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Geologist

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Tasks & Responsibilities

- Head of AWI Research Unit Potsdam
- Elected Member of Scientific Council of AWI
- Group Leader "Limnogeology & Sedimentary Palaeoclimate Records"
- Adjunct Professor at Potsdam University, Institute of Earth and Environmental Science
- Chief Editor of the Journal of the German Society of Polar Research (Polarforschung)
- Reviews for national and international research agencies (DFG, ESF, NSF, NERC)
- Reviews for international journals: Nature, Earth and Planetary Science, Journal of Geophysical Research, Quaternary Research, Paleoceanography, Marine Geology, Palaeogeography Paleoclimatology Palaeoecology, etc.

Panels & Boards

- Member of the directorate of "proWissen Potsdam e.V."
- Vice Chairman of Donor Assembly of the Potsdam Research Network "Pearls"
- Member of the Steering Committee of the geoscientific skills network "Geo.X. Berlin/Brandenburg."
- Member of the Scientific Advisory Board of the German Society of Polar Research

Professional Experience

- Since 2015: Head of AWI Research Unit Potsdam
- Since 2012: Adjunct Professor for Quaternary Geology at Universität Potsdam
- 2003-2011: Associate Professor (Privatdozent) at Universität Potsdam
- Since 2001: Senior Scientist at AWI Potsdam
- 2001: Research Scientist at Universität Bremen

- 1999-2001: DFG-Habilitation Grant, AWI Bremerhaven
- 1997-2001: Lecturer at University Bremen
- 1994-1998: Post-Doc Scientist at AWI Bremerhaven
- 1993-1994: Consultant at Institut für Umwelttechnik e.V., Dormagen
- 1990-1994: Research Assistant and Lecturer at Universität Köln

Academic Career

- 2012: Nomination as adjunct Professor for Quaternary Geology at the University of Potsdam.
- 2005: Nomination as Privatdozent (Equivalent of Associate Professor) at the University of Potsdam.
- 2003: Accomplishment of Habilitation at Universität Bremen, Cumulative Thesis: "Terrigenous Sediment Records of Cainozoic Climate and Environment - Case Studies from the Atlantic Sector of the Southern Ocean".
- 1993: Accomplishment of Doctoral Examination and Dissertation "Paläoklima und glazigene Karoo-Sedimente des späten Paläozoikums in SW-Tansania" at Universität Köln (examination and thesis: „sehr gut“: 1.0).
- 1989: Accomplishment of Diploma Examination and Diploma Thesis "Vergleichende sedimentologische Untersuchungen rezenter, pleistozäner und permokarbonischer Glazial- und Periglazial-Sedimente" at Universität Köln (examination and thesis: „sehr gut“: 1.0).
- 1985: Accomplishment Pre-Diploma Examination, Universität Köln (sehr gut: 1.0)
- 1982-1989: Study of Geology/Palaeontology at Universität Köln (comprising Mineralogy/Petrography, Geography, Chemistry).

Present Position & Responsibilities

Since April 2015, I am head and representative of the Research Unit Potsdam of the Alfred Wegener Institute Helmholtz Center for Polar and Marine Research (AWI). I am responsible for the site-specific AWI issues and I am active in leading positions in regional scientific policy committees and associations. Since 2012, I am adjunct Professor for Quaternary Geology at the University of Potsdam. My professional career brought me from the University of Cologne to the AWI in Bremerhaven, to the University of Bremen, and finally to AWI Potsdam. I have a long-term experience as a geoscientist and have dealt primarily with climate changes of the past in the Alpine area, in East Africa, in the Antarctic Ocean, in Siberia, and in the Tibetan highlands. The work has often been supported within the framework of third-party funding projects. I have participated in more than 20 land and ship expeditions, including 14 campaigns in a leading role. Under my supervision, 35 university graduate theses were supervised (doctorate / master / bachelor). I am reviewer for highly ranked international journals and funding

agencies. During the last and ongoing decade, I often support public-relation and outreach activities for the AWI. My presentations on polar climate change are designed for laymen, ranging from the school class to the senior group, from the journalist seminar to media presence for the interested society. This communication is needed to justify the necessity of science.

