

Projects:

Source-to-Sink-Fluxes in Cold Environments (NGU, 2004 – 2010)

Holocene Landscape Formation in Cold Environments (NGU, 2008 - 2010)

Project leader:

Achim A. Beylich (NGU)

Focus and main goals:

Quantitative analysis of denudative surface processes and source-to-sink-fluxes / correlations in different cold environment catchments. This includes the analysis of mechanisms, controlling factors and rates of slope and fluvial processes, the analysis of storage elements and the quantification of sediment budgets.

Development of guidelines and protocols for long-term investigations on sediment transfers and sediment budgets in cold environment catchments within the **ESF Network SEDIFLUX** (<http://www.ngu.no/sediflux>) and the **I.A.G./A.I.G. SEDIBUD program** (<http://www.geomorph.org/wg/wgsb.html>):
Development of the **ESF SEDIFLUX Manual** (Beylich & Warburton, 2007) (see below) which is including recommendations, guidelines and protocols for long-term monitoring/investigations on sediment fluxes and sediment budgets in cold environment catchments.



Photo 1: Latnjavagge, Swedish Lapland
(Photo by A.A. Beylich)





Photos 2-4: Erdalen, Norway (Photos by K. Laute)



Photo 5: Hrafnadalur, Eastern Iceland (Photo by A.A. Beylich)



Photo 6: Hrafnadalur, Eastern Iceland (Photo by A.A. Beylich)

The projects ***Source-to-Sink-Fluxes in Cold Environments (NGU)*** and ***Holocene Landscape Formation in Cold Environments (NGU)*** are (since 2004) compiling, continuing and extending research activities which were initially started in 1996 and are focussing on the long-term monitoring and the quantitative and interdisciplinary investigation of sediment transfers, sediment budgets and relief / landscape development in selected cold environment catchments in Iceland (Austdalur and Hrafnadalur), Swedish Lapland (Latnjavagge) Finnish Lapland (Kidisjoki) and Norway (Erdalen). Main goals are the analysis of controlling factors for sediment transfers, sediment budgets, relief development and landscape formation as well as the investigation of human impact and of the impact of projected climate change on sediment transfers and sediment budgets. The Ergodic principle of space-for-time substitution is applied to model the impact of climate change on landscape development as well as the relief development and landscape formation in the different cold environments.

The projects are carried out in collaboration with different geo- and bio-scientific institutions in Norway, Iceland, Sweden, Finland and Germany.

Financial support (since 2004):

NGU and different additional sources in Norway, Iceland, Sweden, Finland and Germany

Publications, including (i) peer-reviewed papers, (ii) relevant other publications and (iii) relevant abstracts (listed are publications since 1999):

Berthling, I., Beylich, A.A. & G. Vatne (2006): Coupling of slope and fluvial sediment transport systems in Vinstradalen, Oppdal. 1st TOPONORGE WORKSHOP, Geological Survey of Norway (NGU), Trondheim, 6.-7. March 2006. *NGF Abstracts and Proceedings of the Geological Society of Norway*, 1: 6-7.

Berthling, I., Fadnes, E., Onsøien, R., Beylich, A.A. & G. Vatne (2006): Sediment fluxes from debris flows, Vinstradalen, Oppdal, Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, 4: 21.

Berthling, I., Fadnes, E., Onsøien, R., Beylich, A.A. & G. Vatne (2006): Sediment fluxes from debris flows, Vinstradalen, Oppdal, Norway. *NGU Report 2006.069*: 21.

Beylich, A. A. (1999a): Hangdenudation und fluviale Prozesse in einem subarktisch-ozeanisch geprägten, permafrostfreien Periglazialgebiet mit pleistozäner Vergletscherung – Prozessgeomorphologische Untersuchungen im Bergland der Austfirdir (Austdalur, Ost-Island). *Berichte aus der Geowissenschaft*. Aachen. 130 pp.

Beylich, A. A. (1999b): Untersuchungen über das Morphoklima in einem subarktisch-ozeanisch geprägten Periglazialgebiet in Ost-Island (Austfirdir, Austdalur). *Hallesches Jahrb. für Geowissenschaften, A*, 21: 51 - 66.

Beylich, A. A. (1999c): Intensität und raumzeitliche Variabilität gravitativer und fluvialer Prozesse im periglazialen Bergland der Austfirdir (Ost-Island). *Norden*, 13: 163 - 180.

Beylich, A. A. (2000a): Untersuchungen zum gravitativen und fluvialen Stofftransfer in einem subarktisch-ozeanisch geprägten, permafrostfreien Periglazialgebiet mit pleistozäner Vergletscherung (Austdalur, Ost-Island). *Zeitschr. Geomorph. N.F., Suppl.-Bd.*, 121: 1 – 22.

Beylich, A. A. (2000b): Hangdenudation und fluviale Prozesse in einem subarktisch-ozeanisch geprägten, permafrostfreien Periglazialgebiet mit pleistozäner Vergletscherung – Prozessgeomorphologische Untersuchungen im Bergland der Austfirðir (Austdalur, Ost-Island). *Hallesches Jahrb. für Geowissenschaften, A*, **22**: 131 - 132 (short communication).

Beylich, A. A. (2000c): Geomorphology, sediment budget, and relief development in Austdalur, Austfirðir, East Iceland. *Arctic, Antarctic, and Alpine Research*, **32**, 4: 466 - 477.

Beylich, A. A. (2000d): Slope denudation and streamwork in the periglacial Austfirðir Mountains – Process geomorphological investigations in a drainage basin in East Iceland. *Iceland 2000: Modern processes and past environments*, Keele University: 13 – 14.

Beylich, A. A. (2000e): Morphoklima und rezente Morphodynamik im periglazialen Bergland der Austfirðir (Austdalur, Ost-Island). *Zeitschr. Geomorph. N.F., Suppl.-Bd.*, **123**: 57 - 78.

Beylich, A. A. (2001a): Slope denudation, streamwork, and relief development in two periglacial environments in East Iceland and Swedish Lapland. *Transactions, Japanese Geomorphological Union*, **22** (4), C-23.

Beylich, A. A. (2001b): Recent morphoclimates and recent geomorphodynamics in periglacial environments in East Iceland, Swedish Lapland, and Finnish Lapland. *Transactions, Japanese Geomorphological Union*, **22** (4), C-24.

Beylich, A. A. (2002): Sediment budgets and relief development in present periglacial environments – a morphosystem analytical approach. *Hallesches Jahrbuch für Geowiss, A*, **24**: 111-126.

Beylich, A.A. (2003): Present morphoclimates and morphodynamics in Latnjavagge, the northern Swedish Lapland and Austdalur, east Iceland. *Jökull*, **52**: 33-54.

Beylich, A.A. (2005): Intensity and spatio-temporal variability of chemical denudation in an arctic-oceanic periglacial drainage basin in northernmost Swedish Lapland. *Nordic Hydrology*, **36** (1): 21-36.

Beylich, A.A. (2005): Sedimentary Source-to-Sink-Fluxes in arctic-oceanic Swedish Lapland – Results from process geomorphological investigations at the landscape level. *European Science Foundation (ESF) Network SEDIFLUX – Sedimentary Source-to-Sink-Fluxes in Cold Environments. Second Workshop, Clermont-Ferrand, France 20 – 22 January, 2005*. Seteun, Clermont-Ferrand: 36-37.

Beylich, A.A. (Ed.) (2006): SEDIFLUX - Sedimentary Source-to-Sink-Fluxes in Cold Environments. First ESF SEDIFLUX Science Meeting, Saudarkrokur, Iceland. *Geomorphology* **80** (1-2). 146 pp.

Beylich, A.A. (2005): Fluvial sediment budgets in four small catchments in Iceland, Swedish Lapland and Finnish Lapland. *Sixth International Conference on Geomorphology. September 7-11, 2005, Zaragoza (Spain). Abstracts Volume: 19.*

Beylich, A.A. (2006): The first science meeting of the European Science Foundation (ESF) network SEDIFLUX – sedimentary source-to-sink fluxes in cold environments. In: Beylich, A.A. (Ed.), SEDIFLUX - Sedimentary Source-to-sink Fluxes in Cold Environments. First ESF SEDIFLUX Science Meeting. Saudarkrokur, Iceland. *Geomorphology* **80** (1-2): 1-2.

