The PROFOUND sites

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The PROFOUND sites are part of the following data publication and should be cited like:

Reyer CPO, Silveyra Gonzalez R, Dolos K, Hartig F, Hauf Y, Noack M, Lasch-Born P, Rötzer T, Pretzsch H, Meesenburg H, Fleck S, Wagner M, Bolte A, Sanders T, Kolari P, Mäkelä A, Vesala T, Mammarella I, Pumpanen J, Matteucci G, Collalti A, D'Andrea E, Foltýnová L, Krejza J, Ibrom A, Pilegaard K, Loustau D, Bonnefond J-M, Berbigier P, Picart D, Lafont S, Dietze M, Cameron D, Vieno M, Tian H, Palacios-Orueta A, Cicuendez V, Recuero L, Wiese K, Büchner M, Lange S, Volkholz J, Kim H, Weedon GP, Sheffield J, Babst F, Vega del Valle I, Suckow F, Horemans J, Martel S, Bohn F, Steinkamp J, Chikalanov A, Mahnken M, Gutsch M, Trotta C, Babst F, Frieler K (2020) The PROFOUND database for evaluating vegetation models and simulating climate impacts on European forests. V.0.3. GFZ Data Services. http://doi.org/10.5880/PIK.2020.006

This dataset (version 0.3) replaces an earlier version published (v0.1.12) as Reyer et al. (2019) by replacing tree and stand data for the site Soro and fixing a range of minor issues documented in the file changelog_Profound-DB_v03.pdf.

Reyer CPO, Silveyra Gonzalez R, Dolos K, Hartig F, Hauf Y, Noack M, Lasch-Born P, Rötzer T, Pretzsch H, Meesenburg H, Fleck S, Wagner M, Bolte A, Sanders T, Kolari P, Mäkelä A, Vesala T, Mammarella I, Pumpanen J, Matteucci G, Collalti A, D'Andrea E, Foltýnová L, Krejza J, Ibrom A, Pilegaard K, Loustau D, Bonnefond J-M, Berbigier P, Picart D, Lafont S, Dietze M, Cameron D, Vieno M, Tian H, Palacios-Orueta A, Cicuendez V, Recuero L, Wiese K, Büchner M, Lange S, Volkholz J, Kim H, Weedon GP, Sheffield J, Vega del Valle I, Suckow F, Horemans J, Martel S, Bohn F, Steinkamp J, Chikalanov A, Frieler K (2019) The PROFOUND database for evaluating vegetation models and simulating climate impacts on forests. V.0.1.12. GFZ Data Services. http://doi.org/10.5880/PIK.2019.008

A full description paper is also in preparation:

Reyer CPO, Silveyra Gonzalez R, Dolos K, Hartig F, Hauf Y, Noack M, Lasch-Born P, Rötzer T, Pretzsch H, Meesenburg H, Fleck S, Wagner M, Bolte A, Sanders T, Kolari P, Mäkelä A, Vesala T, Mammarella I, Pumpanen J, Matteucci G, Collalti A, Trotta C, D'Andrea E, Foltýnová L, Krejza J, Ibrom A, Pilegaard K, Loustau D, Bonnefond J-M, Berbigier P, Picart D, Lafont S, Dietze M, Cameron D, Vieno M, Tian H, Palacios A, Cicuendez V, Recuero L, Wiese K, Büchner M, Lange S, Volkholz J, Kim H, Weedon GP, Sheffield J, Babst F, Vega del Valle I, Suckow F, Horemans J, Martel S, Bohn F, Steinkamp J, Chikalanov A, Mahnken M, Gutsch M, Frieler K (2020) The PROFOUND database for evaluating vegetation models and simulating climate impacts on forests. Earth System Science Data Discussions. https://doi.org/10.5194/essd-2019-220, 2020

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Contents

Site overview

The PROFOUND database currently includes 9 forest sites. They are listed in the table below.

Table 1: Forest sites included in the database.

site_id	site	lat	lon	epsg	country	aspect_deg	elevation_masl	slope_percent
3	bily_kriz	49.3	18.32	4326	Czech Republic	180	875	12.5
5	collelongo	41.85	13.59	4326	Italy	252	1560	10
12	hyytiala	61.85	24.3	4326	Finland	180	185	2
13	kroof	48.25	11.4	4326	Germany	1.8	502	2.1
14	le_bray	44.72	-0.769	4326	France	–	61	0
16	peitz	51.92	14.35	4326	Germany	–	50	0
20	solling_beech	51.77	9.57	4326	Germany	225	504	1
21	soro	55.49	11.64	4326	Denmark	–	40	0
25	solling_spruce	51.77	9.58	4326	Germany	90	508	1

To provide the information on which data is available for each site, an overview table is created by combining all existing tables in the database.

Table 2: Overview of sites and datasets

site_id	site	SITES	TREE	STAND	SOIL	CLIMATE_LOCAL	CLIMATE_ISIMIP2B	CLIMATE_ISIMIP2BLBC	CLIMATE_ISIMIP2A	CLIMATE_ISIMIPFT	METEOROLOGICAL	FLUX	ATMOSPHERICHEATCONDUCTION	SOILTS	NDEPOSITION_EMEP	NDEPOSITION_ISIMIP2B	CO2_ISIMIP	MODIS_MOD09A1	MODIS_MOD15A2	MODIS_MOD11A2	MODIS_MOD13Q1	MODIS_MOD17A2	MODIS
3	bily_kriz	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	collelongo	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	hyytiala	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	kroof	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1
14	le_bray	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	peitz	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1
20	solling_beech	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1
21	soro	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	solling_spruce	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1

Site bily_kriz

Description

The Bily Kriz site belongs to the ICP Forests Level II network and is a Fluxnet site located in the Moravian-Silesian Beskydy Mts, Czech Republic, at an altitude of 875 m.a.s.l. The climate is temperate with an annual mean temperature of 7.4°C and an annual precipitation sum of 1434 mm over the 2000-2008 period. The soil is classified as a Haplic Podzol. The site is typical for mountain regions of temperate Europe such as the Black Forest, Bohemian Forest Sumava and forested Carpathians (Hercynian (spruce-)fir-beech forests) but also the higher mountain belts in the (sub-)mediterranean. Stand forming tree species for such sites are Fagus sylvatica, Abies alba, and Picea abies. Currently, a large part of mixed mountain forests are strongly managed for timber production. The main tree species occurring in Bily Kriz are Picea abies rarely with small proportion of Fagus sylvatica. The stand data represent an (even-aged) Picea abies monoculture with a mean DBH of 19 cm (year 2015). The potential vegetation belongs to the Geobiocoene type groups: Abieti-fageta (5AB3) - Abies alba Mill. + Fagus sylvatica L. with understory: Calamagrostis arundinacea (L.) Roth, Oxalis acetosella L., Vaccinium myrtillus L., Deschampsia flexuosa (L.) Trin. More information about the site can be found in Kratochvílová et al. (1989) and Meteorological yearbook (2012).

The following data is available for the site

Table 3: Available data for bily_kriz

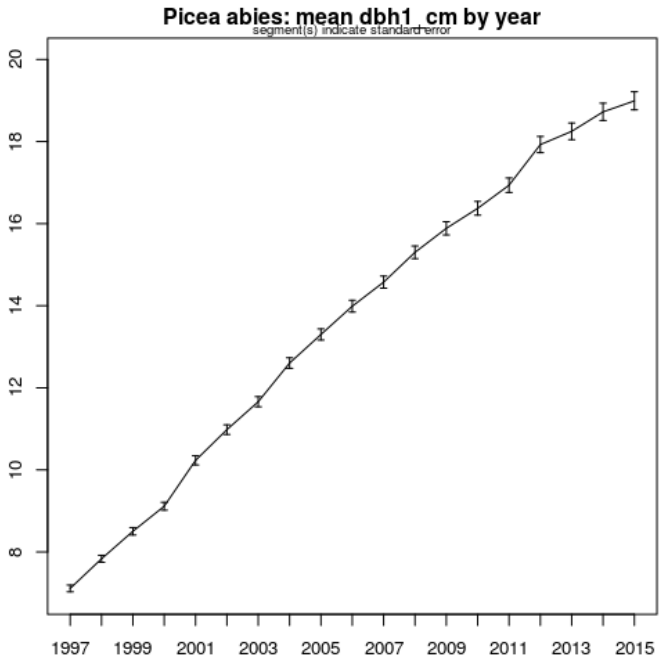
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	1
FLUX	1
ATMOSPHERICHEATCONDUCTION	1
SOILTS	1
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1

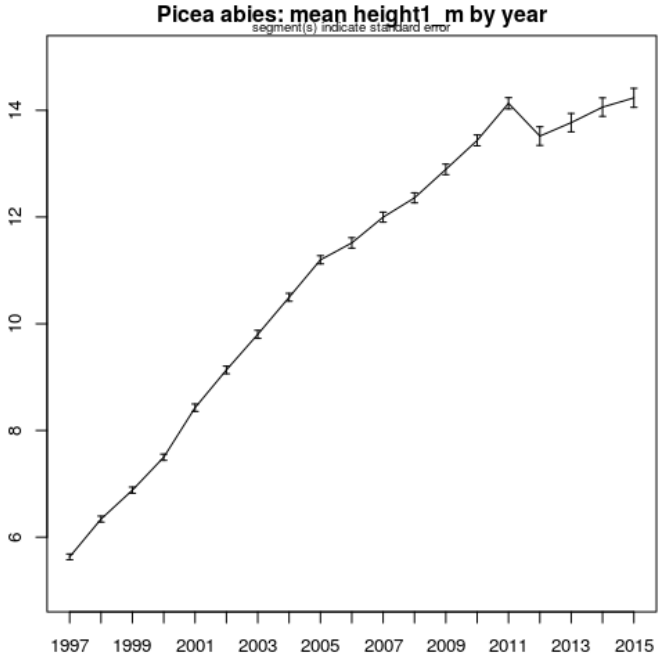
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

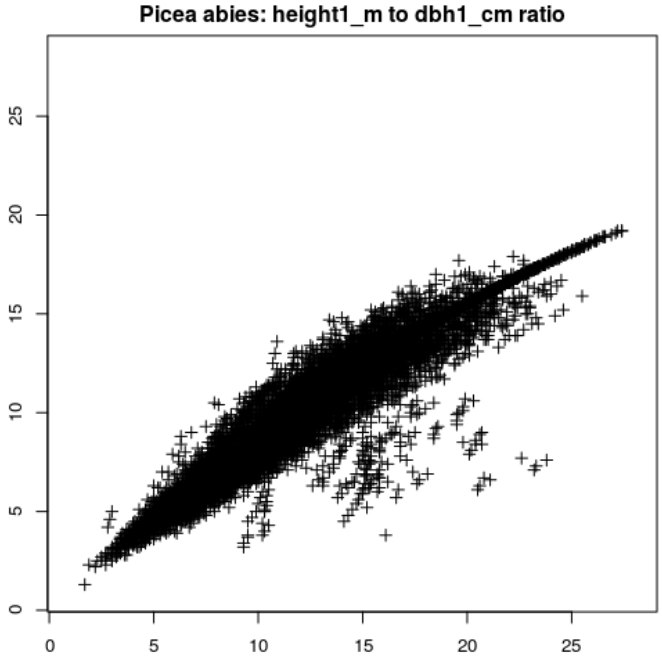
Data

TREE

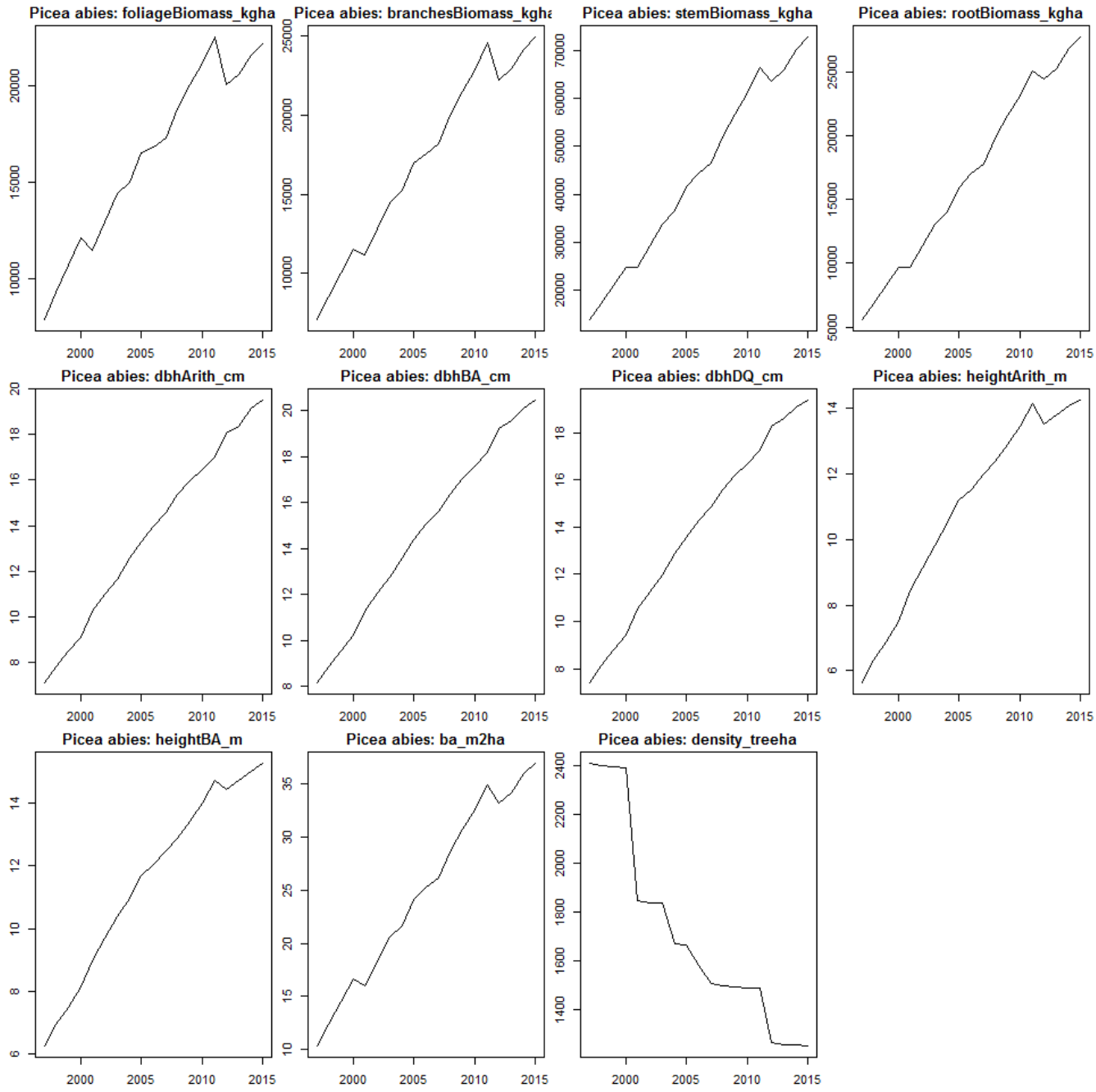

Picea abies: Trees by inventory
0
100
200
300
400
500
600
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015


Picea abies: mean dbh1_cm by year
segment(s) indicate standard error
8
10
12
14
16
18
20
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015


Picea abies: mean height1_m by year
segment(s) indicate standard error
6
8
10
12
14
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015


Picea abies: height1_m to dbh1_cm ratio
0
5
10
15
20
25

STAND


Picea abies: foliageBiomass_kgha
Picea abies: branchesBiomass_kgha
Picea abies: stemBiomass_kgha
Picea abies: rootBiomass_kgha
Picea abies: dbhArith_cm
Picea abies: dbhBA_cm
Picea abies: dbhDQ_cm
Picea abies: heightArith_m
Picea abies: heightBA_m
Picea abies: ba_m2ha
Picea abies: density_treeha

