**Response of chlorophyll a to total nitrogen and total phosphorus concentrations in lotic ecosystems: a systematic review [Bennett et al.]**

**ADDITIONAL FILE 10: Meta-analysis checklist (from Koricheva and Gurevitch 2014)**

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| **Recommended Item** | **Performed** |
| 1. Has formal meta-analysis been conducted (i.e. combination of effect sizes using standard meta-analytical methodology) or is it simply a vote count? | Yes – meta-analysis performed |
| 1. Are details of bibliographic search (electronic data bases used, keyword combinations, years) reported in sufficient detail to allow replication? | Yes – see *3. Methods*, Figure 1, and Additional Files |
| 1. Are criteria for study inclusion/exclusion explicitly listed? | Yes – see Table 1 |
| 1. Have standard metrics of effect size been used or, if non-standard metrics have been employed, is the distribution of these parameters known and have the authors explained how they calculated variances for such metrics? | Yes – used standard metric of Pearson correlation coefficients |
| 1. If more than one estimate of effect size per study was included in the analysis, has potential non-independence of these estimates been taken into account? | Yes – used random effects mixed models with study as random factor |
| 1. Have effect sizes been weighted by study precision or has the rational for using unweighted approach been provided? | Yes – used escalc function in metafor R package to calculate variance which accounts for sample size and thus precision |
| 1. Have statistical model for meta-analysis and the software used been described? | Yes – see *3. Methods* |
| 1. Has heterogeneity of effect sizes between studies been quantified? | Yes – evaluated “between-study variance” in the random effects model |
| 1. Have the causes of existent heterogeneity in effect sizes been explored by meta-regression? | Yes – see *4.* *Review Findings* |
| 1. If effects of multiple moderators have been tested, have potential non-independence of and interactions between moderators been taken into account? | Due to the numerous factors, interactions, and missing data, the most feasible option for this study was to analyze each individual moderator as a single fixed effect |
| 1. If meta-analysis combined studies conducted on different species, has phylogenetic relatedness of species been taken into account? | Not applicable |
| 1. Have tests for publication bias been conducted? | Yes – conducted Rank Correlation Test for Funnel Plot Asymmetry using the “ranktest” function in the “metafor” package; identified publication bias (Kendall's tau = 0.153, p = 0.045) |
| 1. If meta-analysis combines studies published over considerable time span, have possible temporal changes in effect size been tested? | Yes – see *4.* *Review Findings* |
| 1. Have sensitivity analysis been performed to test the robustness of results? | Yes – see *4.* *Review Findings* |
| 1. Have full bibliographic details of primary studies included in a meta-analysis been provided? | Yes – see *Additional File 9* |
| 1. Has the data set used for meta-analysis, including effect sizes and variances/sample sizes from individual primary studies and moderator variables, been provided as electronic appendix? | Yes – see *Additional File 7* |