Figure 1: Simulation Overview
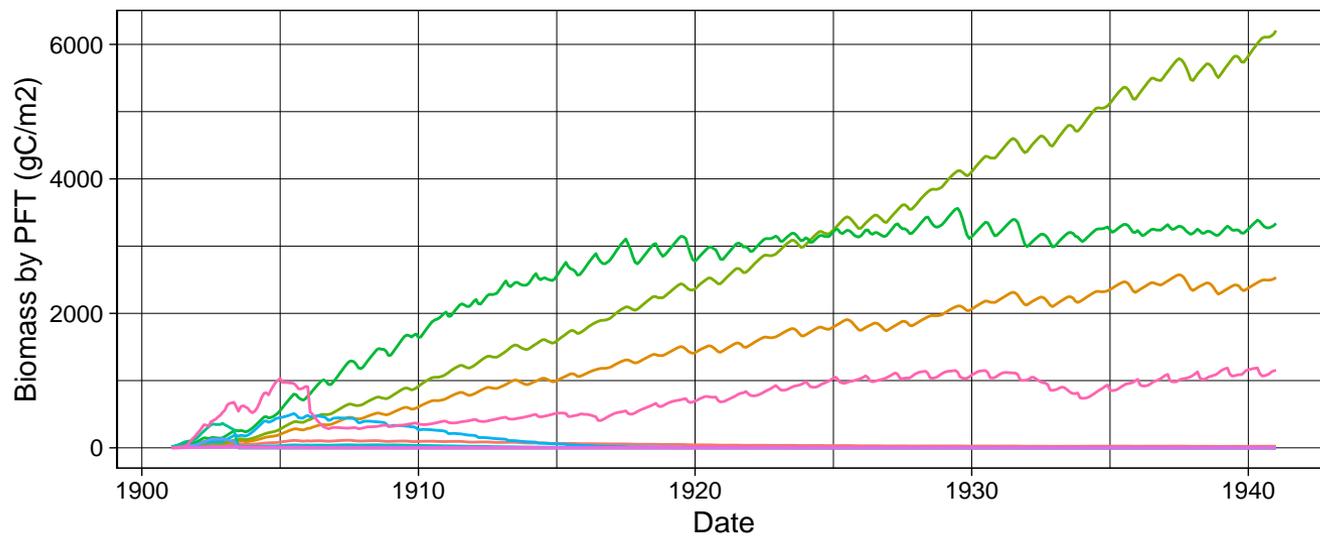
Proj_7_Exp_55 IssuePlots2() Wed 12/02/20 21:04:28 EST

