Projected fire change 2000 - 2099

Unvetted preliminary rush draft from developmental code

Matthew Leonawicz

January 20, 2015

1 Projected fire change tables

In each subsection below, the third table down with percentages relates to table 8.1 in the original document. This uses strictly ALFRESCO output. The tables use years 2000 - 2009 and 2090 - 2099. There is one section for each region, Alaska and the five LCCs.

1.1 Alaska

1.1.1 Historical fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	59	3159
SRES B1	95th	85	17428
SRES A1B	50th	59	3135
SRES A1B	95th	85	18079
SRES A2	50th	59	3060
SRES A2	95th	84	17579

1.1.2 Projected fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	53	2576
SRES B1	95th	75	11429
SRES A1B	50th	55	4904
SRES A1B	95th	83	25677
SRES A2	50th	51	3412
SRES A2	95th	79	23435

1.1.3 Percent change

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	-10.2	-18.5
SRES B1	95th	-11.4	-34.4
SRES A1B	50th	-6.8	56.4
SRES A1B	95th	-2.5	42.0
SRES A2	50th	-13.6	11.5
SRES A2	95th	-5.9	33.3

1.2 Arctic

1.2.1 Historical fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	1	10
SRES B1	95th	4	6232
SRES A1B	50th	1	10
SRES A1B	95th	3	6058
SRES A2	50th	1	10
SRES A2	95th	3	6042

1.2.2 Projected fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	1	40
SRES B1	95th	3	1421
SRES A1B	50th	1	215
SRES A1B	95th	4	7525
SRES A2	50th	1	56
SRES A2	95th	3	5473

1.2.3 Percent change

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	0.0	300.0
SRES B1	95th	-28.2	-77.2
SRES A1B	50th	0.0	2050.0
SRES A1B	95th	18.3	24.2
SRES A2	50th	0.0	460.0
SRES A2	95th	-15.0	-9.4

1.3 North Pacific

1.3.1 Historical fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	0	2
SRES B1	95th	2	23
SRES A1B	50th	0	2
SRES A1B	95th	2	25
SRES A2	50th	0	2
SRES A2	95th	2	24

1.3.2 Projected fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	0	2
SRES B1	95th	2	44
SRES A1B	50th	0	6
SRES A1B	95th	3	274
SRES A2	50th	0	4
SRES A2	95th	3	121

1.3.3 Percent change

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	-	-
SRES B1	95th	29.03	91.3
SRES A1B	50th	-	-
SRES A1B	95th	93.55	996
SRES A2	50th	-	-
SRES A2	95th	64.52	404.17

1.4 Northwest Interior Forest North

1.4.1 Historical fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	42	2230
SRES B1	95th	63	10264
SRES A1B	50th	42	2200
SRES A1B	95th	63	10426
SRES A2	50th	42	2186
SRES A2	95th	63	10422

1.4.2 Projected fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	38	1798
SRES B1	95th	57	8090
SRES A1B	50th	40	3174
SRES A1B	95th	62	12217
SRES A2	50th	37	2176
SRES A2	95th	61	12642

1.4.3 Percent change

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	-7.2	-19.4
SRES B1	95th	-9.2	-21.2
SRES A1B	50th	-3.6	44.3
SRES A1B	95th	-0.6	17.2
SRES A2	50th	-10.8	-0.5
SRES A2	95th	-3.1	21.3

1.5 Northwest Interior Forest South

1.5.1 Historical fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	10	212
SRES B1	95th	20	2283
SRES A1B	50th	10	203
SRES A1B	95th	20	2362
SRES A2	50th	10	200
SRES A2	95th	20	2289

1.5.2 Projected fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	8	143
SRES B1	95th	17	1298
SRES A1B	50th	9	308
SRES A1B	95th	19	8689
SRES A2	50th	8	203
SRES A2	95th	18	4810

