Experimenting Disturbence: What happens when we only perturb the carbon storage?

Kalyn Dorheim

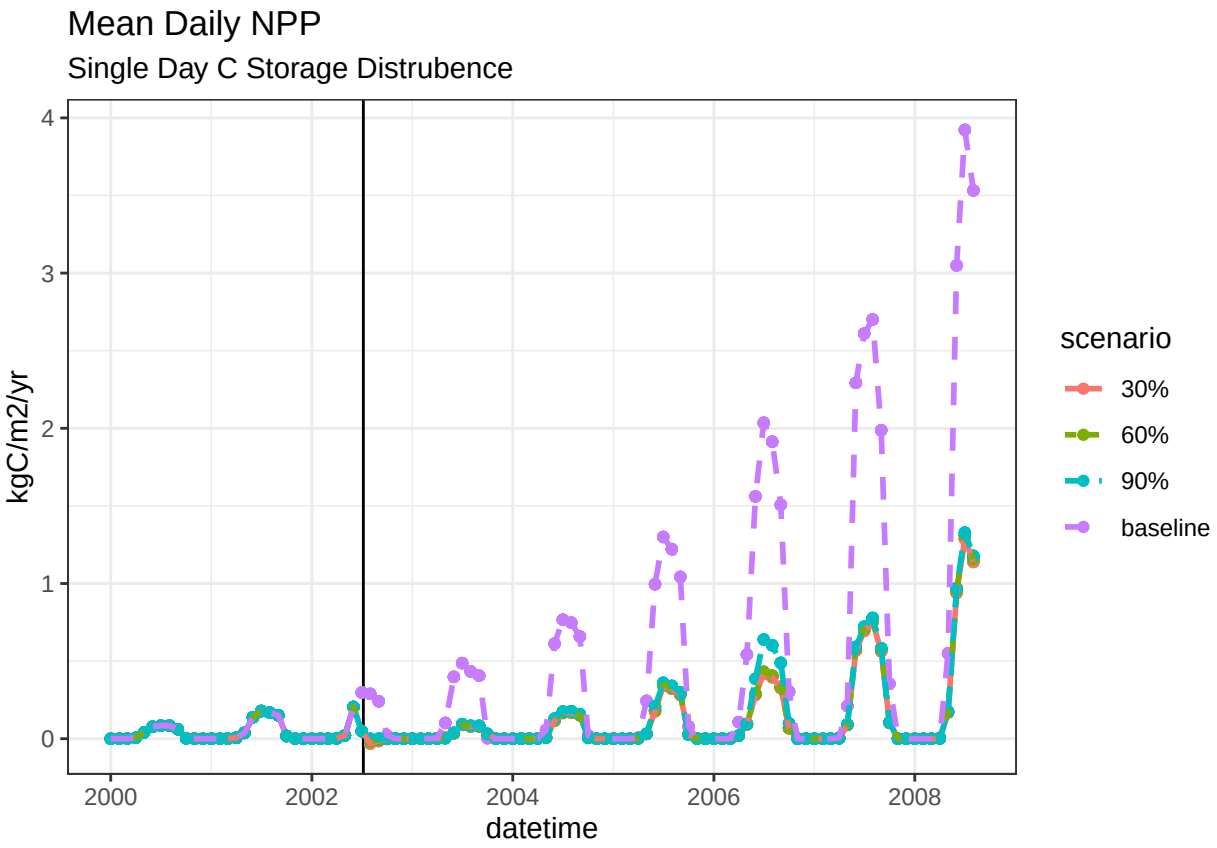
5/20/2020

Objective: Playing around with the disturbence events I am following the advice of Matthes to try to disturb only the carbon storage. Although our FoRTE disturbences will probably have to be over the course of multiple days but this is a starting point.

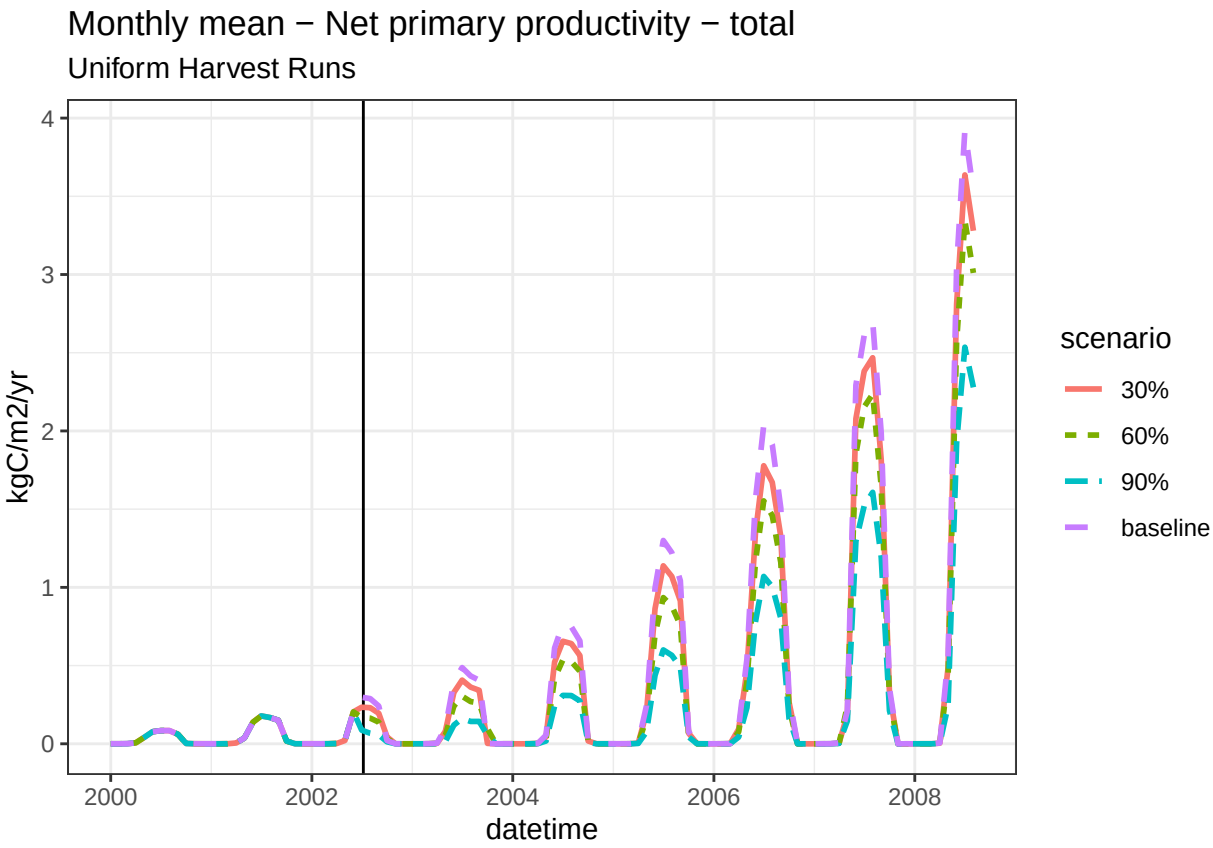
Define the function that will process the output data into data tables that are easy to analyze and plot.