Figure 2: Basal Area
Blue line marks harvest date

A
Logging Simulation (Restart)
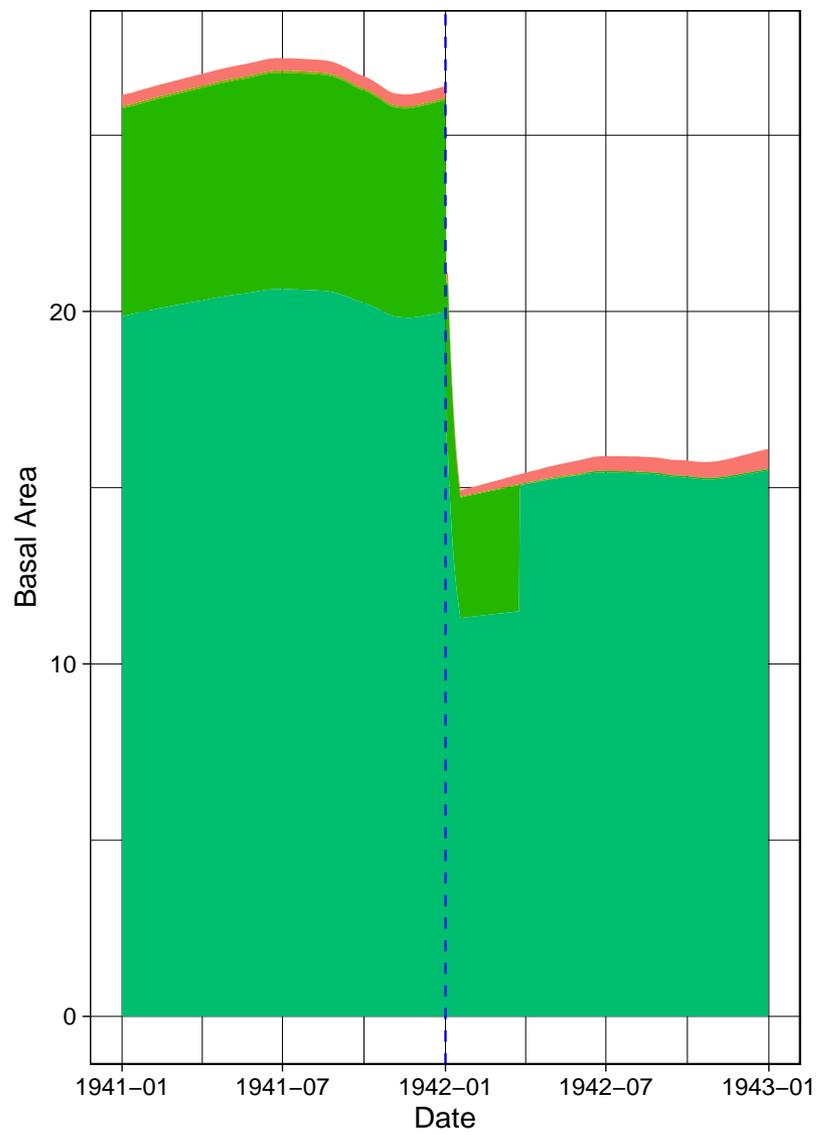
B
Logging Simulation (Restart)
Zoomed In