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 29th – November 02nd, 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. (2006): Sediment transfers and sediment budgets in five small catchments situated in different cold environments in Iceland, Swedish Lapland, Finnish Lapland and Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**: 22-23.

Beylich, A.A. (2006): Sediment transfers and sediment budgets in five small catchments situated in different cold environments in Iceland, Swedish Lapland, Finnish Lapland and Norway. *NGU Report* **2006.069**: 22-23

Beylich, A.A. (2007): Sediment transfers, sediment budgets and relief development in three catchments in different cold environments in sub-Arctic East Iceland and Arctic Swedish Lapland. *Geophysical Research Abstracts*, Vol. **9**, 02784, 2007.

Beylich, A.A. (2007): The quantitative importance of seasonal snowmelt and rainfall generated peak runoff for annual fluvial sediment budgets in four catchments in Swedish Lapland, Finnish Lapland and Iceland. *Geophysical Research Abstracts*, Vol. **9**, 02728, 2007.

Beylich, A.A. (2007): The quantitative role of chemical weathering, solute fluxes and chemical denudation in four different catchments in Iceland, Swedish Lapland and Finnish Lapland. *Geophysical Research Abstracts*, Vol. **9**, 02742, 2007.

Beylich, A.A. (2007): Quantitative studies on sediment fluxes and sediment budgets in changing cold environments – potential and expected benefit of coordinated data exchange and the unification of methods. *Landform Analysis*, Vol. **5**: 9-10.

Beylich, A.A. (2007): Quantitative studies on mass transfers, sediment budget and relief development in a catchment in Arctic-oceanic northernmost Swedish Lapland. *NGU Report*, **2007.052**: 23.

Beylich, A.A. (2007): Quantitative studies on sediment fluxes and sediment budgets in changing cold environments and the expected benefit from the unification of methods and measuring techniques. *NGU Report*, **2007.052**: 24-25.

Beylich, A.A. (2008): Sediment fluxes and sediment budget in Latnjavagge and the potential of applying unified methods for integrating investigations on sediment fluxes and budgets in cold environment catchments. *Geological Survey of Norway Special Publication*, **11**: 111-130.

Beylich, A.A. (2008): Mass transfers, sediment budget and relief development in the Latnjavagge catchment, Arctic-oceanic Swedish Lapland. *Zeitschrift für Geomorphologie N.F.*, **52** (1): 149-197.

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

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

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

Beylich A.A. (2008): Day 6: Tuesday August 19th Stryn – Erdalen – Stryn: Introduction, Stop 1: Lower Erdalen valley, Stop 2: Upper Erdalen valley. *33rd IGC excursion No 31, August 14-20, 2008: UNESCO FJORDS – From Nærøyfjord to Geirangerfjord*: 61-62.

Beylich, A.A. (2009): Chemical and mechanical fluvial denudation in cold environments – Comparison of denudation rates from three catchments in sub-Arctic Easter Iceland, sub-Arctic Finnish Lapland and Arctic Swedish Lapland. *Jökull* **59**: 19-32.

Beylich, A.A. (2009): Timescales of sediment dynamics, climate and topographic change in mountain landscapes (SedyMONT) – Erdalen and Bødalen site project. *NGF Abstracts and Proceedings, no. 1, 2009*: 8.

Beylich, A.A. (2009): Sediment Budgets in Cold Environments – the SEDIBUD programme. *NGF Abstracts and Proceedings, no. 1*: 8-9..

Beylich, A.A. (2009): Fluvial transport and denudation rates in three small catchments in Eastern Iceland, Finnish Lapland and Swedish Lapland. *Geophysical Research Abstracts, Vol. 11, EGU2009-1415, 2009*.

Beylich, A.A. (2009): Timescales of sediment dynamics, climate and topographic change in mountain landscapes (SedyMONT) – Erdalen and Bødalen site project. *Geophysical Research Abstracts*, Vol. **11**, EGU2009-1337, 2009.

Beylich, A.A. (2009): Sediment sources and fluvial transport during thermally and pluvially generated peak runoff in a glacier-fed mountain catchment in Nordfjord, western Norway. *Geophysical Research Abstracts*, Vol. **11**, EGU2009-1498, 2009.

Beylich, A.A. (2009): Sediment sources and fluvial transport in a glacier-fed mountain catchment in western Norway. *7th International Conference on Geomorphology (ANZIAG). Ancient Landscapes – Modern Perspectives. Conference Abstracts.*

Beylich, A.A. (2009): Timescales of sediment dynamics, climate and topographic change in mountain landscapes (SedyMONT / Norway). *7th International Conference on Geomorphology (ANZIAG). Ancient Landscapes – Modern Perspectives. Conference Abstracts.*

Beylich, A.A. (2009): Timescales of sediment dynamics, climate and topographic change in mountain landscapes (SedyMONT / Norway) – Erdalen and Bødalen site project. *Nordic Geographers Meeting Turku 2009. Turku University Department of Geography Publications B 14: 188.*

Beylich, A.A. (2011): Sediment flux source-to-sink. In: Singh, V.P., Singh, P. & U.K. Haritashya (Eds.), *Encyclopedia of Snow, Ice and Glaciers*. Springer.

Beylich, A.A. (2009): Annual data from SEDIBUD key test sites (five examples). Available online at <http://www.geomorph.org/wg/wgsb.html>.

Beylich, A.A. (2010): Holocene, subrecent and contemporary source-to-sink fluxes in a valley-fjord system, Erdalen and Bødalen site project (SedyMONT-Norway). *Geophysical Research Abstracts*, Vol. **12**, EGU2010-1219, 2010.

Beylich, A.A. (2010): The global SEDIBUD (Sediment Budgets in Cold Environments) Programme: Coordinated studies of sedimentary fluxes and budgets in changing cold climate environments. *The Open Geology Journal* **2010**, **4**: 59-61.

Beylich, A.A. (2011): Mass transfers and sedimentary budgets in geomorphologic drainage basin studies. In: *Advanced Topics in Mass Transfer*, Chapter 18, 399-422. *INTECH Book Publication*.

Beylich, A.A. (2011): Mass transfers, sediment budgets and relief development in cold environments: Results of long-term geomorphologic drainage basin studies in Iceland, Swedish Lapland and Finnish Lapland. *Zeitschrift für Geomorphologie N.F*, **55**, **2**: 145-174.

Beylich, A.A. (2011): Mass transfers, sediment budgets and relief development in four drainage basins in Iceland, Swedish Lapland and Finnish Lapland. *Geophysical Research Abstracts* 13, EGU2011-1031, 2011.

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 (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): 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 (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): Quantitative analysis of sediment budgets in cold environments: The global SEDIBUD programme. *Geophysical Research Abstracts*, Vol. 11, EGU2009-1511, 200.

Beylich, A.A. and the SEDIBUD Team (2009): Sediment budgets in cold environments – The SEDIBUD programme. *Nordic Geographers Meeting, Turku 2009. Department of Geography Publications B 14*: 192.

Beylich, A.A. and the SEDIBUD Team (2010): The global I.A.G./A.I.G. Sediment Budgets in Cold Environments (SEDIBUD) Programme: Coordinated analysis and quantification of sedimentary fluxes and budgets in changing cold environments. *NNV-2010-007, September 2010*: 18-19.

Beylich, A.A., Decaulne, A., Dixon, J.C., Lamoureux, S.F., Orwin, J.F., Otto, J.-Ch., Overeem, I., Sæmundsson, Th., Warburton, J. & Z. Zwolinski (in press): The global I.A.G./A.I.G. Sediment Budgets in Cold Environments (SEDIBUD) Programme: Coordinated efforts to quantify sedimentary fluxes and budgets in changing cold environments. *Zeitschrift für Geomorphologie N.F., Supplementband*.

