



# Integrated Water Resources Management – Model Region Mongolia –



## *Publications*

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# 1 Papers

## 1.1 Journals with Impact Factor (n=45)

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 TÜMLING, 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.; ILIYECHeva, 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

HARTWIG, M.; SCHÄFFER, M.; THEURING, P.; AVLYUSH, S.; RODE, M. & BORCHARDT, D. (2016): **Cause-effect-response chains linking source identification of eroded sediments, loss of aquatic ecosystem integrity and management options in a steppe river catchment (Kharaa, Mongolia).** Environmental Earth Sciences 75:855. doi:10.1007/s12665-015-5092-1

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.

HOFMANN, J.; VENOHR, M.; BEHRENDT, H. & OPITZ, D. (2010): **Integrated Water Resources Management in Central Asia: Nutrient and heavy metal emissions and their relevance for the Kharaa River Basin, Mongolia.** Water Science and Technology 62(2):353-363.

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.

HOUDRET, A.; DOMBROWSKY, I. & HORLEMANN, L. (2013) **The institutionalization of river basin management as politics of scale - insights from Mongolia.** Journal of Hydrology 519(C): 2392–2404. doi:10.1016/j.jhydrol.2013.11.037

HÜLSMANN, L.; GEYER, T.; SCHWEITZER, C.; PRIESS, J. & KARTHE, D. (2015): **The Effect of Subarctic Conditions on Water Resources: Initial Results and Limitations of the SWAT Model applied to the Kharaa River Catchment in Northern Mongolia.** Environmental Earth Sciences 73(2):581-592. doi:10.1007/s12665-014-3173-1

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. doi:10.1134/S0097807817030113

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

KARTHE, D.; HOFMANN, J.; IBISCH, R.; HELDT, S.; WESTPHAL, K.; MENZEL, L.; AVLYUSH, S. & MALSY, M. (2015): **Science-Based IWRM Implementation in a Data-Scarce Central Asian Region: Experiences from a Research and Development Project in the Kharaa River Basin, Mongolia.** Water 7(7): 3486-3514. doi:10.3390/w7073486

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.; SCHÄFFER, M.; BALBAR, G.; SURENKHORLOO, P. & BORCHARDT, D. (2016): **Seasonal home range shifts of the Siberian taimen (*Hucho taimen Pallas 1773*): Evidence from passive acoustic telemetry in the Onon River and Balj tributary (Amur River basin, Mongolia).** International Review of Hydrobiology 101:1-13. doi: 10.1002/iroh.201601852

KAUS, A.; SCHÄFFER, M.; KARTHE, D.; BÜTTNER, O.; VON TÜMPLING, W.; BORCHARDT, D. (2016): **Regional patterns of heavy metal concentrations in water, sediment and five consumed fish species of the Kharaa River basin, Mongolia.** Regional Environmental Change. doi:10.1007/s10113-016-0969-4

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

KOPP, B.; LANGE, J. & MENZEL, L. (2016): **Effects of wildfire on runoff generating processes in northern Mongolia.** Regional Environmental Change. doi:10.1007/s10113-016-0962-y

KOPP, B.J.; MINDERLEIN, S. & MENZEL, L. (2014): **Soil moisture dynamics in a mountainous headwater area in the discontinuous permafrost zone of northern Mongolia.** Arctic, Antarctic and Alpine Research 46(2):459-470.

LANGE, J.; KOPP, B.J.; BENTS, M. & MENZEL, L. (2015): **Tracing variability of runoff generation in mountainous permafrost of semi-arid northeastern Mongolia.** Hydrological Processes 29(6):1046–1055. DOI: 10.1002/hyp.10218

MALSY, M.; AUS DER BEEK, T.; FLÖRKE, M. (2015): **Evaluation of large-scale precipitation data sets for water resources modelling in Central Asia.** Environmental Earth Sciences 73(2):787-799. doi 10.1007/s12665-014-3107-y

MALSY, M.; FLÖRKE, M. & BORCHARDT, D. (2016): **What drives the water quality changes in the Selenga Basin: climate change or socio-economic development?** Regional Environmental Change. doi: 10.1007/s10113-016-1005-4

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.

SIGEL, K.; ALTANTUUL, K. & BASANDORJ, D. (2012): **Household needs and demand for improved water supply and sanitation in peri-urban ger areas: The case of Darkhan, Mongolia**. Environmental Earth Sciences 65(5):1561-1566.

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.

