I.A.G. / A.I.G. Working Group SEDIBUD

- Sediment Budgets in Cold Environments -

(http://www.geomorph.org/wg/wgsb.html)

Annual Report (April 4, 2014)

Meetings

- Session S20 *Sediment budgets* (Conveners: Achim A. Beylich & Armelle Decaulne) at the 8th International I.A.G. / A.I.G. Conference on Geomorphology "Geomorphology and sustainability" in Paris, France, August 27 - 31, 2013
- SEDIBUD business meeting and *SEDIBUD book* (see below) discussion meetings with contributing SEDIBUD book chapter authors during the 8th International I.A.G. / A.I.G. Conference on Geomorphology in Paris, France, August 27 - 31, 2013
- Feedback meetings with invited chapter authors of the *SEDIBUD book* during the AGU Fall Meeting in San Francisco, USA, December 9 - 13, 2013
- Feedback meetings with contributing chapter authors of the *SEDIBUD book* during the forthcoming EGU General Assembly 2014 in Vienna, Austria, April 27 – May 2, 2014
- Session GM7.3/HS9.9/SSP3.2.2 *Sedimentary source-to-sink fluxes and sediment budgets* (co-organized) (Conveners: Achim A. Beylich, Armelle Decaulne, David Morche & Katja Laute) at the forthcoming EGU General Assembly 2014 in Vienna, Austria, April 27 – May 2, 2014 (further details at http://meetingorganizer.copernicus.org/EGU2014/session/14763)

- Forthcoming 8th I.A.G. / A.I.G. SEDIBUD Workshop *"Sediment cascades in cold climate geosystems"*, Zugspitze, Germany, September 1 - 4, 2014 (more information can be found at http://www.geomorph.org/wg/wgsb.html)
- Proposed I.A.G. / A.I.G. SEDIBUD Working Group session on *Sediment budgets* (Convener: Achim A. Beylich) at the forthcoming I.A.G. / A.I.G. Regional Conference "Gradualism vs catastrophism in landscape evolution" in Barnaul, Russia, July 2 - 4, 2015

New publications (SEDIBUD special issues)

- **Decaulne, A., Rachlewicz, G., Lamoureux, S.F. & A.A. Beylich (Eds.) (2013):** Sediment Budgets in Cold Environments: Sedimentary fluxes dynamics in the changing mountain and polar environment: Monitoring, record & consequences. *Zeitschrift für Geomorphologie N.F.*, 57, *Supplementary Issue* 2 *(with contributions from the 6th SEDIBUD Workshop, Zakopane, Poland, September 3 - 10, 2011)*
- **Beylich, A.A., Gärtner-Roer, I., Decaulne, A. & D. Morche (Eds.) (2014):** Sediment flux and sediment budget studies in cold environments: New approaches and techniques. *Geomorphology*, in press *(with contributions from the 7th SEDIBUD Workshop and Summer School in Trondheim and Loen, Norway, September 10 - 17, 2012)*
- **Beylich, A.A. & A. Decaulne (Eds.) (in preparation):** Sedimentary fluxes and budgets in different climatic environments. *Geografiska Annaler*, A *(with contributions from the conference session S20 Sediment budgets of the 8th I.A.G. / A.I.G. International Conference on Geomorphology, Paris, August 27 - 31, 2013)*

SEDIBUD book project (ongoing SEDIBUD key activity)

SEDIBUD Synthesis Book (currently in preparation, see below)

SEDIBUD BOOK STRUCTURE OUTLINE (by April 4, 2014)

accepted by *Cambridge University Press*

Book title:

Source-to-Sink Fluxes in Undisturbed Cold Environments

Book editors:

Achim A. Beylich (Trondheim, Norway)

John C. Dixon (Fayetteville, U.S.A.)

Zbigniew Zwolinski (Poznan, Poland)

Motivation, reasons for writing and comparable books

The book will summarize and synthesize the achievements of the International Association of Geomorphologists` (I.A.G. / A.I.G.) Working Group SEDIBUD (Sediment Budgets in Cold Environments) which has been active over more than eight years since 2005 (http://www.geomorph.org/wg/wgsb.html).

