

Publikationen mit Beteiligung des GMC in den Jahren 2019 und 2020

1. Ahmad, S., Liu, H., Günther, A., Couwenberg, J., & Lennartz, B. 2020. Long-term rewetting of degraded peatlands restores hydrological buffer function. *Science of The Total Environment*, 141571. <https://doi:10.1016/j.scitotenv.2020.141571>
2. Arbeiter S, Flinks H, Grünwald J & Tanneberger F (2020) Diet of corncrakes *Crex crex* and prey availability in relation to meadow management. *Ardea* 108(1): 1-10. <https://doi.org/10.5253/arde.v108i1.a7>
3. Becker, L., Wichmann, S., Beckmann, V. (2020): Common Reed for Thatching in Northern Germany: Estimating the Market Potential of Reed of Regional Origin. *Resources* 9 (12): 146.
4. Beyer, F., Jurasinski, G., Couwenberg, J. & Grenzdörffer, G. (2019) Multisensor data to derive peatland vegetation communities using a fixed-wing unmanned aerial vehicle. *International Journal of Remote Sensing*, DOI: 10.1080/01431161.2019.1580825
5. Borg Dahl, M., Krebs, M., Unterseher, M., Urlich, T. & Gaudig, G. (2020) Temporal dynamics in the taxonomic and functional profile of the *Sphagnum*-associated fungi (mycobiomes) in a *Sphagnum* farming field site in Northwestern Germany. *FEMS Microbiology Ecology*, 96, Issue 11, fiae204, <https://doi.org/10.1093/femsec/fiae204>
6. de Klerk, P. & Joosten, H. (2019) How ancient cultures perceived mires and wetlands (3000 BCE –500 CE): an introduction. *IMCG Bulletin* May/July19, 4-15.
7. de Klerk, P. (2019) Peatland prose from the past: The indulgent and exorbitant mires of St. Ambrose (340-397 CE). *IMCG Bulletin* Apr/May19, 2-3.
8. de Klerk, P. (2019) Peatland prose from the past: the trembling soils of Pliny the Elder (23-79 CE). *IMCG Bulletin* Feb/Mar 2019, 3.
9. de Klerk, P. 2019. Peatland prose from the past: the Sudd in the south *IMCG Bulletin* 2019/05: 7-12
10. De Klerk, P., Bobrov, A., Theuerkauf, M. & Joosten, H. (2020) Short-distance distribution patterns of testate amoebae in an Arctic ice-wedge polygon mire (Berelekh-Indigirka lowlands, NE Siberia) *Polar Biology* <https://doi.org/10.1007/s00300-020-02711-5>
11. de Klerk, P., Donner, N., Minke, M. & Joosten, H. (2018) Comprehending the arctic ice-wedge polygon mire landscape using short-distance high resolution palaeoecological research. In: Sychev, V.G. & Lothar Mueller, L. (ed.): *Novel methods and results of landscape research in Europe, Central Asia and Siberia*, Volume 1: Landscapes in the 21st century: status analyses, basic processes and research concepts, pp. 257-262. doi: 10.25680/6112.2018.76.43.048
12. De Klerk, P., Musäus, I. & Joosten, H. (2020): Famicose peatlands and ungulate hoof diseases: on the meaning of a word from 'On the meaning of words' (Festus, 2nd century CE; Paulus Diaconus, 8th century CE). *Mires and Peat*, Volume 26, Article 22, 16 pp., doi: 10.19189/MaP.2020.OMB.StA.2018 <http://mires-and-peat.net/pages/volumes/map26/map2622.php>
13. Eller, F., Ehde, P.M., Oehmke, C., Ren, L., Brix, H., Sorrell, B.K., Weisner, S.E.B. (2020) Biomethane Yield from Different European *Phragmites australis* Genotypes, Compared with Other Herbaceous Wetland Species Grown at Different Fertilization Regimes. *Resources*, 9, 57. <https://doi.org/10.3390/resources9050057>
14. Elshehawi S, Gabriel M, Pretorius L, Bukhosini S, Butler M, van der Plicht J, Grundling P & Grootjans AP (2019) Ecohydrology and causes of peat degradation at the Vasi peatland, South

Africa. *Mires and Peat*, 24, Art. 33. <http://mires-and-peat.net/pages/volumes/map24/map2433.php>

15. Elshehawi S, Peters J, Minayeva T, Neher A, Barthelmes A & Joosten H (2019) Options for financing emission avoidance from drained peatlands in the Nile Basin. Unpublished report.