MALSY, M.; HEINEN, M.; AUS DER BEEK, T. & FLÖRKE, M. (2013): **Water resources and socio-economic development in a water scarce region on the example of Mongolia.** *GeoÖko* 34(1-2):27-49.

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. Hennef: 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.

HOUDRET, A.; SCHWEITZER, C. & PRIESS, J. (2012): **IWRM in Mongolia: caught between national aspirations and local realities.** In: STREUSLOFF, H. (Ed.) (2012): **IWRM Karlsruhe 2012 Conference Proceedings: Interactions of Water with Energy and Materials in Urban Areas and Agriculture**, pp. 72-79. München: Fraunhofer Verlag.

KARTHE, D. (2014): **Wasser, Landschaft und Mensch in der Mongolei: Entwicklung und Umsetzung eines Integrierten Wasserressourcen-Managements im Kharaa-Einzugsgebiet.** In: CYFFKA, B. (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. Hennef: 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.

KARTHE, D.; BORCHARDT, D. & KAUS, A. (2011): **Towards an Integrated Water Resources**

**Management for the Kharaa Catchment, Mongolia.** In: DARKHAN AGRICULTURAL UNIVERSITY (2011): **Climate Change and Water Management.** International Conference, Darkhan, S. 85-98.

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.

KARTHE, D.; THEURING, P.; BORCHARDT, D. & HUFERT, F. (2012): **An Integrated Water Monitoring Concept Designed for a Multi-Stressor Environment: Experiences from the Kharaa River Basin, Mongolia.** In: TSERASHCHUK, M. (Ed.) (2012): **Proceedings of the IWA Young and Senior Water Professionals Conference St Petersburg 2012 Part I**, pp. 40-48.

KAUS, A.; KARTHE, D. & BORCHARDT, D. (2011): **Incorporating fish ecology into water resources management: Current research in Northern Mongolia.** In: ГУРИНОВИЧ, А.Д. (Hrsg.) (2011): **Proceedings of the IWA 1st Central Asian Regional Young and Senior Water Professionals Conference, Almaty/Kazakhstan**, S. 94-102.

KRÄTZ, D.; IBISCH, R.B.; SONINKHISHIG, N.; SAULYEGUL, A.; GANGANMURUN, E. & BORCHARDT, D. (2008): **Gold-Tagebau und der Einfluss multipler Stressoren auf aquatische Lebensgemeinschaften in Fließgewässern der Mongolei.** In: DEUTSCHE GESELLSCHAFT FÜR LIMNOLOGIE (Hrsg.) (2008): **Tagungsband Konstanz 2008**, pp. 293-297. Krefeld: Eigenverlag der DGL.

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.

MALSY, M.; AUS DER BEEK, T. & FLÖRKE, M. (2013): **Global change impacts on Mongolian water resources.** In: CHIFFLARD, P.; CYFFKA, B.; KARTHE, D. & WETZEL, K.-F. (2013): **Beiträge zum 44. Jahrestreffen des Arbeitskreises Hydrologie**, pp. 95-98. Augsburg: Geographica Augustana.

MENZEL, L.; AUS DER BEEK, T.; TÖRNROS, T.; WIMMER, F. & GOMBOO, D. (2008): **Hydrological impact of climate and land-use change – results from the MoMo project.** In:

BASANDORJ, B. & OYUNBAATAR, D. (Ed.) (2008): **International Conference "Uncertainties in water resource management: causes, technologies and consequences"**, pp. 13-18. Jakarta: IHP Technical Documents in Hydrology No. 1.

PRIESS, J.; SCHWARZ, N. & LAUTENBACH, S. (2010): **Feedbacks in socio-environmental land systems**. In: SWAYNE, D.A.; WANHONG, Y; VOINOV, A. et al. (2010): **Proceedings of the International Environmental Modelling and Software Society (iEMSS) 2010 International Congress on Environmental Modelling and Software Modelling for Environment's Sake**. Online: <http://www.iemss.org/iemss2010/proceedings.html>

RÖLL, S.; HOPFGARTEN, S. & LI, P. (2010): **Ground Water Modelling within an Integrated Water Resources Management**. In: SCHNEIDER, A. & HAUEISEN, J. (2010): **Proceedings of the 55th International Scientific Colloquium "Crossing Borders within the ABC – Automation, Biomedical Engineering and Computer Science"**, pp. 68-72. Ilmenau: Technische Universität Ilmenau.

