



Supplement of

Circumarctic land cover diversity considering wetness gradients

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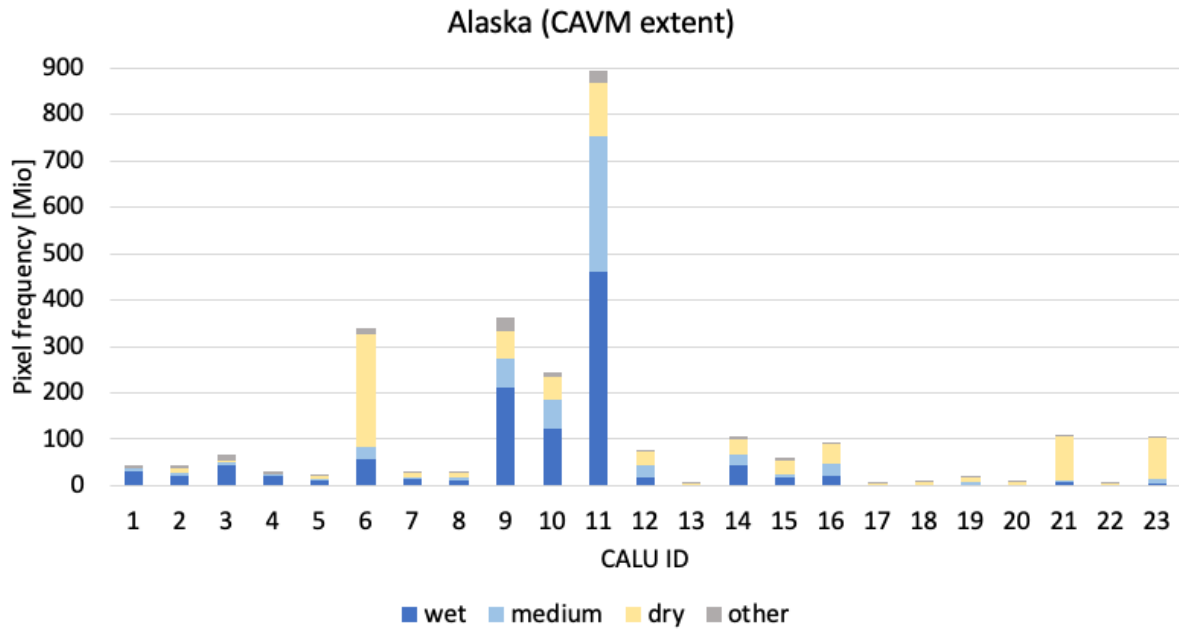


Figure S1: Comparison of CALU (10m, for legend of unit IDs see Bartsch et al. 2023) with CAWASAR wetness levels (500m, Widhalm et al. 2015) over the extent of the Alaskan North Slope (CAVM extent, see also Figure 3 in Bartsch et al. 2023).

