



Integrated Water Resources Management – Model Region Mongolia –



Publications

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1 Papers

1.1 Journals with Impact Factor (n=47)

AUS DER BEEK, T.; VOSS, F. & FLÖRKE, M. (2011): *Modelling the impact of global change on the hydrological system of the Aral Sea basin*. Physics and Chemistry of the Earth 36(13): 684-694.

AVLYUSH, S.; SCHÄFFER, M. & BORCHARDT, D. (2013): *Life cycles and habitat selection of two sympatric mayflies under extreme continental climate (River Kharaa, Mongolia)*. International Review of Hydrobiology 98(3):141-154.

BATBAYAR, G.; PFEIFFER, M.; VON TÜMPLING, W.; KAPPAS, M. & KARTHE, D. (2017): *Chemical water quality gradients of the sub catchments of the Mongolian Selenga River basin*. Environmental Monitoring and Assessment 189:420. doi:10.1007/s10661-017-6123-z

CHALOV, S.; THORSLUND, J.; KASIMOV, N.S.; NITTRouer, J.; ILIYECHVA, E.; PIETRON, J.; SHINKAREVA, G.; LYCHAGIN, M.; AYBULLATOV D.; KOSITKY A.; TARASOV, M.; AKHTMAN, Y.; GARMAEV, E.; KARTHE D. & JARSJÖ, J. (2016): *The Selenga River delta: a geochemical barrier protecting Lake Baikal waters*. Regional Environmental Change. doi: 10.1007/s10113-016-0996-1

DOMBROWSKY, I.; HAGEMANN, N. & HOUDRET, A. (2014): *The river basin as a new scale for water governance in transition countries? A comparative study of Mongolia and Ukraine*. Environmental Earth Sciences 72(12):4705-4726. doi:10.1007/s12665-014-3308-4

GAWEL, E., SIGEL, K. & BRETSCHNEIDER, W. (2013): *Affordability of Water Supply in Mongolia –Empirical Lessons for Measuring Affordability*. Water Policy 15(2013):19-42.

HARTWIG, M. & BORCHARDT, D. (2014): *Alteration of key hyporheic functions through biological and physical clogging along a nutrient and fine-sediment gradient*. Ecohydrology 8(5):961-975. doi: 10.1002/eco.1571

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HARTWIG, M.; THEURING, P.; RODE, M. & BORCHARDT, D. (2012): *Suspended sediments in the Kharaa River catchment (Mongolia) and its impact on hyporheic zone functions*. Environmental Earth Sciences 65(5):1535-1546_ doi:10.1007/s12665-011-1198-2.

HELDT, S.; RODRIGUEZ, J.C.; DOMBROWSKY, I.; FELD, C. & KARTHE, D. (2017): *Is the EU WFD suitable to support*

IWRM Planning in non-European countries? Lessons Learnt from the Introduction of IWRM and River Basin Management in Mongolia. Environmental Science and Policy 75:27-37.

doi:10.1016/j.envsci.2017.05.009

HOFMANN, J.; HÜRDLER, J.; IBISCH, R.; SCHAEFFER, M. BORCHARDT, D. (2011): ***Analysis of Recent Nutrient Emission Pathways, Resulting Surface Water Quality and Ecological Impacts under Extreme Continental Climate: The Kharaa River Basin (Mongolia).*** International Review of Hydrobiology 96(5):484-519.
10.1002/iroh.201111294

HOFMANN, J.; KARTHE, D.; IBISCH, R.; SCHÄFFER, M.; KAUS, A.; AVLYUSH, S. & HELDT, S. (2015): ***Initial Characterization and Water Quality Assessment of Stream Landscapes in Northern Mongolia and its Integration into a River Basin Management Plan.*** Water 7(7):3166-3205. doi:10.3390/w7073166.

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HOFMANN, J.; WATSON, V. & SCHARAW, B. (2015): ***Groundwater quality under stress: contaminants in the Kharaa River basin (Mongolia).*** Environmental Earth Sciences 73(2), 629-648. doi: 10.1007/s12665-014-3148-2

HORLEMANN, L. & DOMBROWSKY, I. (2012): ***Institutionalising IWRM in developing and transition countries: the case of Mongolia.*** Environmental Earth Sciences 65(5):1547-1559. doi:10.1007/s12665-011-1213-7.