1.5.3 Percent change

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	-10.5	-32.5
SRES B1	95th	-15.3	-43.1
SRES A1B	50th	-5.3	51.7
SRES A1B	95th	-2.3	267.9
SRES A2	50th	-15.8	1.5
SRES A2	95th	-10.2	110.1

1.6 Western Alaska

1.6.1 Historical fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	8	332
SRES B1	95th	17	7251
SRES A1B	50th	8	330
SRES A1B	95th	17	7529
SRES A2	50th	8	334
SRES A2	95th	17	7407

1.6.2 Projected fire

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	6	360
SRES B1	95th	14	5842
SRES A1B	50th	7	1329
SRES A1B	95th	15	9979
SRES A2	50th	7	824
SRES A2	95th	15	10651

1.6.3 Percent change

Climate-change scenario	Percentile	Ignitions	Area burned
SRES B1	50th	-23.5	8.4
SRES B1	95th	-18.1	-19.4
SRES A1B	50th	-17.6	302.7
SRES A1B	95th	-14.4	32.5
SRES A2	50th	-17.6	146.7
SRES A2	95th	-12.1	43.8

2 Percentile fire trends by scenario

The below graph relates to figure 8.2 in the original document. This uses strictly ALFRESCO output.

2.1 Alaska

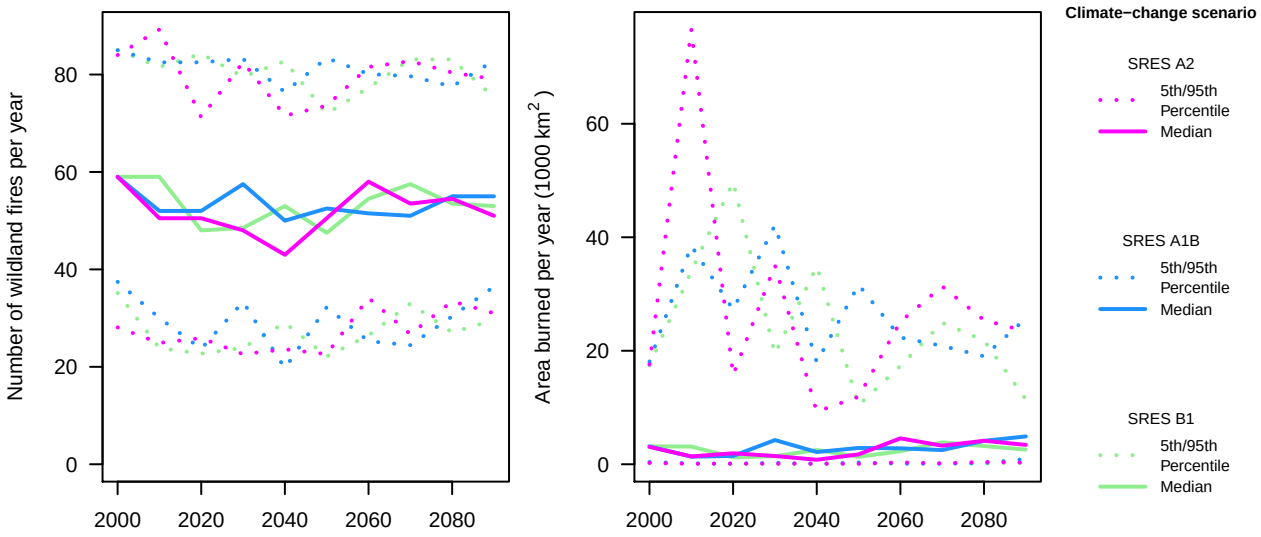

Figure 1: Alaska

All five following separate LCC graphs relate to figure 8.3 in the original document. This uses strictly ALFRESCO output.