CLIMATE_LOCAL

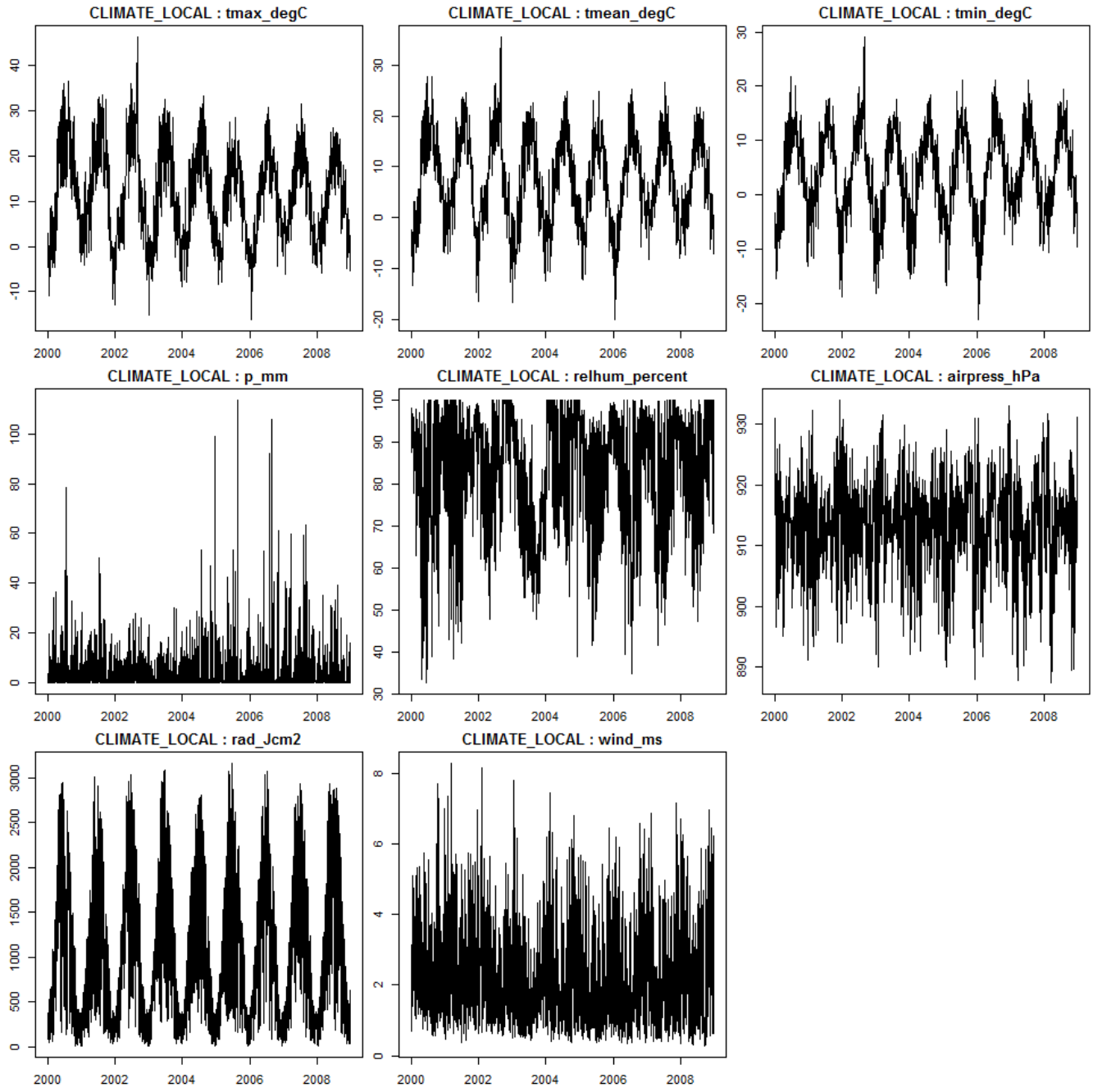


Table 4: Summary of CLIMATE_LOCAL for bily_kriz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
bily_kriz	3	2000	13.5	8.54	4.1	1490	79.9	913	370605	2.35
bily_kriz	3	2001	12.4	7.67	3.72	1567	82.7	912	341851	2.47
bily_kriz	3	2002	13	8.3	4.42	1379	86.4	913	375278	2.2
bily_kriz	3	2003	11.1	6.16	2.35	1004	72.8	914	405381	1.98
bily_kriz	3	2004	12.3	7.68	3.65	1652	88.8	913	367440	2.25
bily_kriz	3	2005	9.31	5.93	3.03	1506	80.1	914	387422	1.95
bily_kriz	3	2006	10.4	6.88	3.87	1395	81.6	914	394616	2.02
bily_kriz	3	2007	11	7.57	4.42	1750	81.7	912	379212	2.07
bily_kriz	3	2008	10.5	7.48	4.65	1168	83.8	913	387168	2.4
bily_kriz	3	2000-2008	11.5	7.36	3.8	1435	82	913	378775	2.19

CLIMATE_ISIMIP2B

Table 5: Summary of CLIMATE_ISIMIP2B for bily_kriz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	11.54	6.931	2.223	968.3	74.29	949.9	391145	3.218
GFDLESM2M	piControl	1661-2099	11.54	6.811	2.08	1041	77.09	949.7	391289	2.561
GFDLESM2M	rcp2p6	2006-2099	12.9	8.31	3.577	1016	73.81	950.8	397678	3.445
GFDLESM2M	rcp4p5	2006-2099	13.41	8.748	3.953	989.9	73.18	951.1	401238	3.385
GFDLESM2M	rcp6p0	2006-2099	13.27	8.651	3.903	989.9	73.31	951.1	397579	3.415
GFDLESM2M	rcp8p5	2006-2099	14.11	9.203	4.232	1001	73.28	951.4	397359	3.196
HadGEM2ES	historical	1861-2005	11.54	6.75	1.825	949	73.46	950.2	401482	3.246
HadGEM2ES	piControl	1661-2299	12.34	7.401	2.315	969.5	72.05	950	428086	3.231
HadGEM2ES	rcp2p6	2006-2299	14.17	9.44	4.636	1087	72.41	950.1	426496	3.226
HadGEM2ES	rcp4p5	2006-2099	15.19	10.36	5.448	1013	69.91	950.4	428361	3.228
HadGEM2ES	rcp6p0	2006-2099	15.15	10.34	5.469	1020	70.03	950.5	427706	3.251
HadGEM2ES	rcp8p5	2006-2099	16.52	11.6	6.636	990.1	68.09	950.7	438960	3.272
IPSLCM5ALR	historical	1861-2005	10.98	6.358	1.602	1027	75.86	949.5	397737	3.26
IPSLCM5ALR	piControl	1661-2299	10.43	5.751	0.894	1056	76.62	949.3	414643	3.112
IPSLCM5ALR	rcp2p6	2006-2299	13.35	8.822	4.222	1098	73.86	949.8	421470	3.215
IPSLCM5ALR	rcp4p5	2006-2299	14.96	10.31	5.649	1047	72.04	950.6	426964	3.063
IPSLCM5ALR	rcp6p0	2006-2099	13.97	9.406	4.783	1044	72.55	950.2	420093	3.148
IPSLCM5ALR	rcp8p5	2006-2299	20.89	16.1	11.29	939.5	66.13	951	435454	3.02
MIROC5	historical	1861-2005	11.53	6.839	1.974	966.6	73.72	950.1	398037	3.298
MIROC5	piControl	1661-2299	12.98	7.79	2.546	1000	71.12	949.7	453618	3.09
MIROC5	rcp2p6	2006-2299	14.39	9.212	3.955	1032	69.67	950.7	459553	3.365
MIROC5	rcp4p5	2006-2099	14.76	9.597	4.44	1072	70.75	950.7	442918	3.085

MIROC5	rcp6p0	2006-2099	14.55	9.413	4.238	1069	70.59	950.6	445612	3.168
MIROC5	rcp8p5	2006-2099	15.82	10.56	5.287	1068	69.55	951.1	454293	3.135

CLIMATE_ISIMIP2BLBC

Table 6: Summary of CLIMATE_ISIMIP2BLBC for bily_kriz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	10.93	6.768	3.223	1327	80.79	913.5	382227	2.181
GFDLESM2M	piControl	1661-2099	10.92	6.65	3.098	1426	82.93	913.4	382337	1.74
GFDLESM2M	rcp2p6	2006-2099	12.27	8.145	4.577	1391	80.31	914.2	388480	2.337
GFDLESM2M	rcp4p5	2006-2099	12.78	8.582	4.97	1347	79.73	914.4	391175	2.299
GFDLESM2M	rcp6p0	2006-2099	12.64	8.489	4.912	1346	79.83	914.4	387741	2.318
GFDLESM2M	rcp8p5	2006-2099	13.46	9.042	5.306	1356	79.71	914.6	387804	2.172
HadGEM2ES	historical	1861-2005	10.42	6.163	2.5	1528	81.87	914	379761	2.211
HadGEM2ES	piControl	1661-2299	11.21	6.813	3.035	1554	80.83	913.6	400913	2.198
HadGEM2ES	rcp2p6	2006-2299	13.06	8.852	5.294	1730	81.19	913.2	398584	2.203
HadGEM2ES	rcp4p5	2006-2099	14.06	9.767	6.14	1566	78.74	913.3	401353	2.207
HadGEM2ES	rcp6p0	2006-2099	14.03	9.756	6.152	1599	78.8	913.4	400592	2.223
HadGEM2ES	rcp8p5	2006-2099	15.38	11.01	7.342	1523	76.64	913.4	412375	2.238
IPSLCM5ALR	historical	1861-2005	10.39	6.13	2.473	1374	83.12	913.8	390576	2.215
IPSLCM5ALR	piControl	1661-2299	9.834	5.522	1.785	1418	83.63	913.7	404397	2.114
IPSLCM5ALR	rcp2p6	2006-2299	12.76	8.592	5.075	1470	81.46	913.4	409411	2.186
IPSLCM5ALR	rcp4p5	2006-2299	14.35	10.08	6.52	1399	79.61	913.9	413982	2.083
IPSLCM5ALR	rcp6p0	2006-2099	13.37	9.179	5.647	1392	80.15	913.7	407645	2.143
IPSLCM5ALR	rcp8p5	2006-2299	20.29	15.88	12.19	1230	72.9	913.1	421215	2.066
MIROC5	historical	1861-2005	10.57	6.462	2.874	1318	80.92	913.9	375332	2.333
MIROC5	piControl	1661-2299	11.95	7.413	3.546	1361	78.32	913.2	426218	2.188
MIROC5	rcp2p6	2006-2299	13.36	8.835	4.957	1407	76.77	913.9	432601	2.38
MIROC5	rcp4p5	2006-2099	13.73	9.219	5.417	1459	77.95	913.8	416265	2.189

MIROC5	rcp6p0	2006-2099	13.53	9.036	5.219	1458	77.78	913.7	418812	2.247
MIROC5	rcp8p5	2006-2099	14.79	10.19	6.293	1457	76.64	914	427219	2.223

CLIMATE_ISIMIP2A

Table 7: Summary of CLIMATE_ISIMIP2A for bily_kriz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	11.4	6.629	2.216	989	78.95	957.2	392392	3.68
PRINCETON	1901-2012	11.22	6.664	2.041	1008	85.34	959.2	405423	3.086
WATCH	1901-2001	11.42	6.794	2.09	1022	76.38	948.6	332569	2.055
WFDEI	1901-2010	11.47	6.83	2.107	1024	76.72	949	361220	2.406

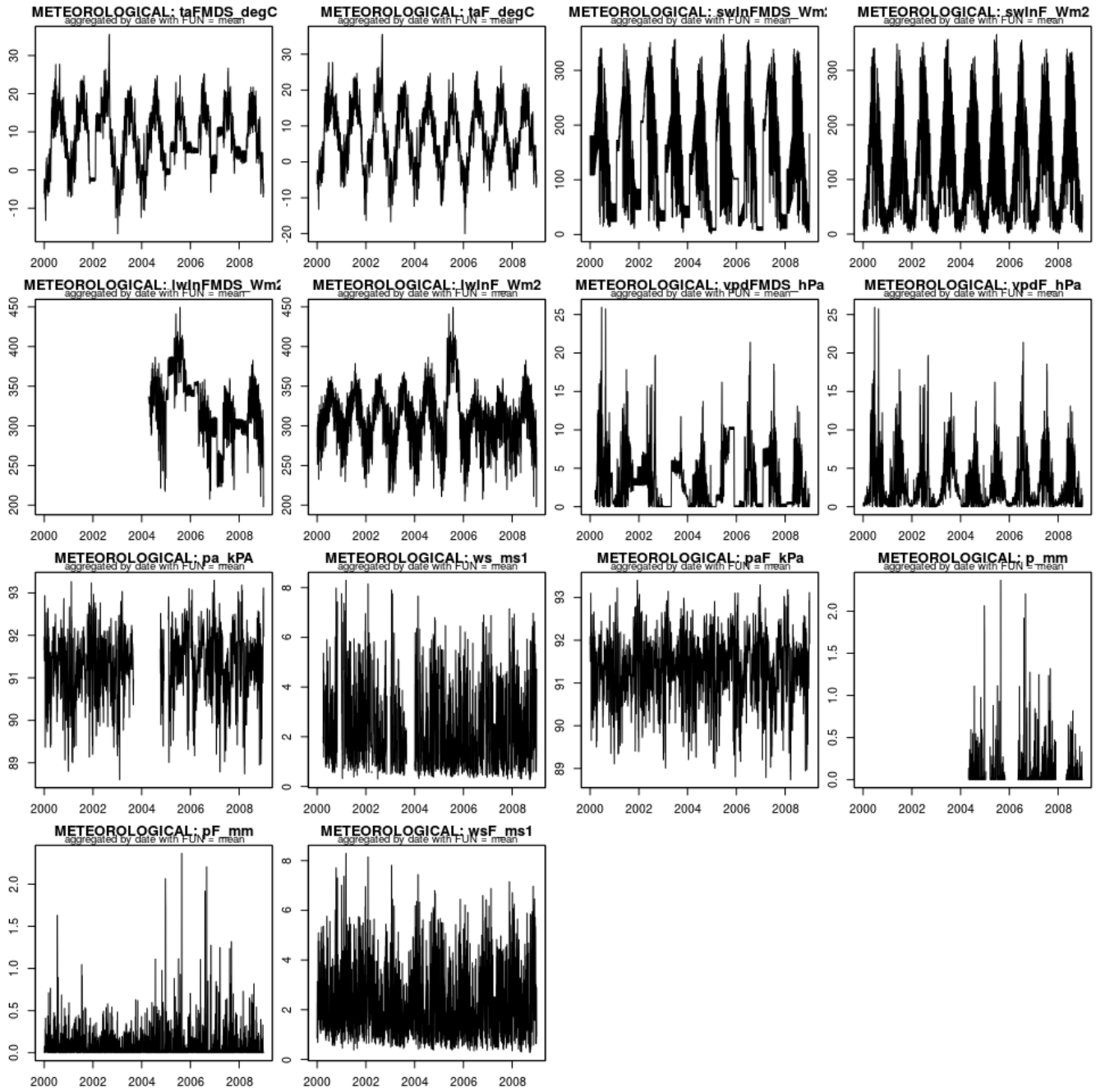
CLIMATE_ISIMIPFT

Table 8: Summary of CLIMATE_ISIMIPFT for bily_kriz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