16. Emsens, W.-J., van Diggelen, R., Aggenbach, C. J. S., Cajthaml, T., Frouz, J., Klimkowska, A., Kotowski, W., Kozub, L., Liczner, Y., Seeber, E., Silvennoinen, H., Tanneberger, F., Vicena, J., Wilk, M. & Verbruggen, E. 2020. Recovery of fen peatland microbiomes and predicted functional profiles after rewetting. *ISME J* <https://doi.org/10.1038/s41396-020-0639-x>
17. Ferré, M., Mullera, A., Leifeld, J., Bader, C., Müller, M., Engel, S. & Wichmann, S. (2019) Sustainable management of cultivated peatlands in Switzerland: Insights, challenges, and opportunities. *Land use policy*, 87, 104019.
18. Gaudig, G., Krebs, M. & Joosten, H. (2020) Sphagnum growth under N-saturation: interactive effects of water level and P or K fertilization. *Plant Biology*, doi:10.1111/plb.13092
19. Geurts J, Oehmke C, Lambertini C, Eller F, Sorrell BK, Mandiola SR, Grootjans AP, Brix H, Wichtmann W, Lamers LPM, Fritz C (2020) Nutrient removal potential and biomass production by *Phragmites australis* and *Typha latifolia* on European rewetted peat and mineral soils. *Science of the Total Environment* 747, 141102.
20. Geurts, J.J.M, van Duinen, G.-J.A., van Belle, J., Wichmann, S., Wichtmann, W. & Fritz, C. (2019) Recognize the high potential of paludiculture on rewetted peat soils to mitigate climate change. *Journal of Sustainable and Organic Agricultural Systems*, 69(1), 5–8.
21. Goriup, P., Haberl, A., Rubel, O., Ajder, V., Kulchytskyy, I., Smaliychuk, A. & Goriup, N. (2019) Potential for renewable use of biomass from reedbeds on the lower Prut, Danube and Dniester floodplains of Ukraine and Moldova. *Mires and Peat*, 25(07), 1–11. (Online: <http://www.mires-and-peat.net/pages/volumes/map25/map2507.php>); doi:10.19189/MaP.2018.OMB.338
22. Gribbe S, Blume-Werry G, Couwenberg J (2020) Digital, three-dimensional visualization of root systems in peat. *Soil Systems*, 4, 13, doi: 10.3390/soilsystems4010013
23. Günther A, Barthelmes A, Huth V, Joosten H, Jurasinski G, Koebsch F, Couwenberg J (2020) Prompt rewetting of drained peatlands reduces climate warming despite methane emissions. *Nature Communications*, <https://doi.org/10.1038/s41467-020-15499-z>
24. Halbritter AH, ... Blume-Werry G, ... Kreyling J ... (2019) The handbook for standardised field and laboratory measurements in terrestrial climate-change experiments and observational studies (ClimEx). *Methods in Ecology and Evolution* <https://doi.org/10.1111/2041-210X.13331>
25. Helbig, M., Waddington, J.M., [...] Wilmking, M., [...] (2020) Increasing contribution of peatlands to boreal evapotranspiration in a warming climate. *Nature Climate Change*, <https://doi.org/10.1038/s41558-020-0763-7>
26. Humpenöder, F., Karstens, K., Lotze-Campen, H., Leifeld, J., Menichetti, L., Barthelmes, A. & Popp, A. 2020. Peatland protection and restoration are key for climate change mitigation. *Environ. Res. Lett.* In press <https://doi.org/10.1088/1748-9326/abae2a>
27. Jablonska, E., Michaelis, D., Tokarska, M., Goldstein, M.G., Wilk, M., Wyszomirski, T. & Kotowski, W. (2019) Alleviation of plant stress precedes termination of rich fen stages in peat profiles of lowland mires. *Ecosystems*. <https://doi.org/10.1007/s10021-019-00437-y>
