



International Association of Geomorphologists  
Association Internationale des Géomorphologues

Working Group

on

Sediment Budgets in Cold Environments

**SEDIBUD First Newsletter**

February 5<sup>th</sup>, 2007

**- 2007 A -**

**SEDIBUD**

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# 1. SEDIBUD Annual Report for 2006

## Chair

Assoc. Professor Achim A. Beylich (Norway)

## Vice-Chair

Assoc. Professor Scott Lamoureux (Canada)

## Secretary

Dr. Armelle Decaulne (France)

## Other Core Members

Professor John C. Dixon (USA)  
Professor Brigitta Erschbamer (Austria)  
Dr. Samuel Etienne (France)  
Professor Bernd Etzelmüller (Norway)  
Dr. Vyacheslav V. Gordeev (Russia)  
Professor Jukka Käyhkö (Finland)  
PhD student Hugues Lantuit (Germany)  
Professor Ulf Molau (Sweden)  
Dr. John F. Orwin (New Zealand)  
Dr. Andrew J. Russell (UK)  
Professor Karl-Heinz Schmidt (Germany)  
Dr. Þorsteinn Sæmundsson (Iceland)  
Dr. Ola M. Sæther (Norway)  
Dr. Fiona S. Tweed (UK)  
Dr. Jeff Warburton (UK)  
Professor Xiaoping Yang (China)

## Invited External Experts

Professor Nel Caine (USA)  
Professor Lothar Schrott (Austria)

## Address and email of current contact person

Assoc. Professor Achim A. Beylich  
Geological Survey of Norway (NGU)  
Landscape & Climate  
Leiv Eirikssons vei 39  
N-7491 Trondheim, NORWAY  
Email: [Achim.Beylich@ngu.no](mailto:Achim.Beylich@ngu.no)  
Phone: ++47 73 90 4117  
Fax: ++47 73 92 1620  
&  
Department of Geography  
Norwegian University of Science and Technology (NTNU)  
Dragvoll  
N-7491 Trondheim, NORWAY

## 1.1. Activities for the year to date and intended main output for the group

Polar and mountainous regions are among the most sensitive regions to climate change. The ESF SEDIFLUX Network (2004-2006) (<http://www.ngu.no/sediflux>) has been analysing the impact of climate change on landforms in high-latitude and high-altitude cold environments, via the mobilisation, movement and deposition of sediments by slope processes, rivers, glaciers, coastal processes and wind.

SEDIFLUX has over the last years evolved into a coordinated multidisciplinary and multinational effort to monitor the changing structure of landforms in cold environments and has led to a series of coordinated research initiatives. The efforts conducted within the SEDIFLUX network were urgently needed, given the critical importance of studying the impact of projected climate change on the land structure of such sensitive cold environments. There is especially strong synergy with the International Tundra Experiment (ITEX), whose focus is to determine the relationship between changing climate and circumpolar plant species. The impact of climate on plant species would be mediated partly through changes in land structure brought about by sediment transfers.

SEDIFLUX has established a sustainable framework for long-term research to coordinate multinational, interdisciplinary monitoring networks, a first in the field of geomorphology. SEDIFLUX is now providing the basis for further research. One of the major outcomes produced by the SEDIFLUX group will be the SEDIFLUX Manual, which will provide guidelines and protocols for monitoring and sediment budget studies in key cold environment key test catchments worldwide. These long-term monitoring campaigns will apply unified approaches and standardized methods to generate comparable datasets from different cold environments for the development of the SEDIBUD metadata database and for modelling the impact of climate change on sediment transfers and sediment budgets. SEDIFLUX (2004 – 2006) will continue and be extended through the I.A.G./A.I.G. SEDIBUD programme (<http://www.geomorph.org/wg/wgsb.html>) which was formally started with an initial kick-off meeting at the Third SEDIFLUX Science Meeting in Durham, UK, December 16<sup>th</sup> – 19<sup>th</sup>, 2005. All SEDIFLUX members – more than 300 scientists from 35 countries worldwide - will participate in the SEDIBUD programme. The first SEDIBUD Workshop was held jointly with the Fourth ESF SEDIFLUX Science Meeting, in Trondheim, Norway, October 29<sup>th</sup> – November 02<sup>nd</sup>, 2006 ([http://www.ngu.no/sediflux/sciencemeeting\\_index.html](http://www.ngu.no/sediflux/sciencemeeting_index.html)). With the experience gained from SEDIFLUX and the scientific products from SEDIFLUX we now have within SEDIBUD the framework to carry out major multidisciplinary research into the impact of climate change on sediment budgets in sensitive high-latitude and high-altitude cold environments.