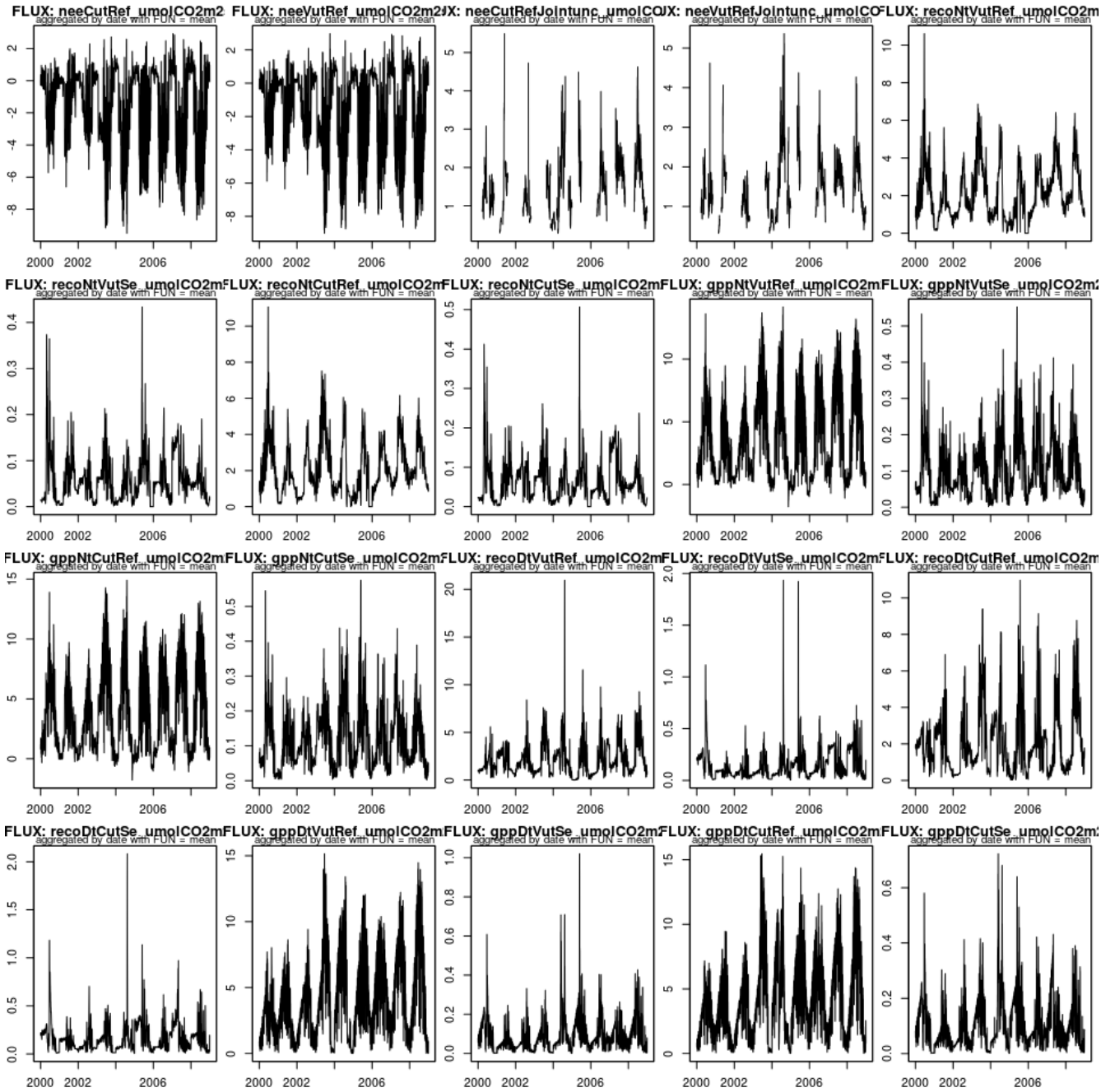
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	11.67	7.073	2.415	1008	82.1	948.4	322974	2.051
GFDLESM2M	rcp2p6	2006-2099	12.86	8.263	3.571	1044	81.78	949.2	331432	2.166
GFDLESM2M	rcp4p5	2006-2099	13.37	8.691	3.934	1015	81.21	949.5	332323	2.132
GFDLESM2M	rcp6p0	2006-2099	13.23	8.6	3.885	1021	81.37	949.5	331107	2.141
GFDLESM2M	rcp8p5	2006-2099	14.06	9.162	4.25	1022	81.04	949.7	331276	2.036
HadGEM2ES	historical	1950-2004	11.41	6.813	2.161	1032	78.28	948.5	322696	2.036
HadGEM2ES	rcp2p6	2005-2099	14.7	9.762	4.83	1010	73.8	948.5	348081	2.015
HadGEM2ES	rcp4p5	2005-2099	15.36	10.41	5.479	1004	72.99	948.7	345896	2.004
HadGEM2ES	rcp6p0	2005-2099	15.3	10.38	5.492	1015	73.12	948.7	346140	2.025
HadGEM2ES	rcp8p5	2005-2099	16.66	11.62	6.635	994.8	71.33	948.9	351791	2.038
IPSLCM5ALR	historical	1950-2005	11.66	7.096	2.48	1016	79.68	948.5	320967	2.061
IPSLCM5ALR	rcp2p6	2006-2099	13.78	9.267	4.737	1095	77.91	948.5	335728	2.002
IPSLCM5ALR	rcp4p5	2006-2099	14.21	9.67	5.153	1063	77.22	948.9	334196	1.962
IPSLCM5ALR	rcp6p0	2006-2099	14.23	9.726	5.22	1068	77.07	948.7	332725	1.989
IPSLCM5ALR	rcp8p5	2006-2099	15.48	10.86	6.245	1039	75.77	949.1	338151	1.963
MIROCESMCHEM	historical	1950-2005	11.63	7.018	2.354	1032	87.44	948.3	327998	2.004
MIROCESMCHEM	rcp2p6	2006-2099	14.31	9.479	4.709	1086	87.92	948.9	369878	1.319
MIROCESMCHEM	rcp4p5	2006-2099	14.47	9.637	4.888	1093	88.02	949.3	364160	1.376
MIROCESMCHEM	rcp6p0	2006-2099	14.58	9.762	5.037	1134	88.13	948.9	366079	1.253
MIROCESMCHEM	rcp8p5	2006-2099	15.56	10.73	5.999	1114	88.09	949.5	371399	1.19
NorESM1M	historical	1950-2005	11.56	6.979	2.324	998.7	78.83	948.5	321467	2.05
NorESM1M	rcp2p6	2006-2099	13.35	8.901	4.277	1032	74.59	948.7	345135	2.159

NorESM1M	rcp4p5	2006-2099	13.95	9.362	4.627	1011	73.74	948.8	348312	2.112
NorESM1M	rcp6p0	2006-2099	13.97	9.311	4.521	1024	74.22	948.9	346791	2.101
NorESM1M	rcp8p5	2006-2099	14.76	9.636	4.513	1044	74.85	949.1	349510	2.03

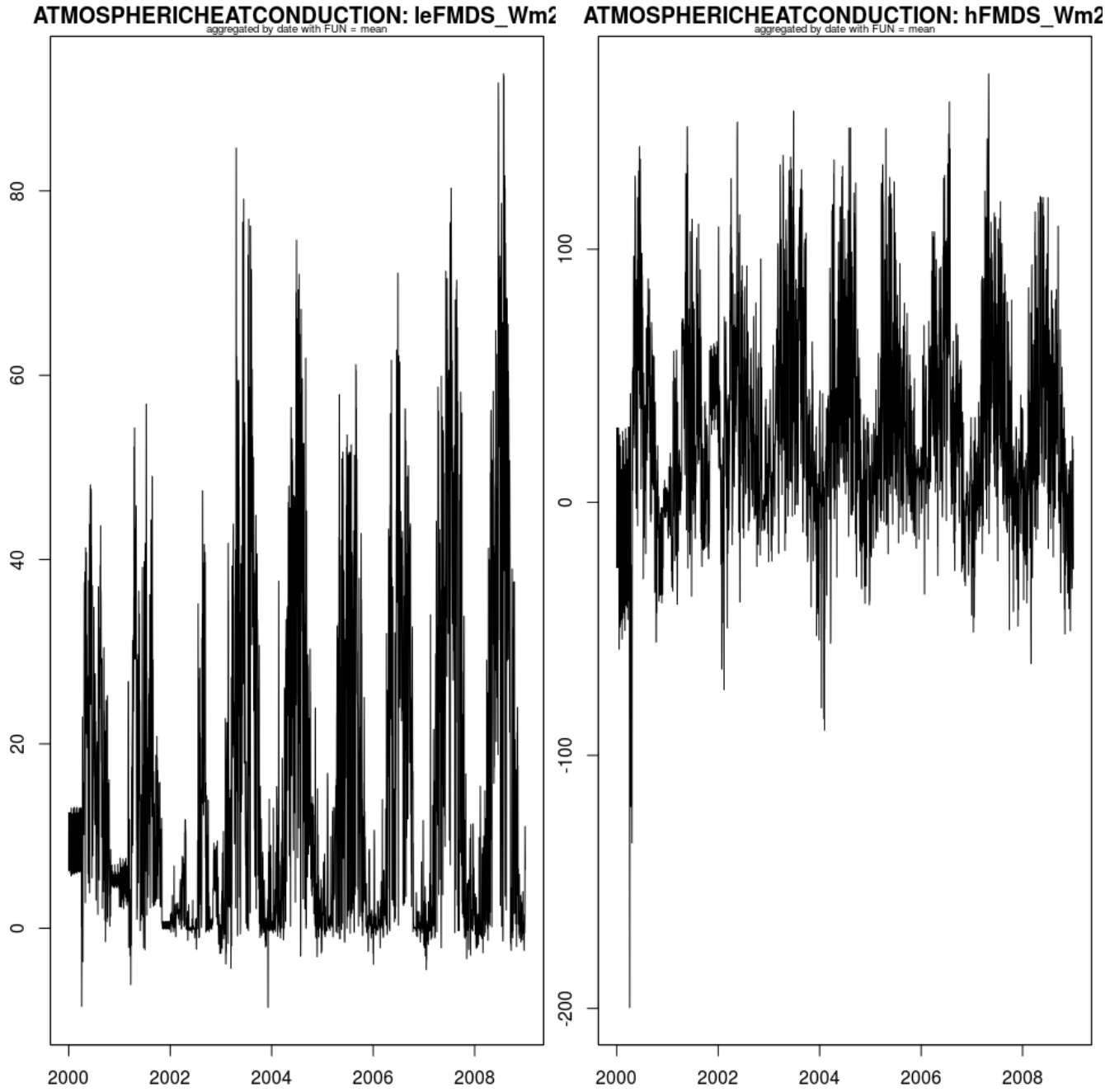
METEOROLOGICAL



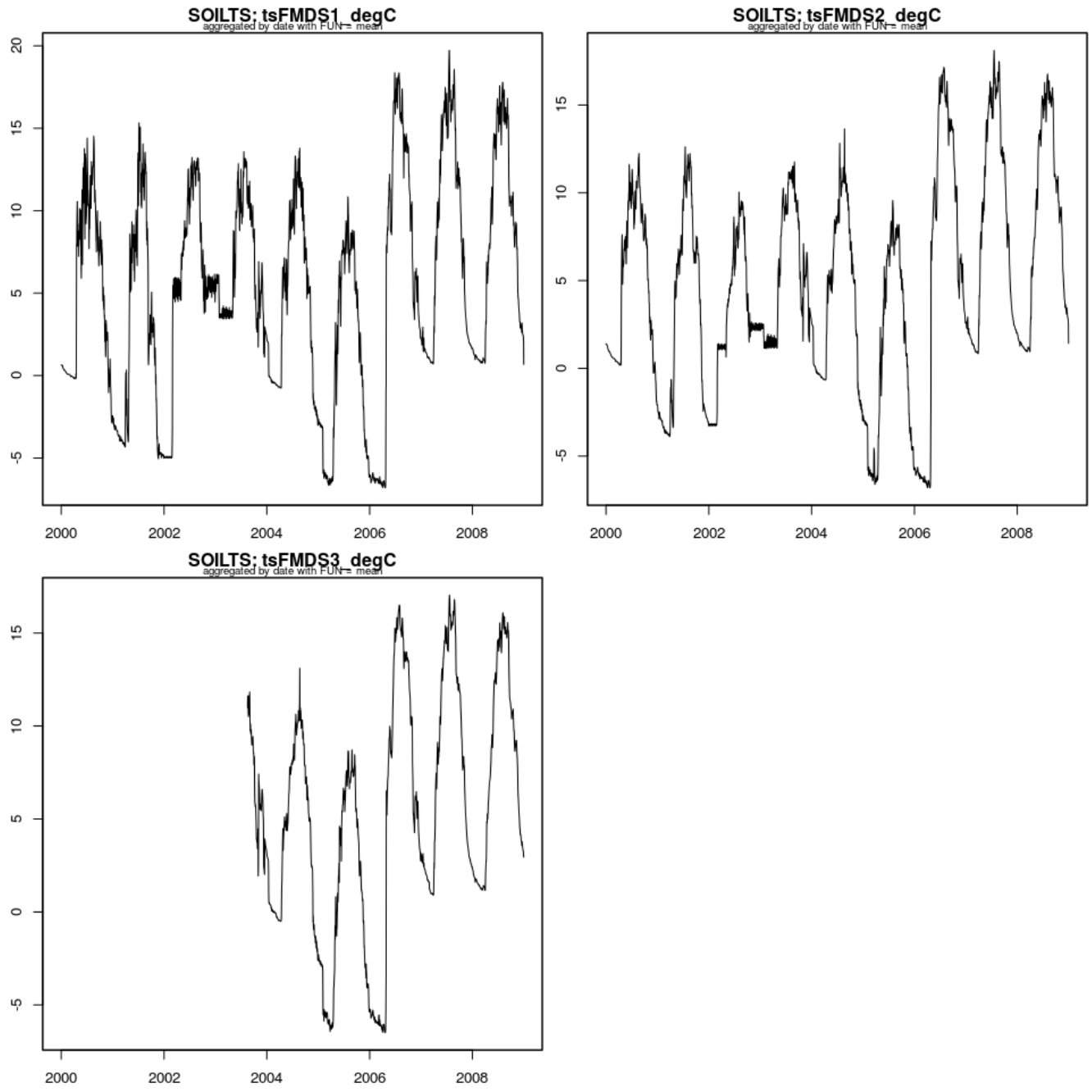
FLUX


FLUX: neeCutRef_umolCO2m2
FLUX: neeVutRef_umolCO2m2
FLUX: neeCutRefJointunc_umolCO
FLUX: neeVutRefJointunc_umolCO
FLUX: recoNtVutRef_umolCO2m
FLUX: recoNtVutSe_umolCO2m
FLUX: recoNtCutRef_umolCO2m
FLUX: recoNtCutSe_umolCO2m
FLUX: gppNtVutRef_umolCO2m
FLUX: gppNtVutSe_umolCO2m
FLUX: gppNtCutRef_umolCO2m
FLUX: gppNtCutSe_umolCO2m
FLUX: recoDtVutRef_umolCO2m
FLUX: recoDtVutSe_umolCO2m
FLUX: recoDtCutRef_umolCO2m
FLUX: recoDtCutSe_umolCO2m
FLUX: gppDtVutRef_umolCO2m
FLUX: gppDtVutSe_umolCO2m
FLUX: gppDtCutRef_umolCO2m
FLUX: gppDtCutSe_umolCO2m
aggregated by date with FUN = mean
2000
2002
2006