28. Jurasinski G, Ahmad S, Anadon-Rosell A, Berendt J, Beyer, F, Bill R, Blume-Werry G, Couwenberg J, Günther A, Joosten H, Koebsch F, Köhn D, Koldrack N, Kreyling J, Leinweber P, Lennartz B, Liu H,

- MichaelisD, MrotzekA, NegassaW, Schenk S, SchmackaF, SchwiegerS, SmiljanicM, TannebergerF, Teuber L, UrichT, Wang H, WeilM, WilmkingM, Zak D, Wrage-MönnigN (2020) From understanding to sustainable use of peatlands: the WETSCAPES approach. *Soil Systems*, 4, 14, doi:10.3390/soilsystems4010014
29. Lüth, V., van Gessel, N., Krebs, M., Kohl, M., Prager, A., Joosten, H., Decker, E. & Reski, R. 2020. Axenic in-vitro cultivation of nineteen peat moss (*Sphagnum* L.) species as a resource for basic biology, biotechnology and paludiculture. *New Phytologist* DOI: 10.1111/nph.16922
 30. Michaelis, D., Mrotzek, A. & Couwenberg, J. (2020) Roots, Tissues, Cells and Fragments—How to Characterize Peat from Drained and Rewetted Fens. *Soil Systems*, 4, 12, doi: 10.3390/soilsystems4010012
 31. Mrotzek, A., Michaelis, D., Günther, A., Wrage-Mönnig, N. & Couwenberg, J. (2020) Mass balances of a drained and a rewetted peatland: on former losses and recent gains. *Soil Systems*, 4, 16, doi: 10.3390/soilsystems4010016
 32. Muster, C., Krebs, M. & Joosten, H. (2021) Seven years of spider community succession in a *Sphagnum* farm. *Journal of Arachnology*, 48, 119-131.
 33. Naqinezhad, A., Ramezani, E., Khalili, A.H. & Joosten, H. (2019) Habitat and floristic peculiarities of an isolated mountain mire in the Hyrcanian region of northern Iran: a harbour for rare and endangered plant species. *Mires and Peat*, Volume 24, Article 21, 1–22.
 34. Schulz E, Meier-Uhlherr R, Luthardt V & Joosten H (2019) A toolkit for field identification and ecohydrological interpretation of peatland deposits in Germany. *Mires and Peat*, 24, Art. 32. <http://mires-and-peat.net/pages/volumes/map24/map2432.php>
 35. Schwieger, S., Blume-Werry, G., Ciesiolka, F., & Anadon-Rosell, A. (2020) Root biomass and root traits of *Alnus glutinosa* show size-dependent and opposite patterns in a drained and a rewetted forest peatland. *Annals of Botany*, mcaa195, <https://doi.org/10.1093/aob/mcaa195>
 36. Schwieger, S., Blume-Werry, G., Peters, B., Smiljanic, M. & Kreyling, J. (2019) Patterns and drivers in spring and autumn phenology differ above- and belowground in four ecosystems under the same macroclimatic conditions. *Plant and Soil*. <https://doi.org/10.1007/s11104-019-04300-w>
 37. Schwieger, S., Kreyling, J., Couwenberg, J., Smiljanic, M., Weigel, R., Wilmking, M. & Blume-Werry, G. (2020) Wetter is Better: Rewetting of Minerotrophic Peatlands Increases Plant Production and Moves Them Towards Carbon Sinks in a Dry Year. *Ecosystems*, <https://doi.org/10.1007/s10021-020-00570-z>
 38. Sirin, A. A., Makarov, D.A., Gummert, I., Maslov A. A., Gul'be, Ya.I. (2019) Depth of Peat Burning and Carbon Losses from an Underground Forest Fire. *Lesoveden'ye (Forest Science)* 5: 410-422. doi: 10.1134/S0024114819050097 [In Russian with English Summary]
