	Control		Waterlogged		Recovery		Sig. effect	Post-hoc
	eCO_2	aCO_2	eCO_2	aCO_2	eCO_2	aCO_2		
Acacia floribunda								
Photosynthetic rate (A, μ mol m ⁻² s ⁻¹)	13.41 (7.58)	19.25 (7.47)	20.9 (6.83)	22.06 (7.68)	17.15 (1.17)	25.11 (6.3)	C	
Stomatal conductance (Gs, mmol m^{-2} s^{-1})	0.41 (0.11)	$0.41\ (0.07)$	$0.36 \ (0.16)$	$0.24\ (0.07)$	0.27 (0.04)	0.49 (0.12)	NS	
Water use efficiency (A/Gs)	1 (0.43)	1.22 (0.62)	1.89 (0.53)	2.55 (0.65)	$2.02 \ (0.35)$	1.53 (0.44)	W	cw, cr
Dry root biomass (g)	5.64(2.35)	$6.02\ (2.51)$			3.74(0.76)	4.64 (0.94)	W	
Dry fine root biomass (g)	2.12(1.5)	2.27(1.07)			$1.01 \ (0.39)$	$1.21\ (0.35)$	W	
Dry shoot biomass (g)	8.9 (4.17)	10.93 (3.67)			9.29(1.65)	10.27 (3.13)	NS	
Root mass fraction	0.4 (0.14)	$0.35 \ (0.07)$	0.2 (0.02)	$0.24\ (0.05)$	$0.29 \ (0.03)$	$0.32 \ (0.03)$	W	cw, wr, cr
Fine root DMC (%)	$0.13 \ (0.03)$	0.16 (0.04)	$0.18 \; (0.07)$	0.15 (0.03)	0.13 (0.01)	$0.12\ (0.02)$	W	wr
SLA $(cm^2 g^{-1})$	$27.54\ (2.12)$	28.26 (2.33)	$24.83\ (2.15)$	24.72(3.12)	29.91 (2.91)	27.84(1.4)	W	cw, wr
Stem density (g cm ⁻²)	$0.46 \ (0.07)$	$0.48 \; (0.05)$	0.49 (0.04)	$0.54\ (0.07)$	0.5 (0.02)	$0.47 \ (0.12)$	NS	
Casuarina cunninghamiana								
Photosynthetic rate (A, μ mol m ⁻² s ⁻¹)	25.3 (6.32)	38.11 (7.8)	26.63 (7.53)	33.53 (3.75)	27.41 (1.81)	35.38 (7.6)	С	
Stomatal conductance (Gs, mmol m ⁻² s ⁻¹)	0.53 (0.14)	$0.66 \ (0.15)$	$0.64 \ (0.07)$	0.57 (0.07)	0.57 (0.07)	$0.61\ (0.14)$	NS	
Water use efficiency (A/Gs)	1.5(0.2)	1.69 (0.08)	1.26 (0.24)	1.72(0.23)	1.65 (0.18)	1.65 (0.07)	$C \times W, C$	w
Dry root biomass (g)	5.79 (3.1)	10.88 (3.67)			$6.31\ (2.07)$	7.05 (2.75)	$C \times W, C$	c
Dry fine root biomass (g)	1.66 (1.23)	4.11 (1.96)			1.95 (0.73)	2.61 (1.31)	$C \times W^*$, C	c
Dry shoot biomass (g)	10.44 (3.75)	17.19 (5.66)			11.97 (3.28)	10.55(3)	$C \times W$	
Root mass fraction	$0.34\ (0.06)$	0.39(0.04)	0.29(0.1)	0.27 (0.04)	$0.34 \ (0.03)$	0.39 (0.04)	W	
Fine root DMC (%)	0.18 (0.08)	$0.25 \ (0.07)$	0.18 (0.08)	$0.21\ (0.04)$	0.15 (0.02)	0.19(0.03)	С	
SLA $(cm^2 g^{-1})$	20.82 (2.39)	18.84 (1.76)	20.76 (1.61)	20.57 (2.33)	20.3(2.19)	21.61 (1.47)	NS	
Stem density (g cm ⁻²)	0.4 (0.03)	$0.44 \ (0.02)$	0.34 (0.09)	0.4 (0.03)	0.41 (0.02)	0.41 (0.04)	\mathbf{C}	

	Control		Waterlogged		Recovery		Sig. effect	Post-hoc
	eCO_2	aCO_2	eCO_2	aCO_2	eCO_2	$a\mathrm{CO}_2$		
Eucalyptus camaldulensis								
Photosynthetic rate (A, μ mol m ⁻² s ⁻¹)	9.94 (5.88)	15.46 (1.49)	15.46 (1.49)	18.39 (5.11)	17.99 (3.87)	21.09 (2.95)	C, W	cr
Stomatal conductance (Gs, mmol $m^{-2} s^{-1}$)	0.14 (0.08)	0.17 (0.10)	$0.32\ (0.09)$	0.28 (0.13)	0.52 (0.17)	0.35 (0.08)	W	cw, wr, cr
Water use efficiency (A/Gs)	2.1(0.4)	3.26 (1)	1.99(0.25)	2.65 (0.46)	1.93 (0.21)	2.48(0.47)	C	
Dry root biomass (g)	14.85 (3.5)	14.32 (2.58)			14.09 (5.73)	13.42 (6.51)	NS	
Dry fine root biomass (g)	2.64 (1.84)	1.73 (0.93)			3.69(2.73)	3.82(2.22)	W	
Dry shoot biomass (g)	22.93 (5.31)	22.63 (6.13)			26.49 (10.35)	23.23 (8.49)	NS	
Root mass fraction	0.39 (0.05)	0.39 (0.05)	0.25 (0.02)	$0.25 \ (0.06)$	0.35 (0.11)	$0.36 \ (0.05)$	W	cw, rw
Fine root DMC (SLA $(cm^2 g^{-1})$	31.7 (8.24)	28.11 (1.74)	31.38 (1.8)	31.82 (3.61)	28.59 (1.59)	28.08 (0.74)	W	cw, wr
Stem density (g cm ⁻²)	0.39 (0.02)	0.41 (0.02)	0.38 (0.02)	0.39 (0.04)	0.39 (0.04)	0.39 (0.06)	N	

Table 0.1: Mean and standard deviation (in parentheses) of measured gas exchange rates, biomass and functional traits for each combination of CO2 level and waterlogging treatments. Significant differences as determined by two-way ANOVA are denoted by the letters NS, C, W or I (NS = no significant effect of either treatment, C = significant effect of CO2 level, W = significant effect of waterlogging treatment, C x W = significant interaction between CO2 level and waterlogging treatment). Where interactions were found, waterlogging treatments in which significant differences between aCO2 and eCO2 were determined by post-hoc tests are denoted by: c = control, w = waterlogged, r = recovery. Significant differences between waterlogging treatments determined by post-hoc tests are denoted using the following script: cw = difference between control and waterlogged measurements, cr = difference between control and recovery measurements, wr = difference between waterlogged and recovery measurements. * - interaction effect was marginally significant, but post-hoc analysis confirmed significant differences among treatments.

N.B. biomass measurements for waterlogged plants are omitted because these plants were harvested at a younger age than control or recovery plants and are thus not comparable.