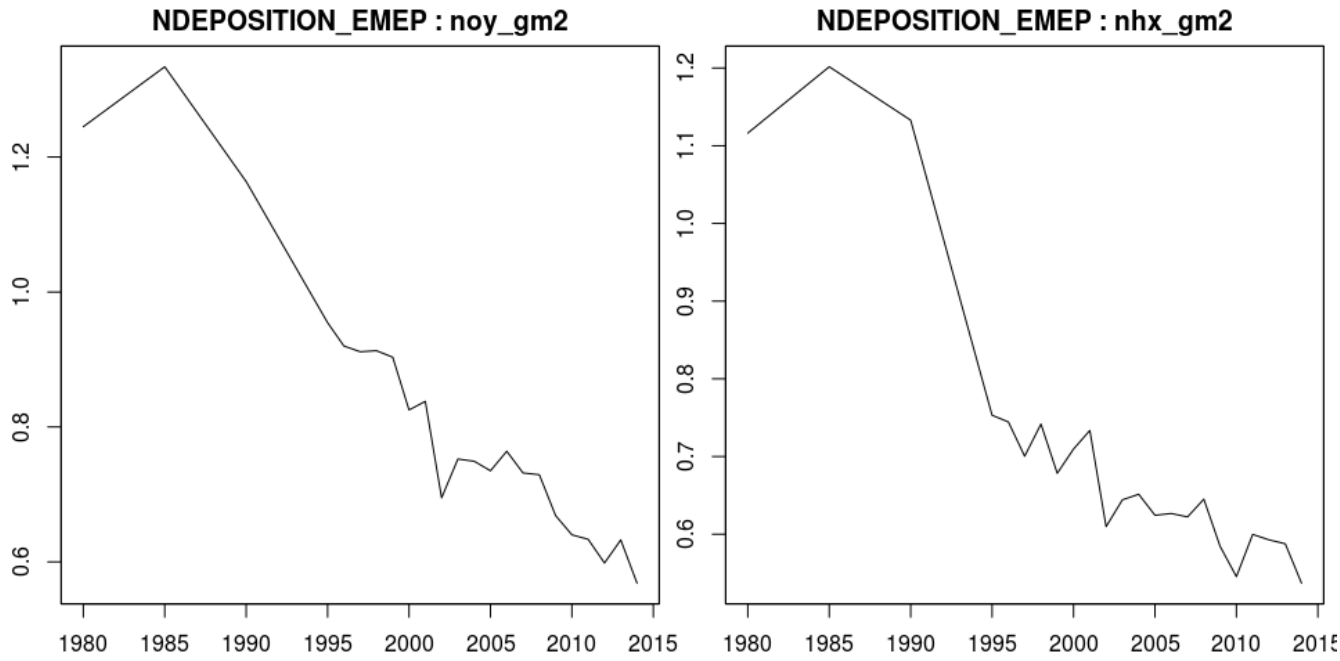
ATMOSPHERICHEATCONDUCTION



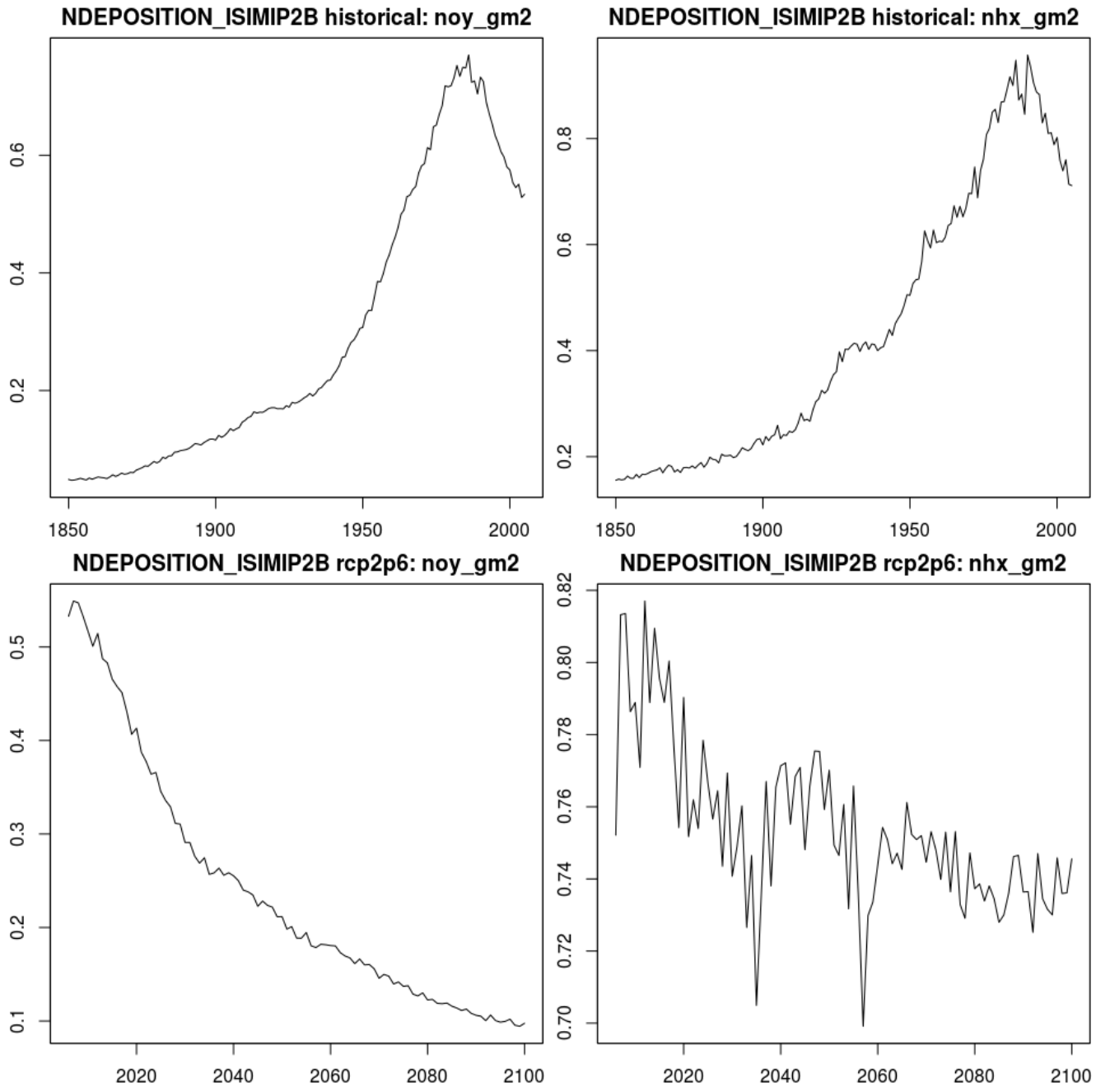
SOILTS

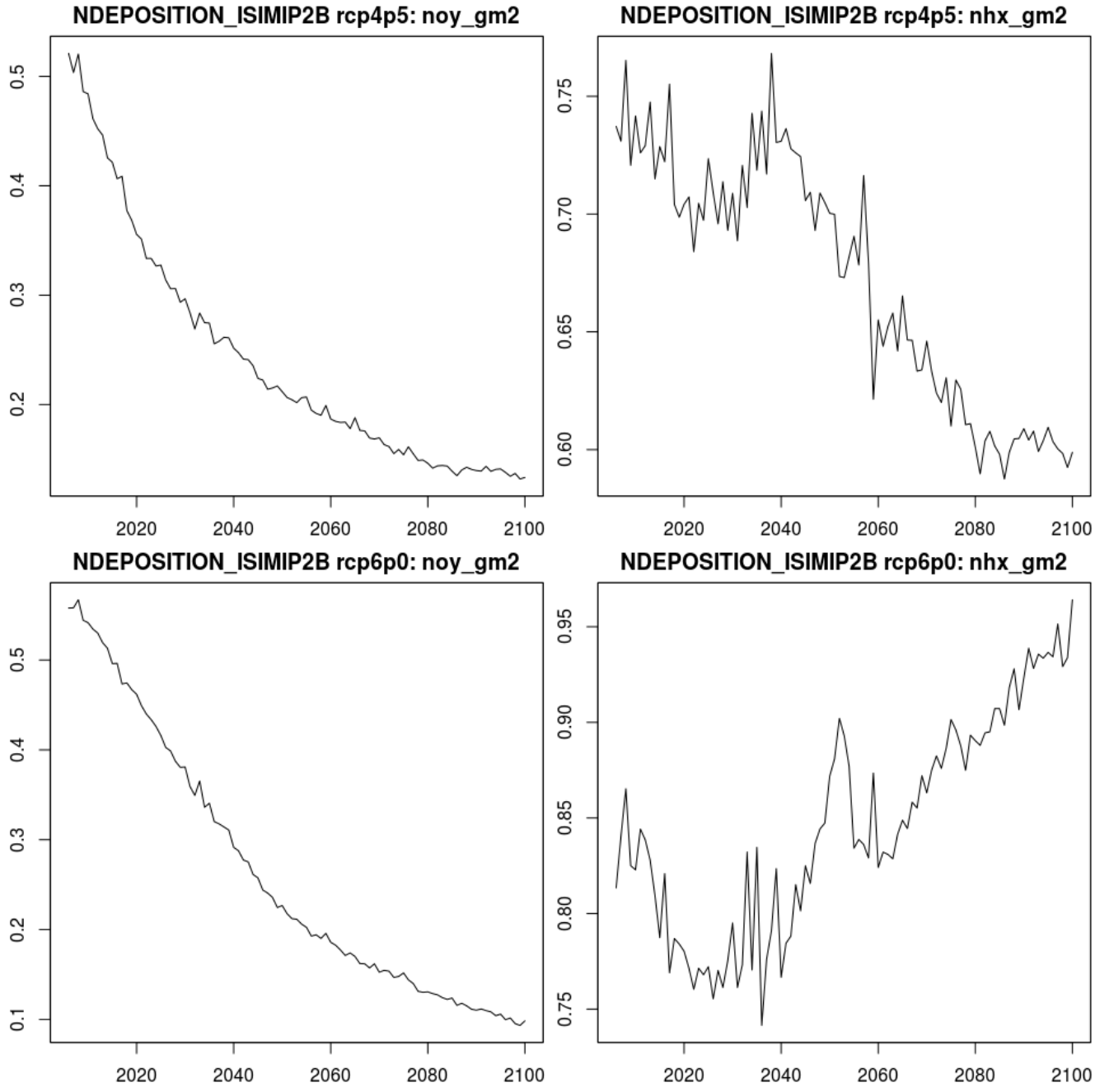

SOILTS: tsFMDS1_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS2_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS3_degC
aggregated by date with FUN = mean
2000
2002
2004
2006
2008

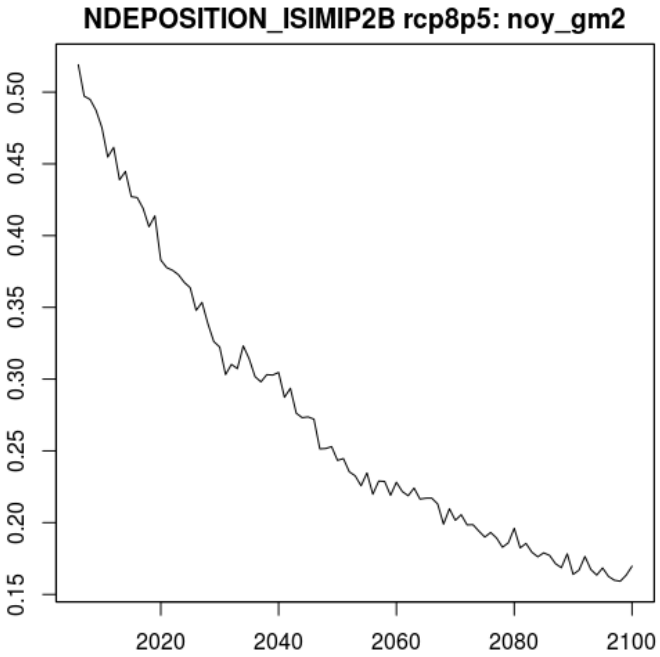
NDEPOSITION_EMEP

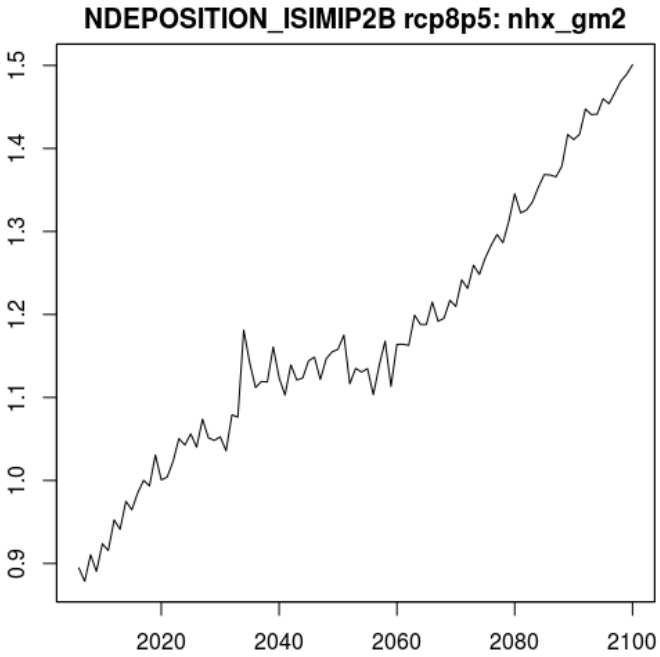


NDEPOSITION_ISIMIP2B

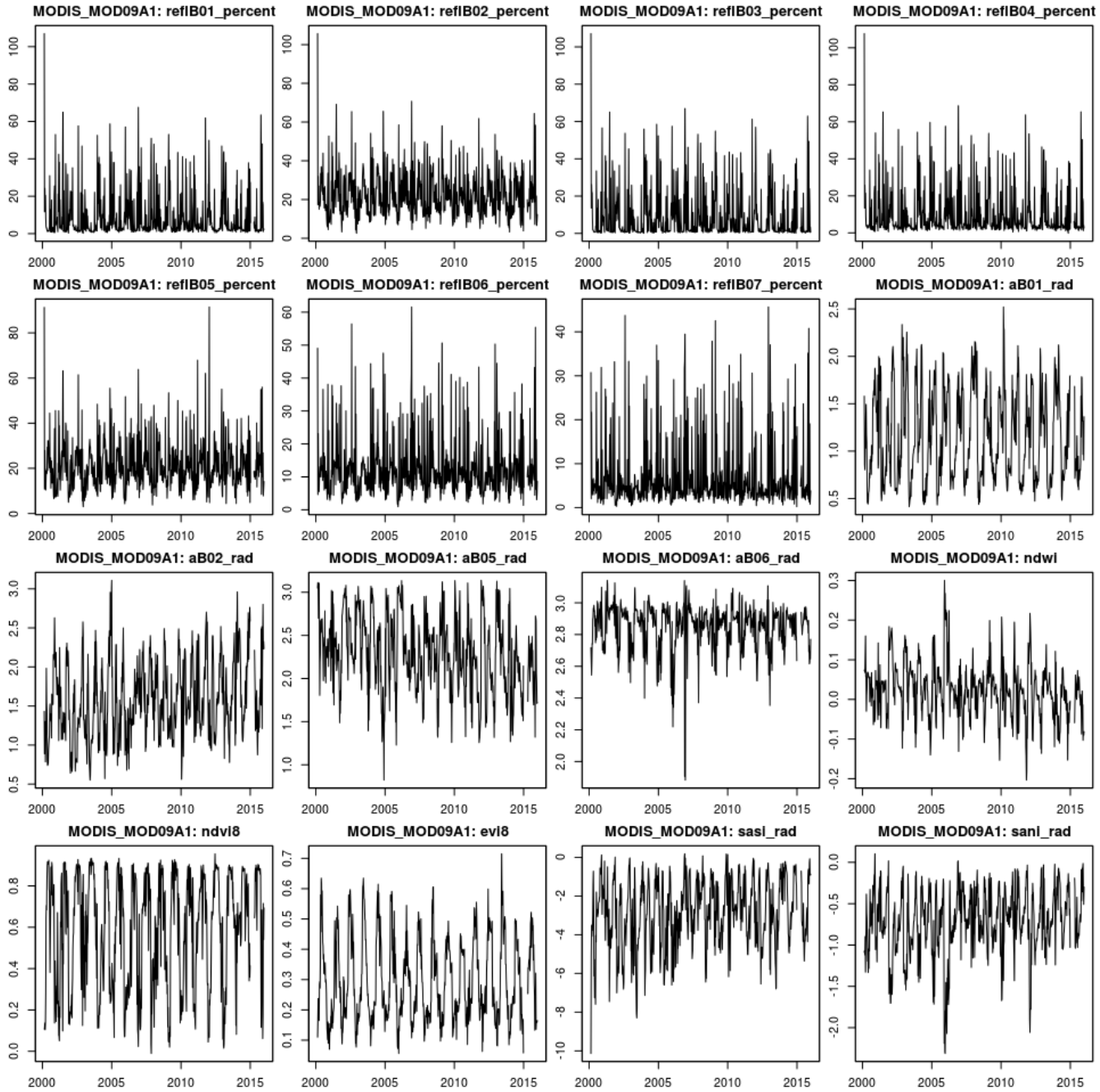



NDEPOSITION_ISIMIP2B rcp4p5: noy_gm2
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100