Research Focus

- Late Quaternary palaeoenvironment of periglacial regions in East Asia.
- Cenozoic climate and environment of the southern-hemispheric polar to subpolar realm.
- Land-ocean linkages of environmental change.
- Approach: Evaluation of sedimentary climate archives (lake sediments, land forms, marine sediments).

I have a long-lasting research experience and expertise on palaeoclimatic topics, using sedimentological, geochemical/mineralogical, and palaeolimnological approaches. Recent studies deal with late Pleistocene and Holocene environmental changes in Siberia (AWI, DFG), Kamchatka (BMBF, DFG), Bering Sea (BMBF), East China Sea (DFG), the Tibetan Plateau (DFG), and Antarctica (DFG). Support comes from several PhD and Diploma students and guest scientists. The studies are concerned with marine sediment cores, lake-sediment records, and geomorphological indicators. Former studies dealt with detrital sediment fluxes in the Antarctic Ocean, related to ice-sheet dynamics and palaeoceanographic changes during the late Cenozoic and the Quaternary (AWI, DFG), compiled in a Habilitation thesis. My PhD thesis was devoted to fossil glaciolacustrine sediment records of the late Palaeozoic Gondwana glaciation in eastern Africa. The Diploma thesis dealt with Permian and Quaternary deposits in the European Alps.

Teaching

During the last 27 years, I taught students from the geological departments of Cologne University, Bremen University, and, since 2002, of Potsdam University; almost every semester (exception: 1995-1996). During that time, I covered a broad range of subdisciplines with: (1) lectures on Sedimentology, Palaeoclimate and Quaternary Geology, Marine Geology, and Limnogeology; (2) practical courses on the Determination of Minerals and Rocks, Sedimentology and Sediment Petrography, and Coal and Hydrocarbon Exploration; (3) field courses on Geological Mapping in the Dolomites and in Lower Saxony, Germany; and (4) field excursions to Central Germany and Coal Deposits in the Niederheinische Bucht and the Ruhrgebiet. Since the 2010, I am responsible for the Master Module on Palaeoclimate Dynamics.

Research Projects of the last decade

- 2016-2019: Project Leader, Diekmann (BMBF grant 03G0863E): WTZ Central Asia CAME II: Q-TiP - Tipping Points in Lake Systems of the Arid Zone of Central Asia (subproject TP 3)".
- 2016-2019: Principal Investigator: BMBF PALMOD: From the Last Interglacial to the Anthropocene - Modeling a Complete Glacial Cycle, "WP3.2: Paleodata compilation and synthesis."
- 2015-2018: Co-Project Leader, Diekmann (DFG grant DI 655/9-1): "Holocene Environment of far-east Siberia".
- 2011-2014: Co-Project Leader, Diekmann (BMBF grant 03G0814C): WTZ Zentralasien CAME: "QUASI - Supra-regional signal pathways and long-time archives: Quaternary monsoon dynamics at the northern margin of the Tibetan Plateau".
- 2008-2014: Co-Project Leader, Diekmann: Bundle project with FU Berlin and RWTH Aachen (DFG grant DI 655/5-1, -2, -3): "Landscape and Lake System Response to Late Quaternary Monsoon Dynamics on the Tibetan Plateau".
- 2006-2009: Project Leader, Diekmann & Hubberten (BMBF grant 03G0640B): "Limnogeological Reconstruction of late Quaternary Climate and Environment on Kmchatka, Land-Ocean in the Northwest Pacific" (subproject 5 of the German-Russian KALMAR Project).
- 2006-2009: Project Leader, Diekmann (DFG grant DI 655/3-1, -2): "East Antarctic Ice-Sheet dynamics during the late Quaternary inferred from marine sediment records of the Indian sector of the Southern Ocean."