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doi:10.1007/s12665-014-3173-1

KARTHE, D.; ABDULLAEV, I.; BOLDGIV, B.; BORCHARDT, D.; CHALOV, S.; JARSJÖ, J.; LI, L.; NITTRouer, J. (2017): ***Water in Central Asia: an integrated assessment for science-based management.*** Environmental Earth Sciences 76:690. doi:10.1007/s12665-017-6994-x

KARTHE, D.; CHALOV, S. & BORCHARDT, D. (2015): ***Water Resources and Their Management in Central Asia in the Early 21st Century: Status, Challenges and Future Prospects.*** Environmental Earth Sciences 73(2):487-499. DOI :10.1007/s12665-014-3789-1

KARTHE, D.; CHALOV, S.; MOREYDO, V.; PASHKINA, M.; ROMANCHENKO, A.; BATBAYAR, G.; KALUGIN, A.; WESTPHAL, K.; MALSY, M. & FLÖRKE, M. (2017): ***Assessment and Prediction of Runoff, Water and Sediment Quality in the Selenga River Basin aided by a Web-Based Geoservice.*** Water Resources 44(3):399–416.

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KARTHE, D.; HELDT, S.; HOUDRET, A. & BORCHARDT, D. (2015): *IWRM in a country under rapid transition: lessons learnt from the Kharaa River Basin, Mongolia*. Environmental Earth Sciences 73(2):681-695. doi:10.1007/s12665-014-3435-y

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KARTHE, D.; REEH, T.; NIEMANN, S.; SIEGMUND, A. & WALTHER, M. (2016): *Empirical assessment of environmental education in the context of an IWRM concept for Northern Mongolia*. Environmental Earth Sciences 75:1286. doi: 10.1007/s12665-016-6036-0

KASIMOV, N.; KARTHE, D. & CHALOV, S. (2017): *Environmental change in the Selenga River—Lake Baikal Basin*. Regional Environmental Change. doi:10.1007/s10113-017-1201-x

KAUS, A.; BÜTTNER, O.; KARTHE, D.; SCHÄFFER, M. & BORCHARDT, D. (2017): *Movements and behaviour of a potadromous fish (*Brachymystax lenok*, Pallas 1773) in a highly-connected river system (Mongolia)*. Ecology of Freshwater Fish. doi:10.1111/eff.12390

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KHURELBAATAR, G.; SULLIVAN, C.M.; VAN AFFERDEN, M.; RAHMAN, K.Z.; FÜHNER, C.; GEREL, O.; LONDONG, J. & MÜLLER, R.A. (2017): *Application of primary treated wastewater to short rotation coppice of willow and poplar in Mongolia: Influence of plants on treatment performance*. Ecological Engineering 98:82–90. doi:10.1016/j.ecoleng.2016.10.010

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1055. DOI: 10.1002/hyp.10218

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MENZEL, L.; HOFMANN, J. & IBISCH, R. (2011): *Untersuchung von Wasser- und Stoffflüssen als Grundlage für ein Integriertes Wasserressourcen – Management im Kharaa-Einzugsgebiet (Mongolei)*. Hydrologie und Wasserbewirtschaftung 55(2):88-103.

MINDERLEIN, S. & MENZEL, L. (2015): *Evapotranspiration and energy balance dynamics of a semi arid mountainous steppe and shrubland site in northern Mongolia*. Environmental Earth Sciences 73(2):593-609. doi: 10.1007/s12665-014-3335-1.

PFEIFFER, M.; BATBAYAR, G.; HOFMANN, J.; SIEGFRIED, K.; KARTHE, D. & HAHN-TOMER, S. (2015): *Investigating arsenic (As) occurrence and sources in ground, surface, waste and drinking water in northern Mongolia*. Environmental Earth Sciences 73(2):649-662. doi: 10.1007/s12665-013-3029-0.

PRIESS, J.; SCHWEITZER, C.; BATKHISHIG, O.; KOSCHITZKI, T. & WURBS, D. (2015): *Impacts of land-use dynamics on erosion risks and water management in Northern Mongolia*. Environmental Earth Sciences 73(2):697-708. doi: 10.1007/s12665-014-3380-9.

PRIESS, J.; SCHWEITZER, C.; WIMMER, F. et al. (2011): *The consequences of land-use change and water demands in Central Mongolia*. Land Use Policy 28(1):4-10. doi:10.1016/j.landusepol.2010.03.002

ROST, G.; LONDONG, J.; DIETZE, S. & OSOR, G. (2015): *Integrated urban water management - an adapted management approach for planning and implementing urban water management measures – Case study area Darkhan, Kharaa catchment, Mongolia*. Environmental Earth Sciences 73(2):709-718. DOI: 10.1007/s12665-014-3701-z.