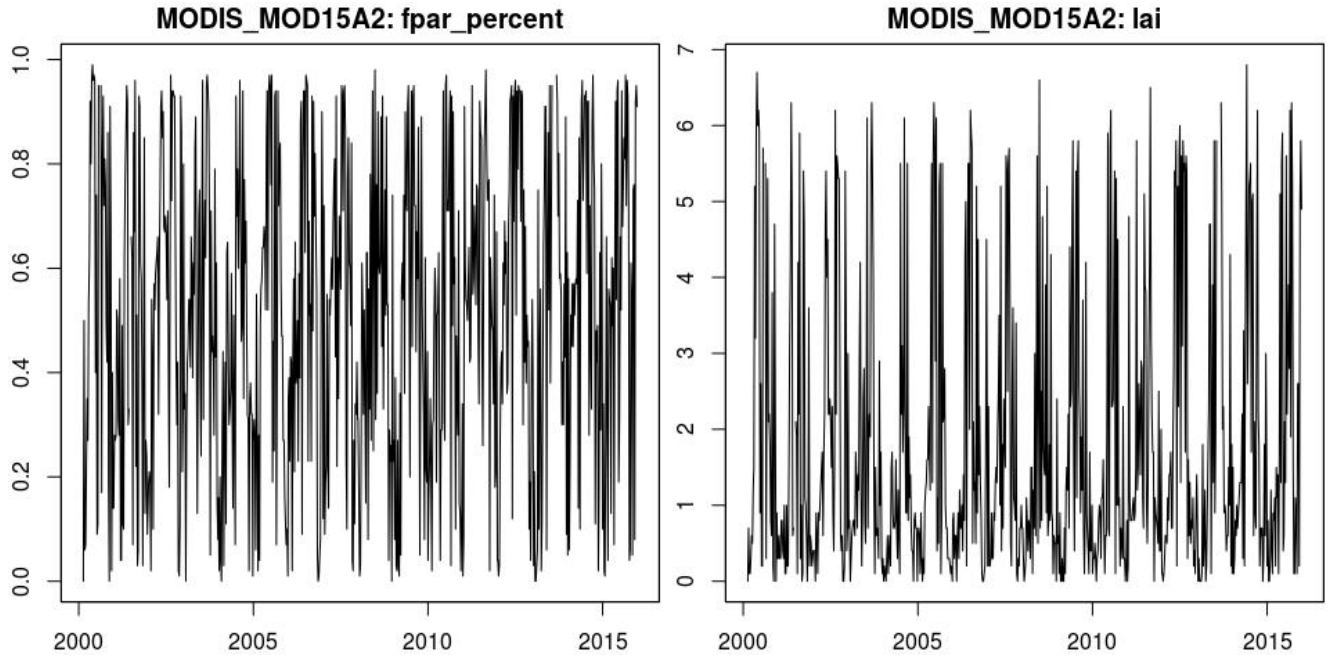

NDEPOSITION_ISIMIP2B rcp8p5: noy_gm2
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
2020
2040
2060
2080
2100


NDEPOSITION_ISIMIP2B rcp8p5: nhx_gm2
0.9
1.0
1.1
1.2
1.3
1.4
1.5
2020
2040
2060
2080
2100

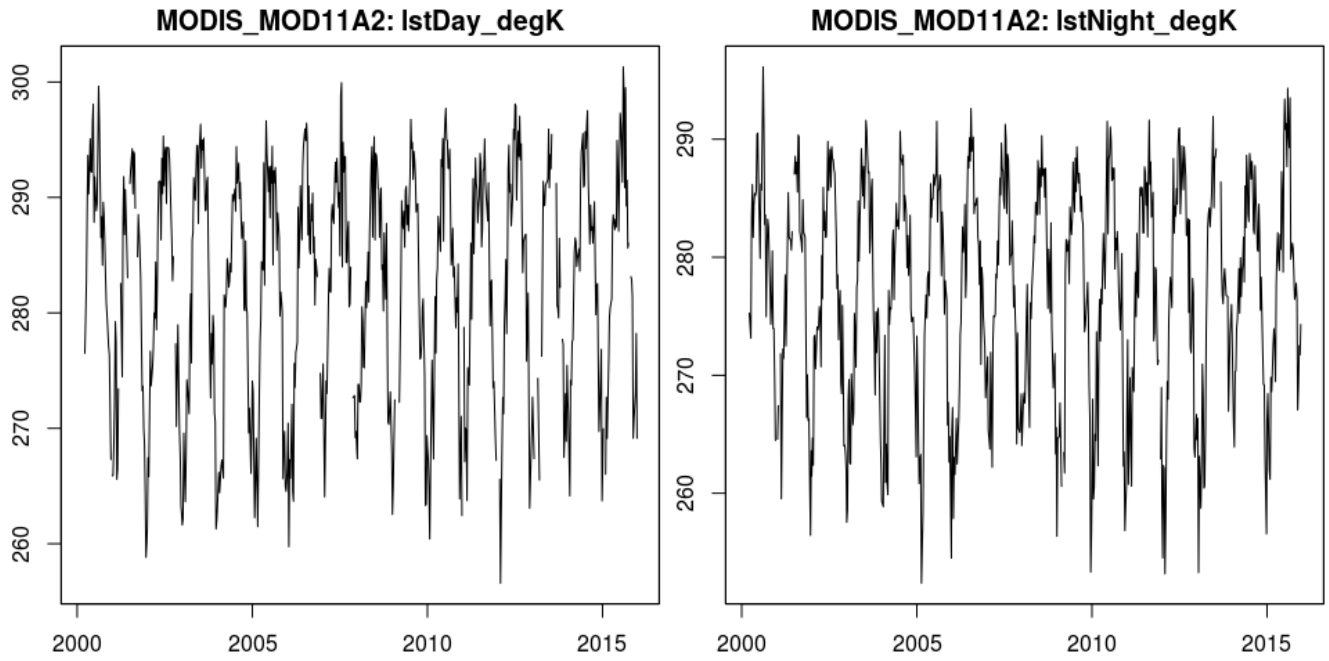
MODIS_MOD09A1



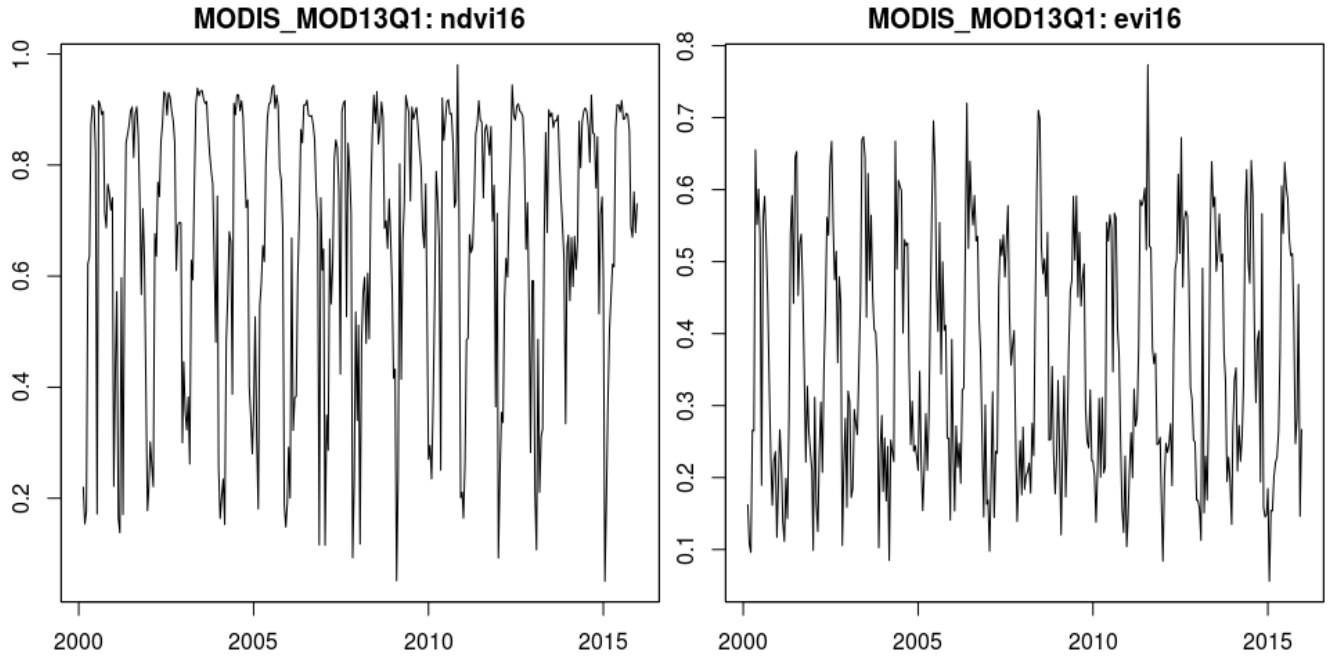
MODIS_MOD15A2



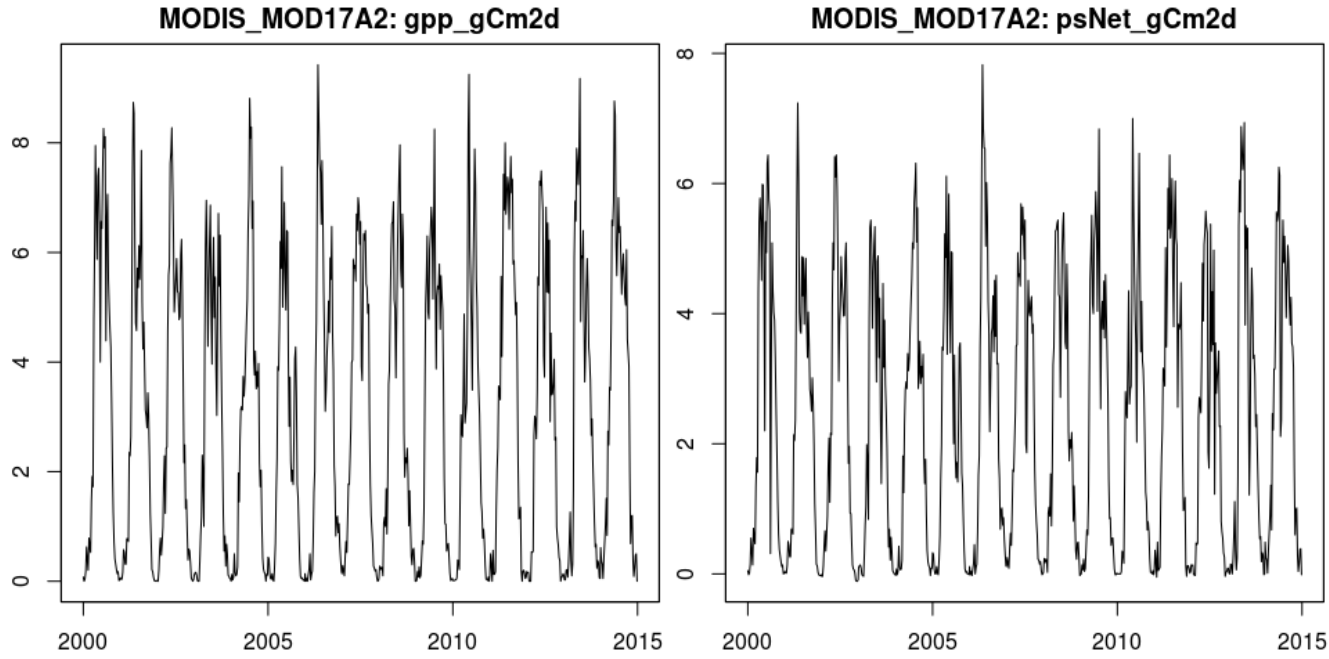
MODIS_MOD11A2



MODIS_MOD13Q1



MODIS_MOD17A2



Site collelongo

Description

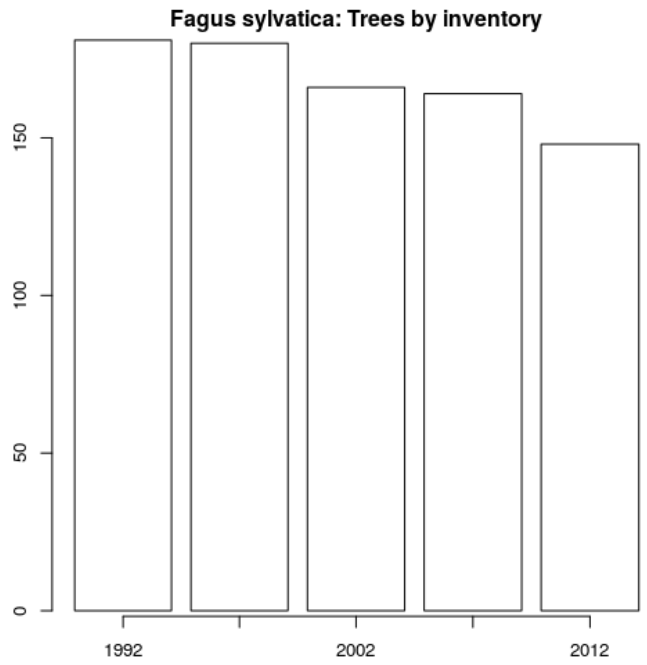
The experimental site of Collelongo is located in Selva Piana, a pure Fagus sylvatica forest in Collelongo (AQ, central Italy) at 1560 m.a.s.l. Located 100 km from Rome, it is one of the first Italian sites of the ICP network and also part of the ILTER international network. The climate is Mediterranean montane, with a mean annual temperature of 7.2°C and a mean annual precipitation of 1179 mm in the period 1996-2014. Bedrock consists of cretaceous limestone. Soil depth exhibits high spatial variability ranging from 40 to 100 cm and is classified as a Humic Alisol (Chiti et al. 2010) or Dystric Luvisol according to the FAO classification. The stand is a typical Apennine beech forests dominated by Fagus sylvatica with sporadic trees of Taxus baccata. The phytosociological association is Polysticho – Fagetum (Feoli & Lagonegro 1982). Currently, Collelongo constitutes a managed Fagus sylvatica stand with mean DBH of 25 cm in 2012. In the area around the eddy-flux tower there are only Fagus sylvatica trees. Moreover the footprint of the tower is totally included in the Fagus sylvatica forest. More information about the site can be found in Chiti et al. (2010) and Collalti et al. (2016).
The following data is available for the site