Amplified climate change and ecological sensitivity of largely undisturbed polar and cold climate environments have been highlighted as key global environmental issues. The effects of projected climate change will change surface environments in cold regions and alter the fluxes of sediments, nutrients and solutes, but the absence of quantitative data and coordinated geomorphic process monitoring and analysis to understand the sensitivity of the Earth surface environment in these largely undisturbed environments is acute.

Our book will address this existing key knowledge gap. The applied approach of integrating comparable and longer-term field datasets on contemporary solute and sedimentary fluxes from a number of different defined cold climate catchment geosystems for better understanding (i) the environmental drivers and rates of contemporary denudational surface processes and (ii) possible effects of projected climate change in cold regions is unique in the field of geomorphology and no comparable book currently exists on the market. Largely undisturbed cold climate environments can provide baseline data for modeling the effects of environmental change.

SEDIBUD has over the past eight years produced seven special issues to leading international journals where SEDIBUD members have been publishing parts of their ongoing work at SEDIBUD field sites. The proposed book shall, building on these achievements, synthesize the work carried out by SEDIBUD members over the last decade in numerous cold climate catchment geosystems worldwide.

Readership and level

The book is targeting graduate students in advanced courses on geomorphology, sedimentology and environmental science and will provide a key reference for research scientists. It is highly interdisciplinary in scope, with a primary audience of earth and environmental scientists, geographers, geomorphologists and ecologists, both practitioners and professionals. The book will also have wider reach to those concerned with issues raised by global environmental change and be of value to policy makers and environmental managers.

Schedule

Contributing chapter authors are provided with chapter guidelines (see Appendix 1) to guarantee a homogenous structure of the book and are asked to submit their chapter contributions by *May 31, 2014* to the book editors. Preliminary chapter drafts were sent to the book editors by January / February 2014 (see further details in Appendix 1).

Meetings with contributing chapter authors took place during the 8th I.A.G. / A.I.G. International Conference on Geomorphology in Paris, 27-31 August 2013, to discuss and clarify upcoming questions from contributing chapter authors.

The peer review of the chapter contributions will be followed by the writing of the concluding and synthesis chapters by the book editors and book part coordinators (partly in collaboration with contributing chapter authors). Feedback and discussion meetings with invited chapter authors were/will be organized during the AGU Fall Meeting in San Francisco (USA), December 9 - 13, 2013, and during the EGU General Assembly in Vienna (Austria), April 27 – May 2, 2014. A SEDIBUD book preparation meeting will be organized during the 8th SEDIBUD Workshop which will take place at the Schneefernerhaus in Garmisch-Partenkirchen (Zugspitze, Germany), September 1 – 4, 2014. The book will be completed by March 1, 2015.

Editors and contributing authors

The three editors and book part coordinators of the proposed book are active Steering Committee Members (since 2005) of I.A.G. / A.I.G. SEDIBUD.

The confirmed contributing chapter authors are carefully selected and invited active members of the SEDIBUD group (2005 – 2017).

Book editors and book part coordinators:

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Professor Zbigniew Zwolinski (*I.A.G. / A.I.G SEDIBUD Steering Committee Member, former Member of the I.A.G. / A.I.G. Executive Committee*), Geomorphologist, Department of Geoecology, Institute of Geoecology & Geoinformation, Adam Mickiewicz University, Dziegielowa 27, PL-61-680 Poznan, Poland; E-mail address: zbzw@amu.edu.pl

Book structure and content

Total number of words: up to max. 256500 (page format 276 x 219 mm, ca. 900 words per page)

Total number of Figures: up to 320 (200 black and white line illustrations, 120 black and white photos)

Color images can be made available online on the Cambridge University Press website.

Book structure:

Preface

This book on *Sediment Budgets in Cold Environments* aims at an integrated analysis of environmental drivers and rates of contemporary solute and sedimentary fluxes in cold climate catchment geosystems. It will summarize and synthesize the achievements of the I.A.G. / A.I.G SEDIBUD (Sediment Budgets in Cold Environments) Program (since 2005) and is looking at selected examples of natural and largely undisturbed catchment geosystems (SEDIBUD key test sites) from different characteristic cold climate environments worldwide. The book is not aiming at a geographical survey / inventory of these environments. The key focus is on the quantitative analysis and understanding of environmental controls and rates of contemporary solute and sedimentary fluxes in defined cold climate catchment geosystems. Referring to the issue of glacial environments versus cold environments both glacierized and non-glacierized catchment geosystems are investigated.

