Seasonal surface subsidence and frost heave detected by C-band DInSAR in a High Arctic environment, Cape Bounty, Melville Island, Nunavut, Canada

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Supplementary material

Table S1: Kauth-Thomas transform coefficients to derive the wetness index from WorldView-2 imagery (from Yarbrough et al., 2014)

Band	Coastal	Blue	Green	Yellow	Red	Red Edge	NIR1	NIR2
λ (nm)	400-450	450-510	510-580	585-625	630-690	705-745	770-895	860-1040
Coefficients	-0.27095	-0.31571	-0.31726	-0.24254	-0.25646	-0.09655	-0.74253	0.20243

Table S2: Estimation of DInSAR error: average (absolute) displacement measured by DInSAR within six control polygons within 'stable' areas of bedrock of felsenmeer (similar control locations as in Rudy et al. 2018). Coordinates are in WGS84, UTM Zone 12X

Centre of polygon				Average (absolute) measured vertical displacement (cm)		
ID	**Easting**	**Northing**	**No. of pixels**	**2013 Jul 16-Sep2**	**2015 Jul 30 – Sep 16**	**2019 Aug 2 – Sep 19**
0	540514	8309176	219	0.77	0.31	0.81
1	540030	8311642	43	0.40	0.39	1.38
2	541784	8311574	45	0.87	0.88	0.77
3	542076	8313029	5	0.38	1.39	0.97
4	541087	8313677	27	0.11	0.23	1.40
5	544581	8314756	113	0.11	0.10	0.55
			Mean	0.44	0.55	0.98

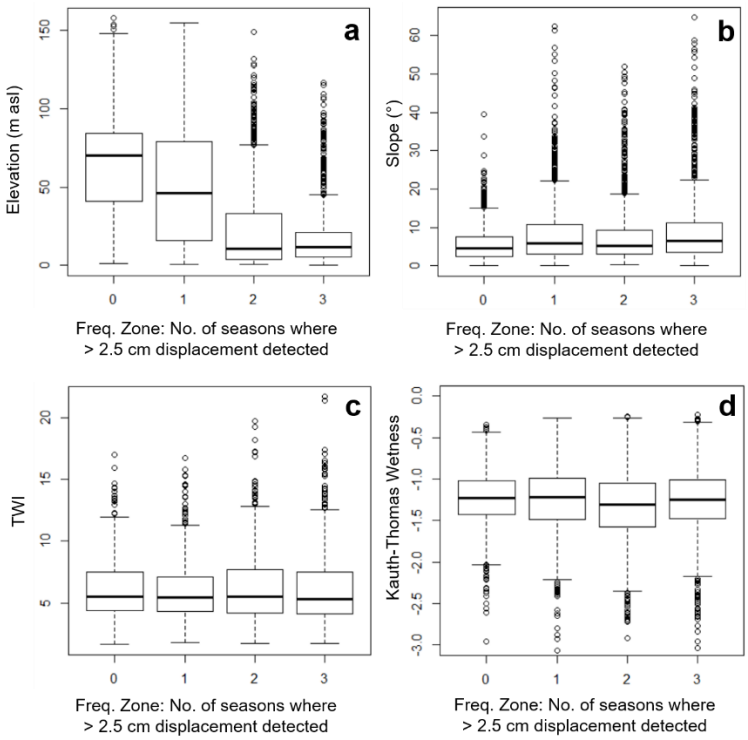

Figure S1: Statistical summary of (a) elevation; (b) slope; (c) topographic wetness index; (d) Kauth-Thomas wetness of pixels randomly sampled from within areas which displayed >2.5 cm in one, many, or none of the studied years

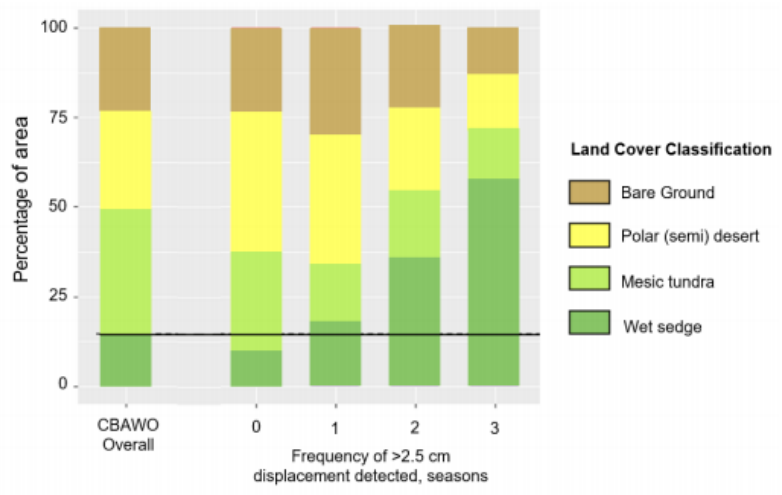

Figure S2: Land cover make up of each frequency zone as compared to the composition of the CBAWO as a whole. As an example, despite making up only 14 % of total area at the CBAWO, 57 % of the areas which displayed >2.5 cm displacement in all three seasons were found within areas of wet sedge