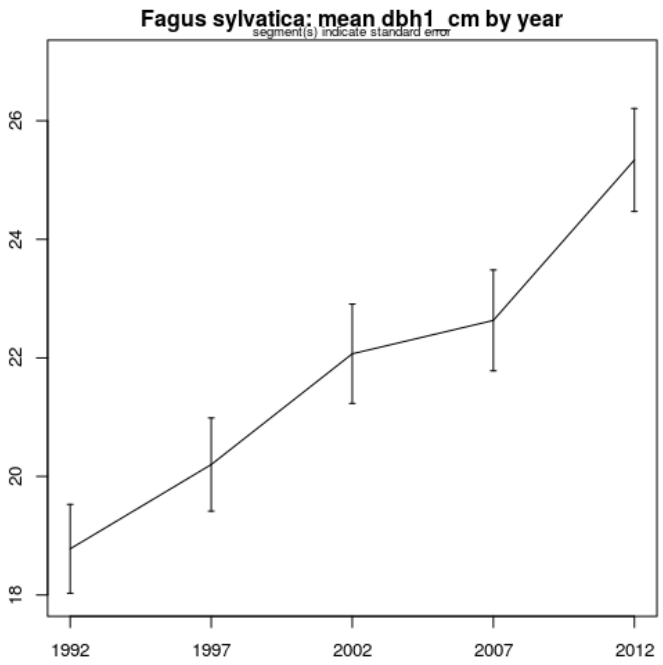
Table 9: Available data for collelongo

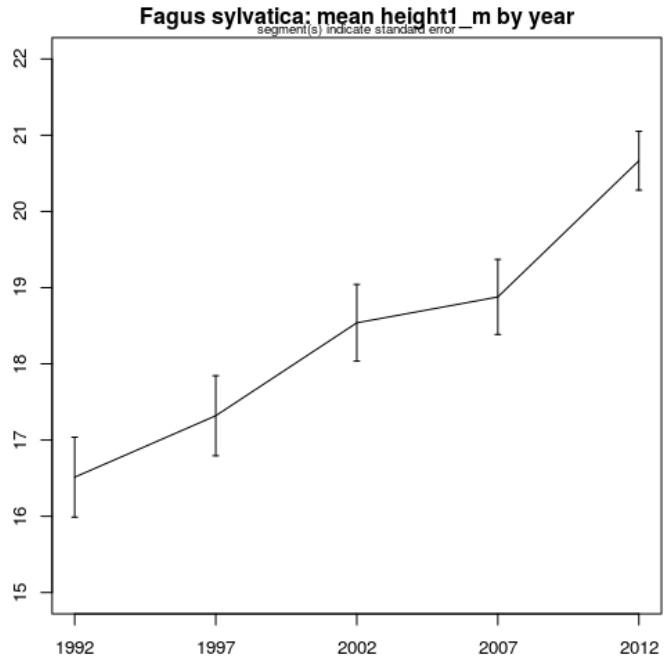
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	1
FLUX	1
ATMOSPHERICHEATCONDUCTION	1
SOILTS	1
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

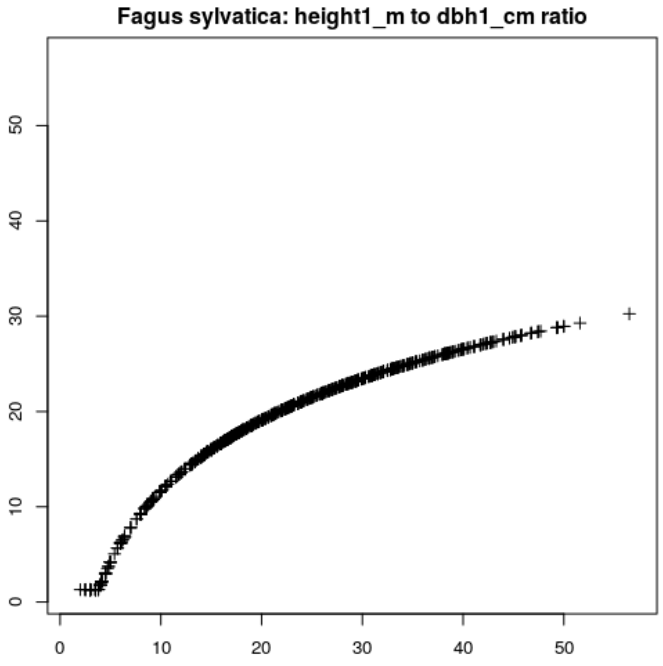
Data

TREE

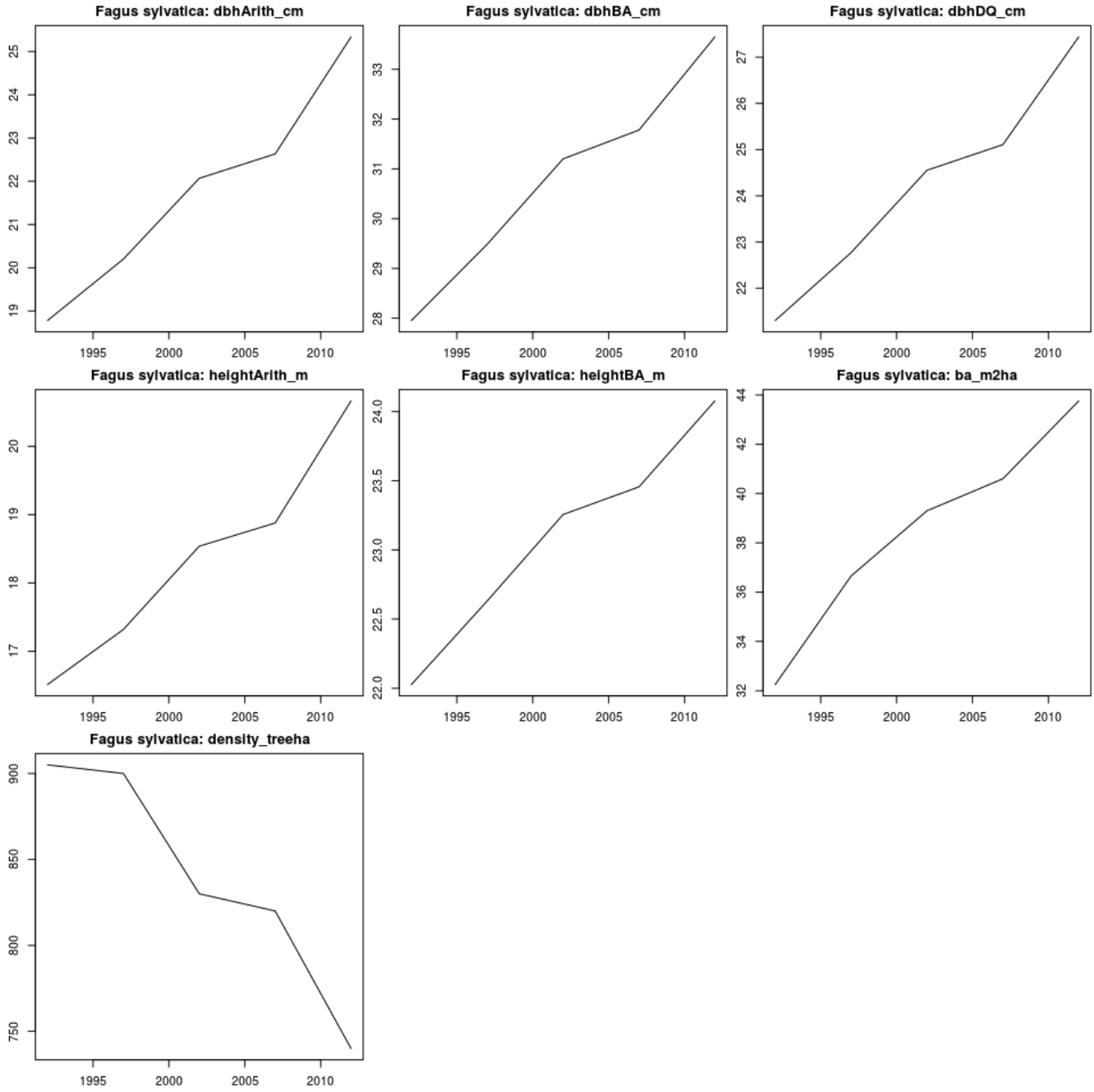

Fagus sylvatica: Trees by inventory
0
50
100
150
1992
2002
2012


Fagus sylvatica: mean dbh1_cm by year
segment(s) indicate standard error
18
20
22
24
26
1992
1997
2002
2007
2012


Fagus sylvatica: mean height1_m by year
segment(s) indicate standard error
15
16
17
18
19
20
21
22
1992
1997
2002
2007
2012


Fagus sylvatica: height1_m to dbh1_cm ratio
0
10
20
30
40
50
0
10
20
30
40
50

STAND


Fagus sylvatica: dbhArith_cm
Fagus sylvatica: dbhBA_cm
Fagus sylvatica: dbhDQ_cm
Fagus sylvatica: heightArith_m
Fagus sylvatica: heightBA_m
Fagus sylvatica: ba_m2ha
Fagus sylvatica: density_treeha

CLIMATE_LOCAL

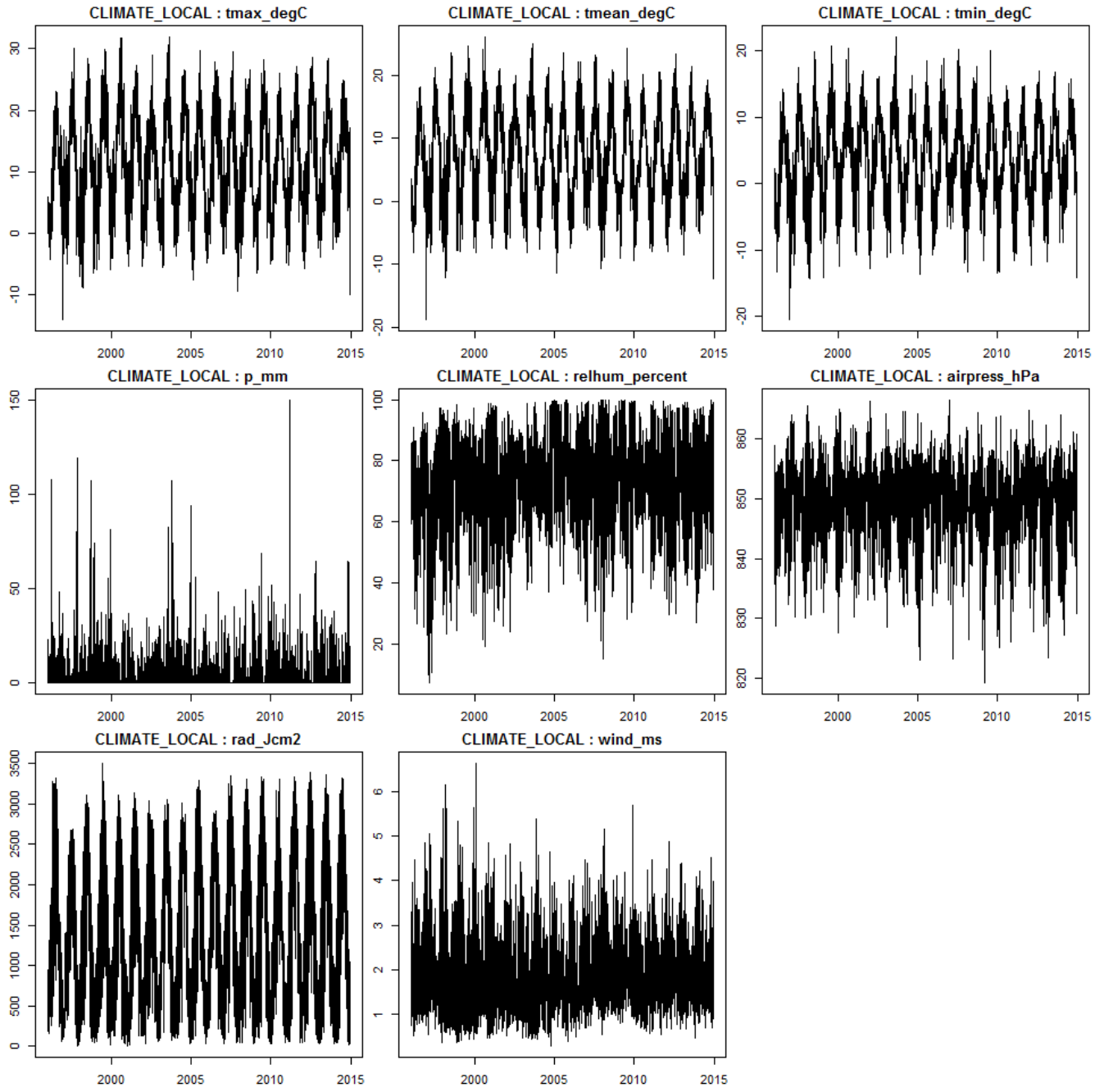


Table 10: Summary of CLIMATE_LOCAL for collelongo. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
collelongo	5	1996	9.13	5.27	1.6	1530	71.8	848	509716	1.71
collelongo	5	1997	11.1	6.65	2.58	1139	61.8	851	477648	1.78
collelongo	5	1998	10.8	6.66	2.66	1238	72.9	850	528816	1.66
collelongo	5	1999	12.4	7.95	4.04	1380	73.9	849	531835	1.59
collelongo	5	2000	13.4	8.63	4.54	858	71	851	532023	1.68
collelongo	5	2001	12.2	7.96	4.28	778	71.5	850	525700	1.71
collelongo	5	2002	11.4	7.62	4.31	1270	75.2	850	509202	1.64
collelongo	5	2003	12.4	8.17	4.32	1619	73.3	850	555206	1.6
collelongo	5	2004	11.6	7.28	3.47	1433	77.1	849	529835	1.62
collelongo	5	2005	10.9	6.66	2.97	942	80.2	849	546290	1.68
collelongo	5	2006	11.7	6.98	3.35	850	74.3	851	566697	1.68
collelongo	5	2007	11.1	7.31	3.76	795	74.1	850	577579	1.9
collelongo	5	2008	10.9	7.08	3.51	1194	76.6	850	550287	1.91
collelongo	5	2009	11.3	7.08	3.18	1213	77.2	848	557654	1.87
collelongo	5	2010	10.4	6.58	2.99	1458	75.8	847	519445	1.73
collelongo	5	2011	11.8	7.23	3.17	1089	73.9	851	595274	1.78
collelongo	5	2012	11.9	7.64	3.71	1013	71.2	850	594830	1.86
collelongo	5	2013	11.5	7.15	3.35	1348	76.6	849	543276	1.77
collelongo	5	2014	11.8	7.58	3.98	1244	78.1	849	544565	1.78
collelongo	5	1996-2014	11.5	7.24	3.46	1179	74	850	541888	1.73