For reaching a global cover of different cold climate environments the book is (after providing an introduction part (Part I) and a basic part on climate change in cold environments and general implications for solute and sedimentary fluxes (Part II)) dealing in different defined parts with *Sub-Arctic and Arctic Environments* (Part III), *Sub-Antarctic and Antarctic Environments* (Part IV) and *Alpine / Mountain Environments* (Part V). In Part VI comparable datasets on contemporary solute and sedimentary fluxes generated during coordinated research efforts in different cold climate catchment geosystems as presented in Parts III - V are integrated with the key goals to (i) identify the main environmental drivers and rates of contemporary solute and sedimentary fluxes, and (ii) model possible effects of projected climate change on solute and sedimentary fluxes in cold climate environments.

Part I (up to 6500 words)

A.A. Beylich: Solute and sedimentary fluxes and budgets in changing cold climate environments

1. *Introduction to the theme*

Climate change, human activity and other environmental disturbances can affect Earth surface systems via alteration of vegetation cover, hydrologic regime, permafrost distribution, and glacier fluctuations. For example, Pleistocene temperature drop had profound climatic and geomorphic influences worldwide, including abrupt glacial advance in vast terrestrial areas that have both sculpted the topography and deposited extensive mantles of glacigenic materials. In consideration of such legacies, formerly glaciated landscapes today can be considered at a unique stage of readjustment (recovery) with respect to spatial organization of currently active geomorphic process domains (Brardinoni and Hassan, 2006), and the magnitude and patterns of sediment fluxes (Church and Slaymaker, 1989; Hewitt et al., 2002; Warburton, 2007). Accordingly, both contemporary environmental changes and disturbances over the Quaternary are significantly influencing patterns of weathering, detachment, transport, and deposition of material across landscape components. It is a challenge to develop a better understanding of how such changes and disturbances interact to modulate sedimentary source-to-sink fluxes and budgets in the light of peculiar landscape sensitivities (Beylich et al., 2006; Slaymaker et al., 2009; Milliman and Farnsworth, 2011).

Key components for understanding sediment dynamics and for constructing sediment budgets include the identification and definition of the linkages, and the quantification (as volumes and rates) of (i): sediment sources, (ii) storage sites, and (iii) transport processes (e.g., Swanson et al., 1982; Reid and Dunne, 1996).

Current knowledge on the sediment cascade within Holocene to contemporary climates forms the basis for predicting the consequences of future environmental change and disturbances. However, much of this information is still limited in terms of spatial and temporal coverage and needs to be extended and consolidated. Only after coordinated research efforts and integration of regional datasets it is advisable to apply and test, with an acceptable degree of reliability, models of landscape response to environmental change and disturbance (e.g., Beylich et al., 2012). Within such efforts, the integration of multiple techniques of data collection and analysis (e.g., field-based measurements, remotely-sensed mapping, GIS-based analyses, and modeling) across temporal scales (e.g., through real-time monitoring, dendrochronology, or cosmogenic nuclides) allows to obtain increasingly reliable and insightful results (e.g., Hinderer, 2012).

2. *The I.A.G. / A.I.G. SEDIBUD (Sediment Budgets in Cold Environments) Programme*

Amplified climate change and ecological sensitivity of polar and cold climate environments has been highlighted as a key global environmental issue (ACIA, 2004). Projected climate change in largely undisturbed cold regions is expected to alter melt season duration and intensity, along with the number of extreme rainfall events, total annual precipitation and the balance between snowfall and rainfall. Similarly, changes to the thermal balance are expected to reduce the extent of permafrost and seasonal ground frost and increase active layer depths. These effects will undoubtedly change surface environments in cold regions and alter the fluxes of sediments, nutrients and solutes, but the absence of quantitative data and coordinated process monitoring and analysis to understand the sensitivity of the Earth surface environment is acute in cold climate environments.

The *SEDIBUD (Sediment Budgets in Cold Environments)* Programme of the International Association of Geomorphologists (I.A.G. / A.I.G.) was formed in 2005 to address this key knowledge gap (Beylich, 2007; Beylich et al., 2007).

The central research question of this global group of scientists is to

Assess and model the contemporary sedimentary fluxes in cold climates, with emphasis on both particulate and dissolved components.