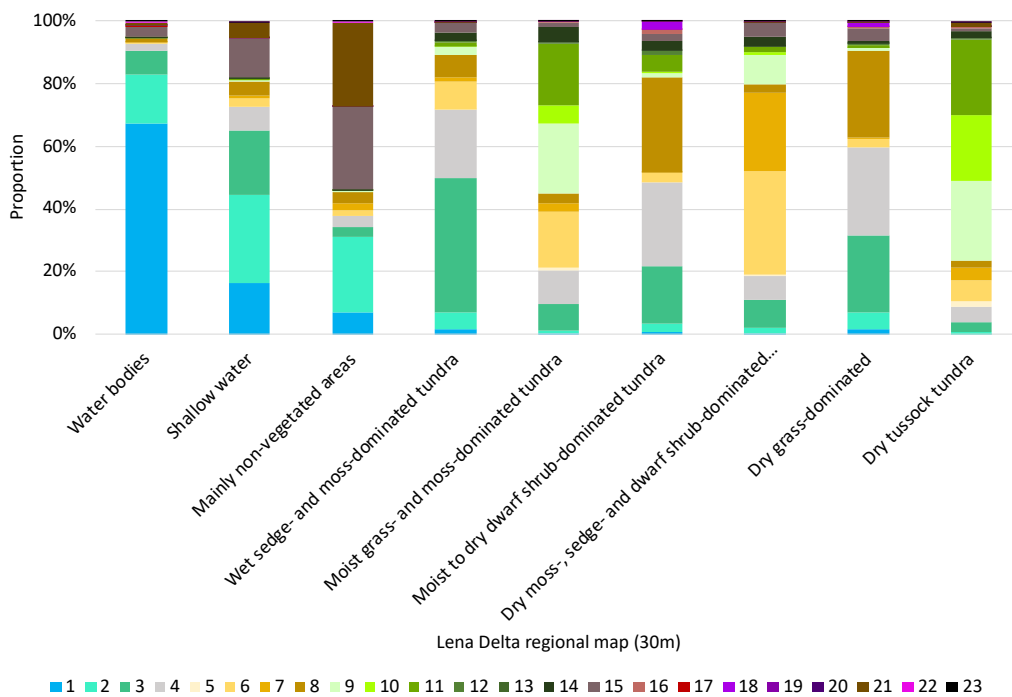


Figure S2: Cross-comparison of CALU (10m) with the Lena Delta Landcover classification by Schneider et al. (2009), 30m (proportion of CAL Unit within class; for legend of unit IDs see Bartsch et al. 2023).

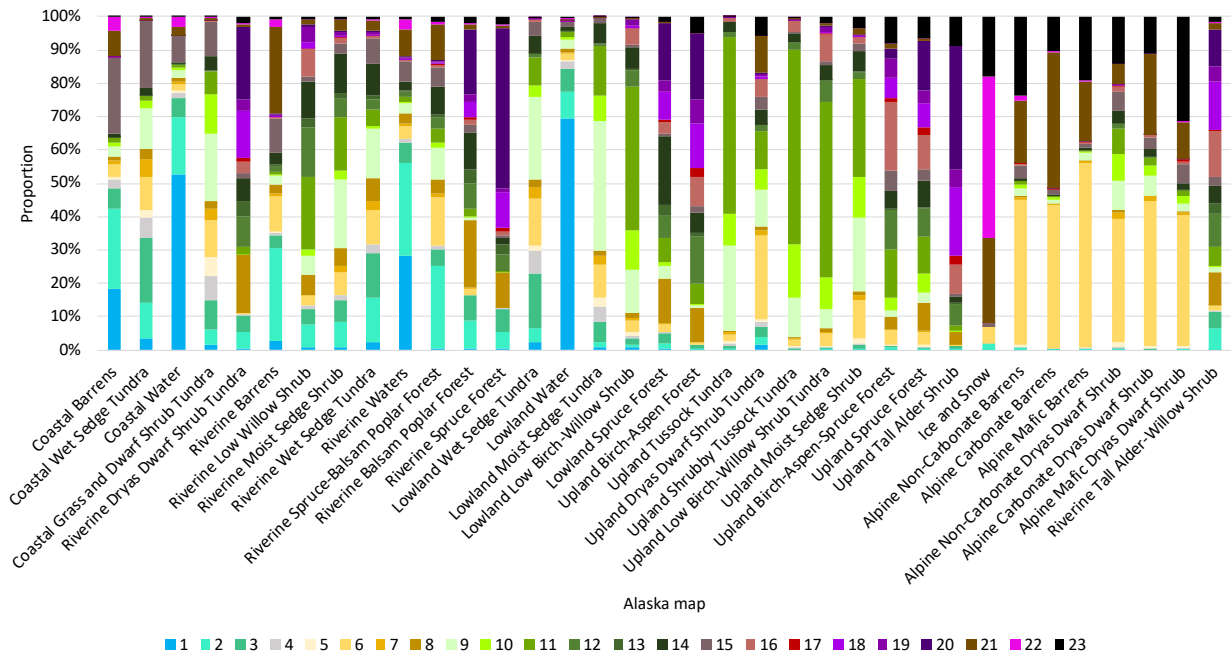


Figure S3: Cross-comparison of CALU (10m) with the Alaska landcover/ecosystems 2010 classification (30m) published in Muller et al. (2018) (proportion of CAL Unit within class; for legend of unit IDs see Bartsch et al. 2023).