Beylich, A.A. and the SEDIFLUX Team (2005): SEDIFLUX: A European Science Foundation (ESF) Network. *Sixth International Conference on Geomorphology, September 7-11, 2005, Zaragoza (Spain). Abstracts Volume*: 19.

Beylich, A.A. and the SEDIFLUX Team (2005): The European Science Foundation (ESF) Network SEDIFLUX. *ICARP II, Conference Material (CD)*.

Beylich, A.A. and the SEDIFLUX Team (2006): The European Science Foundation (ESF) Network Sedimentary Source-to-Sink Fluxes in Cold Environments (SEDIFLUX). 1st TOPONORGE WORKSHOP, Geological Survey of Norway (NGU), Trondheim, 6.-7. March 2006. *NGF Abstracts and Proceedings of the Geological Society of Norway*, No. 1: 8.

Beylich, A.A. and the SedyMONT-Norway Team (2009): Timescales of sediment dynamics, climate and topographic change in mountain landscapes – Erdalen and Bødalen site project (SedyMONT – Norway). *NGU Report 2009.050*: 22.

Beylich, A.A. and the SedyMONT-Norway Team (2010): Timescales of sediment dynamics, climate and topographic change in mountain landscapes – Erdalen and Bødalen site project (SedyMONT-Norway): Holocene, subrecent and contemporary source-to-sink fluxes in a valley – fjord system. 29th *Nordic Geological Winter Meeting, Oslo, January 11-13, 2010. NGF Abstracts and Proceedings*, 1: 18.

Beylich, A.A. & F. Brardinoni (Eds) (in review): Mass wasting processes, source-to-sink fluxes, and sedimentary budgets. *Geomorphology, special issue*.

Beylich, A.A., Decaulne, A. & S.F. Lamoureux (Eds) (in review): Sedimentary fluxes and budgets in natural and anthropogenically modified landscapes – Effects of climate change and land-use change on geomorphic processes. *Geomorphology, special issue*.

Beylich, A.A., Densmore, A., Hinderer, M., Molnar, P., Picotti, V., Reiterer, A., Schlunegger, F. & L. Schrott (2010): Timescales of sediment dynamics, climate and topographic change in mountain landscapes and controls on topographic development (SedyMONT). 6th *TOPO-EUROPE Conference, November 4 - 6, 2010, Hønefoss*. Abstracts.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2006): The European Science Foundation (ESF) Network SEDIFLUX – An introduction and overview. In: Beylich, A.A. (Ed.): SEDIFLUX. Sedimentary Source-to-Sink-Fluxes in Cold Environments. *Geomorphology* 80 (1-2): 3-7.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2005): Sedimentary Source-to-Sink-Fluxes in Cold Environments – Information on the European Science Foundation (ESF) Network SEDIFLUX. *Zeitschrift für Geomorphologie N.F., Suppl.-Vol.* 138: 229-234.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2004): Information on the European Science Foundation

(ESF) Network: Sedimentary Source-to-Sink-Fluxes in Cold Environments (SEDIFLUX). *Geophysical Research Abstracts*, **6**, 06798, 2004.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2005): The European Science Foundation (ESF) Network SEDIFLUX: Sedimentary Source-to-Sink-Fluxes in Cold Environments. *NGF Abstracts and Proceedings*, no. 1, 2005: 11-12.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2005): Sedimentary Source-to-Sink-Fluxes in Cold Environments (SEDIFLUX): An interdisciplinary ESF Network. *HeadWater2005*, Conference Papers (CD). Bergen.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2005): The European Science Foundation (ESF) Network SEDIFLUX: Sedimentary Source-to-Sink-Fluxes in Cold Environments (2004 – 2006) – Introduction. *EUCOP II Programme and Abstracts*: 92-93.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2004): The ESF Network SEDIFLUX: “Sedimentary Source-to-Sink-Fluxes in Cold Environments” – an introduction. *Náttúrustofa Norðurlands vestra*. NNV-2004-003. June 2004, 27-28.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Rachold, V., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ., Tweed, F.S. & J. Warburton (2004): The European Science Foundation (ESF) Network SEDIFLUX: Sedimentary Source-to-Sink-Fluxes in Cold Environments. *Seventh Workshop on Land Ocean Interactions in the Russian Arctic, LOIRA project. November 15-18, 2004. P.P. Shirshov Institute of Oceanology of RAS, Russia; World Ocean Problems Commission, Russia; Joint Global Ocean Flux Study (JGOFS)*: 14-15.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Lantuit, H., Russell, A.J., Sæmundsson, Þ., Schmidt, K.-H., Tweed, F.S. & J. Warburton (2006): The European Science Foundation (ESF) Network – Sedimentary Source-to-Sink-Fluxes in Cold Environments- (SEDIFLUX, 2004-2006). *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**: 24-25.

Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Lantuit, H., Russell, A.J., Sæmundsson, Þ., Schmidt, K.-H., Tweed, F.S. & J. Warburton (2006): The European Science Foundation (ESF) Network – Sedimentary Source-to-Sink-Fluxes in Cold Environments- (SEDIFLUX, 2004-2006). *NGU Report 2006.069*: 24-25.

Beylich, A. A. & D. Gintz (2004): Effects of high-magnitude/low-frequency fluvial events generated by intense snowmelt or heavy rainfall in arctic periglacial environments in northern Swedish Lapland and northern Siberia. *Geografiska Annaler*, **86 A** (1): 11-29.

Beylich, A.A. & D. Gintz (2010): Applying biofilm analysis for detecting mobility or stability of gravel bed channel stretches. *Geophysical Research Abstracts*, Vol. **12**, EGU2010-1247, 2010.

Beylich, A.A., Gustavsson, M. & E. Kolstrup (2007): Experimental weathering of selected non-calcareous rock types under wet/moist conditions. *Zeitschrift für Geomorphologie N.F.* **51** (1): 1-26.

Beylich, A.A., Hansen, L., Liermann, S., Gintz, D., Laute, K., Vatne, G., Fredin, O., Burki, V. & I. Berthling (2008): Sediment dynamics and sub-recent sediment budget of the braided sandur system at Sandane, Erdalen (Nordfjord, western Norway). *NGU Report*, **2008.058**: 21.

Beylich, A.A., Hansen, L., Liermann, S., Gintz, D., Laute, K., Vatne, G., Fredin, O., Burki, V., Berthling, I. & K.-H. Schmidt (2008): Sub-recent sediment dynamics and sediment budget of the braided sandur system at Sandane, Erdalen (Nordfjord, Western Norway). *Geophysical Research Abstracts*. Vol. **10**, EGU2008-A-02591, 2008.

Beylich, A.A., Hansen, L., Liermann, S., Gintz, D., Laute, K., Vatne, G., Fredin, O., Burki, V., Berthling, I. & K.-H. Schmidt (2008): Sub-recent development of the braided sandur system at Sandane, sub-Arctic oceanic upper Erdalen (Norway). *33rd International Geological Congress 2008, Oslo, Norway*. Abstracts.

Beylich, A.A. & C. Kneisel (2008): Postglacial sediment budget and relief development in Hrafnadalur, Easter Iceland. *Geophysical Research Abstracts*, Vol. **10**, EGU2008-A-01660, 2008.

Beylich, A.A. & C. Kneisel (2008): Holocene and present-day sediment budget and relief development in Austfiridir (eastern Iceland). *33rd International Geological Congress 2008, Oslo, Norway*. Abstracts.

Beylich, A.A. & C. Kneisel (2009): Sediment budget and relief development in Hrafnadalur, sub-Arctic oceanic eastern Iceland. *Arctic, Antarctic and Alpine Research*, **41(1)**: 3-17.

Beylich, A.A., Kolstrup, E., Linde, N., Pedersen, L.B., Thyrssted, T., Gintz, D. & L. Dynesius (2003): Assessment of chemical denudation rates using hydrological measurements, water chemistry analysis and electromagnetic geophysical data. *Permafrost and Periglacial Processes* **14**: 387-397.

