Lausanne, sessions in Oslo (IGC) and Brasov, intensive course in Lesvos). We put also some energy on the edition of a book on geomorphosites that will be available at the Int. Conference in Melbourne.

We'll send you the four-year report (2005-2009) with an official request for a new period of activity for the years 2009-2013.

Paola Coratza and Emmanuel Reynard  
Chairs of the WG

## **Proposal for continuation of the Rocky Coast Working Group (RoCG)**

### **1. Rationale**

The rocky coast working group of the IAG/AIG was established in 2005 to further geomorphic enquiry into a relatively unstudied landform system, the rocky coast. The group has gained significant momentum in its first 4-years growing steadily in membership (~ 80 members in 20 countries); and now making in roads into policy and management (e.g. members have been asked to participate actively in a Review of Rock Coast Landforms for the Australian National Government) and into agenda-setting for research (e.g. inputting to a UK research council (NERC) strategic review). The group has also been successful in creating of an online discussion group, a special issue of *Geomorphology*, and rocky coast meetings held at the Kota Kinabalu regional meeting (2007), the British Society for Geomorphology's Annual Conference (2008) and the Melbourne congress (2009). As a result, research has significantly advanced in the field, with experimental laboratory methods of rock erosion being conducted (Trenhaile and students), detailed microerosion methodologies continued (Stephenson & colleagues), as well as the expansion of rocky coast research into low-energy environments such as estuaries (Kennedy & students).

To build on this momentum, it is therefore proposed that the Rocky Coast working group is renewed for a further 4 years. No additional funding is needed to further the group's research intentions.

### **2. Chair of working group**

It is proposed that the extended working group will continue to be co-chaired by Dr Wayne Stephenson (Australia) with Dr David Kennedy (New Zealand) replacing Dr Larissa Naylor (UK).

Dr Naylor will continue to be actively involved in the group, acting as treasurer; however, she has indicated she wishes to step down from her co-chair role for the next 4-year term of the working group.

### **3. Proposed Activities and Outputs**

The core activities of the working group will revolve around maintaining the momentum established by the first working group, primarily through increased communication and number of outputs, as well as field research and workshops.

Specific Activities include:

- (1) Organise a regional workshop, to be held in Spain in 2010 (led by Dr Ramon Blanco-Chao).
- (2) To produce a co-edited volume presenting the state of the art and forecasting future directions of rock coast geomorphology. This body of work is critically important, as only 2 research monographs exist on rock coast geomorphology, published in 1988 (Trenhaile) and 1992 (Sunamura), respectively, and these are now dated. We are currently in discussion with the editor of the Geological Society's Special Publications, who has expressed a keen interest in our

publishing this with them. Several members of the current working group have agreed to participate in this book.

- (3) Publication of 1 - 2 special issues in international journals, such as Marine Geology or Journal of Coastal Research. For example, a proposal for a special issue on 'Evidence of storm signatures in rock coast systems' is currently being prepared for consideration by the editors of either Marine or Sedimentary Geology.
- (4) Maintain the email discussion list.
- (5) Create and maintain a working group website.
- (6) Hold regular 'virtual' face-to-face meetings (once or twice a year), where all members meet via online access-grid methods. Such live workshops would provide the most fast and effective networking and transferral of research ideas between workshops/conference sessions. We envisage that these would be themed around particular topics (e.g. application of cosmogenics in rock coast systems), activities (e.g. methods handbook) or outputs (e.g. discussions about the Geological Society Special Publication).
- (7) Organisation of 2-3 conference sessions where cross-disciplinary research on rocky landforms is the theme.