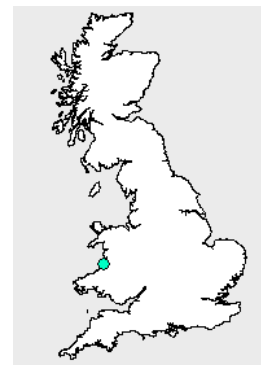


## General Information

|                |              |                             |              |
|----------------|--------------|-----------------------------|--------------|
| River Name     | Ystwyth      | Catchment Area (km2)        | 170          |
| Station Name   | Pont Llolwyn | SAAR (mm) 61-90             | 1440         |
| Station Number | 63001        | Mean Annual Rain (mm) 62-91 | 1496         |
| Grid Reference | SN591774     | Mean Annual PE (mm) 62-91   | 529          |
| EA Region      | EA-W         | Observed flow record        | 1963 to 2005 |



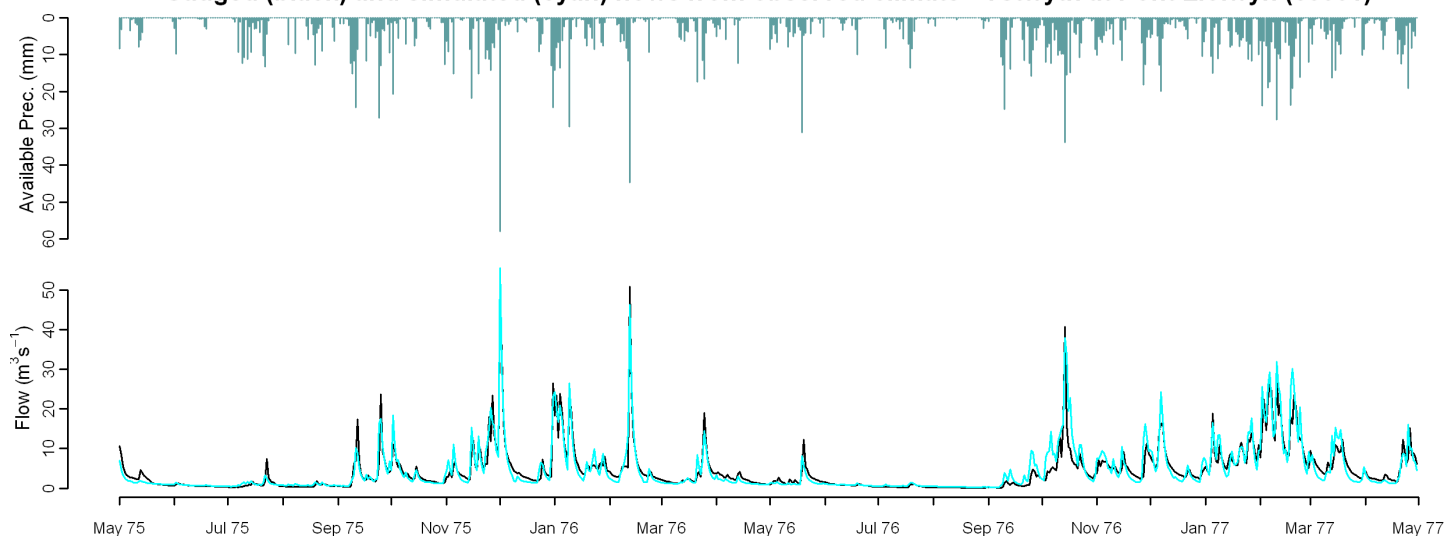
## Observed Data

## Comparison of gauged and simulated flow

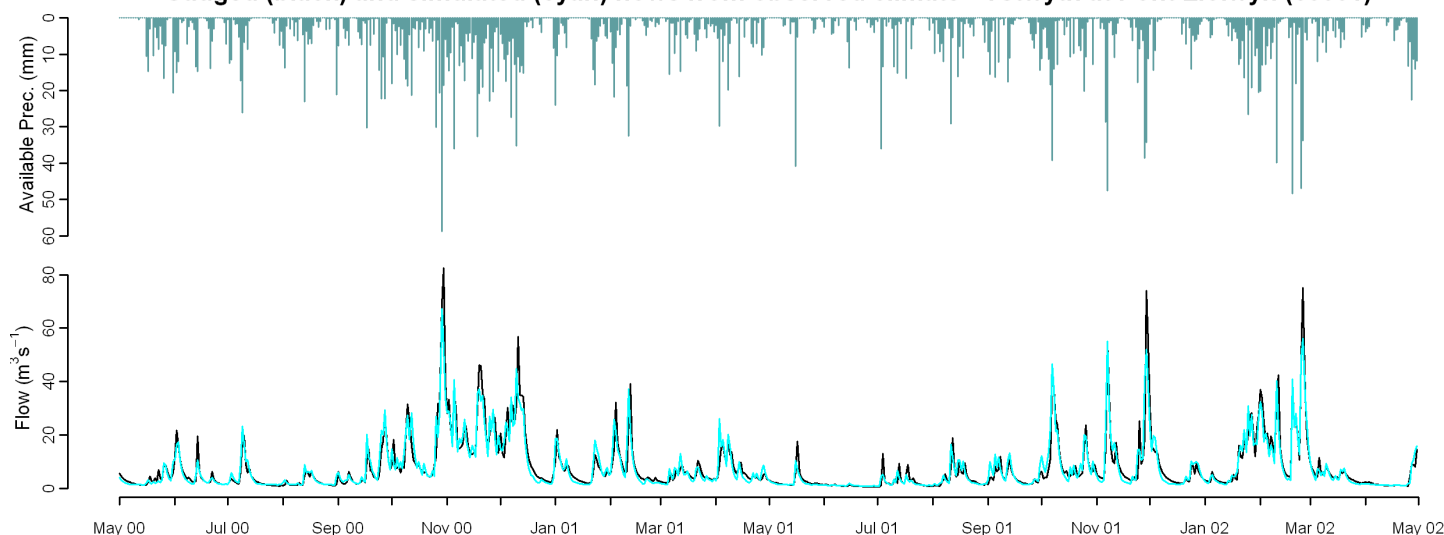
## Model used: CERF

|                    | Mean Annual | J     | F     | M    | A     | M     | J     | J     | A    | S   | O   | N   | D    | Nash Sutcliffe |
|--------------------|-------------|-------|-------|------|-------|-------|-------|-------|------|-----|-----|-----|------|----------------|
| MORECS (1971-2005) | -1.1        | -0.8  | -2.4  | -3.3 | -9.8  | -18.3 | -14.3 | -10.9 | 2.3  | 7.1 | 7.1 | 4.0 | -0.5 | 0.78           |
| Performance Band   | 1           | 1     | 1     | 1    | 2     | 2     | 2     | 2     | 1    | 1   | 1   | 1   | 1    | 1              |
| MORECS (1962-1991) | -1.6        | -0.3  | -1.9  | -3.1 | -12.4 | -20.5 | -16.6 | -12.4 | -3.5 | 5.1 | 5.9 | 4.9 | -0.3 | 0.75           |
|                    | Q90         | Q75   | Q50   | Q25  | Q5    |       |       |       |      |     |     |     |      |                |
| MORECS (1971-2005) | 17.4        | -17.9 | -25.1 | 4.5  | 6.4   |       |       |       |      |     |     |     |      |                |
| Performance Band   | 1           | 1     | 1     | 1    | 1     |       |       |       |      |     |     |     |      |                |
| MORECS (1962-1991) | 16.8        | -18.9 | -27.4 | -1.0 | 8.8   |       |       |       |      |     |     |     |      |                |