ROST, G.; LONDONG, J. (2013): **Development of a toolbox-model for integrated urban water management – case study area Darkhan, Kharaa catchment, Mongolia**. In: BAYRAKTAR, E.; EROGLU, V.; TOPBAS, K. (Ed.) (2013): **Proceedings of the 3W Istanbul'2013. International Solid Waste, Water and Wastewater Congress, Istanbul/Turkey**, pp. 1463-1471.

SCHÄFFER, M.; IBISCH, R. & BORCHARDT, D. (2008): **Invertebrate Lebensgemeinschaften als Indikatoren für Landnutzungseffekte im Norden der Mongolei**. In: DEUTSCHE GESELLSCHAFT FÜR LIMNOLOGIE (=DGL) (2009): **Erweiterte Zusammenfassungen der Jahrestagung 2008 (Konstanz), Hardeggen 2009**, pp. 308-312. Krefeld: Eigenverlag der DGL.

SCHARAW, B. & WESTERHOFF, T. (2010): **Sensor based leak detection in urban water supply systems on the example of the drinking water distribution network of the city of Darkhan, Mongolia**. In: SCHNEIDER, A. & HAUEISEN, J. (2010): **Proceedings of the 55th International Scientific Colloquium "Crossing Borders within the ABC – Automation, Biomedical Engineering and Computer Science"**, pp. 94-98, Ilmenau: Technische Universität Ilmenau.

SCHARAW, B. & DIETZE, S. (2010): **Model supported design and operation of a wastewater treatment pilot plant**. In: SCHNEIDER, A. & HAUEISEN, J. (2010): **Proceedings of the 55th International Scientific Colloquium "Crossing Borders within the ABC – Automation, Biomedical Engineering and Computer Science"**, pp. 57-61. Ilmenau: Technische Universität Ilmenau.

SCHARAW, B. & WESTERHOFF, T. (2011): **A leak detection in drinking water distribution network of Darkhan in framework of the project Integrated Water Resources Management in Central Asia, Model Region Mongolia**. In: ГУРИНОВИЧ, А.Д. (Hrsg.) (2011): **Proceedings of the IWA 1st Central Asian Regional Young and Senior Water Professionals Conference, Almaty/Kazakhstan**, pp. 275-282.

SCHWEITZER, C. & PRIESS, J.A. (2010): **Linking wildfire behaviour and land-use modelling in Northern Mongolia**. In: SWAYNE, D.A.; WANHONG, Y; VOINOV, A. et al. (2010): **Proceedings of the**

**International Environmental Modelling and Software Society (iEMSs) 2010 International Congress on Environmental Modelling and Software Modelling for Environment's Sake.** Online: <http://www.iemss.org/iemss2010/proceedings.html>

WATSON, V. & SCHARAW, B. (2012): **Groundwater Monitoring and Modelling in the Frame Work of the Project Integrated Water Resources Management in Central Asia, Model Region Mongolia.** In: TSERASHCHUK, M. (Ed.) (2012): **Proceedings of the IWA Young and Senior Water Professionals Conference St Petersburg 2012 Part I**, pp. 30-137.

WESTERHOFF, T. & SCHARAW, B. (2007): **Model based management of the drinking water supply system of city Darkhan in Mongolia.** In: SCHNEIDER, A. (2007): **Proceedings of the 52nd International Scientific Colloquium "Computer Science Meets Automation", Volume II**, pp. 41-46. Ilmenau: Technische Universität Ilmenau.

## 1.4 Other Papers

AUS DER BEEK, T. & MALSY, M. (2011): **MoMo: Integriertes Wasserressourcen-Management in Zentralasien - Modell-Region Mongolei.** *Hydrobrief* 52:3-5.

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. 1<sup>st</sup> Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

BORCHARDT, D. & IBISCH, R. (2009): **Integrated Water Resources Management for Central Asia: Model Region Mongolia (MoMo).** In: IBISCH, R. & BORCHARDT, D. (Ed.) (2009): **Integrated Water Resources Management: From Research to Implementation**, pp. 18f. 1<sup>st</sup> Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

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. 3<sup>rd</sup> 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. 2<sup>nd</sup> Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

BORCHARDT, D. & KARTHE, D. (2013): **Integriertes Wasserressourcen-Management in Zentralasien: Modellregion Mongolei (MoMo).** In: IBISCH, R.; KIRSCHKE, S.; STÄRZ, C. & BORCHARDT, D. (Ed.) (2013): **Integriertes Wasserressourcen-Management: Von der Forschung zur Umsetzung**, pp. 36-38. 4<sup>th</sup> Edition. Leipzig & Magdeburg: Helmholtz-Zentrum für Umweltforschung.