2.2 Arctic

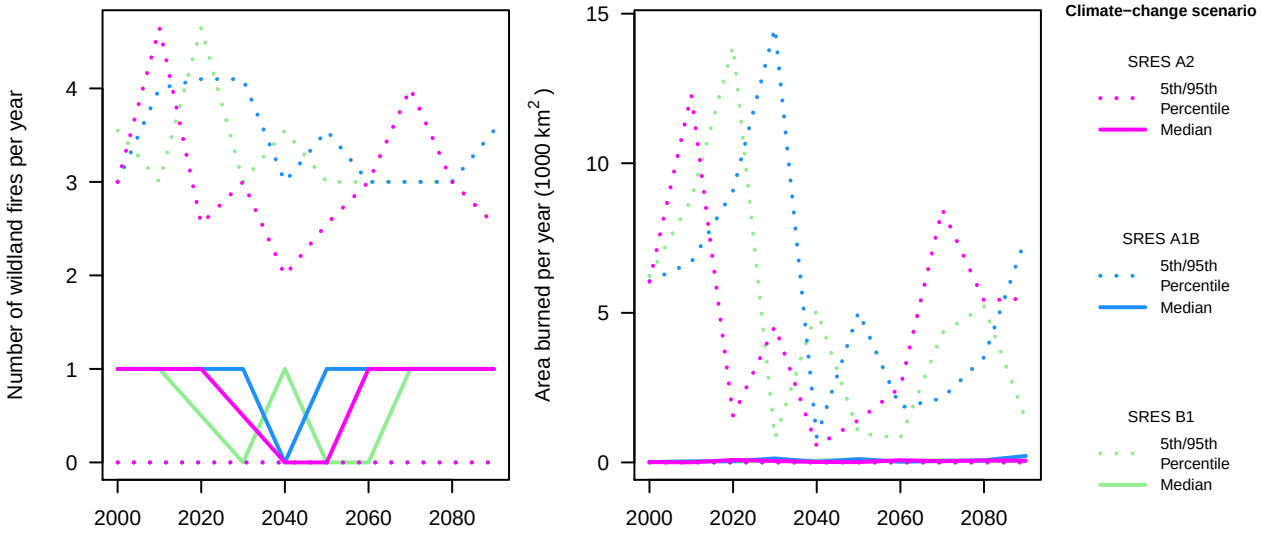

Figure 2: Arctic

2.3 North Pacific

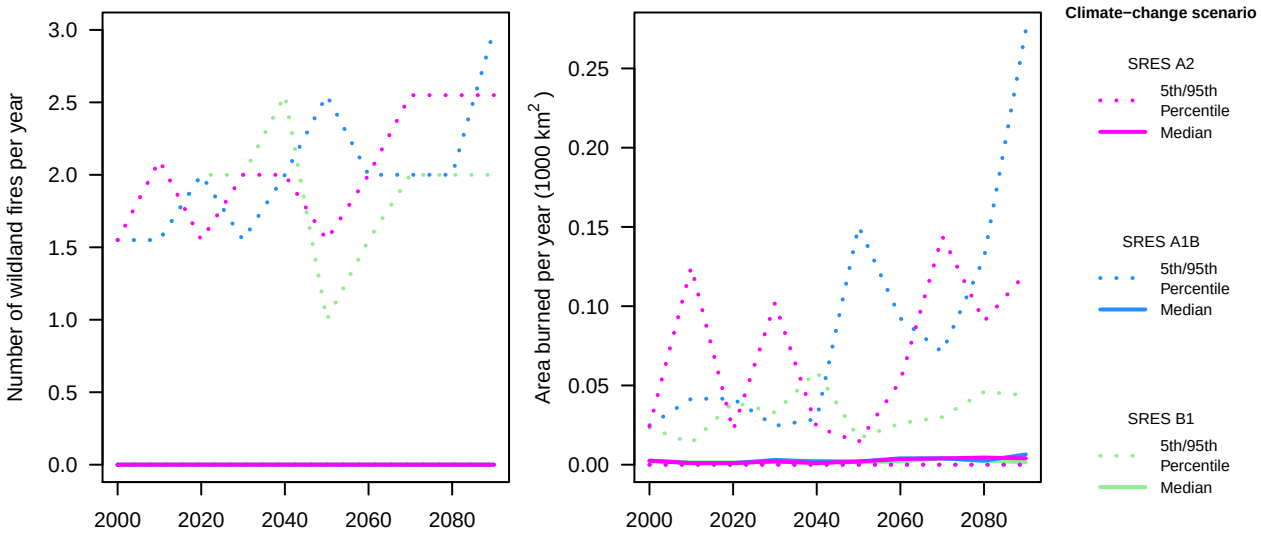

Figure 3: North Pacific