SCHARAW, B.; RÖLL, S.; WESTERHOFF, T. et al. (2009): *Simulation und Optimierung eines Trinkwasserversorgungssystems im Rahmen eines IWRM*. at- Automatisierungstechnik 57(12):601-612.

SCHWEITZER, C.; DAS, S. & PRIESS, J.A. (2011): *SITE – a generic land-use modelling framework. Design, features and a case study application*. Environmental Modelling & Software 26(8):1052-1055.

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SIGEL, K.; HAGEMANN, N.; LEIDEL, M.; NIEMANN, S. & WEIGELT, C. (2014): *Insights regarding transdisciplinarity and knowledge transfer gained from two case studies on integrated water resources management in Ukraine and Mongolia*. Interdisciplinary Science Review. DOI: 10.1179/0308018814Z.00000000096

SIGEL, K.; STÄUDEL, J. & LONDONG, J. (2014): *Experiences with stakeholder involvement in strategic sanitation planning: a case study of the city of Darkhan, Mongolia*. Water Science & Technology: Water Supply 14(3):504-512. doi: 10.2166/ws.2014.001

SURENKHORLOO, P. (2009): *Updated species list of stoneflies (Plecoptera) of Mongolia*. Aquatic Insects 31(1):707-720.

THEURING, P.; COLLINS, A.L. & RODE, M. (2015): *Source identification of fine-grained suspended sediment in the Kharaa River basin, northern Mongolia*. Science of the Total Environment 526:77-87.

THEURING, P.; RODE, M.; BEHRENS, S.; KIRCHNER, G. & JHA, A. (2013): *Identification of fluvial sediment sources in a meso-scale catchment, Northern Mongolia*. Hydrological Processes 27(6):845-856, doi: 10.1002/hyp.9684.

1.2 Other Peer-Reviewed Journals (n=10)

CHALOV, S.; KASIMOV, N.; Lychagin, M.; BELOZEROVA, E.; SHINKAREVA, G.; THEURING, P.; ROMANCHENKO, A.; ALEXEEVSKY, N. & GARMAEV, E. (2013): *Water resources assessment of the Selenga – Baikal river system*. GeoÖko 34(1-2):77-102.

CYFFKA, B. & KARTHE, D. (2013): *Water resources and riverine ecosystems in Eastern Central Asia: Management perspectives in the context of multiple stressors*. GeoÖko 34(1-2):3-4.

KARTHE, D.; KASIMOV, N.; CHALOV, S.; SHINKAREVA, G.; MALSY, M.; MENZEL, L.; THEURING, P.; HARTWIG, M.; SCHWEITZER, C.; HOFMANN, J.; PRIESS, J. & Lychagin, M. (2014): *Integrating Multi-Scale Data for the Assessment of Water Availability and Quality in the Kharaa - Orkhon - Selenga River System*. Geography, Environment, Sustainability 3(7):65-86.

KARTHE, D.; LONDONG, J.; REEH, T. & HUFERT, F. (2013): *Wassermanagement in mongolischen Tourist Ger Camps: Status Quo und Herausforderungen*. tw – Zeitschrift für Tourismuswissenschaft 5(2):215-221.

KARTHE, D.; MALSY, M.; KOPP, B.; MINDERLEIN, S. & HÜLSMANN, L. (2013): *Assessing water availability and its drivers in the context of an integrated water resources management (IWRM): a case study from the Kharaa River Basin, Mongolia*. GeoÖko 34(1-2):5-26.

KRÄTZ, D.A.; IBISCH, R.B.; SAULYEGU, A.; GANGANMURUN, E.; SONINKHISHIG, N. & BORCHARDT, D. (2010): *Impacts of Open Placer Gold Mining on Aquatic Communities in Rivers of the Khentii Mountains, North-East*

Mongolia. *Mongolian Journal of Biological Sciences* 8(1):41-50.

MALSY, M.; AUS DER BEEK, T.; EISNER, S. & FLÖRKE, M. (2012): *Climate change impacts on Central Asian water resources.* *Advances in Geosciences* 32:77-83.

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SCHÄFFER, M. (2011): *Illustrated description of a simple methodology for quantifying fine sediment input into river bed substrate.* In: DASHZEVEG, Ts. (2011) (Ed.): *Geocological Issues in Mongolia. Journal of the Geocological Institute of the Mongolian Academy of Science*, pp. 36-40.

WIMMER, F.; SCHLAFFER S.; AUS DER BEEK, T. & MENZEL L. (2009): *Distributed modelling of climate change impacts on snow sublimation in northern Mongolia.* *Advances in Geosciences* 21:117-124.