GAWEL, E.; SIGEL, K. & BRETSCHNEIDER, W. (2011): **Affordability of Water Supply in Mongolia. Empirical Lessons for Measuring Affordability.** Leipzig: UFZ Discussion Paper.

HEPPELER, J. (2014): **Pilotanlage in Darkhan übergeben.** Wasserspiegel 2-3:16.

HOFMANN, J. (2010): **Flusssysteme Chinas und der Mongolei im Wandel.** In: NEUMANN, N. & BAUCHROWITZ, M. (Ed.) (2010): **Jahresforschungsbericht des IGB 2010**, pp. 14-15. Berlin: Leibniz-Institut für Gewässerökologie und Binnenfischerei.

HOFMANN, J.; SCHARAW, B. & WATSON, V. (2015): **Sicherstellung der Trinkwasserversorgung der Stadt Darkhan im Kharaa-Flussgebiet in der Nordmongolei.** *Mongolische Notizen* 23:26-35.

HORLEMANN, L. & DOMBROWSKY, I. (2010): **Institutionalizing IWRM in developing and Transition Countries – The Case of Mongolia.** Leipzig: UFZ Discussion Paper.

KARTHE, D.; SIGEL, K.; SCHARAW, B.; STÄUDEL, J.; HUFERT, F. & BORCHARDT, D. (2012): **Towards an integrated concept for monitoring and improvements in water supply, sanitation and hygiene (WASH) in urban Mongolia.** Water & Risk 20:1-5.

MENZEL, L. (2014): **Eco-hydrological investigations in the Khentii Mountains, Northern Mongolia.** Mountain Meridian 8(2013-14):14-15.

PAULSEN, H. (2010): **MoMo: Water Resources Management in Mongolia.** Geoconnexion International 10(1), pp. 23f.

PAULSEN, H. (2011): **Sensors in Action in Mongolia.** Geoconnexion International 10(4), pp. 21-23.

PAULSEN, H.; WESKAMM, J. & KOCH, D. (2012): **Mongolia: On the Open Road.** Geoconnexion International 11(4), pp. 21f.

PAULSEN, H. (2012): **Wasser für die Mongolei.** GIS.business 8/2012, pp. 16-19.

SCHWEITZER, C. & PRIESS, J. (2009): **Modelling land-use and land-cover change and the impact on water resources in northern Mongolia.** *GLP Newsletter* 5:9-12.

SIGEL, K. (2012): **Urban water supply and sanitation in Mongolia: A description of the political, legal, and institutional framework.** Leipzig: UFZ Discussion Paper.

WITHANACHCHI, S.S.; HOUDRET, A.; NERGUI, S.; GONZALEZ, E.E.; TSOGTBAYAR A. & PLOEGER, A. (2014): **(Re)configuration of Water Resources Management in Mongolia: A Critical Geopolitical Analysis.** ICDD Working Paper No. 13. Kassel: kassel university press.

## 2 Books

### 2.1 Books with ISBN

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

### 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.

KARTHE, D. & BORCHARDT, D. (2013): *Integrated Water Resources Management, Model Region Mongolia - Project Profile*. Magdeburg: Helmholtz Centre for Environmental Research.

MoMo-KONSORTIUM (2009): *MoMo - IWRM in Central Asia – Model Region Mongolia (MoMo): Case Study in the Kharaa River Basin. Final Project Report*.

### 2.3 Book Chapters (n=15)

BATBAYAR, G.; KARTHE, D.; PFEIFFER, M.; VON TÜMPLING, W. & KAPPAS, M. (2015): *Influence of urban settlement and mining activities on surface water quality in northern 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. 73-86. Stuttgart: ibidem.

DOMBROWSKY, I.; HOUDRET, A.; HORLEMANN, L. (2014): *Evolving river basin management in Mongolia?* In: HUITEMA, D. & MEIJERINK, S. (Eds.): *The politics of river basin organisations*, pp. 265-297. Cheltenham: Edward Elgar.

HELDT, S.; KARTHE, D. & FELD, C. (2015): *The EU-WFD as an Implementation Tool for IWRM in non-European countries – Case Study: 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. 281-299. Stuttgart: ibidem.

