**Supplementary Materials**

**S2 – Formulas for calculating effect sizes in meta-analysis**

* 1. **Data analysis**

Standardized mean difference (d):

1. $d= \frac{\overbar{X}\_{1}-\overbar{X}\_{2}}{S\_{within}}$

Where $\overbar{X}\_{1}$ and $\overbar{X}\_{2}$ are the sample means of the two groups, the high salinity and the low salinity, respectively and the denominator $(S\_{within}) $is the within groups standard deviation, pooled across groups (Eq. 2). Hedge’s g corrects for a bias overestimating standardized mean difference for small sample sizes using the correction factor J (Hedges 1981).

1. $S\_{within}= \sqrt{\frac{\left(n\_{1}-1\right)S\_{1}^{2}+\left(n\_{2}-1\right)S\_{2}^{2}}{n\_{1}+n\_{2}-2}}$

$S\_{1}$ and $S\_{2}$ are the Standard Deviation of the two groups and $n\_{1}$ and $n\_{2}$ the sample size.

Variation parameters were converted to standard deviation if necessary and the standardize mean difference (d) and its variance (Vd) computed.

The variance of d for each study was calculated as:

1. $V\_{d}=\frac{n\_{1}+n\_{2}}{n\_{1}n\_{2}}+ \frac{d^{2}}{2(n\_{1}+n\_{2})}$

and converted to variance of g $(V\_{g})$ as follows:

1. $V\_{g}= J^{2}×V\_{d}$
2. $J=1- \frac{3}{4 df-1}$

Meta-analyses weigh the individual effect sizes by the inverse of the effect size variance to account for the precision of each study (Eq. 5).

1. $w=\frac{1}{V\_{g}}$

Calculation of effect size from correlation coefficient (r) was only necessary for a couple of datapoints:

1. $d= \frac{2r}{\sqrt{1-r^{2}}}$
2. $V\_{r}= \frac{(1-r^{2})\^2}{n-1}$
3. $V\_{d}= \frac{4V\_{r}}{\left(1-r^{2}\right)^{3}}$