Logging event reduction

Subsequent loss of plants

fates_levscls

0
5
10
15
20
30
40
50
60
70
80
90
100

Proj_7_Exp_55 IssuePlots2() Wed 12/02/20 21:04:28 EST

Figure 3: PFT Compostition

A

| All PFTs (1–12) | PFT 4 & grasses (10–12) | PFTs 2 & 4 | Tree PFTs (1–6) | Woody PFTs (1–9) |
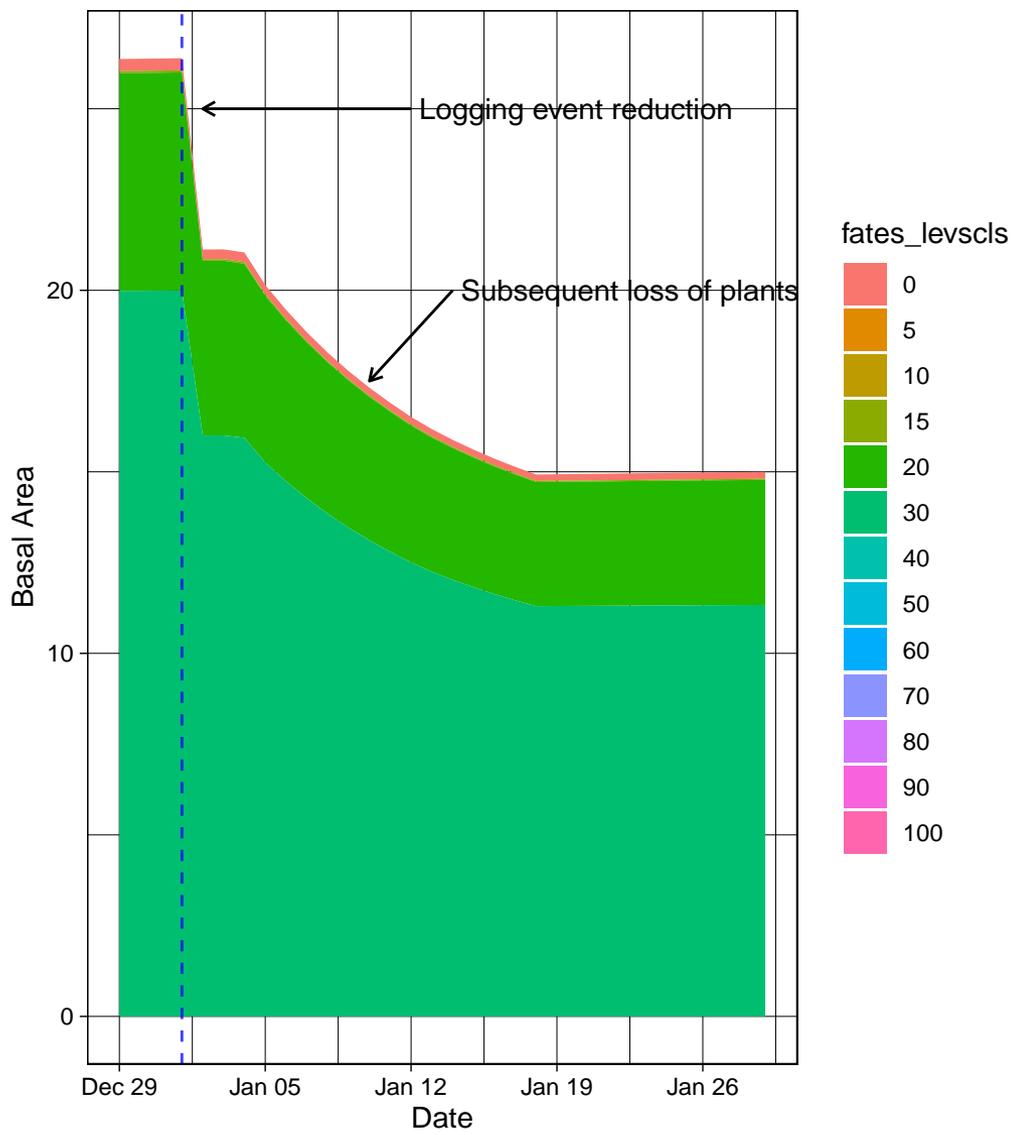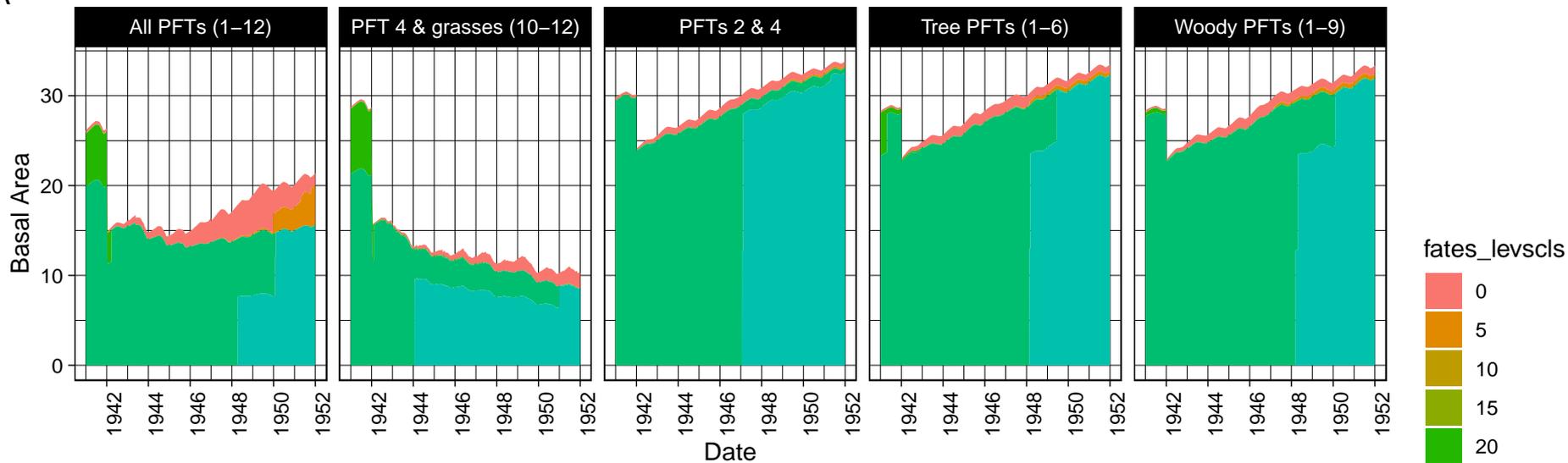
B