CLIMATE_ISIMIP2B

Table 11: Summary of CLIMATE_ISIMIP2B for collelongo. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	19.63	14.46	9.623	939.7	73.42	903.2	528987	2.404
GFDLESM2M	piControl	1661-2099	19.92	14.39	9.317	969.4	74.37	902.9	534672	2.176
GFDLESM2M	rcp2p6	2006-2099	21.2	15.71	10.58	838.6	72.23	904.7	541528	2.316
GFDLESM2M	rcp4p5	2006-2099	21.56	16.04	10.9	838.7	72.02	904.9	539131	2.304
GFDLESM2M	rcp6p0	2006-2099	21.39	15.98	10.91	829.4	72.01	904.8	539860	2.419
GFDLESM2M	rcp8p5	2006-2099	22.09	16.61	11.46	802.5	71.32	905.3	546984	2.45
HadGEM2ES	historical	1861-2005	19.91	14.6	9.618	903.3	73.12	903.6	542772	2.485
HadGEM2ES	piControl	1661-2299	20.42	15.02	9.952	933.9	72.78	903.4	564115	2.477
HadGEM2ES	rcp2p6	2006-2299	22.04	16.68	11.73	992.4	72.94	903.9	564132	2.328
HadGEM2ES	rcp4p5	2006-2099	22.71	17.28	12.27	901.1	72.18	904.3	563118	2.317
HadGEM2ES	rcp6p0	2006-2099	22.63	17.25	12.29	939.7	72.48	904.3	558364	2.312
HadGEM2ES	rcp8p5	2006-2099	23.68	18.19	13.15	858.9	71.67	904.6	569736	2.303
IPSLCM5ALR	historical	1861-2005	19.09	13.95	9.147	1078	74.75	902.6	528342	2.411
IPSLCM5ALR	piControl	1661-2299	18.5	13.42	8.635	1159	75.29	902	537358	2.404
IPSLCM5ALR	rcp2p6	2006-2299	21.32	16.14	11.31	1062	73.66	903.5	558695	2.376
IPSLCM5ALR	rcp4p5	2006-2299	22.92	17.61	12.68	933.9	72.26	904.6	564999	2.331
IPSLCM5ALR	rcp6p0	2006-2099	21.96	16.73	11.86	945.9	72.64	904	558339	2.36
IPSLCM5ALR	rcp8p5	2006-2299	28.48	23.09	18.22	784.9	68.6	906	577565	2.178
MIROC5	historical	1861-2005	20.18	14.8	9.82	940.9	73.15	903.4	540222	2.392
MIROC5	piControl	1661-2299	20.85	15.27	10.21	1006	73.27	903	562452	2.291
MIROC5	rcp2p6	2006-2299	22.24	16.59	11.4	931.5	71.86	904.4	572035	2.334
MIROC5	rcp4p5	2006-2099	22.6	16.93	11.7	914.5	71.29	904.6	569318	2.366

MIROC5	rcp6p0	2006-2099	22.34	16.76	11.6	928.2	71.9	904.4	565042	2.363
MIROC5	rcp8p5	2006-2099	23.64	17.81	12.5	868.7	70.77	905	572539	2.263

CLIMATE_ISIMIP2BLBC

Table 12: Summary of CLIMATE_ISIMIP2BLBC for collelongo. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	10.41	6.349	2.691	1245	74.27	849.2	530737	1.74
GFDLESM2M	piControl	1661-2099	10.64	6.274	2.428	1288	75.17	849	536749	1.575
GFDLESM2M	rcp2p6	2006-2099	11.91	7.597	3.714	1116	73.14	850.4	543330	1.676
GFDLESM2M	rcp4p5	2006-2099	12.27	7.922	4.036	1114	72.93	850.5	540908	1.667
GFDLESM2M	rcp6p0	2006-2099	12.11	7.867	4.037	1106	72.88	850.5	541886	1.75
GFDLESM2M	rcp8p5	2006-2099	12.79	8.498	4.606	1063	72.19	850.7	548934	1.771
HadGEM2ES	historical	1861-2005	10.58	6.369	2.567	1140	73.69	850.2	549946	1.818
HadGEM2ES	piControl	1661-2299	11.07	6.79	2.921	1176	73.35	849.8	571445	1.813
HadGEM2ES	rcp2p6	2006-2299	12.7	8.453	4.672	1247	73.5	849.6	571942	1.703
HadGEM2ES	rcp4p5	2006-2099	13.36	9.049	5.221	1135	72.73	849.8	571337	1.695
HadGEM2ES	rcp6p0	2006-2099	13.29	9.022	5.234	1181	73.04	849.8	566045	1.69
HadGEM2ES	rcp8p5	2006-2099	14.31	9.965	6.112	1080	72.21	849.8	578996	1.685
IPSLCM5ALR	historical	1861-2005	9.972	5.848	2.151	1390	75.53	849.1	533516	1.725
IPSLCM5ALR	piControl	1661-2299	9.391	5.316	1.636	1497	76.01	848.7	540143	1.72
IPSLCM5ALR	rcp2p6	2006-2299	12.19	8.036	4.318	1367	74.47	849.2	562633	1.7
IPSLCM5ALR	rcp4p5	2006-2299	13.76	9.502	5.706	1194	73.08	849.9	568882	1.666
IPSLCM5ALR	rcp6p0	2006-2099	12.82	8.62	4.872	1203	73.46	849.6	562859	1.686
IPSLCM5ALR	rcp8p5	2006-2299	19.32	14.99	11.23	992.9	69.26	849.3	586314	1.555
MIROC5	historical	1861-2005	10.9	6.667	2.878	1186	73.7	849.8	542661	1.735
MIROC5	piControl	1661-2299	11.52	7.137	3.286	1268	73.83	849.2	565662	1.662
MIROC5	rcp2p6	2006-2299	12.9	8.463	4.506	1179	72.39	850.1	577369	1.694
MIROC5	rcp4p5	2006-2099	13.26	8.804	4.82	1157	71.8	850.2	574310	1.718

MIROC5	rcp6p0	2006-2099	13.01	8.626	4.695	1175	72.44	850.1	569387	1.715
MIROC5	rcp8p5	2006-2099	14.27	9.682	5.631	1097	71.26	850.3	578512	1.645

CLIMATE_ISIMIP2A

Table 13: Summary of CLIMATE_ISIMIP2A for collelongo. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	20.16	14.55	9.827	995.9	70.32	903.5	526367	3.852
PRINCETON	1901-2012	19.74	14.58	9.411	778	76.24	944.3	534651	4.393
WATCH	1901-2001	19.87	14.56	9.568	989.4	70.12	897	472481	1.919
WFDEI	1901-2010	19.88	14.59	9.634	986.1	71.9	898.9	494874	2.047

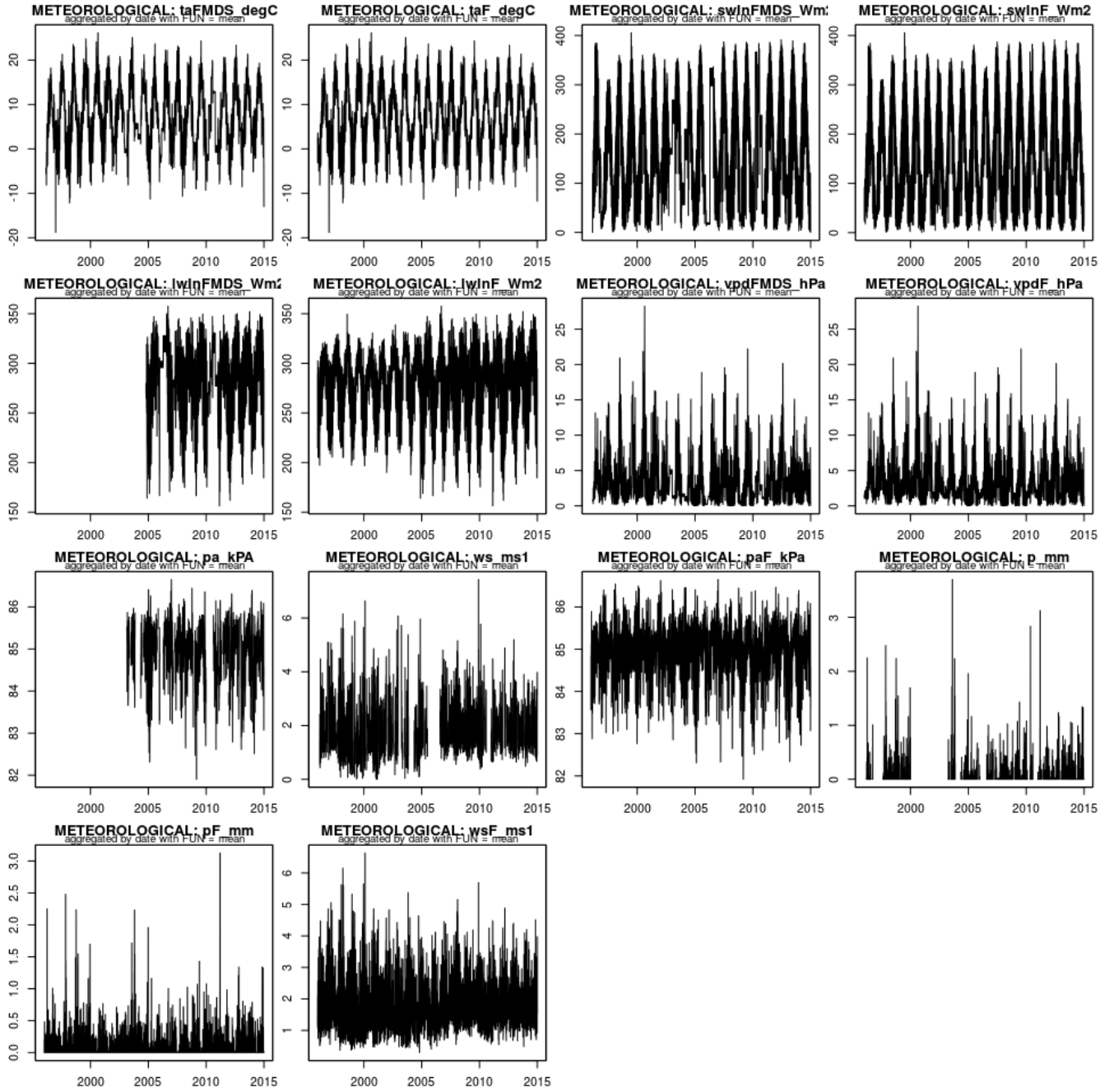
CLIMATE_ISIMIPFT

Table 14: Summary of CLIMATE_ISIMIPFT for collelongo. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

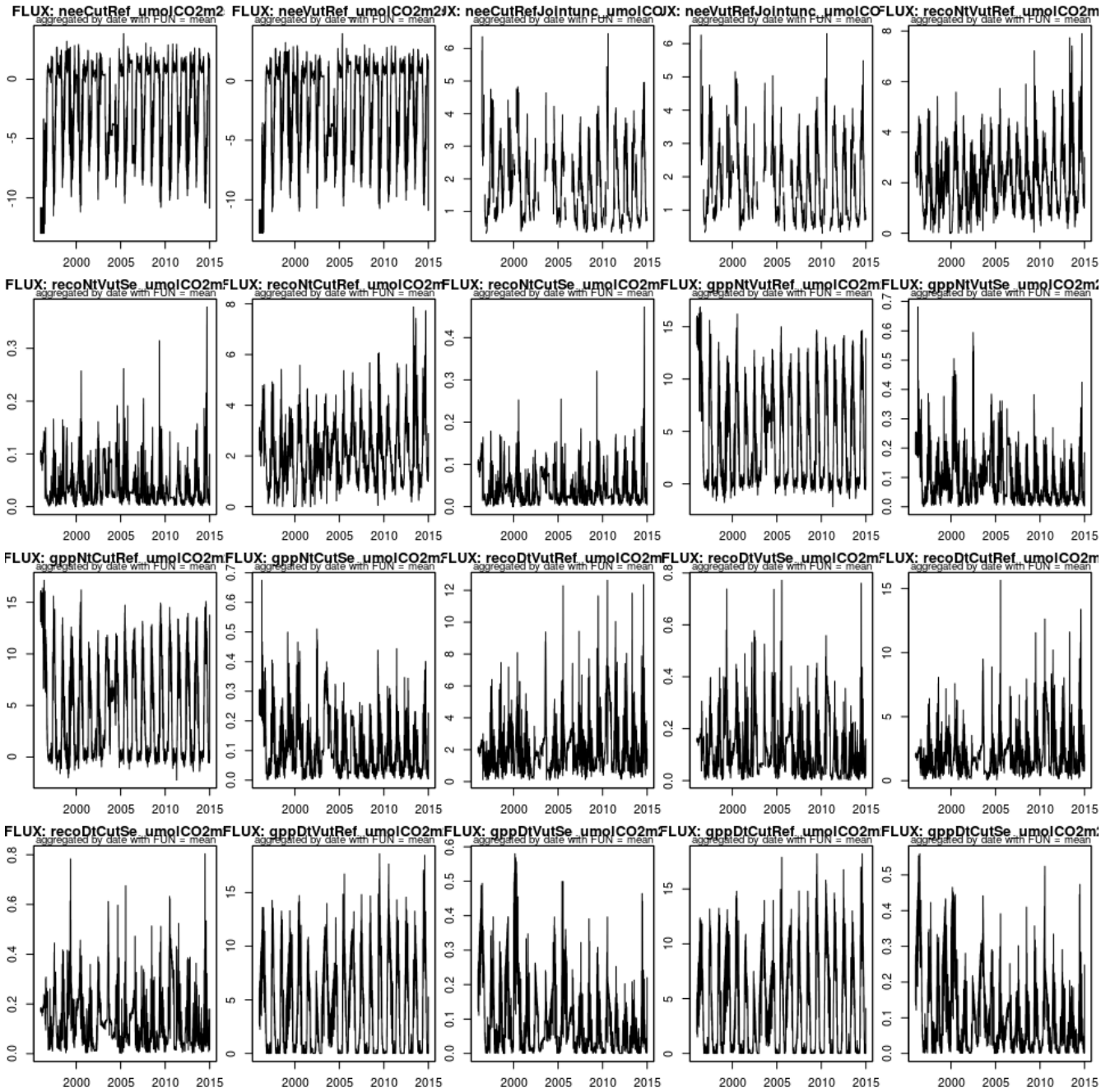
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	20.16	14.84	9.844	976.9	72.88	896.7	472623	1.914
GFDLESM2M	rcp2p6	2006-2099	21.57	15.92	10.6	894.8	71.67	897.7	486693	1.829
GFDLESM2M	rcp4p5	2006-2099	21.93	16.25	10.92	889.9	71.41	897.9	484897	1.822
GFDLESM2M	rcp6p0	2006-2099	21.76	16.2	10.94	881.4	71.42	897.8	485254	1.9
GFDLESM2M	rcp8p5	2006-2099	22.47	16.82	11.47	856	70.8	898	489746	1.923
HadGEM2ES	historical	1950-2004	20.03	14.7	9.696	1002	72.43	896.7	472700	1.915
HadGEM2ES	rcp2p6	2005-2099	22.49	16.9	11.72	1063	71.55	896.5	490280	1.822
HadGEM2ES	rcp4p5	2005-2099	23.08	17.43	12.21	1015	70.81	896.7	489750	1.8
HadGEM2ES	rcp6p0	2005-2099	23	17.4	12.24	1040	71.16	896.7	488396	1.799
HadGEM2ES	rcp8p5	2005-2099	24.13	18.41	13.15	972.3	69.97	896.8	493380	1.792
IPSLCM5ALR	historical	1950-2005	20.1	14.78	9.786	998.1	74.12	896.8	470635	1.926
IPSLCM5ALR	rcp2p6	2006-2099	21.95	16.58	11.53	999	73.16	896.8	485543	1.892
IPSLCM5ALR	rcp4p5	2006-2099	22.47	17.05	11.95	915.9	72.4	897.3	486528	1.875
IPSLCM5ALR	rcp6p0	2006-2099	22.43	17.07	12.04	934.7	72.53	897.1	483264	1.88
IPSLCM5ALR	rcp8p5	2006-2099	23.68	18.21	13.08	867.5	71.61	897.4	487829	1.854
MIROCESMCHEM	historical	1950-2005	20.14	14.79	9.785	991.2	84.32	896.6	474868	1.932
MIROCESMCHEM	rcp2p6	2006-2099	22.61	17.07	11.94	986.1	82.98	897.2	510021	1.918
MIROCESMCHEM	rcp4p5	2006-2099	22.8	17.23	12.08	970.5	82.95	897.4	507108	1.886
MIROCESMCHEM	rcp6p0	2006-2099	22.82	17.26	12.11	1004	82.98	897.2	505843	1.902
MIROCESMCHEM	rcp8p5	2006-2099	23.82	18.22	13.04	930.7	82.67	897.6	510500	1.869
NorESM1M	historical	1950-2005	20.02	14.72	9.738	1003	72.37	896.6	470121	1.91
NorESM1M	rcp2p6	2006-2099	21.61	16.13	10.99	1012	71.07	896.7	485516	1.881