2.4 Northwest Interior Forest North

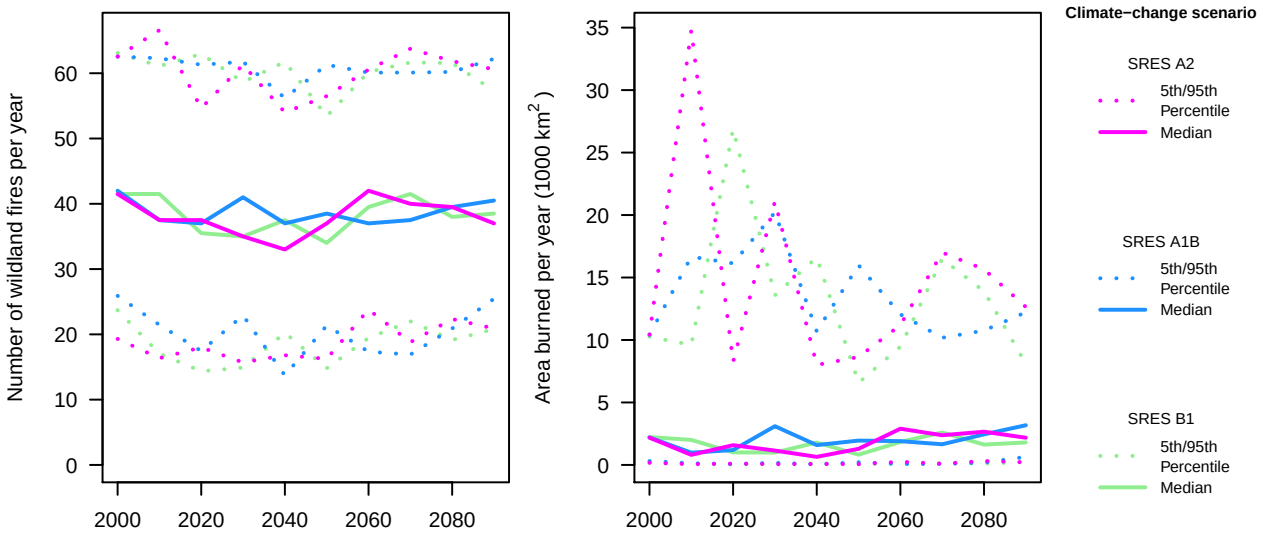

Figure 4: Northwest Interior Forest North

2.5 Northwest Interior Forest South