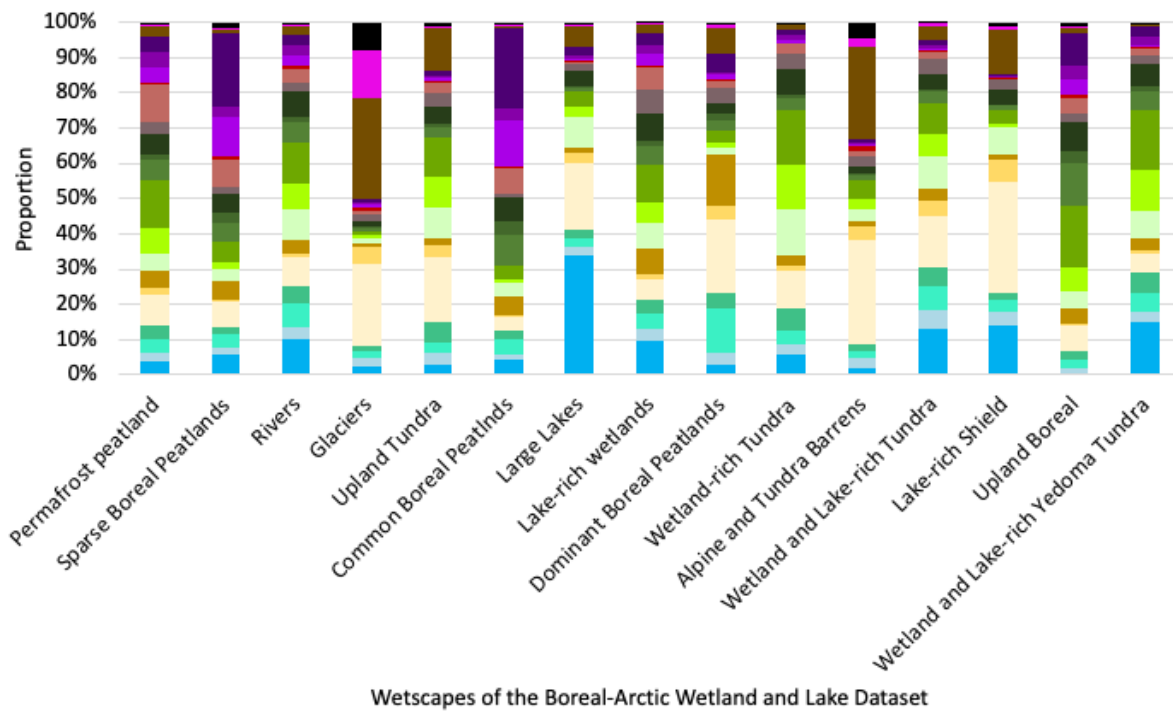


Figure S4: Cross-comparison of CALU (10m) with the Boreal Lakes and Wetland database (BAWLD) published in Olefeld et al. (2021) (proportion of CAL Unit within Wetscape type; for legend of unit IDs see Bartsch et al. 2023).

References

Bartsch, A., Efimova, A., Widhalm, B., Muri, X., von Baeckmann, C., Bergstedt, H., Ermokhina, K., Hugelius, G., Heim, B., and Leibmann, M.: Circumarctic landcover diversity considering wetness gradients, *EGUsphere* [preprint], <https://doi.org/10.5194/egusphere-2023-2295>, 2023.

Muller, S., D.A. Walker, and M.T. Jorgenson (2018): *Ecosystems of Northern Alaska*, In: Reynolds, M., Breen, A., and Walker, D. (2017): *Land Cover and Ecosystem Map Collection for Northern Alaska*, ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1359>

Olefeldt, D., Hovemyr, M., Kuhn, M. A., Bastviken, D., Bohn, T. J., Connolly, J., Crill, P., Euskirchen, E. S., Finkelstein, S. A., Genet, H., Grosse, G., Harris, L. I., Heffernan, L., Helbig, M., Hugelius, G., Hutchins, R., Juutinen, S., Lara, M. J., Malhotra, A., Manies, K., McGuire, A. D., Natali, S. M., O'Donnell, J. A., Parmentier, F.-J. W., Räsänen, A., Schädel, C., Sonnentag, O., Strack, M., Tank, S., Treat, C., Varner, R. K., Virtanen, T., Warren, R. K., and Watts, J. D. (2021): The Boreal-Arctic Wetland and Lake Dataset (BAWLD), *Earth System Science Data*, pp. 5127–5149, <https://doi.org/10.5194/essd-13-5127-20210>.

Schneider, J., G. Grosse, and D. Wagner (2009): “The Lena River Delta - Land Cover Classification of Tundra Environments Based on Landsat 7 ETM+ Data and Its Application for Upscaling of Methane Emissions.” doi:10.1594/PANGAEA.759631. In Supplement to: “Land Cover Classification of Tundra Environments in the Arctic Lena Delta Based on Landsat 7 ETM+ Data and its Application for Upscaling of Methane Emissions.” *Remote Sensing of Environment* 113 (2): 380–391. doi:10.1016/j.rse.2008.10.013.

Widhalm, B., Bartsch, A., and Heim, B. (2015): A novel approach for the characterization of tundra wetland regions with C-band SAR satellite data, *International Journal of Remote Sensing*, 36, 5537–5556.