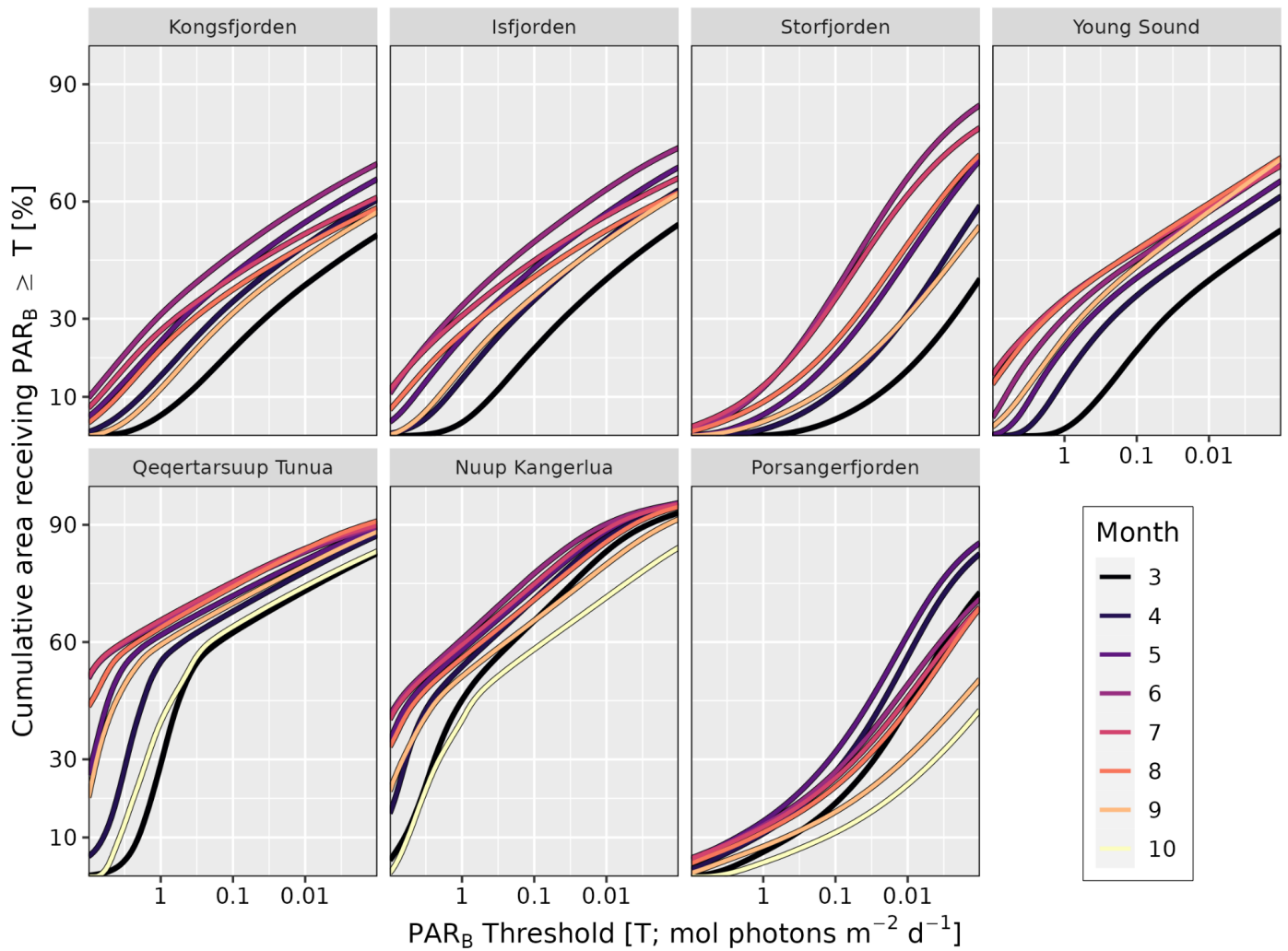


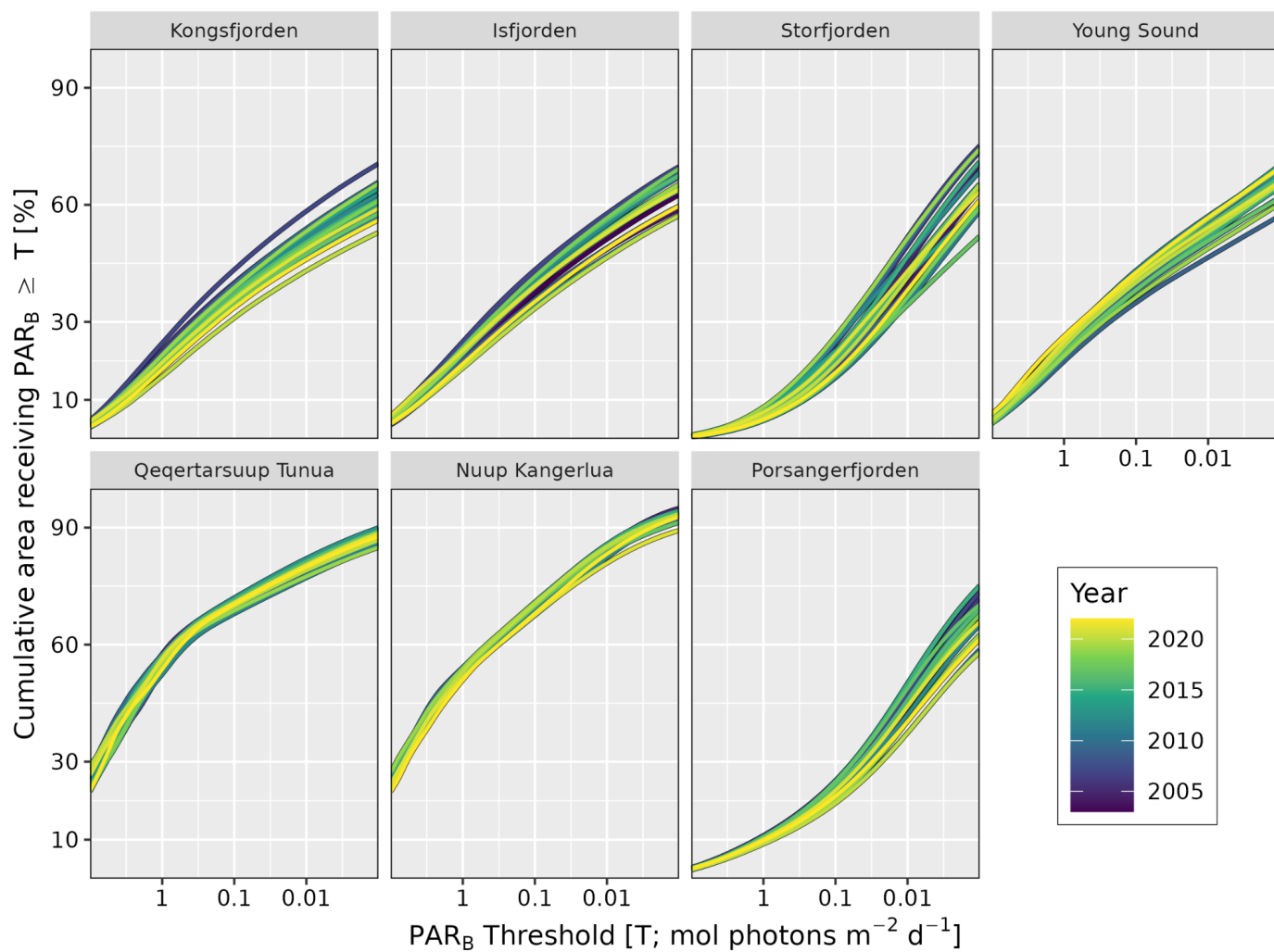
Supplementary

S1 Shallow monthly climatology  $P$ -functions per site



5 **Figure S1:** Shallow (i.e. depth  $\leq 50$  m)  $P$ -functions per site for the monthly climatology of bottom PAR ( $PAR_B$ ). Otherwise the same as Fig. 5.

## S2 Shallow yearly climatology $P$ -functions per site



**Figure S2:** Shallow (i.e. depth  $\leq 50$  m)  $P$ -functions per site for annual average bottom PAR ( $PAR_B$ ). Otherwise the same as Fig. 5.