Beylich, A.A., Kolstrup, E., Molau, U., Thyrssted, T., Linde, N., Pedersen, L.B. & D. Gintz (2003): Combining water chemistry and geophysical investigations with assessment of chemical denudation rates in the

Latnjavagge drainage basin, arctic-oceanic Swedish Lapland. *ICOP 2003 Proceedings, Extended Abstracts Reporting Current Research and New Information*: 9-10.

Beylich, A.A., Kolstrup, E., Thyrsted, T. & D. Gintz (2004): Water chemistry and its diversity in relation to local factors in the Latnjavagge drainage basin, arctic-oceanic Swedish Lapland. *Geomorphology*, **58**: 125-143.

Beylich, A.A., Kolstrup, E., Thyrsted, T., Linde, N. & L.B. Pedersen (2004): Assessing chemical denudation rates by combining water chemistry analyses and geophysical investigation in a periglacial environment. *Geophysical Research Abstracts*, **6**, 07477, 2004.

Beylich, A.A., Kolstrup, E., Thyrsted, T., Linde, N. & L.B. Pedersen (2004, April): Assessment of chemical denudation rates in cold environments. – In: Humlum, O. & N. Matsuoka (Eds.), *A Handbook on Periglacial Field Methods*. Web-publication at: www.unis.no.

Beylich, A. A., Kolstrup, E., Thyrsted, T., Linde, N., Pedersen, L. B. & L. Dynesius (2004): Chemical denudation in arctic-alpine Latnjavagge (Swedish Lapland) in relation to regolith as assessed by radio magnetotelluric-geophysical profiles. *Geomorphology*, **57**: 303-319.

Beylich, A.A. & S.F. Lamoureux (2007): SEDIFLUX Manual. First Edition: Prospect. *NGU Report*, **2007.053**: 117.

Beylich, A.A. & S.F. Lamoureux (2009): Fourth SEDIBUD Workshop, Kingston, Canada, 13-16 October 2009. Workshop Report. Available online at <http://www.geomorph.org/wg/wgsb.html>.

Beylich, A.A. & S.F. Lamoureux (Eds.) (2010): Sedimentary Fluxes and Budgets in Changing Cold Environments: Quantitative Analysis and Scaling Issues. *Geografiska Annaler, Special Issue*, **92 A (2)**.

Beylich, A.A. & S.F. Lamoureux (2010): The Third Workshop of the I.A.G./A.I.G. SEDIBUD Programme – Sediment Budgets in Cold Environments: Sediment Fluxes and Sediment Budgets in Changing high-latitude and high-altitude Cold Environments. Editorial. *Geografiska Annaler*, **92 A (2)**: 149-150.

Beylich, A.A. & S.F. Lamoureux (2010): The Global SEDIBUD Programme: Coordinated Study and Quantification of Sedimentary Fluxes and Budgets in Changing Cold Climate Environments. *International Polar Year Oslo Science Conference 2010, Polar Science – Global Impact*, 8-12 June, Oslo. Conference Abstracts.

Beylich, A.A. & S.F. Lamoureux (2010): Coordinated analysis and quantification of sedimentary fluxes and budgets in cold environments: The SEDIBUD Programme. *Geophysical Research Abstracts*, Vol. **12**, EGU2010-1212, 2010.

Beylich, A.A. & S.F. Lamoureux (2011): Sedimentary fluxes and budgets in cold climate environments: The SEDIBUD (Sediment budgets in cold environments) Programme. *Geophysical Research Abstracts* 13, EGU2011-1033, 2011.

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 (2011): Developing frameworks for studies on sedimentary fluxes and budgets in changing cold environments. *Quaestiones Geographicae*, 30(1): 5-18.

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. *Arctic, Antarctic and Alpine Research, Special Issue* 41(1).

Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2009): Sediment budgets in Cold Environments – the SEDIBUD programme. *Arctic, Antarctic and Alpine Research*, **41(1)**: 1-2.

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. *7th International Conference on Geomorphology (ANZIAG). Ancient Landscapes – Modern Perspectives. Conference Abstracts.*

Beylich, A.A., Lamoureux, S.F. & A. Decaulne (Eds.) (2009): Fourth I.A.G./A.I.G. SEDIBUD Workshop, Kingston, Ontario, Canada: Quantitative analysis of sedimentary fluxes and budgets in changing cold climate environments: Scaling issues, new techniques, modelling and data management. *NGU Report 2009.050*. 40pp.

Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2011): The SEDIBUD (Sediment Budgets in Cold Environments) Programme: Overview of ongoing activities and relevant tasks for the coming years. *Sixth SEDIBUD Workshop, Zakopane, Poland. Abstract Volume: 7-9.*

Beylich, A.A., Lamoureux, S.F. & A. Decaulne (in press): The SEDIBUD (Sediment Budgets in Cold Environments) Programme: Ongoing activities and selected key tasks for the coming years. *Geomorphology*.

Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2012): The SEDIBUD (Sediment Budgets in Cold Environments) Programme, ongoing activities and relevant tasks for the coming years. *Nordic Geological Winter Meeting 2012, Reykjavik. Abstracts.*

Beylich, A.A., Lamoureux, S.F. & A. Decaulne (2012): The SEDIBUD (Sediment Budgets in Cold Environments) Programme: Overview of ongoing activities and relevant tasks for the coming years. *IPY Conference 2012, Montreal. Abstracts.*

Beylich, A.A., Lamoureux, S.F., Decaulne, A., Björk, R.G. & F.S. Tweed (2007): Chapter 4 – Selection of critical key test catchments. *NGU Report, 2007.053*: 95-100.

Beylich, A.A., Lamoureux, S.F., Decaulne, A., Dixon, J.C., Orwin, J.F., Otto, J.-C., Overeem, I., Sæmundsson, Th., Warburton, J. & Z. Zwolinski (2009): Sediment Budgets in Cold Environments: The I.A.G./A.I.G. SEDIBUD programme. *NGU Report 2009.050*: 20-21.

Beylich, A.A., Lamoureux, S.F., Decaulne, A., Dixon, J.C., Orwin, J.F., Otto, J.-Ch., Overeem, I., Sæmundsson, Th., Warburton, J. & Z. Zwolinski (2010): Sedimentary fluxes and budgets in changing cold environments: The global I.A.G./A.I.G. Sediment Budgets in Cold Environments (SEDIBUD) Programme. *Geografiska Annaler*, **92 A (2)**: 151-153.

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. Laute (Eds) (2010): Detecting Landscape Change. ESF TOPO-EUROPE Workshop and PhD Summer School, August 31 – September 8, 2010, Loen (Nordfjord), Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **3**. 115pp.

Beylich, A.A. & K. Laute (2010): Field excursions. Study Sites Erdalen & Bødalen. ESF TOPO-EUROPE Workshop and PhD Summer School on Detecting Landscape Change, August 31 – September 8, 2010, Loen (Nordfjord), Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **3**: 101-107.

Beylich, A.A. & K. Laute (2011): Controls and spatio-temporal variability of surface water chemistry and chemical denudation in the fjord landscape of the inner Nordfjord, western Norway. *Sixth SEDIBUD Workshop, Zakopane, Poland. Abstract Volume*: 17-18.

Beylich, A.A. & K. Laute (2011): Rates and spatio-temporal variability of chemical denudation in the fjord landscape of the inner Nordfjord, western Norway. *7th TOPO-EUROPE Workshop, Davos, Switzerland, 6-9 October 2011. Abstracts*.

Beylich, A.A. & K. Laute (in review): Spatial variations of surface water chemistry and chemical denudation in the Erdalen drainage basin, Nordfjord, western Norway. *Geomorphology*.

Beylich, A.A. & K. Laute (in review): Temporal variations of surface water chemistry and chemical denudation in a steep and glacier-fed mountain catchment in western Norway (Erdalen, Nordfjord). *Catena*.