 39. Sirin, A.A., Medvedeva, M.A., Makarov, D.A., Maslov, A.A. & Joosten, H. (2020). Multispectral satellite based monitoring of land cover change and associated fire reduction after large-scale peatland rewetting following the 2010 peat fires in Moscow Region (Russia). *Ecological Engineering* <https://doi.org/10.1016/j.ecoleng.2020.106044>
 40. Tanneberger, F., Appulo, L., Ewert, S., Lakner, S., Ó Brolcháin, N., Peters, J., Wichtmann, W. (2020) The Power of Nature-based Solutions: How Peatlands can Help us to Achieve Key EU Sustainability Objectives. *Advanced Sustainability Systems*. <https://onlinelibrary.wiley.com/doi/full/10.1002/adssu.202000146>

41. Tanneberger, F., Schröder, C., Hohlbein, M., Lenschow, U., Permien, T., Wichmann, S. & Wichtmann, W. (2020) Climate Change Mitigation through Land Use on Rewetted Peatlands – Cross-Sectoral Spatial Planning for Paludiculture in Northeast Germany. *Wetlands*. <https://doi.org/10.1007/s13157-020-01310-8>
42. Teltewskoi, A., Michaelis, D., Schirrmeister, L., Joosten, H., Schiefelbein, U. & Manthey, M. (2019). A robust vegetation-based elevation transfer method for reconstructing Arctic polygon mire palaeo-microtopography. *Palaeogeography, Palaeoclimatology, Palaeoecology* <https://doi.org/10.1016/j.palaeo.2018.12.019>
43. Theuerkauf, M. & Couwenberg, J. (2020): Comment on Marquer et al., (2020): Pollen-based reconstruction of Holocene land-cover in mountain regions: Evaluation of the landscape reconstruction algorithm in the Vicdessos valley, northern Pyrenees, France. *Quaternary Science Review*, 106463. <https://doi.org/10.1016/j.quascirev.2020.106463>
44. Theuerkauf, M., Engelbrecht, E., Dräger, N., Hupfer, M., Mrotzek, A., Prager, A. & Scharnweber, T. (2019) Using Annual Resolution Pollen Analysis to Synchronize Varve and Tree-Ring Records. *Quaternary*, 2(3), 23. <https://www.mdpi.com/2571-550X/2/3/23>
45. Vroom, R.J.E., Temmink, R.J.M., van Dijk, G., Joosten, H., Lamers, L.P.M., Smolders, A.J.P., Krebs, M., Gaudig, G. & Fritz, C. (2020) Nutrient dynamics of sphagnum farming on rewetted bog grassland in NW Germany. *Science of the Total Environment*, <https://doi.org/10.1016/j.scitotenv.2020.138470>
46. Walton, C.R., Zak, D., Audet, J., Petersen, R.J., Lange, J., Oehmke, C., Wichtmann, W., Kreyling, J., Grygoruk, M., Jabłońska, E., Kotowski, W., Wiśniewska, M.M., Ziegler, R. & Hoffmann, C.C. (2020) Wetland buffer zones for nitrogen and phosphorus retention: Impacts of soil type, hydrology and vegetation. *Science of the Total Environment*, <https://doi.org/10.1016/j.scitotenv.2020.138709>
47. Weil, M., Wang, H., Bengtsson, M., Köhn, D., Günther, A., Jurasinski, G., Couwenberg, J., Negassa, W., Zak, D. & Urich, T. (2020) Long-Term Rewetting of Three Formerly Drained Peatlands Drives Congruent Compositional Changes in Pro- and Eukaryotic Soil Microbiomes through Environmental Filtering. *Microorganisms*, 8, 550, 20 p.; doi:10.3390/microorganisms8040550
48. Wichmann, S., Krebs, M., Kumar, S. & Gaudig, G. (2020) Paludiculture on former bog grassland: Profitability of Sphagnum farming in North West Germany. *Mires and Peat*, 26, 08, 18 p. <http://www.mires-and-peat.net/pages/volumes/map26/map2608.php>
49. Ziegler, R. (2020) Paludiculture as a critical sustainability innovation mission. *Research Policy*. DOI: 10.1016/j.respol.2020.103979