## 1.2. Report on the First SEDIBUD Workshop

The First SEDIBUD Workshop was held jointly with the Fourth ESF SEDIFLUX Science Meeting at the Geological Survey of Norway (NGU) main building in Trondheim on October 29-November 2 2006. The Meeting was scientifically organized by Achim A. Beylich (NGU, Trondheim) and included Invited Keynote Speeches, Invited Commentaries, Oral and Poster Presentations as well as extended Working Group Sessions and an Excursion. 80 scientists from 14 countries participated in the Meeting and very good progress was achieved with the preparation of the ESF SEDIFLUX Manual, with the definition of critical key test sites (catchments) within SEDIFLUX/SEDIBUD, with the discussion and development of relevant science questions to be addressed within SEDIFLUX/SEDIBUD, and with the further development of activities which were started within ESF SEDIFLUX and which will be continued and extended with the global I.A.G./A.I.G. SEDIBUD programme (long-term investigations/monitoring at SEDIFLUX/SEDIBUD key test sites, metadata database development, etc.) (<http://www.geomorph.org/wg/wgsb.html>).

Detailed information on the Meeting, including the complete scientific programme and all accepted abstracts, is available at [http://www.ngu.no/sediflux/sciencemeeting\\_index.html](http://www.ngu.no/sediflux/sciencemeeting_index.html).



*Participants of the Fourth SEDIFLUX and First SEDIBUD Workshop in Trondheim (NGU), October 29<sup>th</sup>-November 02<sup>nd</sup>, 2006 (Photo by Ola Fredin).*

## 2. SEDIBUD plans for 2007

### Meetings

- SEDIBUD Planning Meeting in Trondheim (NGU), Norway, March 28<sup>th</sup>-April 01<sup>st</sup>, 2007 (Participants: Achim A. Beylich, Scott Lamoureux, Armelle Decaulne)
- Proposed Thematic Session on *Sediment fluxes and sediment budgets in changing polar and alpine environments* – Session supported by I.A.G./A.I.G. SEDIBUD at the Second Nordic Geographers Meeting in Bergen, Norway, June 15<sup>th</sup> – 17<sup>th</sup>, 2007 (<http://www.uib.no/ngm>)
- SEDIBUD Seminar and Workshop for Young Geomorphologists at the I.A.G./A.I.G. Regional Conference on Geomorphology – Geodiversity of polar landforms – in Longyearbyen, Spitsbergen, August 2-5, 2007 (<http://www.geomorph.org>)
- Second SEDIBUD Workshop, Abisko, Sweden, September 15<sup>th</sup> – 19<sup>th</sup>, 2007 (<http://www.geomorph.org/wg/wgsb.html>)

### Dissemination

- SEDIBUD Newsletters 2007 A – 2007 C
- Further development and frequent updating of the IAG/AIG SEDIBUD website (<http://www.geomorph.org/wg/wgsb.html>)

### Key activities

- Further definition and development of the Science Questions addressed within SEDIBUD
- Finalization of the ESF SEDIFLUX Manual (First Edition)

- Publication of Special Issues (Norsk Geografisk Tidsskrift-Norwegian Journal of Geography and Zeitschrift für Geomorphologie) arising from the Fourth SEDIFLUX and First SEDIBUD Workshop in Trondheim, Norway, October 29<sup>th</sup> – November 02<sup>nd</sup>, 2006. **REMINDER: Deadline for submission of Papers is March 01<sup>st</sup>, 2007.**
- Selection of 30 – 40 globally distributed SEDIBUD Key Test Sites for long-term monitoring/investigations – following guidelines given in the ESF SEDIFLUX Manual (selection will be based on proposals submitted by SEDIBUD Members). The Call for Key Test Sites and the Proposal Forms are sent out together with this SEDIBUD Newsletter 2007 A and will also be available at the SEDIBUD website at <http://www.geomorph.org/wg/wgsb.html>
- Start of the development (concept) of the SEDIBUD Metadata Database, which will contain comparable datasets from different cold environments worldwide for modelling of the impact of projected climate change on sediment transfers and sediment budgets

### 3. Forthcoming relevant meetings and sessions

#### 3.1 Nordic Geographers Meeting, Bergen, Norway, June 15<sup>th</sup>-17<sup>th</sup>, 2007

Thematic Session on *Sediment Fluxes and Sediment Budgets in Changing Polar and alpine environments* – Session supported by I.A.G./A.I.G. SEDIBUD.