Beylich, A.A., Laute, K. & M. Hassan (2011): Analysing fluvial bedload transport in steep mountain streams by integrating extended field measurements with flume experiments. *Sixth SEDIBUD Workshop, Zakopane, Poland. Abstract Volume*: 19.

Beylich, A.A., Laute, K. & S. Liermann (2010): Monitoring of geomorphic processes and quantitative analysis of mechanical and chemical denudation rates in glacier-fed valley-fjord systems in the inner Nordfjord, western Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **3**: 21-22.

Beylich, A.A., Laute, K. & S. Liermann (2011): Analysis of bedload transport in steep mountain streams: Integrating field measurements with flume experiments. *Geophysical Research Abstracts* 13, EGU2011-3291, 2011.

Beylich, A.A., Laute, K. & S. Liermann (2011): Holocene to contemporary source-to-sink fluxes in a valley-fjord system in western Norway: Erdalen and Bødalen site project (SedyMONT-Norway). *Geophysical Research Abstracts* 13, EGU2011-13777, 2011.

Beylich, A.A., Laute, K., Liermann, S. & the SedyMONT-Norway Team (2010): Timescales of sediment dynamics, climate and topographic change in mountain landscapes (SedyMONT): Erdalen and Bødalen site project (SedyMONT-Norway): Holocene, subrecent and contemporary source-to-sink fluxes in a valley-fjord system. *6th TOPO-EUROPE Conference, November 4-6, 2010, Hønefoss. Abstracts.*

Beylich, A.A., Laute, K., Liermann, S., Hansen, L., Burki, V., Vatne, G., Fredin, O., Gintz, D. & I. Berthling (2009): Subrecent sediment dynamics and sediment budget of the braided sandur system at Sandane, Erdalen (Nordfjord, western Norway). *Norsk Geografisk Tidsskrift – Norwegian Journal of Geography, Special Issue*, **63 (2)**: 123-131.

Beylich, A.A., Liermann, S. & K. Laute (2009): Spatio-temporal variability of sediment sources and fluvial transport in two glacier-fed mountain catchments in Nordfjord, western Norway. *NGU Report 2009.050*: 19.

Beylich, A.A., Liermann, S. & K. Laute (2010): Fluvial transport during thermally and pluvially induced peak runoff events in a glacier-fed mountain catchment in western Norway. *Geografiska Annaler*, **92 A (2)**: 237-246.

Beylich, A.A., Liermann, S. & K. Laute (2010): Mechanical and chemical denudation in two glacier-fed mountain catchments in Nordfjord, western Norway (Erdalen and Bødalen). *Geophysical Research Abstracts*, Vol. **12**, EGU2010-1221, 2010.

Beylich, A.A., Liermann, S. & K. Laute (2010): Spatio-temporal variability of mechanical and chemical denudation rates in glacier-fed valley-fjord systems in the inner Nordfjord, western Norway. *NNV-2010-007*, September 2010: 17.

Beylich, A.A., Liermann, S. & K. Laute (2011): Spatio-temporal variability of chemical and mechanical denudation in glacier-fed mountain catchments in Nordfjord, western Norway. *Geophysical Research Abstracts* 13, EGU2011-1397, 2011.

Beylich, A.A., Lindblad, K. & U. Molau (2005): Direct human impacts on mechanical denudation in an arctic-oceanic periglacial environment in northern Swedish Lapland (Abisko mountain area). *Zeitschrift für Geomorphologie N.F., Suppl.-Vol.* **138**: 81-100.

Beylich, A.A., Lindblad, K., Molau, U., Sandberg, O. & S. Wache (2004): Intensity and spatio-temporal variability of fluvial sediment transfers in arctic-oceanic Latnjavagge, northernmost Swedish Lapland. *Geophysical Research Abstracts*, **6**, 06807, 2004.

Beylich, A.A. & U. Molau (2011): Dynamics and Landscape Formation in Cold Environments: The DYNAFLUX / DYNACOLD Network. *Geophysical Research Abstracts* 13, EGU2011-13761, 2011.

Beylich, A.A., Molau, U. & C. Keskitalo (2006): Dynamics and Landscape Formation in Cold Environments. *NGF Abstracts and Proceedings of the Geological Society of Norway*, 4: 28.

Beylich, A.A., Molau, U. & C. Keskitalo (2006): Dynamics and Landscape Formation in Cold Environments. *NGU Report 2006.069*: 28

Beylich, A.A., Molau, U., Luthbom, K. & D. Gintz (2005): Rates of chemical and mechanical fluvial denudation in an arctic-oceanic periglacial environment, Latnjavagge drainage basin, northernmost Swedish Lapland. *Arctic, Antarctic, and Alpine Research* 37 (1): 75-87.

Beylich, A.A., Molau, U., Sandberg, O., Lindblad, K. & H. Seppä (2004): Integrating sediment budget studies and ecology at the landscape level – results from ongoing monitoring programmes in Latnjavagge, northernmost Swedish Lapland. Náttúrustofa Norðurlands vestra. NNV-2004-003. June 2004, 29-30.

Beylich, A.A. & O. Sandberg (2005): Geomorphic effects of the extreme rainfall event of July 20th-21st, 2004 in the Latnjavagge catchment, northernmost Swedish Lapland. *Geografiska Annaler*, 87 A (3): 409-419.

Beylich, A.A., Sandberg, O., Lindblad, K. & U. Molau (2004): Fluvial sediment transport and denudation in Latnjavagge, arctic-oceanic Swedish Lapland. - Joint International Geomorphology Conference, 18-20 August 2004, Glasgow. Abstract Volume, p46.

Beylich, A.A., Sandberg, O., Molau, U., Lindblad, K. & S. Wache (2004): Sediment sources and spatio-temporal variability of fluvial sediment transfers in arctic-oceanic Latnjavagge, Swedish Lapland. Náttúrustofa Norðurlands vestra. NNV-2004-003. June 2004, 66-67.

Beylich, A.A., Sandberg, O., Molau, U. & S. Wache (2006): Intensity and spatio-temporal variability of fluvial sediment transfers in an arctic-oceanic periglacial environment in northernmost Swedish Lapland. *Geomorphology* 80 (1-2): 114-130.

Beylich, A.A. & K.-H. Schmidt (2005): Water chemistry and solute fluxes in the Kidisjoki catchment, subarctic Finnish Lapland. *European Science Foundation (ESF) Network SEDIFLUX – Sedimentary Source-to-Sink-Fluxes in Cold Environments. Second Workshop, Clermont-Ferrand, France 20 – 22 January, 2005.* Seteun, Clermont-Ferrand: 54.

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., Schmidt, K.-H. & S. Neuvonen (2005): Chemical denudation in a small catchment in subarctic Finnish Lapland. *NFG Abstracts and Proceedings*, no. 1, 2005: 12.

Beylich, A.A., Schmidt, K.-H., Neuvonen, S., Forbrich, I. & A. Schildt (2005): Hydrology, water chemistry and solute fluxes in a small catchment in subarctic Finnish Lapland. *HeadWater2005*, Conference Papers (CD). Bergen.

Beylich, A.A., Schmidt, K.-H., Neuvonen, S., Forbrich, I. & A. Schildt (2006): Solute fluxes in the Kidisjoki catchment, subarctic Finnish Lapland. *Geomorphologie: Relief, Processus, Environment*. No. 3: 205-212.

Beylich, A.A., Sæmundsson, Þ., Decaulne, A. & O. Sandberg (Eds.) (2004) : First Science Meeting of the European Science Foundation ESF – Network SEDIFLUX. Sauðárkrúkur, Iceland, June 18th – 21st, 2004. - Extended Abstracts of Science Meeting Contributions. Náttúrustofa Norðurlands vestra. NNV-2004-003. 103 pp.

Beylich, A.A. & O.M. Sæther (Eds.) (2009): Environmental Fluxes in Polar Regions under Changing Climate. *Norwegian Journal of Geography – Norsk Geografisk Tidsskrift, Special Issue 63(2)*.

Beylich, A.A. & O.M. Sæther (2009): Environmental fluxes in polar regions under changing climate. EDITORIAL. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, **63(2)**: 97.