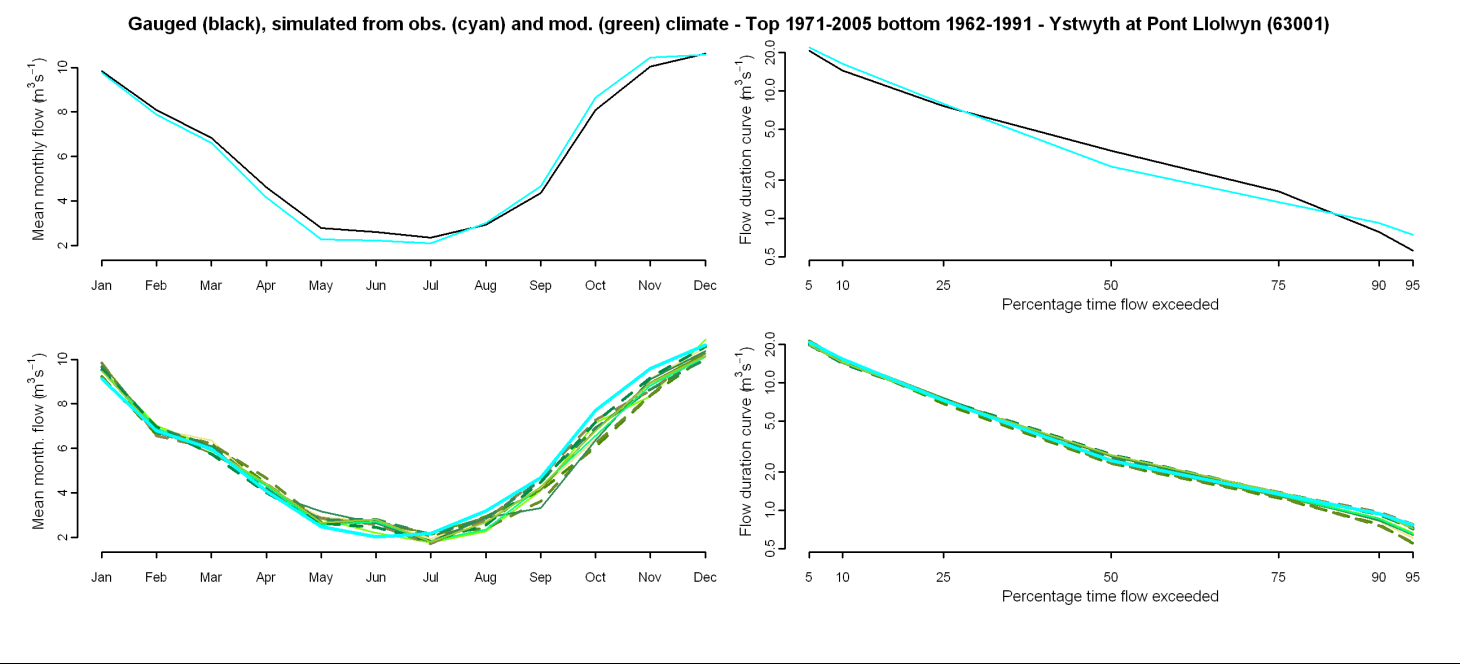
Gauged (black) and simulated (cyan) flows from observed climate - Ystwyth at Pont Llolwyn (63001)



Gauged (black) and simulated (cyan) flows from observed climate - Ystwyth at Pont Llolwyn (63001)



Comparison of gauged and simulated flow (observed and modelled climate)



Percentage difference between flow simulated from observed climate and Future Flows Climate

|         | afgcx | afixa | afixc | afixh | afixi | afixj | afixk | afixl | afixm | afixo | afixq |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Annual  | -2    | -3    | 0     | 0     | -1    | -3    | -3    | 0     | -3    | -2    | -1    |
| January | 6     | 2     | 10    | 6     | 9     | 5     | 3     | 9     | 5     | 0     | 8     |
| April   | -1    | 7     | 0     | 6     | 7     | 14    | 4     | 7     | -1    | 0     | 6     |
| July    | -18   | 0     | 1     | -17   | -5    | 3     | -16   | -2    | -17   | -15   | -20   |
| October | -6    | -13   | -19   | -4    | -13   | -16   | -11   | -9    | -14   | -7    | -11   |
| Q90     | -8    | -18   | -14   | 4     | -13   | -20   | -13   | -2    | -11   | -3    | 0     |
| Q75     | -1    | -7    | -2    | 4     | -6    | -7    | -1    | 3     | -4    | 1     | 3     |
| Q50     | 4     | -4    | 2     | 9     | -3    | -5    | 10    | 7     | 0     | 11    | 11    |
| Q25     | 0     | -5    | 3     | 5     | 1     | -1    | 1     | 1     | -2    | 2     | 1     |
| Q5      | -5    | 2     | -1    | -3    | -2    | 0     | -5    | 1     | -4    | -7    | -4    |
| RP2     | -2    | -5    | 0     | 6     | 1     | -3    | -2    | 4     | 2     | 4     | 0     |
| RP10    | -2    | -14   | -10   | -2    | -4    | -16   | -9    | -11   | 2     | -5    | -7    |

Climate change graphs for 2050s