Zoomed in on logging event

Blue line marks harvest date

| All PFTs (1–12) | PFT 4 & grasses (10–12) | PFTs 2 & 4 | Tree PFTs (1–6) | Woody PFTs (1–9) |

fates_levscls

- 0
- 5
- 10
- 15
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100

Proj_7_Exp_55 IssuePlots2() Wed 12/02/20 21:04:28 EST
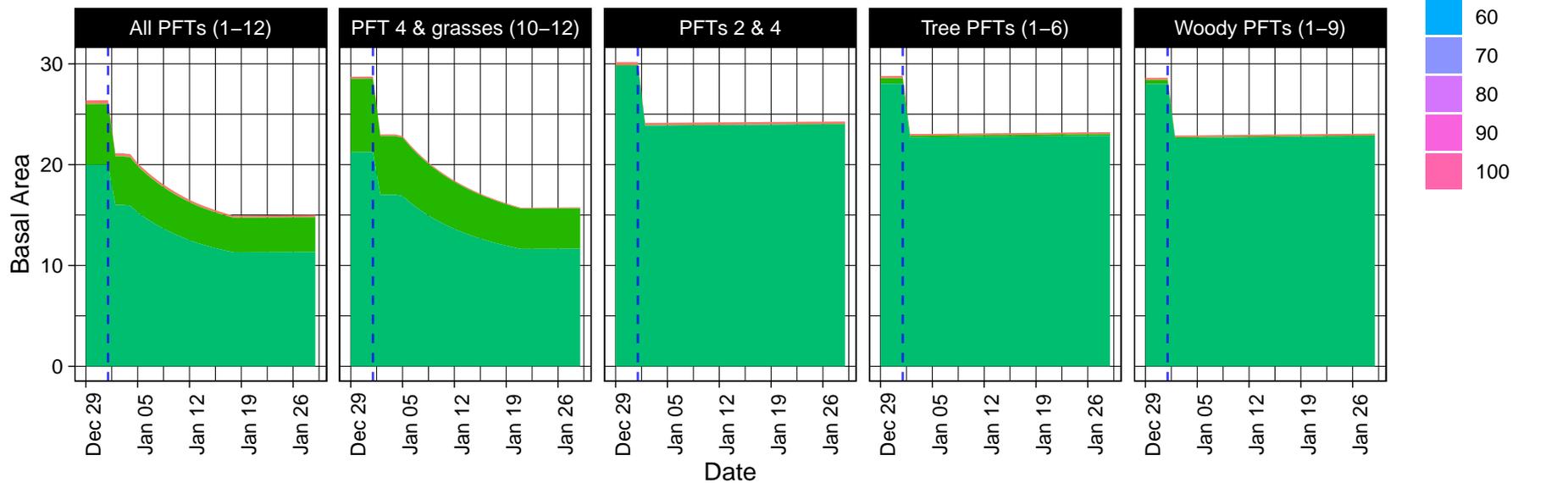
Figure 4: Mortality Types