Initially formed as European Science Foundation (ESF) Network SEDIFLUX (2004 -) (Beylich et al., 2005; 2006), SEDIBUD has further expanded to a global group of researchers with field research sites located in polar and alpine regions in the northern and southern hemisphere. Research being carried out at each site varies by programme, logistics and available resources, but typically represent interdisciplinary collaborations of geomorphologists, hydrologists, ecologists, permafrost scientists and glaciologists. SEDIBUD has developed a key set of primary surface process monitoring and research data requirements to incorporate results from these diverse projects and allow coordinated quantitative analysis across the programme. SEDIBUD Key Test Sites provide data on annual climate conditions, total discharge and particulate and dissolved fluxes as well as information on other relevant surface processes. A number of selected Key Test Sites is providing high-resolution data on climate conditions, runoff and sedimentary fluxes, which in addition to the annual data contribute to the SEDIBUD Metadata Database. To support these coordinated efforts, the SEDIFLUX Manual (Beylich and Warburton, 2007) has been produced to establish common methods and data standards (Beylich, 2007; Beylich et al., 2007). In addition, a framework paper for characterizing fluvial sediment fluxes from source to sink in cold environments has been published by the group (Orwin et al., 2010). Comparable datasets from different SEDIBUD Key Test Sites are analysed to address key research questions of the SEDIBUD Programme as defined in the SEDIBUD Working Group Objective (available online at the SEDIBUD Website).

SEDIBUD has identified 44 SEDIBUD Key Test Sites worldwide, and the SEDIBUD Key Test Site Database (Laute et al., 2014) and the SEDIBUD Fact Sheets Volume (Lamoureux et al., 2008) provide significant information on SEDIBUD Key Test Sites.

Defined SEDIBUD Key Tasks include:

- The ongoing and continued generation and compilation of comparable longer-term datasets on contemporary sedimentary fluxes and sediment yields from SEDIBUD Key Test Sites worldwide
- The further extension of the SEDIBUD Metadata Database with these datasets
- The testing of defined SEDIBUD Hypotheses (available online at the SEDIBUD Website) by using the datasets continuously compiled in the SEDIBUD Metadata Database

References

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Part II (up to 14000 words)

Climate change in cold environments and general implications for contemporary solute and sedimentary fluxes

3. *I. Berthling & B. Etzelmüller: The changing cryosphere and implications for solute and sedimentary fluxes in cold climate environments (up to 7000 words)*

4. *U. Molau: Changes in vegetation cover and implications for solute and sedimentary fluxes in cold climate environments (up to 7000 words)*

Part III (Coordinator: J.C. Dixon) (up to ca. 78000 words)

Solute and sedimentary fluxes in Sub-Arctic and Arctic Environments

5. Review chapter

J.C. Dixon: Contemporary solute and sedimentary fluxes in Sub-Arctic and Arctic Environments – current knowledge (up to 6500 words)

Oceanic Sub-Arctic and Oceanic Arctic Environments

Research on environmental drivers and rates of contemporary solute and sedimentary fluxes in selected Oceanic Sub-Arctic and Oceanic Arctic Sites

6. *A.A. Beylich: Solute and sedimentary fluxes in selected catchment systems in Iceland and Lapland*

7. *A. Decaulne, Ó. Eggertsson, Th. Sæmundsson: The use of dendrogeomorphology to recognize the spatio-temporal distribution of snow avalanches in N-Iceland*

8. *J.C. Dixon: A contemporary assessment of sediment and solute transfers in Kärkevagge, Swedish Lapland*

9. *D. Germain & B. Hétu: Hillslope processes and related sediment fluxes on a fine-grained scree slope of Eastern Canada*

10. *B. Hasholt: Sediment transport from Greenland (> 6500 words)*

11. *W. Kociuba: Measurements of bedload flux in a high Arctic environment*

12. *G. Rachlewicz, G. Szpikowska, J. Szpikowski & Z. Zwolinski: Solute and sedimentary fluxes in catchments in Spitsbergen*

13. *M.C. Strzelecki, A.J. Long, J.M. Lloyd, J. Malecki, P. Zagorski:* the impact of rapid deglaciation and intensified sediment supply on the functioning of High Arctic coastal environments – Svalbard perspective

Continental Sub-Arctic and Continental Arctic Environments

Research on environmental drivers and rates of contemporary solute and sedimentary fluxes in selected Continental Sub-Arctic and Continental Arctic Sites