Selected Publications

(full list: <http://epic.awi.de/view/ldapid/bdiekmann.html>)

- Diekmann, B., Pestryakova, L., Nazarova, L., Subetto, D., Tarasov, P.E., Stauch, G., Thiemann, A., Lehmkühl, F., Biskaborn, B.K., Kuhn, G., Henning, D., Müller, S. (2017): Late Quaternary Lake Dynamics in the Verkhoyansk Mountains of Eastern Siberia: Implications for Climate and Glaciation History. - *Polarforschung*, 2016: 86 (2): 97-110, doi:10.2312/polarforschung.86.2.97.
- Biskaborn, B.K., Subetto, D., Savelieva, L.A., Vakhrameeva, P.S., Hansche, A., Herzschuh, U., Klemm, J., Heinecke, L., Pestryakova, L., Meyer, H., Kuhn, G., Diekmann, B. (2016): Late Quaternary vegetation and lake system dynamics in north eastern Siberia: Implications for seasonal climate variability. - *Quaternary Science Reviews*, 147: 406-421, doi: 10.1016/j.quascirev.2015.08.014.
- Borchers, A., Dietze, E., Kuhn, G., Esper, O., Voigt, I., Hartmann, K., Diekmann, B. (2016): Holocene ice dynamics and bottom water formation associated with Cape Darnley polynya activity recorded in Burton Basin, East Antarctica. - *Marine Geophysical Research*, 37: 49-70, doi: 10.1007/s11001-015-9254-z.
- Ramisch, A., Lockot, G., Haberzettl, T., Hartmann, K., Kuhn, G., Lehmkühl, F., Schimpf, S., Schulte, P., Stauch, G., Wang, R., Wünnemann, B., Yan, D., Zhang, Y., Diekmann, B. (2016): A persistent northern boundary of Indian Summer Monsoon precipitation over Central Asia during the Holocene. - *Nature Scientific Reports*, 6: 1-7, doi: 10.1038/srep25791.
- Brooks, S.J., Diekmann, B., Jones, V., Hammarlund, D. (2015): Holocene environmental