1.3 Papers in Conference Proceedings (n=26)

AUS DER BEEK, T.; WIMMER, F.; TÖRNROS, T. & MENZEL, L. (2009): *Hydrologische Aspekte des Projektes "Integriertes Wasserressourcen-Management in Zentralasien: Modellregion Mongolei (MoMo).* In: FOHRER, N.; SCHMALZ, B.; HÖRMANN, G. & BIEGER, K. (Hrsg.) (2009): *Hydrologische Systeme im Wandel - Beiträge zum Tag der Hydrologie 2009*, S. 101-107. Hefen: Forum für Hydrologie und Wasserbewirtschaftung.

HOFMANN, J.; RODE, M. & THEURING, P. (2013): *Recent developments in river water quality in a typical Mongolian river basin, the Kharaa case study.* Proceedings of IAHS-IAPSO-IASPEI Assembly, Gothenburg, Sweden, July 2013. IAHS Publication 361, pp. 123-131.

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KARTHE, D. (2014): *Wasser, Landschaft und Mensch in der Mongolei: Entwicklung und Umsetzung eines Integrierten Wasserressourcen-Managements im Kharaa-Einzugsgebiet.* In: СУФКА, В. (2014): *Wasser – Landschaft – Mensch in Vergangenheit, Gegenwart und Zukunft. Beiträge zum Tag der Hydrologie am 20./21. März 2014 an der Katholischen Universität Eichstätt-Ingolstadt*, pp. 71-78. Forum für Hydrologie und Wasserbewirtschaftung, Heft 34.14. Hefen: Fachgemeinschaft Hydrologische Wissenschaften in der DWA.

KARTHE, D.; BORCHARDT, D. & KAUS, A. (2011): *Towards an Integrated Water Resources Management for the Kharaa Catchment, Mongolia.* In: ГУРИНОВИЧ, А.Д. (Hrsg.) (2011): *Proceedings of the IWA 1st Central Asian Regional Young and Senior Water Professionals Conference, Almaty/Kazakhstan*, S. 79-93.

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KARTHE, D.; BORCHARDT, D. & HUFERT, F. (2012): *Implementing IWRM: Experiences from a Central Asian Model Region*. In: PANDYA, A.B. (Hrsg.) (2012): *India Water Week 2012. Water, Energy and Food Security: Call for Solutions*, Part A3, pp. 1-15. Delhi: Ministry of Water Resources, Government of India.

KARTHE, D.; CHALOV, S.; THEURING, P. & BELOZAROVA, E. (2012): *Integration meso- und makroskaliger Ansätze zum Wasserressourcen-Monitoring und Management im Baikal-Selenga-Einzugsgebiet*. In: CHIFFLARD, P.; CYFFKA, B.; KARTHE, D. & WETZEL, K.-F. (Ed.)(2012): *Beiträge zum 44. Jahrestreffen des Arbeitskreises Hydrologie 2012, WasserCluster Lunz am See*, pp. 95-99.

KARTHE, D.; CHALOV, S.; THEURING, P. & BELOZEROVA, E. (2013): *Integration of Meso- and Macroscale Approaches for Water Resources Monitoring and Management in the Baikal-Selenga-Basin*. In: CHIFFLARD, P.; CYFFKA, B.; KARTHE, D. & WETZEL, K.-F. (2013): *Beiträge zum 44. Jahrestreffen des Arbeitskreises Hydrologie*, pp. 90-94. Augsburg: Geographica Augustana.

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MALSY, M.; AUS DER BEEK, T.; EISNER, S.; KYNAST, E. & FLÖRKE, M. (2011) *Vulnerability of Central Asian water resources to climate variability*. In: ГУРИНОВИЧ, А.Д. (Hrsg.) (2011): *Proceedings of the IWA 1st Central Asian Regional Young and Senior Water Professionals Conference, Almaty/Kazakhstan*, pp. 103-114.

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1.4 Other Papers

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BORCHARDT, D. & IBISCH, R. (2009): *Integriertes Wasserressourcen-Management in Zentralasien: Modellregion Mongolei (MoMo)*. In: IBISCH, R. & BORCHARDT, D. (Ed.) (2011): *Integriertes Wasserressourcen-Management: Von der Forschung zur Umsetzung*, pp. 18f. 1st Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

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BORCHARDT, D. & KARTHE, D. (2011): *Integriertes Wasserressourcen-Management in Zentralasien: Modellregion Mongolei (MoMo)*. In: IBISCH, R.; KIRSCHKE, S.; STÄRZ, C. & BORCHARDT, D. (Ed.) (2011): *Integriertes Wasserressourcen-Management: Von der Forschung zur Umsetzung*, pp. 24f. 3rd Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

BORCHARDT, D. & KARTHE, D. (2011): *Integrated Water Resources Management in Central Asia: Model Region Mongolia (MoMo)*. In: IBISCH, R.; KIRSCHKE, S.; STÄRZ, C. & BORCHARDT, D. (Ed.) (2011): *Integrated Water Resources Management: From Research to Implementation*, pp. 24f. 2nd Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

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2 Books

2.1 Books with ISBN (n=5)

AVLYUSH, S. (2011): *Effects of surface gold mining on macroinvertebrate communities. A case study in river systems in the North-East of Mongolia*. Saarbrücken, Germany: Lambert Academic Publishing.

