There are a range of hierarchy processes and their response to climate change, therefore the key processes may vary with the spatial and temporal scales.

One issue is the assumed correlations in current models may not be applicable in the future.

To predict the change of global runoff better, One of the most important response is the effect of increased CO2 on FPAR, LAI response.

Rainfall is the most important driver of runoff. How to deal with the deificiency of GCM in simulating rainfall

What we can do is: put probability of scenarios/predictions.

Include nonstationary stats of rainfall into the prediction of rainfall, and consequent impact on runoff. This will address how fluctuation of rainfall and water supply on the runoff and vegetation responses.

## Other processes may become important from leaf to landscape scale:

- VPD may become more important factor with climate change
- Mortality is another issue.
- Carbon allocation
- Recruitment