Blue line marks harvest date

Proj_7_Exp_55 IssuePlots2() Wed 12/02/20 21:04:28 EST
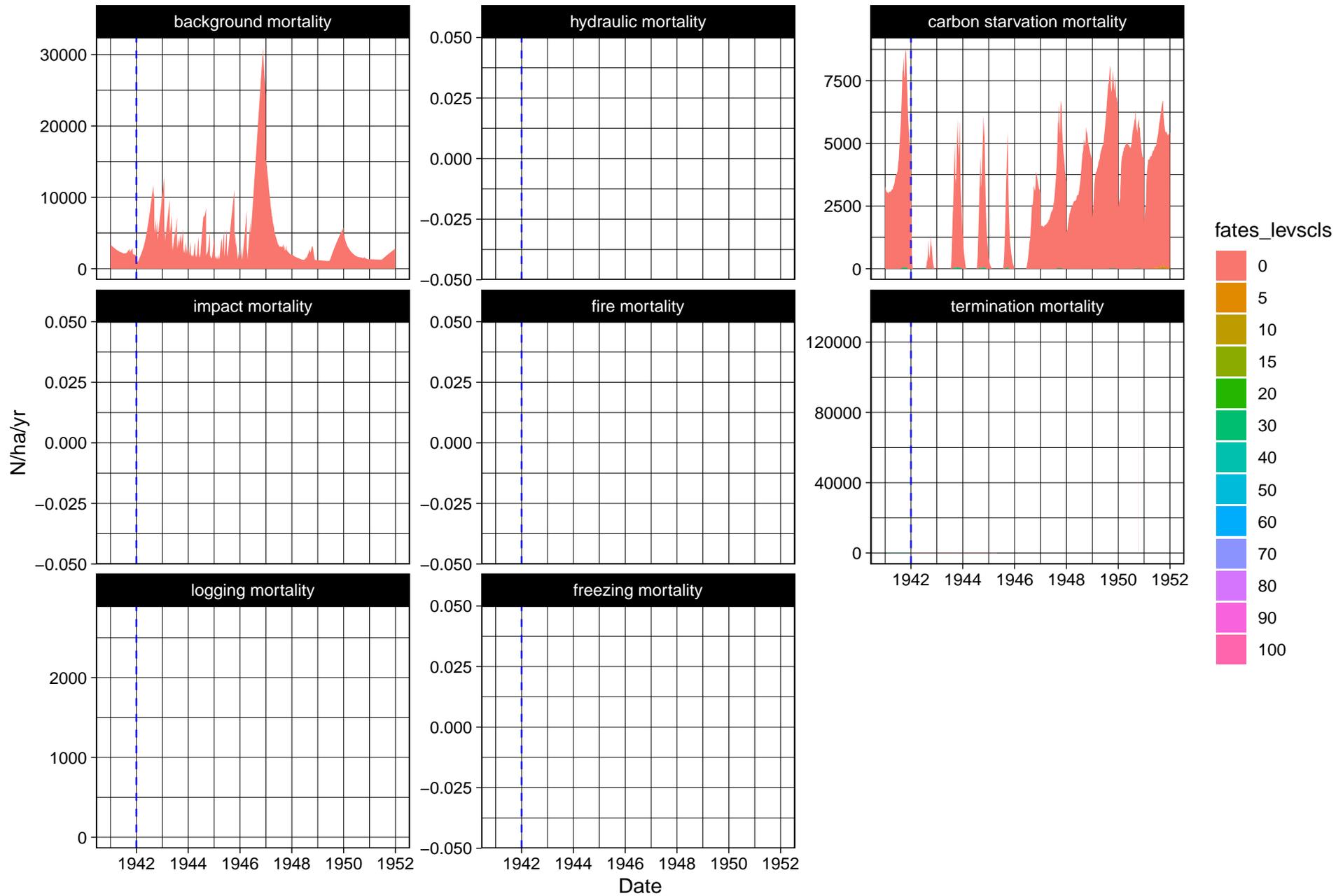
Figure 5: Number of Cohorts