BRUSKI, C. (2015): *Gemeinsame Faulung von Klärschlamm und Fäzes unter extremen klimatischen Bedingungen - Beispiel Mongolei*. Berlin, Germany: Rhombos-Verlag.

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Download: <https://nimbus.igb-berlin.de/index.php/s/3wgXyFSXOzqw6G9>

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KHURELBAATAR, G. (2016): *Development of Soil-Willow-System for wastewater treatment and wood production under the extreme climate conditions of Mongolia*. Berlin, Germany: Rhombos-Verlag.

2.2 Reports

BOCK, F. (2014): *Water Supply, Sanitation and Hygiene in Mongolia - an Institutional Analysis*. Ulaanbaatar: ACF Mongolia.

KARTHE, D. & BORCHARDT, D. (2012): *Integrated Water Resources Management, Model Region Mongolia - Project Profile*. Magdeburg: Helmholtz Centre for Environmental Research.

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2.3 Book Chapters (n=15)

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HOFMANN, J.; TUUL, D. & ENKHTUYA, B. (2016): *Agriculture in Mongolia Under Pressure of Agronomic Nutrient Imbalances and Food Security Demands: A Case Study of Stakeholder Participation for Future Nutrient and Water Resource Management*. In: BORCHARDT, D.; BOGARDI, J. & IBISCH, R. (2016): *Integrated Water Resources Management: Concept, Research and Implementation*, pp. 471-514. Heidelberg, Germany & New York, USA: Springer.

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IBISCH, R.; LEIDEL, M.; NIEMANN, S.; HORNIDGE, A.K. & GOEDERT, R. (2016): *Capacity Development for Integrated Water Resources Management: Lessons Learned from Applied Research Projects*. In: BORCHARDT, D.; BOGARDI, J. & IBISCH, R. (2016): *Integrated Water Resources Management: Concept, Research and Implementation*, pp. 335-376. Heidelberg, Germany & New York, USA: Springer.

KARTHE, D.; CHALOV, S.; KASIMOV, N. & KAPPAS, M. (2015): *Water and Environment in the Selenga-Baikal Basin: International Research Cooperation for an Ecoregion of Global Relevance. Editorial*. In: KARTHE, D.; CHALOV, S.; KASIMOV, N. & KAPPAS, M. (Eds.) (2015): *Water and Environment in the Selenga-Baikal Basin: International Research Cooperation for an Ecoregion of Global Relevance*, pp. 1-13. Stuttgart: ibidem.

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RODE, M.; HARTWIG, M.; WAGENSCHNEIN, D.; KEBEDE, T. & BORCHARDT, D. (2015): *The importance of hyporheic zone processes on ecological functioning and solute transport of streams and rivers*. In: CHICHARO, L.; MÜLLER, F. & FOHRER, N. (2015) (Eds.): *Ecosystem Services and River Basin Ecohydrology*, pp. 57-82. Dordrecht, The Netherlands: Springer Science + Business Media.

TÖRNROS, T. & MENZEL, L. (2010): *Heading for knowledge in a data scarce river basin: Kharaa, Mongolia*. In: HERRMANN, A. & SCHUMANN, S. (Eds.) (2010): *Status and Perspectives of Hydrology in Small Basins*, pp. 270–275. Wallingford: IAHS Publication 336.

WESTPHAL, K.; SULLIVAN, C.; GREGENSEN, P.; KARTHE, D. (2015): *Potential and feasibility of willow vegetation filters in Mongolia*. In: KARTHE, D.; CHALOV, S.; KASIMOV, N. & KAPPAS, M. (Eds.) (2015): *Water and Environment in the Selenga-Baikal Basin: International Research Cooperation for an Ecoregion of Global Relevance*, pp. 301-320. Stuttgart: ibidem.