14. *J. Käyhkö, E. Lotsari, P. Alho, C. Flener & E. Kasvi: Sediment fluxes and their control mechanisms in the subarctic catchment of Tana (Teno), Norway / Finland*

15. *N. Tananaev: Sediment transfer and fluxes in continental Russian Arctic watersheds: a multi-scale perspective*

16. Concluding chapter

J.C. Dixon: Controls and variability of solute and sedimentary fluxes in Sub-Arctic and Arctic Environments

Part IV (Coordinator: Z. Zwolinski) (up to 58500 words)

Solute and sedimentary fluxes in Sub-Antarctic and Antarctic Environments

17. Review chapter

Z. Zwolinski, M. Kejna, A.N. Lastochkin et al.: Environmental impact on contemporary solute and sedimentary fluxes in Antarctica – current knowledge (up to 6500 words)

Oceanic Sub-Antarctic and Oceanic Antarctic Environments

Research on environmental drivers and rates of contemporary solute and sedimentary fluxes in selected Oceanic Sub-Antarctic and Oceanic Antarctic Sites

18. *E. Isla: Environmental controls on sediment composition and particle fluxes over the Antarctic continental shelf*

19. *G. Vieira, M. Francelino, J.C. Fernandes: Permafrost and active layer deformation in the South Shetlands (Antarctic Peninsula region): an assessment on active processes and rates*

20. *Z. Zwolinski, M. Kejna, G. Rachlewicz, I. Sobota, J. Szpikowski: Solute and sedimentary fluxes on King George Island*

Continental Sub-Antarctic and Continental Antarctic Environments

Research on environmental drivers and rates of contemporary solute and sedimentary fluxes in selected Continental Sub-Antarctic and Continental Antarctic Sites

21. *A.N. Lastochkin: Dynamics of the Antarctica ice cap*

22. *I.K. Meiklejohn: Weathering, permafrost and active layer – producers for solute and sedimentary fluxes*

23. *W.B. Lyons, K.A. Welch, J. Levy, A. Fountain & D. McKnight: Solute and sediment fluxes from rivers and streams in the McMurdo Dry Valleys*

24. *D. Yu. Bolshiyanov: Sedimentation and geomorphological processes in Jetty Oasis and Fisher Massif (Prince Charles Mountains) in Pleistocene and in modern times*

25. Concluding chapter

Z. Zwolinski: Regularities, differentiation and variability of solute and sedimentary fluxes in Antarctica

Part V (Coordinator: A.A. Beylich) (up to 84500 words)

Solute and sedimentary fluxes in Alpine / Mountain Environments

26. Review chapter

A.A. Beylich: Contemporary solute and sedimentary fluxes in Alpine / Mountain environments – current knowledge (up to 6500 words)

Research on environmental drivers and rates of contemporary solute and sedimentary fluxes in selected Oceanic Alpine / Mountain and Continental Alpine / Mountain Sites

Oceanic Alpine / Mountain Environments

27. *A.A. Beylich & K. Laute: Sedimentary source-to-sink fluxes in the fjord landscape in western Norway*

28. *A. Decaulne: The use of dendrogeomorphology to recognize the spatio-temporal distribution of snow avalanches in western Norway*

29. *K. Laute & A.A. Beylich: Sediment delivery from headwater slope systems in the inner Nordfjord area, western Norway*

30. *T.A. Stott, M.S. Leggat, P.N. Owens, B. Forrester, S.J. Dery & B. Menounos: Changes in suspended sediment dynamics in the proglacial zone of a retreating glacier in British Columbia, Canada*

Continental Alpine / Mountain Environments

31. *M. Fort: Solute and sedimentary fluxes in the Himalayas*

32. *M. Geilhausen & L. Schrott: Pro- and paraglacial sedimentary fluxes in the Austrian Alps*

33. J. Götz *& L. Schrott: A postglacial sediment budget of an inner-alpine sedimentary basin, Gradenmoos, Austrian Alps*

34. *M. Krautblatter: Quantifying rock slope erosion*

35. *D. Morche, M. Krautblatter, T. Heckmann, F. Haas & J. Götz: Rates of slope and channel processes in the Reintal Valley, Bavarian Alps*

36. *J. Stangl, E. Rascher & O. Sass: Comparative analysis of sediment routing in two different alpine catchments*