Blue line marks harvest date
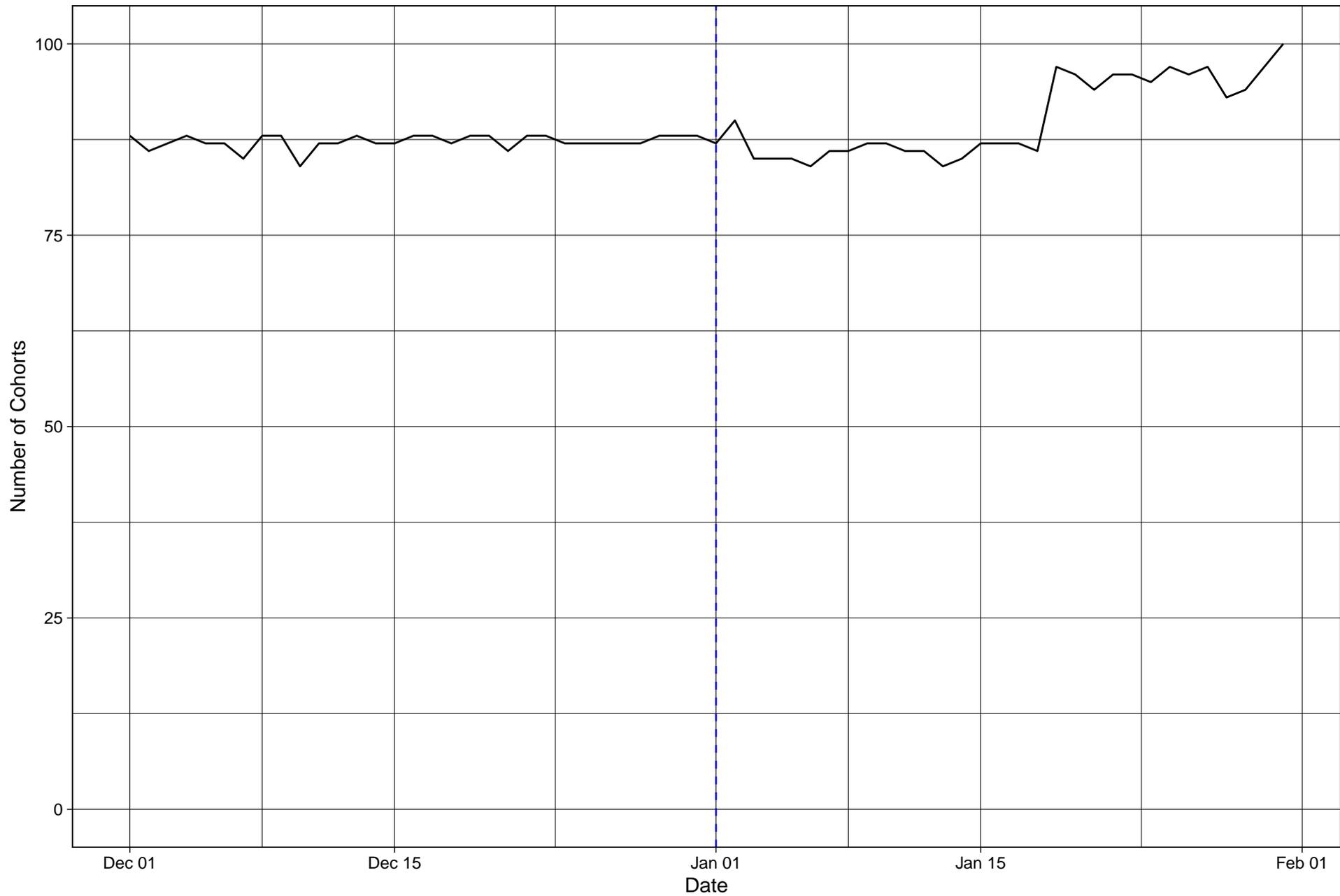
Documentation of FATES Issue: Unexplained loss of plants following logging events
Joshua M. Rady

Proj_7_Exp_55_Analysis.r IssuePlots2() plots.
JMR CentennialTools.r
Wed 12/02/20 EST 21:05:12

Node: Steppin−Razor Running: macOS Mojave 10.14.6
R version 3.6.1 (2019−07−05) x86_64−apple−darwin15.6.0 (64−bit)
With: patchwork, 1.0.0, R 3.6.0; ; 2019−12−02 20:49:55 UTC; unix,
reshape2, 1.4.3, R 3.6.0; x86_64−apple−darwin15.6.0; 2019−04−27 00:13:50 UTC; unix,
ggplot2, 3.2.1, R 3.6.0; ; 2019−08−11 11:45:27 UTC; unix,
ncdf4, 1.16.1, R 3.6.0; x86_64−apple−darwin15.6.0; 2019−04−26 20:03:28 UTC; unix

CLM data from CESM case(s):
Brazil40yrSpinUp_All_PFTs, DCF_Logging_1942_20pct_All_PFTs_CCM_Off,
DCF_Logging_1942_20pct_PFTs_2n4_CCM_Off, DCF_Logging_1942_20pct_PFTs_4nGrass_CCM_Off,
DCF_Logging_1942_20pct_Tree_PFTs_CCM_Off, DCF_Logging_1942_20pct_Woody_PFTs_CCM_Off