- change in Kamchatka: A synopsis. - *Global and Planetary Change*, 134: 166-174, doi:10.1016/j.gloplacha.2015.09.004.
- Hoff, U., Biskaborn, B.K., Dirksen, V., Dirksen, O., Kuhn, G., Meyer, H., Nazarova, L., Roth, A., Diekmann, B. (2015): Holocene environment of Central Kamchatka, Russia: Implications from a multi proxy record of Two Yurts Lake. - *Global and Planetary Change*, 134: 101-117, doi: 10.1016/j.gloplacha.2015.07.011.
- Schleusner, P., Biskaborn, B. K., Kienast, F., Wolter, J., Subetto, D. & Diekmann, B. (2015). Basin evolution and palaeoenvironmental variability of the thermokarst lake El'gene-Kyuele, Arctic Siberia. *Boreas*, 44: 216-229, doi: 10.1111/bor.12084.
- Dirksen, V., Dirksen, O., Diekmann, B. (2013). Holocene vegetation dynamics and climate change in Kamchatka Peninsula, Russian Far East. - *Review of Palaeobotany and Palynology*, 190: 48-65, doi.org/10.1016/j.revpalbo.2012.11.010.
- Nazarova, L., Lüpfer, H., Subetto, D., Pestryakova, L., Diekmann, B. (2013). Holocene climate conditions in central Yakutia (Eastern Siberia) inferred from sediment composition and fossil chironomids of Lake Temje. - *Quaternary International*, 290-291: 264-274, doi/10.1016/j.quaint.2012.11.006.
- Opitz, S., Wünnemann, B., Aichner, B., Dietze, E., Hartmann, K., Herzsuh, U., Ijmker, J., Lehmkuhl, F., Shijie Li, Mischke, S., Plotzki, A., Stauch, G., Diekmann, B. (2012). Late glacial and Holocene development of Lake Donggi Cona, north-eastern Tibetan Plateau, inferred from sedimentological analysis. - *Palaeogeography Palaeoclimatology Palaeoecology*, 337-338: 159-176, doi:10.1016/j.palaeo.2012.04.013.
- Krinner, G., Diekmann, B., Colleoni, F., Stauch, G. (2011). Global, regional and local scale factors determining glaciation extent in Eastern Siberia over the last 140,000 years. - *Quaternary Science Reviews*, 30: 821-831.
- Diekmann, B., Hofmann, J., Henrich, R., Fütterer, D.K., Röhl, U., Wei, K.-Y. (2008). Detrital sediment supply in the southern Okinawa Trough and its relation to sea-level and Kuroshio dynamics during the late Quaternary. - *Marine Geology*, 255(1-2): 83-95, doi:10.1016/j.margeo.2008.08.001.
- Diekmann, B. (2007): Sedimentary Patterns in the Late Quaternary Southern Ocean. - *Deep-Sea Research II*, 54: 2350-2366.
- Diekmann, B. (2004): Palaeoclimate: Message from the Fish Teeth. - *Nature*, 430, 26-27.
- Diekmann, B., Kuhn, G., Gersonde, R. & Mackensen, A. (2004): Middle Eocene to early Miocene environmental changes in the sub-Antarctic Southern Ocean: evidence from biogenic and terrigenous depositional patterns at ODP Site 1090. - *Global and Planetary Change* 40: 295-313.
- Diekmann, B., Fälker, M. & Kuhn, G. (2003). Environmental history of the south-eastern South Atlantic since the Middle Miocene: evidence from the sedimentological records of ODP Sites 1088 and 1092. - *Sedimentology* 50: 511-529.
- Diekmann, B., Kuhn, G., Rachold, V., Abelman, A., Brathauer, U., Fütterer, D. K., Gersonde, R., Grobe, H. (2000). Terrigenous sediment supply in the Scotia Sea (Southern Ocean): response to Late Quaternary ice dynamics in Patagonia and on the Antarctic Peninsula. *Palaeogeography Palaeoclimatology Palaeoecology*, 162(3/4): 357-387.
- Diekmann, B., Kuhn, G. (1999). Provenance and dispersal of glacial-marine surface sediments in the Weddell Sea and adjoining areas, Antarctica: ice-rafting versus current transport. - *Marine Geology*, 158: 209-231.
- Diekmann, B., Wopfner, H. (1996). Petrographic and diagenetic signatures of climatic change in peri- and postglacial Karoo sediments of SW Tanzania. *Palaeogeography Palaeoclimatology Palaeoecology*, 125: 5-25.

PUBLIC RELATION & OUTREACH

At AWI Potsdam, I am concerned with public-relation affairs. My own research was featured in several print media and TV programs. During the last 15 years, I have given about 27 talks to public audience, dealing with my own research and questions on ongoing global warming.

Television, Radio & Print Media (Examples)