37. Concluding chapter

A.A. Beylich: Controls and variability of solute and sedimentary fluxes in Alpine / Mountain Environments

Part VI (up to 15000 words)

38. *A.A. Beylich, J.C. Dixon & Z. Zwolinski: An integrated analysis of the variability, environmental drivers and rates of contemporary solute and sedimentary fluxes in changing cold climate environments - from coordinated field data generation to integration and modeling (synthesis chapter)*

A synthetic analysis of geomorphic process data generated at different defined field study sites (see Parts III – V) shall provide a better understanding of

- The key environmental drivers and rates of contemporary solute and sedimentary fluxes in largely undisturbed cold climate environments,
- Possible effects of projected climate change on solute and sedimentary fluxes in cold climate environments

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Appendix 1:

Guidelines for the structure and requested content of chapters (SEDIBUD Book) dealing with solute and sedimentary fluxes in cold climate catchment geosystems *(sent to contributing chapter authors)*

Chapter authors are asked to send preliminary chapter drafts (texts as Word files) to the book editors (achim.beylich@ngu.no) by January / February 2014.

Deadline for submission of final chapters: *May 31, 2014*.

Chapter title (not more than 15-20 words)

- ***Including investigated geomorphic processes and name(s) of studied catchment geo-system(s)***

Contributing authors (with affiliations)

A list of keywords

Abstract (ca. 200 words)

Introduction (up to 1100 words)

- Which key questions related to the theme *Environmental drivers and rates of contemporary solute and sedimentary fluxes in cold climate catchment geosystems* are addressed in this chapter
- Which denudational surface processes are investigated in this chapter
- Information on the studied catchment(s) including the catchment information requested in the *Call for Catchment Information and Annual Data from SEDIBUD Key Test Sites* (see appendix 2 below)

Methods (up to 1000 words)

- Detailed description of instrumentation, methods and techniques used

Results and discussion (up to 3500 words)

- In addition to presenting and discussing high-resolution geomorphic process data this section should include (as far as available) and discuss annual data which were requested in the *Call for Catchment Information and Annual Data from SEDIBUD Key Test Sites* (see appendix 2 below)

Conclusions (up to 600 words)

- Which are the environmental controls and rates of contemporary denudational surface processes in your catchment geosystem(s)

Acknowledgements (up to 100 words)

References

Number of Figures: up to 6 – 10 (including black and white line illustrations and black and white photos)

(Color images can be made available online on the Cambridge University Press website)

Number of Tables: up to 2

Appendix 2:

Call for Catchment Information and Annual Data from SEDIBUD Key Test Sites

(This Call was sent to SEDIBUD Key Test Site Principal Investigators on November 14, 2011)

Name of SEDIBUD Key Test Site: *Principal Investigator:*	**Period of investigations (years):** **(Hydrological Year (HY) or Calender Year (CY);** **Published Data (PD) or Unpublished Data (UPD))**
Country Region Geographical coordinates	
Elevation range (m a.s.l.)	
Catchment area (km^2)	
Topographic relief (m)	
Topography (short description)	
Lithology	
Glacier cover (%)	

Permafrost (%)	
Areas with bedrock (%) Areas with regolith cover (%)	
Vegetation cover (%) Type of vegetation	
Relevant denudative slope processes Slope – channel coupling (Y / N) If yes, which level of coupling is given	
Storage elements Volumes of different storage elements (m^3)	
Human impact (Y / N) If yes, which type and level of human influence	
Instrumentation and annual field activities	
Mean annual air temperature (ºC)	First year: Second year: Third year: Fourth year: etc.

Total annual precipitation (mm)	First year: Second year: Third year: Fourth year: etc.
Total annual runoff (mm)	First year: Second year: Third year: Fourth year etc.
Annual bedload yield (t km^{-2})	First year: Second year: Third year: Fourth year: etc.
Annual suspended sediment yield (t km^{-2})	First year: Second year: Third year: Fourth year: etc.
Annual solute yield (atmospherically corrected) (t km^{-2})	First year: Second year: Third year: Fourth year: etc.
Rates of relevant denudational slope processes	
References **(Especially if published annual data (PD) are provided)**	

Trondheim, April 4, 2014

Achim A. Beylich
Chair of I.A.G. / A.I.G. SEDIBUD