3 Theses

3.1 Bachelor Theses (n=15)

- BRÜCK, O. (2013): *Hydrologische Modellierung mit HBV-D auf der Grundlage großskaliger Klimamodelldaten des Water and Global Change Project (WATCH) im Einzugsgebiet des Kharaa Gol, Mongolei*. {B.Sc. Thesis; Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}
- DREES, L. (2011): *Abschätzung der durchschnittlichen Erosion im Einzugsgebiet des Kharaa, Mongolei – Einfluss der Auflösung des digitalen Geländemodells*. {B.Sc. Thesis, Institute for Landscape Ecology, WWU Münster; project supervisors: Dr. Jörg Priess und Dr. Christian Schweitzer}
- EVERS, L. (2012): *Die Algorithmen von Entscheidungsprozessen und die Anwendung des Analytisch Hierarchischen Prozesses (AHP) am Beispiel siedlungswasserwirtschaftlicher Maßnahmen*. {B.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}
- GRÖNING, J. (2016): *Untersuchung der Vegetation und Ufererosion in der Flussaue des Kharaa Gol (Mongolei) mittels aktueller hochauflösender Luftbilder von Kleindrohnen als konzeptioneller Beitrag für ein ökologisches Auenmonitoring*. {B.Sc. Thesis, Department of Geography, FU Berlin; project supervisor: PD Dr. Jürgen Hofmann}
- HELDT, E. (2012): *UN Menschenrecht auf sauberes Trinkwasser und Sanitärversorgung – Eine Herausforderung für die Siedlungswasserwirtschaft*. {B.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}
- JOSSA, P. (2011): *Aufbau und Betrieb einer häuslichen Toilettenanlage mit Stoffstromtrennung als zentraler Bestandteil eines integrativen Sanitärsystems für Jurten-Siedlungen in der Stadt Darkhan, nördliche Mongolei*. {B.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}
- MEWES, B. (2012): *Simulation der Schneebedeckung im Kharaa-Einzugsgebiet (Mongolei) mit Hilfe des hydrologisch-klimatologischen TRAIN-Modells*. {B.Sc. Thesis, Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}
- PAMLER, A. (2016): *Evaluierung und exemplarische Auswertung der bisher verfügbaren Fernerkundungsdaten in der Google Earth Engine oder anderer Quellen für Monitoringaufgaben in der Mongolei*. {B.Eng. Thesis, Faculty of Spatial Information, HTW Dresden; project supervisor: Prof. Dr. Martin Oczipka}
- PLATZ, C. (2017): *Kombinierte Prozessierung von Luftbilddaten und terrestrischen Bilddaten zu*

Orthobildmosaiken und 3D-Modellen zur Visualisierung im Internet und für die GIS Auswertung.

{Bachelor thesis, Faculty of Spatial Information, HTW Dresden; project supervisors: Prof. Dr. Martin Oczipka, Prof. Dr. Volker Gerbeth}

RIECHMANN, M. (2013). ***Identifikation und Beschreibung der Kernelemente eines funktionalen Designs eines leitungsungebundenen, stoffstrombasierten Sanitärsystems anhand der iPIT®.*** {B.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}

SCHWEMMLE, R. (2015): ***Abflussentwicklung im oberen Einzugsgebiet des Tuul (Mongolei).*** {B.Sc. Thesis, Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

STÖCKIGT, B. (2017): ***Vergleichende Untersuchung von UAV-Befliegungen in Flußauen in der Mongolei für das Umweltmonitoring unter besonderer Berücksichtigung von 3D-Modellen.*** {Bachelor thesis, Faculty of Spatial Information, HTW Dresden; project supervisors: Prof. Dr. Martin Oczipka, Prof. Dr. Ulrich Walz}

WENZEL, F. (2014): ***Temperaturentwicklung in Zentralasien. Analyse ausgewählter Meßstationen von 1950 bis 2010.*** {B.Sc. Thesis; Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

ZIERGÖBEL, R. (2012): ***Analyse und Vergleich von Klimadaten verschiedener meteorologischer Stationen aus dem Flusseinzugsgebiet des Kharaa (Mongolei).*** {B.Sc. Thesis, Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

ZIPFEL, M. (2012): ***Bedeutung von Salz für die Bodennutzung und Urindüngung.*** {B.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}

3.2 Master Theses (n=26)

BATBAYAR, G. (2012): ***Arsenic Content in Water Samples of Mongolia: Using an Arsolux Test Kit Based on Bioreporter.*** {M.Sc. Thesis, Institute of Geography, National University of Mongolia; project advisors: Martin Pfeiffer, Konrad Siegfried, Daniel Karthe}.

