(a) Best model†: $C_R \sim I_{30} + API + \overline{SC} + \overline{SC}:I_{30} + \overline{SC}:API$
R²= 0.81; Adj R²= 0.78; $F_{8, 54}$=28.3; p<0.001
(N)RMSE= 0.13 (12%)

- Slope 1
- Slope 2
- Slope 3
- 1:1

I_{30}: η²= 7.1%***
API: η²= 12.9%***
$\overline{SC}$: η²= 44.1%***
$\overline{SC}:I_{30}$: η²= 5.4%**
$\overline{SC}:API$: η²= 11.4%***

Observed per-event connectivity of runoff - C_R
Predicted per-event connectivity of runoff - C_R

(b) Modelled per-event connectivity of runoff - C_R

Model predictions for:
- API= 5.1 mm (observed 15th percentile)
- Observed I_{30} range (0–35 mm h⁻¹)
- Slope 1 ($\overline{SC}$= 0.47)
- Slope 2 ($\overline{SC}$= 0.17)
- Slope 3 ($\overline{SC}$= 0.02)
- 95% conf interval

30 min max rainfall intensity -I_{30}- (mm h⁻¹)

(c) Modelled per-event connectivity of runoff - C_R

Model predictions for:
- I_{30}= 3.4 mm h⁻¹ (observed 15th percentile)
- Observed API range (0-145 mm)

Antecedent precipitation index -$API_{(10, 0.98)}$- (mm)