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.

Beylich, A.A. & Z. Zwolinski (Eds) (in press): Hydrogeomorphological processes in catchment geoecosystems. *Zeitschrift für Geomorphologie N.F., Supplementband*.

Beylich, A.A. & Z. Zwolinski (in press): Preface. *Zeitschrift für Geomorphologie N.F., Supplementband*.

Burki, V., Hansen, L., Fredin, O., Beylich, A.A. & E. Larsen (2008): Little ice age to present glacial sediment evacuation rate of the Bødalsbreen glacier. 33rd *International Geological Congress 2008, Oslo, Norway*. Abstracts.

Burki, V., Hansen, L., Fredin, O., Beylich, A.A. & E. Larsen (2008): Glacier erosion rates since Little Ice Age during advance and retreat of a Norwegian outlet glacier. *Swiss Geoscience Meeting, Lugano 2008. Abstracts*.

Burki, V., Hansen, L., Fredin, O., Andersen, T.A., Beylich, A.A., Jaboyedoff, M., Larsen, E. & J.-F. Tønnesen (2009): Little Ice Age advance and retreat sediment budgets for an outlet glacier in western Norway. *Boreas*, 10.1111/j.1502-3885.2009.00133.x. ISSN 0300-9483

Decaulne, A., Beylich, A.A., Dixon, J.C., Zwolinski, Z., Rachlewicz, G. & M. Strzelecki (2011): 6th SEDIBUD Workshop Report. *IAG/AIG Newsletter* (submitted).

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)*.

Decaulne, A., Eggertsson, Ó., Arbellay, E., Laute, K. & A.A. Beylich (2011): Recent extreme snow-avalanche events tracked through tree-ring analysis – a case study from Western Norway. *Geophysical Research Abstracts*, Vol. 13, EGU2011-1777, 2011.

Decaulne, A., Eggertsson, Ó., Arbellay, E., Laute, K. & A.A. Beylich (2011): Tracking snow-avalanche occurrence by the mean of dendrogeomorphology – some methodological issues from a Norwegian case study. *Sixth SEDIBUD Workshop, Zakopane, Poland. Abstract Volume: 20-23*.

Decaulne, A., Eggertsson, Ó., Laute, K. & A.A. Beylich (2010): Dendrogeomorphology and dendrochronology revealing recent snow-avalanche activity in Upper Nordfjord, western Norway. *WorldDendo Conference, Rovaniemi, Finland. Abstracts*.

Decaulne, A., Eggertsson, O., Laute, K., Sæmundsson, Th. & A.A. Beylich (2012): Avalanche winters as highlighted by dendrogeomorphologic analyses on selected snow-avalanche paths in Northern Iceland and Western Norway. *Nordic Geological Winter Meeting 2012, Reykjavik. Abstracts*.

Decaulne, A., Eggertsson, O., Laute, K., Sæmundsson, Th. & A.A. Beylich & H.P. Jonsson (2010): Addressing frequency and magnitude of recent snow avalanches in Northern Iceland and Western Norway by using dendrogeomorphology. *Geophysical Research Abstracts*, Vol. 12, EGU2010-4262, 2010.

Decaulne, A., Eggertsson, O., Sæmundsson, Th., Laute, K., Beylich, A.A., Pop, O., Defive, E. & S. Larrue (2010): The EuroDendro project – Snow-avalanche and debris-flow frequency in European Middle Mountains unravelled by dendrogeomorphological analyses. *Geophysical Research Abstracts*, Vol. 12, EGU2010-4231, 2010.

Decaulne, A., Eggertsson, O., Sæmundsson, Th., Laute, K., Beylich, A.A., Pop, O., defive, E. & S. Larrue (2010): The Euro-Dendro project –

Snow avalanche and debris flow frequency in European Middle Mountains unravelled by dendrogeomorphological analyses. *WorldDendro Conference, Rovaniemi, Finland. Abstracts.*

Decaulne, A., Sæmundsson, Th., Eggertsson, O., Laute, K., & A.A. Beylich (2009): Using dendrogeomorphology to address frequency and magnitude of recent snow avalanches on colluvial surfaces in cold mountain environments. *NGU Report 2009.050*: 23.

Derron, M.-H. & A.A. Beylich (2006): Chemical denudation in Erdalen (Nordfjord, Norway), first estimations and numerical modelling. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**: 34.

Derron, M.-H. & A.A. Beylich (2006): Chemical denudation in Erdalen (Nordfjord, Norway), first estimations and numerical modelling. *NGU Report 2006.069*: 34.

Fredin, O., Beylich, A.A., Nesje, A., Larsen, E., Jansson, P. & V. Burki (2007): Recycling of glacial and non-glacial sediments during the `Little Ice Age` advance around Jostedalbreen, south central Norway? *NGF Abstracts and Proceedings of the Geological Society of Norway*, **1**: 27-28.

Fredin, O., Burki, V., Hansen, L., Goodfellow, B., Seguinot, J., Larsen, E. & A.A. Beylich (2010): Topographic relief production from a surface process perspective; a matter of differential erosion rates. *29th Nordic Geological Winter Meeting, Oslo, January 11-13 2010. NGF Abstracts and Proceedings*, **1**: 48-49.

Fredin, O., Larsen, E., Lyså, A., Beylich, A.A., Burki, V., Nesje, A., Derron, M.-H., Eilertsen, R. & J.-F. Tønnesen (2008): Sediment budget, processes and landscape evolution in Nordfjord, western Norway. *Geophysical Research Abstracts*, Vol. **10**, EGU2008-A-08464, 2008.

Fredin, O., Larsen, E., Lyså, A., Hansen, L., Beylich, A.A., Burki, V., Nesje, A., Derron, M.-H., Eilertsen, R. & J.-F. Tønnesen (2007): SEDITRANS – a Norwegian fjord valley system; sediment budget, processes and landscape development. *NGU Report, 2007.052*: 33.

Gintz, D., Beylich, A.A., Zippel, B. & K. Laute (2008): Detection of stable and mobile channel units using biofilm analysis in cold environments. *Geophysical Research Abstracts*. Vol. **10**, EGU2008-A-03877, 2008.

Gintz, D., Beylich, A.A., Zippel, B. & K. Laute (2008): Using biofilm analysis in steep bedload mountain streams for detection of stable and mobile channel units – a new approach for analysis of bedload transport. *33rd International Geological Congress 2008, Oslo, Norway, Abstracts.*

Hansen, L., Beylich, A.A., Burki, V., Eilertsen, R., Fredin, O., Larsen, E., Lyså, A., Nesje, A. & J.-F. Tønnesen (2008): Stratigraphic architecture and

infill history of a (de)glaciated bedrock-valley in Stryn, western Norway. 33rd international Geological Congress 2008, Oslo, Norway. Abstracts.

Hansen, L., Beylich, A.A., Burki, V., Eilertsen, R., Fredin, O., Larsen, E., Lyså, A., Nesje, A., Stalsberg, K. & J.-F. Tønnesen (2009): Stratigraphic architecture and infill history of a deglaciated bedrock valley based on georadar, seismic profiling and drilling. *Sedimentology*, **56**: 1751-1773.

Hansen, L., Liermann, S., Laute, K. & A.A. Beylich (2011): Volume estimation of the Bødalen delta, western Norway – a first outline. *Geophysical Research Abstracts* 13, EGU2011-13795, 2011.

Hansen, L., Waldmann, N., Ariztegui, D., Chapron, E., Eilertsen, R., Liermann, S., Laute, K. & A.A. Beylich (2010): Radar structure of a Gilbert-type delta affected by rock-slope failure, Bødalen, Western Norway. 18th International Sedimentology Congress, Mendoza, Argentina, September 26th-October 1st, Abstracts.

Kleemann, D., Beylich, A.A., Zippel, B. & D. Gintz (2009): Biofilm analysis in cold environments: Usage of biofilm for detecting mobile or stabile river channels. *NGU Report 2009.050*: 25.