Deadline for Submission of Abstracts is **March 01<sup>st</sup>, 2007**. Please send Abstracts for the above-mentioned Thematic Session to [Achim.Beylich@ngu.no](mailto:Achim.Beylich@ngu.no).

More information on Abstract Submission, Registration and on all Thematic Sessions of the Conference can be found at the Conference Website at <http://www.uib.no/ngm/>

The 2<sup>nd</sup> Nordic Geographers Meeting is hosted by the Department of Geography, University of Bergen, in collaboration with the Institute for Research in Economics and Business Administration (SNF) and the Norwegian School of Economics and Business Administration (NHH). The Nordic Geographers Meeting intends to cover all parts of Geography, including Human Geography, Physical Geography, GIS, etc.

#### 3.2. I.A.G./A.I.G. Regional Conference on Geomorphology – Geodiversity of polar landforms – Longyearben, Spitsbergen, August 2-5, 2007

SEDIBUD will organize a Seminar on *Sediment Budgets in Permafrost Regions*

Information on the Conference, Registration and Abstract Submission can be found at: <http://www.geomorph.org>

#### 3.3. Second SEDIBUD Workshop, Abisko, Sweden, September 15<sup>th</sup> – 19<sup>th</sup>, 2007

The Workshop will address major topics of SEDIBUD. The focus is on *High-Latitude and High-Altitude Cold Environments* and oral and poster contributions to the following themes are invited:

- Source-to-Sink Fluxes / Correlations and Sediment Budgets
- Source-to-Sink and Sediment Budget Studies and Global Change
- Source-to-Sink and Sediment Budget Studies at Different Scales
- Exogenous - Endogenous Interactions and Source-to-Sink and Sediment Budget Studies

The Workshop will provide a multinational and interdisciplinary forum for exchanging and sharing knowledge. The major purpose of the Workshop is to take further the issues addressed and discussed within SEDIFLUX (2004 – 2006) and I.A.G./A.I.G. SEDIBUD (2005 -).

Business will be equally shared between technical oral and poster sessions on the one hand and working group sessions on the other hand. Central issues of the working group sessions will be the further discussion of relevant science questions to be addressed within the SEDIBUD programme, the SEDIFLUX Manual, the presentation of SEDIBUD key test sites, the



development of the SEDIBUD metadata database, and the development of further ideas to continue and to extend the scientific activities, which have been started within SEDIFLUX and SEDIBUD.

The First Circular for the Workshop is sent out together with this SEDIBUD Newsletter 2007 A and will also be available at the SEDIBUD website <http://www.geomorph.org/wg/wgsb.html>  
Deadline for Registration and Abstract Submission is **March 25<sup>th</sup>, 2007**.

### **3.4. 33rd International Geological Congress, Oslo, Norway, 5-14th August, 2008**

<http://www.33igc.org>

Achim A. Beylich and Scott Lamoureux have proposed a Symposium on *Present-Day and Holocene Sediment Budgets in Cold Environments*.

Further information: [Achim.Beylich@ngu.no](mailto:Achim.Beylich@ngu.no)

### **3.5. Other Relevant Meetings**

#### **3.5.1. European Geosciences Union General Assembly 2007, Vienna, Austria, 15-20 April 2007**

<http://meetings.copernicus.org/egu2007/>

#### **3.5.2. Arctic Workshop 2007, Skaftafell, Iceland, 2-5 May 2007**

<http://www2.norvol.hi.is/page/arctic>

The Institute of Earth Science, University of Iceland, sponsors the 37th Annual International Arctic Workshop. Past, present and future changes issues in all Arctic environments are welcome. In addition to formal oral presentations and poster sessions, the organizing committee has arranged for a series of 4-hr field excursions to be held in the afternoons. Formal oral presentations will be in the mornings, with additional oral presentations and poster sessions in the late afternoon/early evenings.

Deadline for abstract submission: March 31<sup>st</sup>, 2007.

## **4. Status of SEDIFLUX Manual**

A First Edition of the SEDIFLUX Manual will be available at the Second SEDIBUD Workshop in Abisko, Sweden, September 15<sup>th</sup>-19<sup>th</sup>, 2007.

## **5. Views of a SEDIBUD key site**



**Cape Bounty field site, Melville Island, Nunavut, Canada, 75°N – 109°W (Photos: Scott Lamoureux)**

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*Next SEDIBUD Newsletter will be distributed in June 2007.*

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Please send all relevant contribution concerning all forthcoming events related to SEDIBUD and cold environments to Dr. Armelle Decaulne, SEDIBUD Secretary ([armelle@nnv.is](mailto:armelle@nnv.is)) to be included in the next SEDIBUD Newsletters.