Supplementary Table 1: PAM fluorescence parameters and nomenclature

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| Notation | Definition |
| α |  Initial RLC slope under light limitation; RLC parameter |
| E | Downwelling PAR irradiance |
| Ek | Photon irradiance at onset of light saturation coefficient; RLC parameter |
| Eopt | Photon irradiance where rETR reached its maximal value; RLC parameter  |
| *Fo*, *Fm* | Minimum and maximum fluorescence yield (dark-adapted sample) |
| *F’*, *Fm’* | Minimum and maximum fluorescence yield in light adapted samples |
| *Fv* | Variable fluorescence yield, *Fm* – *Fo* |
| *Fv*/*Fm* | Maximum PSII quantum yield |
| NPQ | Non-photochemical quenching; (*Fm - Fm’*)/*Fm’* |
| PAR | Photosynthetically active radiation |
| PSII | Photosystem II |
| rETR | Relative electron transport rate; YII(E) x E |
| RLC | Rapid light response curve |
| Y(II) | Effective PSII quantum yield at each light level (E); = (F*m’* – *F’*)/*Fm’* |
| Y(NO) | Fraction of light energy dissipated via non-regulated mechanisms; *F’*/*Fm* |
| Y(NPQ) | Fraction of light energy dissipated by regulated mechanisms, (*F’*/ *Fm’*) + (*F’*/*Fm*) |