HOFMANN, J.; OCZIPKA, M.; RUHTZ, T. & DÄMPFING, H. (2016): **How could unmanned aerial systems (UAS) be used for ecohydrological and ecosystem research? Experiences from first operations of UAS in river flood plains of Northern Mongolia.** In: STUBBE, A.; KACZENSKY, P.; WESCHE, K.; SAMJAA, R.; STUBBE, M.; READING, R.P. & GARDNER, S.L. (Eds.) (2016): **Erforschung biologischer Ressourcen der Mongolei**, Band 13, pp. 245-262. Halle/Saale, Germany: Selbstverlag der Martin-Luther-Universität Halle-Wittenberg.

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.

IBISCH, R.; BOGARDI, J. & BORCHARDT, D. (2016): **Integrated Water Resources Management: Concept, Research and Implementation.** In: BORCHARDT, D.; BOGARDI, J. & IBISCH, R. (2016): **Integrated Water Resources Management: Concept, Research and Implementation**, pp. 3-34. Heidelberg, Germany & New York, USA: Springer.

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.

KARTHE, D. & HELDT, S. (2015): **Challenges for Science-Based IWRM Implementation in Mongolia: Experiences from the Kharaa River Basin.** 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. 265-280. Stuttgart: ibidem.

KARTHE, D.; HELDT, S.; ROST, G.; LONDONG, J.; ILIAN, J.; HEPELER, J.; KHURELBAATAR, G.; SULLIVAN, C.; VAN AFFERDEN, M.; STÄUDEL, J.; SCHARAW, B.; WESTERHOFF, T.; DIETZE, S.; SIGEL, K.; HOFMANN, J.; WATSON, V. & BORCHARDT, D. (2015): **Modular Concept for Municipal Waste Water Management in the Kharaa River Basin, Mongolia.** In: BORCHARDT, D.; BOGARDI, J. & IBISCH, R. (2016): **Integrated Water Resources Management: Concept, Research and Implementation**, pp. 649-681. Heidelberg, Germany & New York, USA: Springer.

KIRSCHKE, S.; HORLEMANN, L.; BRENDA, M.; DEFFNER, J.; JOKISCH, A.; MOHAJERI, S. & ONIGKEIT, J. (2016): **Benefits and Barriers of Participation: Experiences of Applied Research Projects in Integrated Water Resources Management.** In: BORCHARDT, D.; BOGARDI, J. & IBISCH, R. (2016): **Integrated Water**



**Resources Management: Concept, Research and Implementation**, pp. 303-334. Heidelberg, Germany & New York, USA: Springer.

MENZEL, L. (2010): **Wasser als limitierender Entwicklungsfaktor**. In: STRIGEL, G.; EBNER VON ESCHENBACH, A.D. & BARJENBRUCH, U. (Eds.) (2010): **Wasser – Grundlage des Lebens. Hydrologie für eine Welt im Wandel**, pp. 82-87. Stuttgart: Schweizerbart.

RODE, M.; HARTWIG, M.; WAGENSCHNEIDER, 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. (Eds.) (2015): **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.; GREGERSEN, 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

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}

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}

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

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}

MUNKHTSETSEG, 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}

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

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 Hydrosiences, Technical University Dresden; project supervisor: Prof. Dr. Dietrich Borchardt}

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

KOPP, B. (2016): **Runoff generating processes in a mountainous headwater in the transition zone between steppe and taiga in northern Mongolia.** {Department of Geography, Heidelberg University; project supervisor: Prof. Dr. Lucas Menzel}

KRAETZ, D. (2009): **Ökologie der Fischbestände in Fließgewässern des Khentii-Gebirges (Mongolei): Bestandsaufbau, Dynamik und Gefährdung durch den Gold-Tagebau.** {Dissertation, Faculty of Forest, Geo and Hydrosiences, TU Dresden; project supervisor: Prof. Dr. Dietrich Borchardt}

MALSY, M. (2016): **Assessing the impacts of global change on water quantity and quality: Large-scale modelling studies for Central Asia.** {Dissertation, Department for Hydrosiences, Technical University Dresden; project supervisor: Prof. Dr. Dietrich Borchardt}

SCHWEITZER, C. (2012): **Modelling land-use and land-cover change and related environmental impact in Northern Mongolia.** {Dissertation, Martin-Luther-Universität Halle-Wittenberg; project supervisor: Dr. Jörg Priess}

STÄUDEL, J. (2017): **Development, Implementation and Operation of Integrated Sanitation Systems Based on Material-Flows: Integrated Sanitation in the City of Darkhan, Mongolia - A Practicable Example.** {Dissertation, Bauhaus-Universität Weimar; project supervisor: Prof. Dr. Jörg Londong}

### 3.4 Habilitation Theses

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