BEHRENS, S. (2011): ***Modellierung des Schwebstoffaustrags in einem mesoskaligen Einzugsgebiet in der Mongolei.*** {Diploma Thesis; Institute Geosciences and Geography, Halle University; project supervisor: Dr. Michael Rode}

BERNER, S. (2007): ***Hydromorphologische Untersuchungen an einem Fließgewässer im Norden der Mongolei (Kharaa-Einzugsgebiet): Grundlagenerarbeitung für die Interpretation biologischer Daten.*** {Diploma Thesis; Center for Environmental Systems Research, Kassel University; project supervisor: Dr. Michael Rode}

BOCK, F. (2015): *Analysing Institutions for Water Supply and Sanitation Services in Ulan Bator, Mongolia – A New Institutional Economics Perspective*. {Master Thesis; Institute of Infrastructure and Resources Management, Leipzig University; project supervisor: Dr. Katja Sigel}

ENDERS, M. (2016): *Google Earth Engine – ein Cloud basiertes Werkzeug für die Fernerkundung : Prüfung und Test hinsichtlich der Eignung für Umweltanalysen*. {M.Eng. Thesis, Faculty of Spatial Information, HTW Dresden; project supervisors: Prof. Dr. Martin Oczipka, PD Dr. Jürgen Hofmann}

FLÖRL, M. (2017): *Verbreitung der Auengehölze am Fluss Kharaa: Eine Fernerkundungsstudie mit Sentinel-2 Daten*. {Master Thesis; Department of Geography, Göttingen University; project supervisor: Dr. Daniel Karthe}

GRAU, M. (2011): *Co-Vergärung von Klärschlamm und Fäzes aus Trockentrenntoiletten*. {M.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}

HEINEN, M. (2012): *Modellierung der Auswirkungen von Landnutzungsänderungen auf die Wasserressourcen der Mongolei im Zeitraum 1971-2100, mit Hilfe WaterGAP3*. {Diploma Thesis, University of Bonn; project supervisors: Dr. Tim aus der Beek and Marcus Malsy}

HELDT, S. (2014): *The EU-WFD as an Implementation Tool for IWRM in non-European Countries. Case Study: Drafting a River Basin Management Plan for the Kharaa River in Northern Mongolia*. {Master Thesis, University of Duisburg-Essen and University Nijmegen; project supervisor: Daniel Karthe}

HEPPELER, J. (2012): *Optimization of the operation of a Sequencing Batch Reactor on the example of the pilot wastewater treatment plant in Darkhan, Mongolia*. {Master Thesis, Stuttgart University; project supervisor: Dr.-Ing. Buren Scharaw}

HOSER, S. (2016): *Landnutzungsklassifizierung in Flussauen des Kharaa-River-Basins, Mongolei mit dem Schwerpunkt Daten und Software der ESA Copernicus Mission*. {M.Eng. Thesis, Faculty of Spatial Information, HTW Dresden; project supervisors: Prof. Dr. Martin Oczipka, PD Dr. Jürgen Hofmann}

HÜLSMANN, L. (2012): *Process-based Hydrological Modeling using SWAT: The Effect of Subarctic Conditions on Water Resources in the Large-Scale River Catchment Kharaa, Mongolia*. {M.Sc. Thesis, Institute of Geology, Göttingen University; project supervisors: Dr. Daniel Karthe, Dr. Jörg Priess and Dr. Christian Schweitzer}

KÖRNER, A. (2011): *Schneehydrologische Prozesse in der Mongolei. Eine explorative Studie zur Anwendbarkeit des Simulationsmodells TRAIN*. {Diploma Thesis; Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

KÖSER-UNRUH, O. (2014): *Fernerkundliches Monitoring von Flussauen in der Mongolei auf Basis von Landsat-, ASTER- und RapidEye-Daten*. {Diploma Thesis, Faculty of Spatial Information, HTW Dresden;}

project supervisor: Prof. Dr. Martin Oczipka}

LOHMEYER, T. (2017): *Kartierung der Landbedeckung im Selenga-Baikal Einzugsgebiet auf Basis multitemporaler Proba-V Aufnahmen*. {Master Thesis; Department of Geography, Göttingen University; project supervisor: Dr. Daniel Karthe}

MÜLLER-MEISSNER, M. (2011): *Veränderung des Wasserhaushaltes nach Brand in der Taiga im Westkhentej, Nordmongolei: Charakterisierung hydroklimatischer Standortparameter sowie Analyse des Blattflächenindex durch Fernerkundung (MODIS)*. {Diploma Thesis; Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