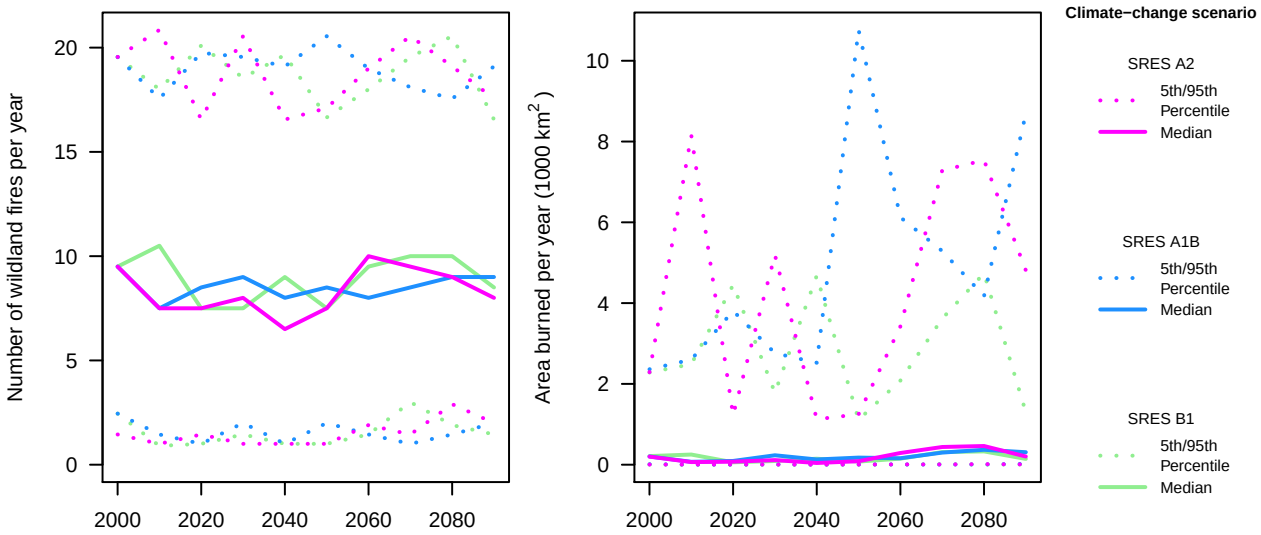

Figure 5: Northwest Interior Forest South

2.6 Western Alaska

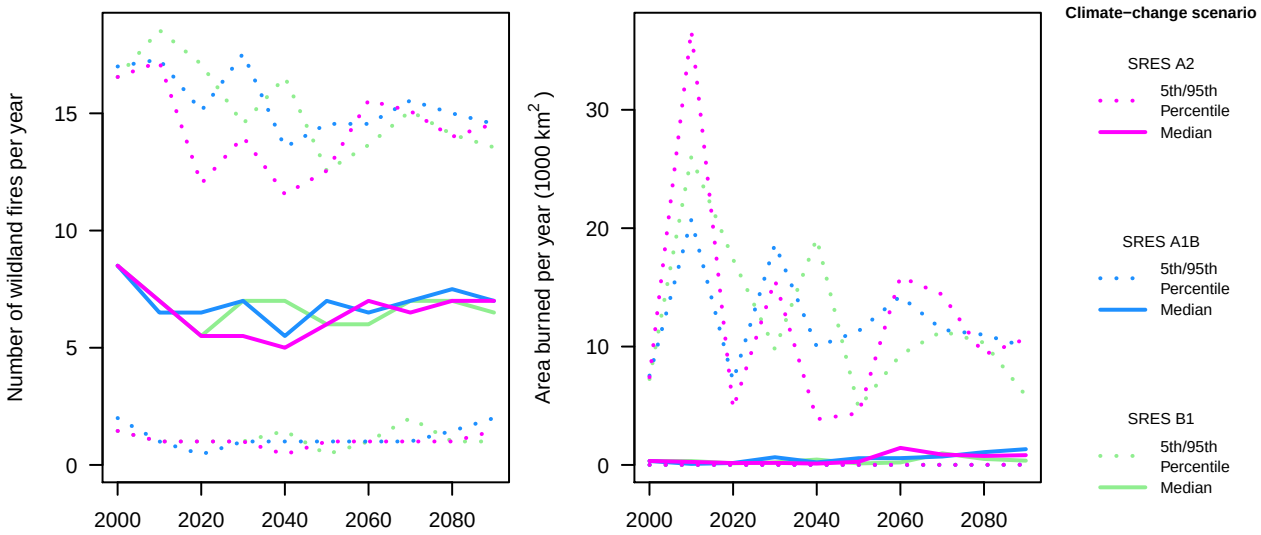

Figure 6: Western Alaska