Kneisel, Ch., Sæmundsson, Þ. & A.A. Beylich (2006): Permafrost environments in central Iceland. *Geophysical Research Abstracts*, **8**: 04226.

Kneisel, Ch., Sæmundsson, Þ. & A.A. Beylich (2007): Reconnaissance surveys of contemporary permafrost environments in central Iceland using geoelectrical methods: implications for permafrost degradation and sediment fluxes. *Geografiska Annaler*, **89 A** (1): 41-50.

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, Volume 88 (52)*, 25 December 2007: 580.

Lamoureux, S.F., Decaulne, A. & A.A. Beylich (2008): SEDIBUD Test Sites: Fact Sheets. 1st Edition, June 2008. ID 3111308, 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.

Lantuit, H., Beylich, A.A. & S.F. Lamoureux (2007): Chapter 5 – Integration and synthesis of cold environment sediment flux data. *NGU Report, 2007.053*: 101-116.

Larsen, E., Beylich, A.A., Bonow, J., Derron, M.-H., Fredin, O., Hättestrand, C., Jansson, K., Kleman, J., Knies, J., Lidmar-Bergström,

K., Stalsberg, K. & A. Stroeven (2006): Relief production in glaciated regions: a case study of the Norwegian Atlantic margin. 1st TOPONORGE WORKSHOP, Geological Survey of Norway (NGU), Trondheim, 6.-7. March, 2006: 22.

Laute, K. & A.A. Beylich (2010): Characteristics of floodplain deposits within a braided sandur system in upper Erdalen (Nordfjord, western Norway). *Geografiska Annaler*, **92 A (2)**: 211-223.

Laute, K. & A.A. Beylich (2010): Geomorphic (de-) coupling of hillslope and channel systems within headwater catchments in two subarctic tributary valleys, Nordfjord, Western Norway. *Geophysical Research Abstracts*, Vol. **12**, EGU2010-1321, 2010.

Laute, K. & A.A. Beylich (2010): Geomorphic influences of the Little Ice Age glacial advance on selected hillslope systems in Nordfjord, Western Norway (Erdalen and Bødalen valleys). *Geophysical Research Abstracts*, Vol. **12**, EGU2010-1320, 2010.

Laute, K. & A.A. Beylich (2010): Influences of the Little Ice Age glacier advance on hillslope development in the headwater areas of two tributary valleys of the Nordfjord, Western Norway. *NNV-2010-007*, September 2010: 32-33.

Laute, K. & A.A. Beylich (2011): Holocene hillslope development in paraglacial tributary valleys in Nordfjord, western Norway. *Geophysical Research Abstracts* 13, EGU2011-182, 2011.

Laute, K., Beylich, A.A. & L. Hansen (2009): Sub-recent erosion and sedimentation within a paraglacial valley system in western Norway (Erdalen, Nordfjord). *NGF Abstracts and Proceedings, no. 1*: 62-63.

Laute, K., Beylich, A.A. & L. Hansen (2009): Sub-recent erosion and sedimentation within a paraglacial tributary catchment of the Nordfjorden valley-fjord system (Erdalen, western Norway). *Geophysical Research Abstracts*, Vol. **11**, EGU2009-1439, 2009.

Laute, K., Beylich, A.A. & L. Hansen (2011): Late Holocene hillslope dynamics in two paraglacial valley systems, western Norway. *Geophysical Research Abstracts* 13, EGU2011-181, 2011.

Laute, K. & A.A. Beylich (2011): Influences of the Little Ice Age glacial advance on hillslope morphometry in valley systems around the Jostedalbreen ice field (western Norway). *Sixth SEDIBUD Workshop, Zakopane, Poland. Abstract Volume*: 37-38.

Laute, K. & A.A. Beylich (2011): Morphometric influences of the Little Ice Age glacial advance on hillslope systems within tributary valleys around the Jostedalbreen ice field (Western Norway). *7th TOPO-EUROPE Workshop, Davos, Switzerland, 6-9 October 2011. Abstracts*.

Laute, K. & Beylich, A.A. (in review): Influences of the Little Ice Age glacial advance on hillslope morphometry and development in paraglacial valley systems around the Jostedalbreen ice field in western Norway. *Geomorphology*.

Laute, K., Beylich, A.A., Hansen, L. & G. Vatne (2010): Postglacial hillslope development in paraglacial tributary catchments (ESF-NFR SedyMONT-Norway Project, SedyMONT, TOPO-EUROPE). *Geophysical Research Abstracts*, Vol. 12, EGU2010-2734, 2010.

Laute, K., Beylich, A.A., Hansen, L. & G. Vatne (2010): Postglacial hillslope development and Holocene to contemporary slope denudation and sediment storage in two paraglacial tributary catchments in Nordfjord, western Norway (Erdalen & Bødalen valleys). *NGF Abstracts and Proceedings of the Geological Society of Norway*, 3: 59-61.

Laute, K., Beylich, A.A., Vatne, G. & L. Hansen (2009): Subrecent erosion and sediment storage quantification within two paraglacial tributary catchments in Nordfjord, western Norway. *7th International Conference on Geomorphology (ANZIAG). Ancient Landscapes – Modern Perspectives. Conference Abstracts*.

Laute, K., Beylich, A.A., Vatne, G. & L. Hansen (2009): Hillslope processes and their variation over time within two tributary catchments in Nordfjord, western Norway. *NGU Report 2009.050*: 27.

Laute, K., Beylich, A.A., Hansen, L. & K.-H. Schmidt (2008): Investigations on sub-recent sedimentation and erosion rates within a braided sandur system in Erdalen (Nordfjord, western Norway). *NGU Report*, 2008.058: 28.

Laute, K., Decaulne, A. & A.A. Beylich (2010): Using dendrogeomorphology and dendrochronology to assess the activity of different hillslope processes in two subarctic tributary valleys, Nordfjord, Western Norway. *Proceedings of the International Conference "Trees & Dynamics", November 15-19, 2010, Clermont-Ferrand, France*. Abstract Volume: 72.

Laute, K., Gintz, D. & A.A. Beylich (2011): SEDIBUD Key Test Site Database. Available online at: <http://www.geomorph.org/wg/wgsb.html>.

Liermann, S. & A.A. Beylich (2011): Holocene to contemporary fluvial sediment fluxes and budgets of two glacier-fed valley-fjord systems in the Nordfjord area, western Norway. *Geophysical Research Abstracts* 13, EGU2011-4874, 2011.

Liermann, S., Beylich, A.A., Rubensdotter, L. & L. Hansen (2010): Holocene to contemporary fluvial sediment budgets in small glacier-fed valley-fjord systems (ESF-NFR SedyMONT-Norway Project, SedyMONT, TOPO-EUROPE). *Geophysical Research Abstracts*, Vol. 12, EGU2010-2820-1, 2010.

Liermann, A.A., Beylich, A.A., Rubensdotter, L. & L. Hansen (2010): Holocene to contemporary fluvial sediment budgets in small glacier-fed valley-fjord systems (ESF-NFR SedyMONT – Norway Project, SedyMONT, TOPO-EUROPE). *6th TOPO-EUROPE Conference, Hønefoss, Norway, Abstracts.*

Liermann, S., Beylich, A.A. & A. van Welden (2011): Contemporary sedimentary processes and suspended sediment transfer in the limited sub-catchment Sætrevatnet in Bødalen, western Norway. *Geophysical Research Abstracts* 13, EGU2011-4989, 2011.