- Deutsche Welle TV, "Antarctic Research Station on the Move": Tomorrow Today - The Science Magazine", TV interview with Bernhard Diekmann about ice-sheet destabilization and consequences for research stations in Antarctica, February 3, 2017.
- ZDF: "Deutsche Spuren in Russland", including TV report on geological field work of Bernhard Diekmann and colleagues in Siberia, December 29, 2015.
- RBB Radio1: "Was hat die Arktisforschung mit dem Klimawandel zu tun?" - Radio interview of Thomas Wosch with Bernhard Diekmann on environmental changes in the Arctic, RBB 'Radio1', July, 21, 2014.
- Berliner Zeitung: "Bohrung im Dauerfrost: Forscher des Alfred-Wegener-Instituts für Polar- und Meeresforschung nehmen Bodenproben in der sibirischen Tundra. - Newspaper report on geological field work of Bernhard Diekmann and colleagues in Siberia, May 7, 2014.
- Berliner Zeitung: „Das schwimmende Labor: Seit 25 Jahren kreuzt die Polarstern über die Meere; wenn es sein muss, durchbricht sie dabei auch meterdickes Eis.“ - Newspaper report on geological field work of Bernhard Diekmann and colleagues in the Antarctic Ocean, November 30, 2007.
- Nordsee-Zeitung: „Verräterische Mückenlarven: In den Ablagerungen in Seen steckt ein hervorragendes Klimaarchiv.“ - Newspaper report on scientific work of Bernhard Diekmann in Siberia, June 11, 2007.
- RBB Berlin-Brandenburg, Wissenschaftsmagazin Ozon: „Geheimnisse der Antarktis: Expedition ins Unbekannte.“ - TV report on scientific work of Bernhard Diekmann in the Antarctic Ocean, March 28, 2007.
- RBB Aktuell: „Betreten der Eisfläche verboten, Einbruchgefahr.“ - TV comment of polar researcher Bernhard Diekmann about the risks walking on lake ice in Potsdam, January 30, 2006.

Popular Science • Book Contributions

- Diekmann, B. (2015). Was bedeutet es, wenn ein See umkippt? - In: Nachgefragt! Potsdamer Kinder fragen - Wissenschaftlerinnen und Wissenschaftler antworten, p. 28.
- Grobe, H., Diekmann, B., Hillenbrand, C.D. (2009). The Memory of the Polar Oceans. - In: Hempel, G. (Ed.): Biology of Polar Oceans, pp. 37-45.
- Diekmann, B., Fütterer, D. K., Grobe, H. (2008). Klimabotschaften aus dem Tiefseeschlamm. - In: Fütterer, D.K. & Fahrbach, E. (Eds.): Polarstern: 25 Jahre Forschung in Arktis und Antarktis, Bielefeld, Delius Klasing, pp. 258-264.

Popular Science • Presentations & Panel Talks (Selection)

- "Polare Ozeane im Klimawandel - gestern und heute". - Potsdamer Köpfe im Wissenschaftsjahr Meere und Ozeane, Wissenschaftsetage Potsdam.
- "Klimawandel in der Arktis (Arctic Climate Change)", feature series 'Professoren hautnah' in the Planetarium Cottbus, October 14, 2016.
- "Zwischen Himmel und Eis (Ice and the Sky)" Panel discussion about a film by Luc Jacquet about the life of glaciologist Claude Lorius and global climate change with Bernhard Diekmann, Anders Levermann, and Ernst-Alfred Müller, Filmmuseum Potsdam, March 9, 2016.
- "Die Arktis im Brennpunkt des Klimawandels" - Akademie Zweite Lebenshälfte in Brandenburg, Bildungsforum Potsdam, 26 November 2015.
- "From Science to Policy", Arctic Discussion Series moderated by Bernhard Diekmann with guests Lars-Otto Reiersen, Wilfried Kraus, Josefine Lenz, Albert Einstein Campus Potsdam, June 29, 2015.
- "Expedition in die Tiefsee: Die Erforschung der Meere gestern und heute" - Biosphäre macht Kinder-Wissen, Biosphäre Potsdam, 13. Juni 2014.
- "Welche Ursachen haben Klimaveränderungen? - Journalistenkolleg: Tauchgänge in die Wissenschaft, Leopoldina - Nationale Akademie der Wissenschaften, Robert-Bosch-Stiftung, Bremerhaven/Bremen, 21. November 2013.
- „Klimawandel - Was sagt der Geologe dazu?“ - Schüler-Campus an der Europa-Universität Viadrina, Frankfurt (Oder), 12. März 2009.
- „Stille Wasser sind tief: Klimabotschaften aus polaren Seen.“ - Sonntagsvorlesungen in der Reihe „Potsdamer Köpfe“, Altes Rathaus Potsdam, 14. Oktober 2007.