



**Supplement Table 2.** Linear regressions ( $y=Ax+B$ ) used to correct total phosphorus (TP), dissolved inorganic P (DIP) and salinity (Sal) data from the central stations to represent the whole inner archipelago (n=52).

	R <sup>2</sup>	A	B
TP 0-4 m	0,93	0,91	0,88
TP 4-10m	0,95	0,97	0,50
TP 10-20m	0,95	1,02	0,62
TP 20-57m	0,98	1,07	0,12
TP 0-57m	0,97	1,00	1,41
DIP 0-4m	0,92	0,85	0,23
DIP 4-10m	0,93	0,92	0,14
DIP 10-20m	0,96	0,96	1,36
DIP 20-57m	0,98	1,02	0,98
DIP 0-57m	0,96	0,92	0,77
Sal 0-4m	0,98	0,84	0,30
Sal 4-10m	0,98	0,85	0,46
Sal 10-20m	0,97	0,91	0,24
Sal 20-57m	0,98	0,92	0,37
Sal 0-57m	0,99	0,88	0,35

**Supplement 3.** Ten-year (1976-1985, 1986-1995, 1996-2005, 2006-2015 [2011 excluded]) model interpolated monthly means and changes of standing P stock in water (upper panels), P input and export with boundary model (second row panels), net P losses in upper water layers 0-20m and net P release in deep water (>20m) with mean model (third row panels), and deep-water oxygen consumption, minimum oxygen concentration and temperature (lower panels). Error bars show standard deviation among years.