Liermann, S., Beylich, A.A., van Welden, A. & T. Andersen (in review): Contemporary suspended sediment transfer and accumulation processes in the small proglacial Sætrevatnet sub-catchment, Bødalen, western Norway. *Geomorphology.*

Liermann, S., Beylich, A.A., van Welden, A. & S. Lamoureux (2011): Variability of contemporary sediment transfer and sedimentation rates in a small proglacial sub-catchment, Nordfjord area, western Norway. *7th TOPO-EUROPE Workshop, Davos, Switzerland, 6-9 October 2011. Abstracts.*

Liermann, S., Beylich, A.A., van Welden, A., Lamoureux, S. & T. Andersen (2011): Contemporary suspended sediment transfer and sediment process variability of the small proglacial Sætrevatnet segment, Bødalen, western Norway. *Sixth I.A.G./A.I.G. SEDIBUD Workshop, Zakopane, Poland, September 3-11, 2011. Abstract Volume: 39.*

Liermann, S., Beylich, A.A., van Welden, A., Lamoureux, S.F. & L. Rubensdotter (2010): Variability of recent sedimentary processes in lake Sætrevatnet in Bødalen, western Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **3**: 62-63.

Liermann, S., Beylich, A.A., van Welden, A., Lamoureux, S.F. & L. Rubensdotter (2010): Variability of contemporary sedimentation rates in a small proglacial lake, Nordfjord area, Western Norway. *NNV-2010-007*, September 2010: 34.

Liermann, S., Beylich, A.A., Vatne, G., Rubensdotter, L. & L. Hansen (2009): Quantitative analysis of Holocene to contemporary fluvial sediment fluxes and sediment deposition / storage within two glacier-fed tributary catchments in the Nordfjord region, western Norway. *NGU Report 2009.050*: 29.

Liermann, S., Rubensdotter, L. & A.A. Beylich (2010): Variability of contemporary sediment delivery rates within the glacier-fed valley Bødalen in western Norway based on sediment analysis. *Geophysical Research Abstracts*, Vol. **12**, EGU2010-4970, 2010.

Lopez, T., Beylich, A.A. & W. Schenk (2007): Assessment and impact of cultural landscape in a U-shaped valley system in western Norway (Erdalen / Nordfjord). *NGU Report*, **2007.052**: 42.

Orwin, J.F., Lamoureux, S.F., Warburton, J. & A.A. Beylich (2010): A framework for characterizing fluvial sediment fluxes from source to sink in cold environments. *Geografiska Annaler*, **92 A (2)**: 155-176.

Rachlewicz, G., Beylich, A.A. & Z. Zwolinski (Eds) (2011): Sedimentary fluxes dynamics in the changing mountain and polar environment – monitoring, record & consequences. *Working Group on Sediment Budgets in Cold Environments SEDIBUD 6th Workshop, Zakopane – Poland, 3-11 September 2011*. Abstract Volume. 120pp.

Ridefelt, H., Åkerman, J., Beylich, A.A., Boelhouwers, J., Kolstrup, E. & R. Nyberg (2009): 56 years of solifluction measurements in the Abisko Mountains, northern Sweden – analysis of temporal and spatial variations of slow soil surface movement. *Geografiska Annaler* **A91(3)**: 215-232.

Sandberg, O. & A.A. Beylich (2004): Intensity of denudative slope processes in arctic-oceanic Latnjavagge, northernmost Swedish Lapland. *Geophysical Research Abstracts*, **6**, 05935, 2004.

Sandberg, O. & A.A. Beylich (2004): Analysing denudative slope processes by combining process measurements with mapping and dating techniques and a GIS based integration of biological and geomorphological data – first results from Latnjavagge, Swedish Lapland. *Náttúrustofa Norðurlands vestra*. NNV-2004-003. June 2004, 52-53.

Sæmundsson, Þ., Decaulne, A. & A.A. Beylich (Eds) (2010): Qualitative and quantitative analysis of sedimentary fluxes and budgets in changing cold climate environments: Field-based approaches and monitoring. 5th I.A.G./A.I.G. SEDIBUD Workshop Sediment Budgets in Cold Environments, Saudarkrokur, Iceland, September 19th – 25th, 2010. Extended abstract contributions. NNV-2010-007, September 2010. 58pp.

Sæmundsson, Þ., Pétursson, H.G., Kneisel, C. & A.A. Beylich (2007): Monitoring of the Tjarnardalir landslide, in central North Iceland. In: *Proceedings of the First North America Landslide Conference, Vail, Colorado, USA, June 3-9, 2007*: 1029-1040.

Sæther, O.M., Beylich, A.A. & G. Åberg (2007): Strontium isotope systematics in the Oppstryn drainage basin, western Norway. *Landform Analysis*, Vol. **5**: 71.

Sæther, O.M., Beylich, A.A. & G. Åberg (2007): Strontium isotope systematics in the Oppstryn drainage basin, western Norway. *NGU Report*, **2007.052**: 50.

- Sæther, O.M., Beylich, A.A. & G. Åberg (2009):** Strontium isotope systematics and the age of melting ice in the Oppstryn drainage basin, western Norway. *Norsk Geografisk Tidsskrift – Norwegian Journal of Geography* (Research Note), **63(2)**: 132-134.
- Tweed, F.S., Russell, A.J., Warburton, J. & A.A. Beylich (2007):** Chapter 1 – Introduction and background: Sediment fluxes and sediment budgets in changing cold environments – a summary of key issues. *NGU Report*, **2007.053**: 19-36.
- Vatne, G. & A.A. Beylich (2008):** Human induced scour pools in the river Gaula, Central Norway. *NGU Report*, **2008.058**: 35.
- Vatne, G., Beylich, A.A., Fjelstad, K., Johnsen, M., Krogstad, T.S., Gullaksen, O. & S. Østgård (2008):** Scour hollows in the lower parts of the river Gaula, Central Norway. *Geophysical Research Abstracts*. Vol. **10**, EGU2008-A-06886, 2008.
- Vatne, G., Beylich, A.A., Fjelstad, K. & T.S. Krogstad (2008):** Deep river scours – a potential quick-clay slide trigger mechanism induced by human activity. 33rd International Geological Congress, Oslo 2008. Abstracts.
- Vatne, G., Naas, Ø.T., Beylich, A.A. & I. Berthling (2006):** Bed load transport in a steep mountain stream, Vinstradalen, Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**: 69.
- Vatne, G., Naas, Ø.T., Beylich, A.A. & I. Berthling (2006):** Bed load transport in a steep mountain stream, Vinstradalen, Norway. *NGU Report* **2006.069**: 69.
- Vatne, G., Naas, Ø.T., Skarholen, T., Beylich, A.A. & I. Berthling (2008):** Bed load transport in a steep snowmelt-dominated mountain stream as inferred from impact sensors. *Norwegian Journal of Geography-Norsk Geografisk Tidsskrift, special issue* **62(2)**: 66-74.
- Wache, S. & A.A. Beylich (2006):** Investigations on the dynamics and sediment budget of a braided river system in Erdalen, Nordfjord, Western Norway. *NGF Abstracts and Proceedings of the Geological Society of Norway*, **4**: 70.
- Wache, S. & A.A. Beylich (2006):** Investigations on the dynamics and sediment budget of a braided river system in Erdalen, Nordfjord, Western Norway. *NGU Report* **2006.069**: 70.
- Warburton, J., Beylich, A.A., Etienne, S., Etzelmüller, B., Gordeev, V.V., Käyhkö, J., Lantuit, H., Russell, A.J., Schmidt, K.-H., Sæmundsson, Þ. & F.S. Tweed (2007):** Sediment budgets and rates of sediment transfer across cold environments in Europe: introduction and background to the European Science Foundation network `Sedimentary source-to-sink fluxes in cold environments` (SEDIFLUX). *Geografiska Annaler*, **89 A (1)**: 1-3.

Popular and Online, Dissemination:

Ser etter løsning i løsmasser: *forskning.no* (05.mars 2009)

Kartlegger naturlig transport av løsmasser: *ngu.no, Aktuelt* (02. mars 2009)

Gransker vinteren i norske daler: *ngu.no, Aktuelt* (15. mars 2010)

Argusblick på masserørsler: *Forskerforum 8* (2009): Side 24-26

**APECS Working Group on Sediment Budgets in Cold Environments
Virtual Poster Session:** Invited Speaker (presenting the SEDIBUD Programme and ongoing research in Nordfjord (SedyMONT-Norway)) (March 24, 2011, 18:00 GMT) (<http://www.apecs.is>)