MUNKHSETSEG, Z. (2008): *Hydrological modelling in the Kharaa basin, north-eastern Mongolia*. {M.Sc. Thesis; National University of Mongolia / Center for Environmental Systems Research, Kassel University; project supervisor: Prof. Lucas Menzel}

OKURDIL, J. (2011): *Untersuchung des Forstbestandes in der Mongolei. Exkurs: Brandbekämpfung mithilfe von MODIS als Modell der Fernerkundung*. {Thesis for the First State Examination, Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

PAILLIART, B. (2011): *Räumliche und zeitliche Variabilität der Schneebedeckung im Einzugsgebiet des Kharaa (Mongolei). Eine Untersuchung der Winter 2000/2001 bis 2009/2010 mit MODIS-Schneeprodukten*. {Diploma Thesis, Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

POSTELT, T. (2013): *Förderung der Umweltbildung mongolischer Jugendlicher – Bewertung der Bildungsmaßnahme im Rahmen des Projektes Integrated Water Resources Management Model Region Mongolia (MoMo)*. {M.Ed. Thesis; University of Education, Heidelberg; project supervisor: Prof. Dr. Dr. h.c. Michael Walther}

SCHLÜTER, J. (2013): *Qualitative Evaluation des Umweltbildungsprojektes „Schulnetzwerk Kharaa: Schulen für einen lebendigen Fluss“. Ein Vergleich von Schülervorstellungen und wissenschaftlichen Konzepten des Integrierten Wasserressourcen-Managements (IWRM) zur didaktischen Rekonstruktion der Wasserproblematik in der Mongolei*. {Master Thesis, Department of Geography, Göttingen University; project supervisors: Prof. Dr. Michael Walther and Dr. Steffen Niemann}

SCHUSTER, C. (2012): *Technische Entwicklung und ökonomischer Vergleich angepasster, leitungsungebundener Sanitärsysteme mit integrierter Abfallentsorgung für Jurten-Siedlungen in der Stadt Darkhan, Mongolei*. {M.Eng. Thesis, Department Urban Water Management, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}

SUNJIDMAA, N. (2018): *Turbidity dynamics during storm events in a Mongolian River with a high environmental gradient (A case study of Kharaa River Basin, Mongolia)*. {M.Sc. Thesis, Institute of Hydrobiology, Technical University Dresden; Project supervisors: Prof. Dr. Dietrich Borchardt; Dr. Dr.h.c. Martin Pfeiffer; Project advisor: Katja Westphal}

UNGER, J. (2013): *Institutional Analysis of the Urban Drinking Water Supply and Sanitation Services in Ukraine and Mongolia – a cooperative study*. {Master thesis, Humboldt-Universität zu Berlin, Faculty of Agriculture and Horticulture; project supervisor: Dr. Katja Sigel}

WESTPHAL, K. (2013): *Scenario development of a large-scale willow based wastewater treatment for the village of Khongor in Mongolia with special focus on design and dimensioning*. {M.Sc. Thesis, Brandenburg University of Technology Cottbus, Faculty of Environmental Sciences and Process Engineering; project supervisors: Chris Sullivan, Dr. Manfred van Afferden}

WITHANACHCHI, S.S. (2013): *An analysis of politics of scale in water governance and management in Mongolia*. {M.A. Thesis, Kassel University; project supervisor: Dr. Annabelle Houdret}

3.3 Doctoral Theses (n=11)

AUS DER BEEK, T. (2011): *Large scale modelling of irrigation water use and its impact on water resources*. {Dissertation, Department of Geography, Heidelberg University; project supervisors: Prof. Dr. Lucas Menzel and Prof. Dr. Dietrich Borchardt}

AVLYUSH, S. (2013): *Life cycle and secondary production of Ephemeroptera, Plecoptera and Trichoptera (Insecta) under an extreme continental climate (River Kharaa, Mongolia)*. {Dissertation, Department for Hydrosociences, Technical University Dresden; project supervisor: Prof. Dr. Dietrich Borchardt}

BRUSKI, C. (2015): *Gemeinsame Faulung von Klärschlamm und Fäzes unter extremen klimatischen Bedingungen - Beispiel Mongolei*. {Dissertation, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}

HARTWIG, M. (2016): *Impact of fine sediment and nutrient input on the hydroheic functionality: A case study in Northern Mongolia*. {Dissertation, Department for Hydrosociences, Technical University Dresden; project supervisor: Prof. Dr. Dietrich Borchardt}

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3.4 Habilitation Theses (n=1)

KARTHE, D. (2017): *Water in Central Asian Drylands: Major Challenges, Recent Developments and Management Options*. {Habilitation thesis, Institute of Geography, Göttingen University}.