Import the disturbence event results

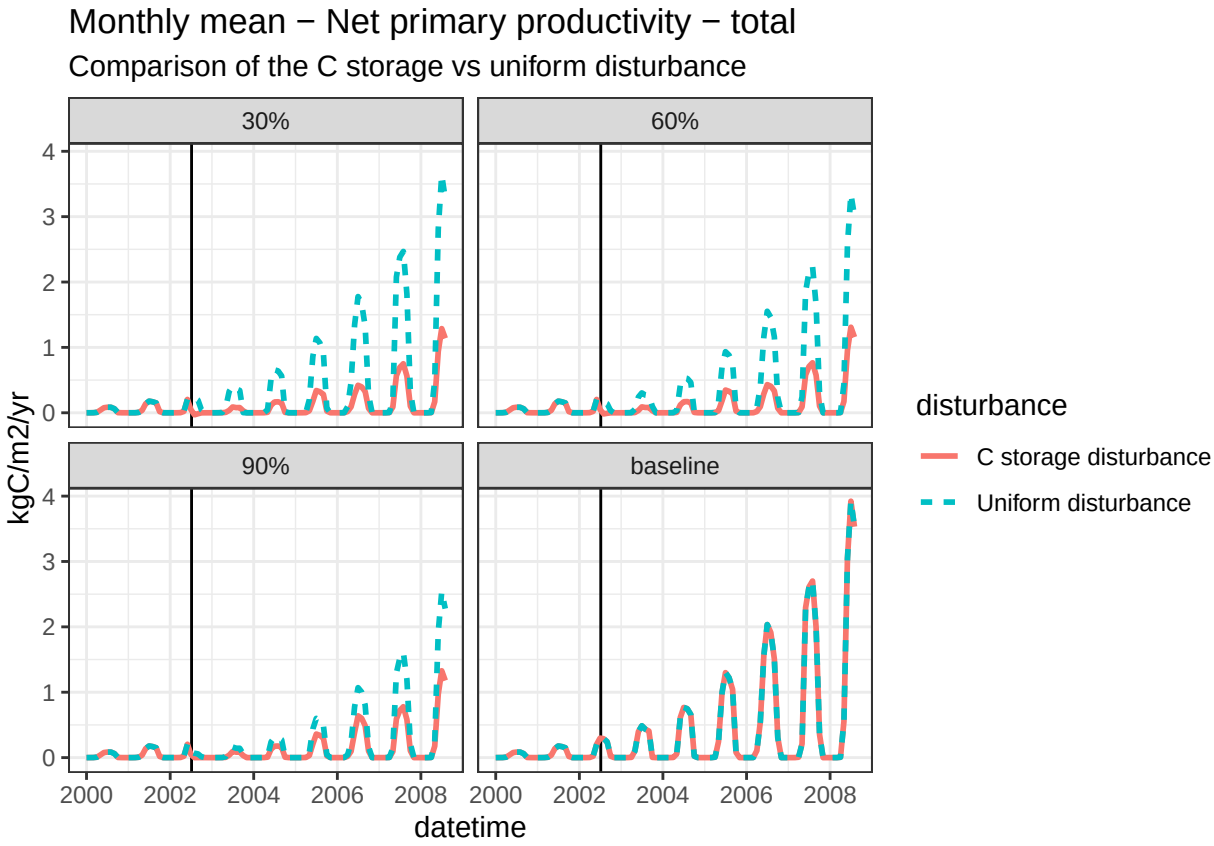
So what what we see here is that that disturbing the carbon storage does impact carbon flux in the stand. But it does so immediatly. Which was not what we were expecting based on the field sights.



How does distrubing the carbon storage compare to the uniform (across all four carbon pools of the plants look)?



Interesting the different disturbance thresholds (30%, 60%, and 90%) cause the NPP to be different for each disturbance treatment. But when we disturbed only the carbon storage there were little to no differences between the different treatment groups.



As expected the baseline results are the same,(they better be the same because they are the same forest). But what is surprising to me is that that NPP was higher for the uniform harvest disturbence. Why could that be? Could it be that with the uniform disturbence because the folliage is removed there is an initial decline in the NPP because there are less trees but that also gives the surviving trees that there is more room to grow, which is why in the following year in the uniform disturbance the NPP begins to recover where as NPP declines following the inital disturbance when only the C storage is disrupted.