NorESM1M	rcp4p5	2006-2099	22.09	16.59	11.41	988.2	70.27	896.8	488845	1.886
NorESM1M	rcp6p0	2006-2099	22.05	16.58	11.44	975.3	70.47	896.9	486925	1.895
NorESM1M	rcp8p5	2006-2099	22.78	17.37	12.27	939.6	69.48	897	492603	1.907

METEOROLOGICAL



FLUX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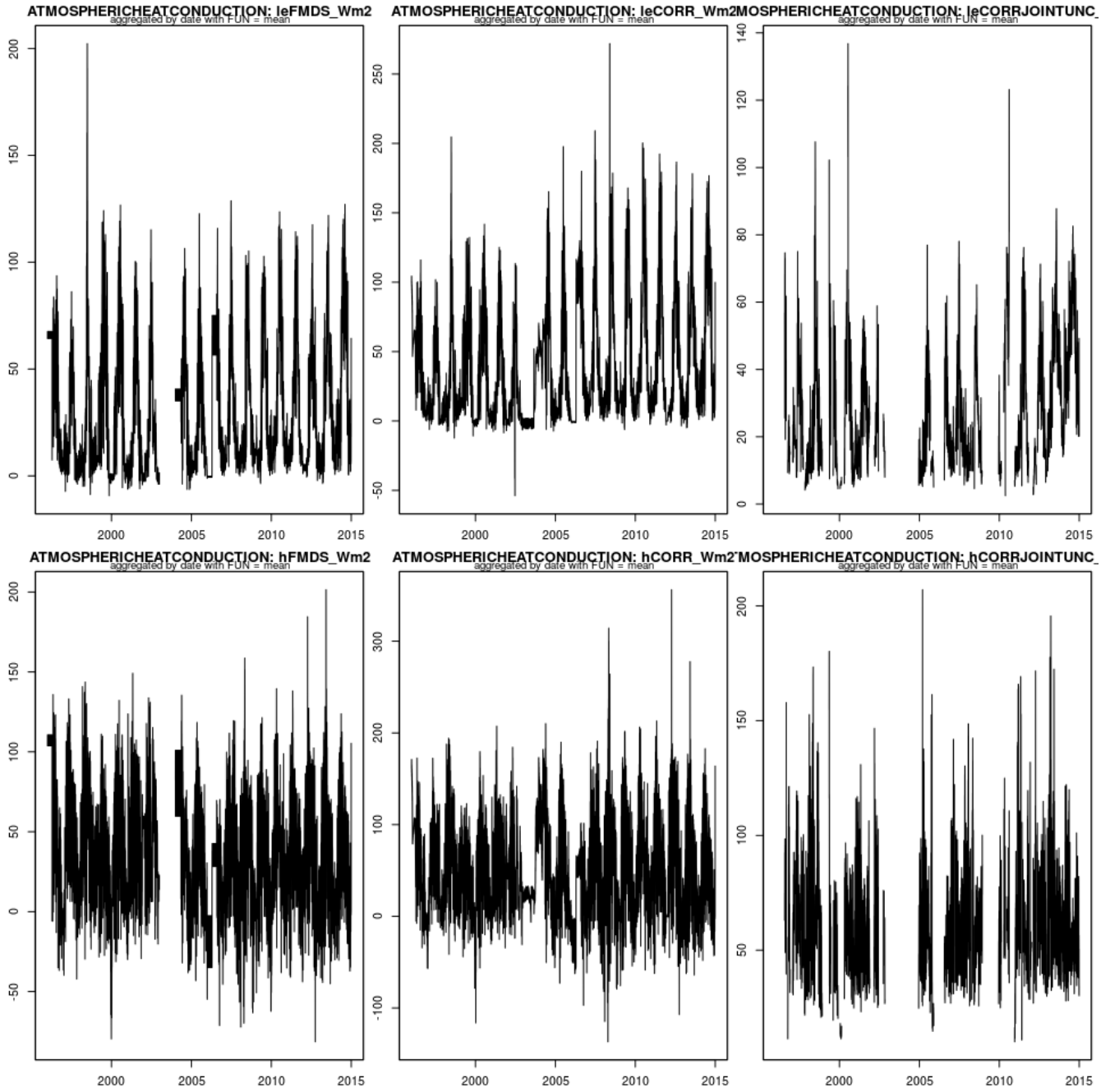
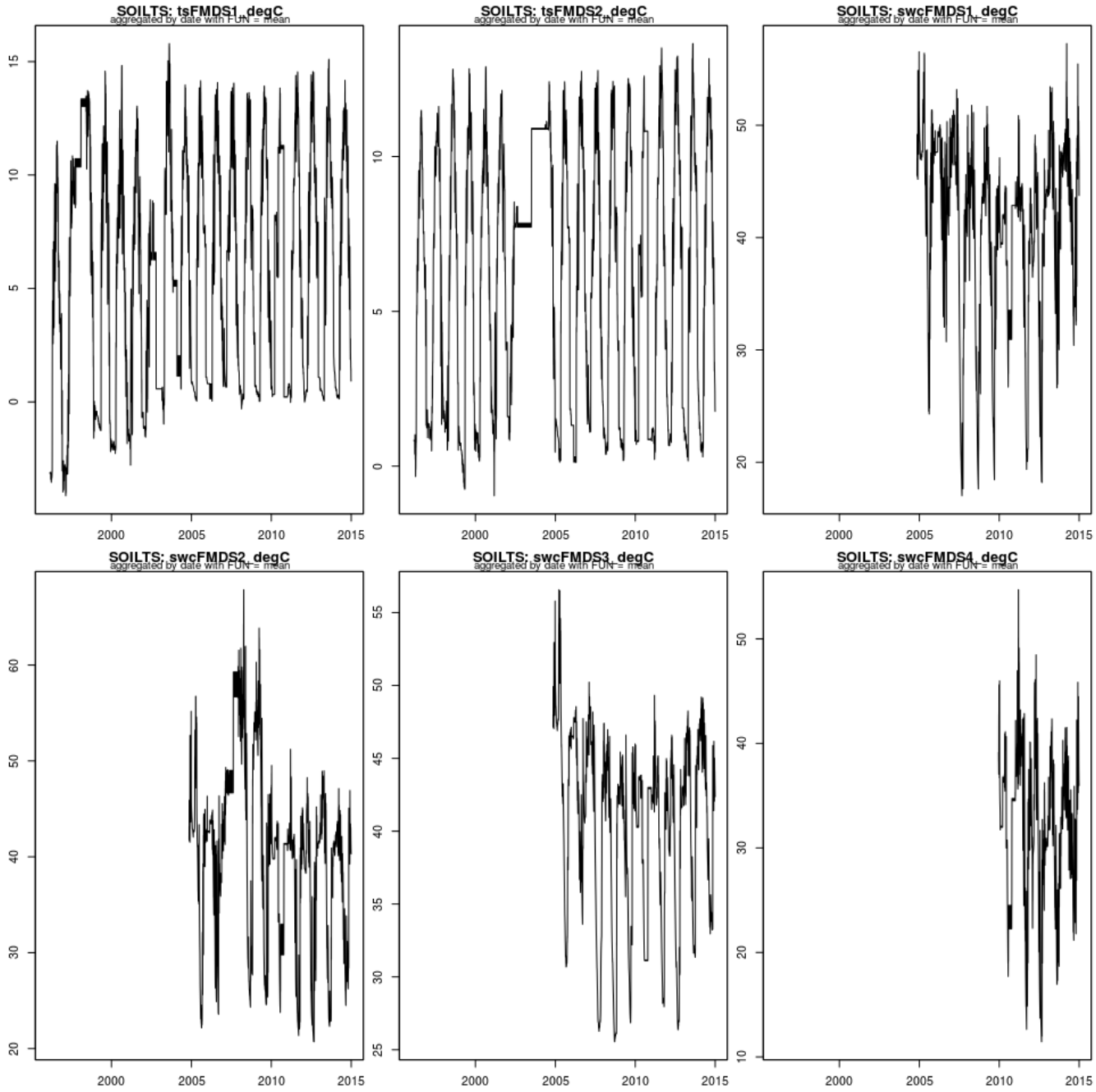
FLUX: neeVutRef_umolCO2m2
FLUX: neeCutRefJointunc_umolCO
FLUX: neeVutRefJointunc_umolCO
FLUX: recoNtVutRef_umolCO2m
FLUX: recoNtVutSe_umolCO2m
FLUX: recoNtCutRef_umolCO2m
FLUX: recoNtCutSe_umolCO2m
FLUX: gppNtVutRef_umolCO2m
FLUX: gppNtVutSe_umolCO2m
FLUX: gppNtCutRef_umolCO2m
FLUX: gppNtCutSe_umolCO2m
FLUX: recoDtVutRef_umolCO2m
FLUX: recoDtVutSe_umolCO2m
FLUX: recoDtCutRef_umolCO2m
FLUX: recoDtCutSe_umolCO2m
FLUX: gppDtVutRef_umolCO2m
FLUX: gppDtVutSe_umolCO2m
FLUX: gppDtCutRef_umolCO2m
FLUX: gppDtCutSe_umolCO2m
aggregated by date with FUN = mean

ATMOSPHERICHEATCONDUCTION



SOILTS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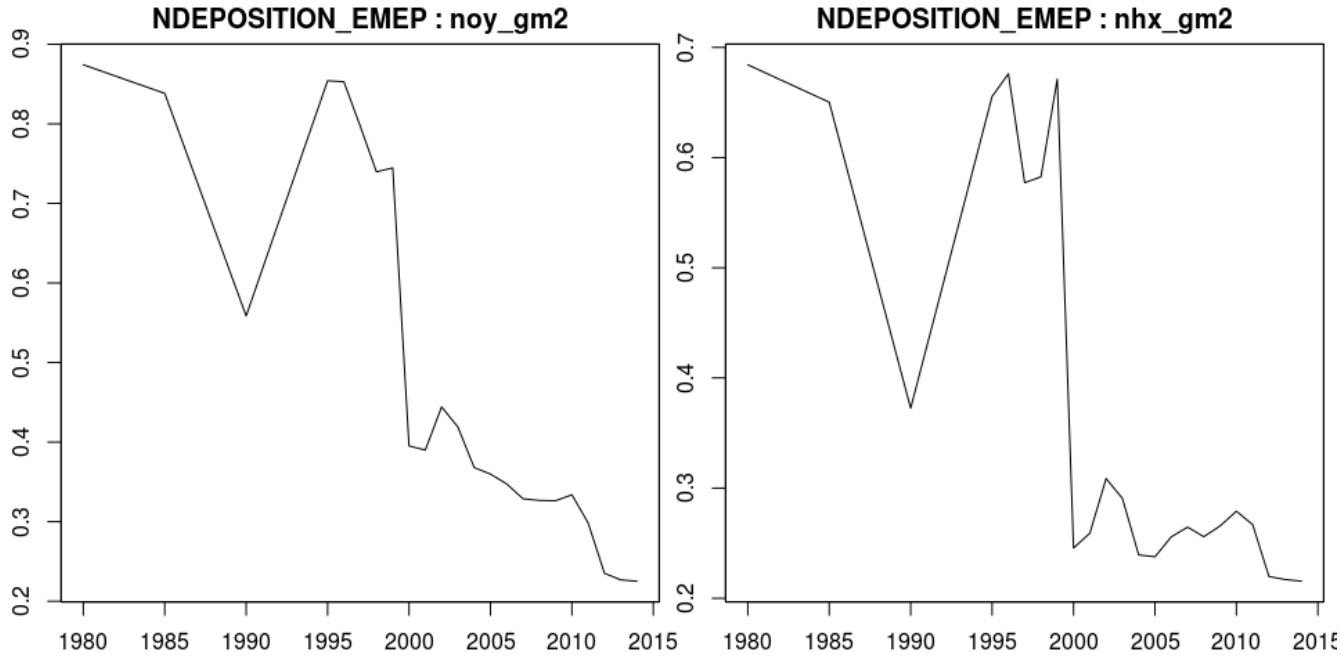
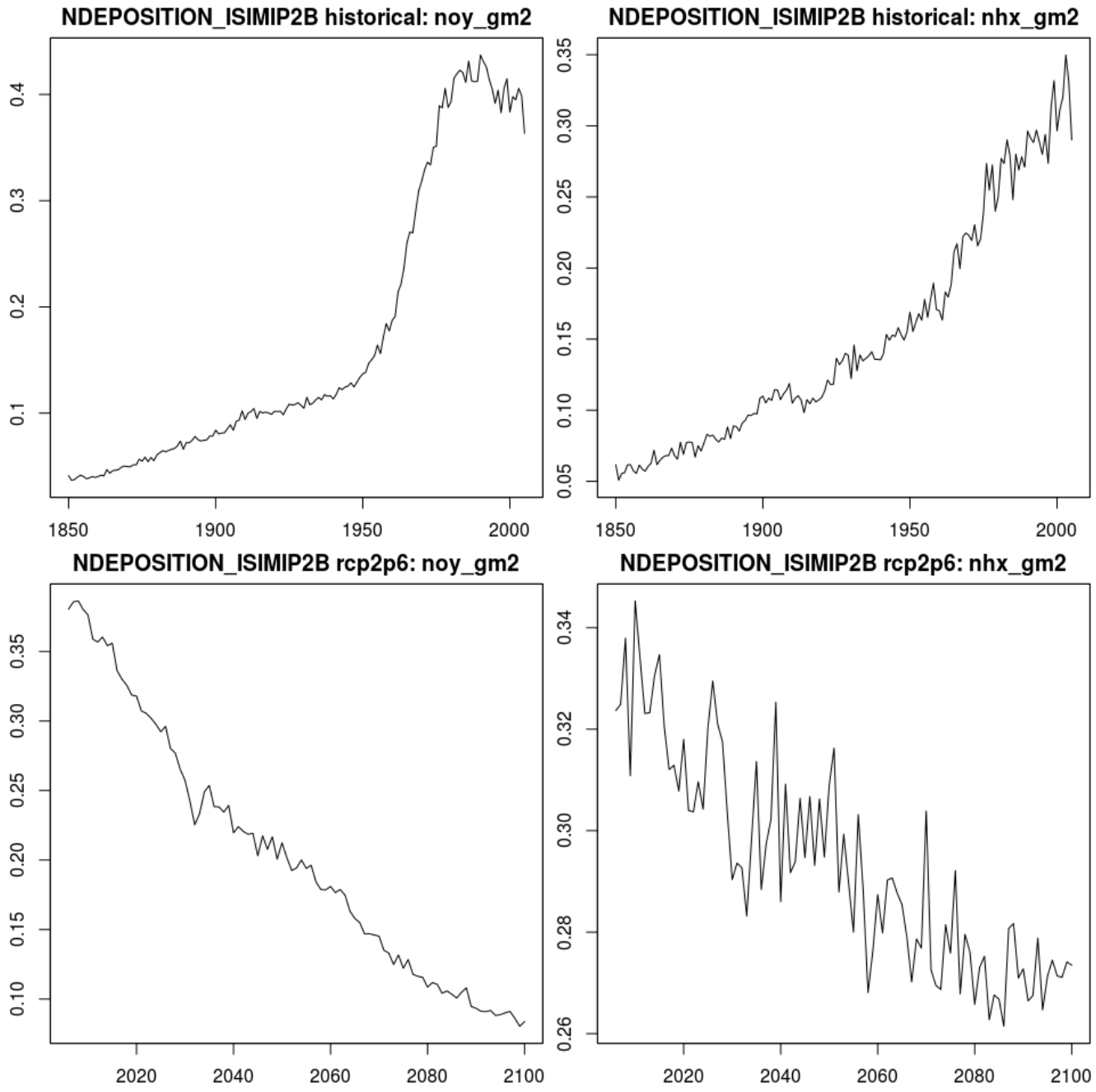
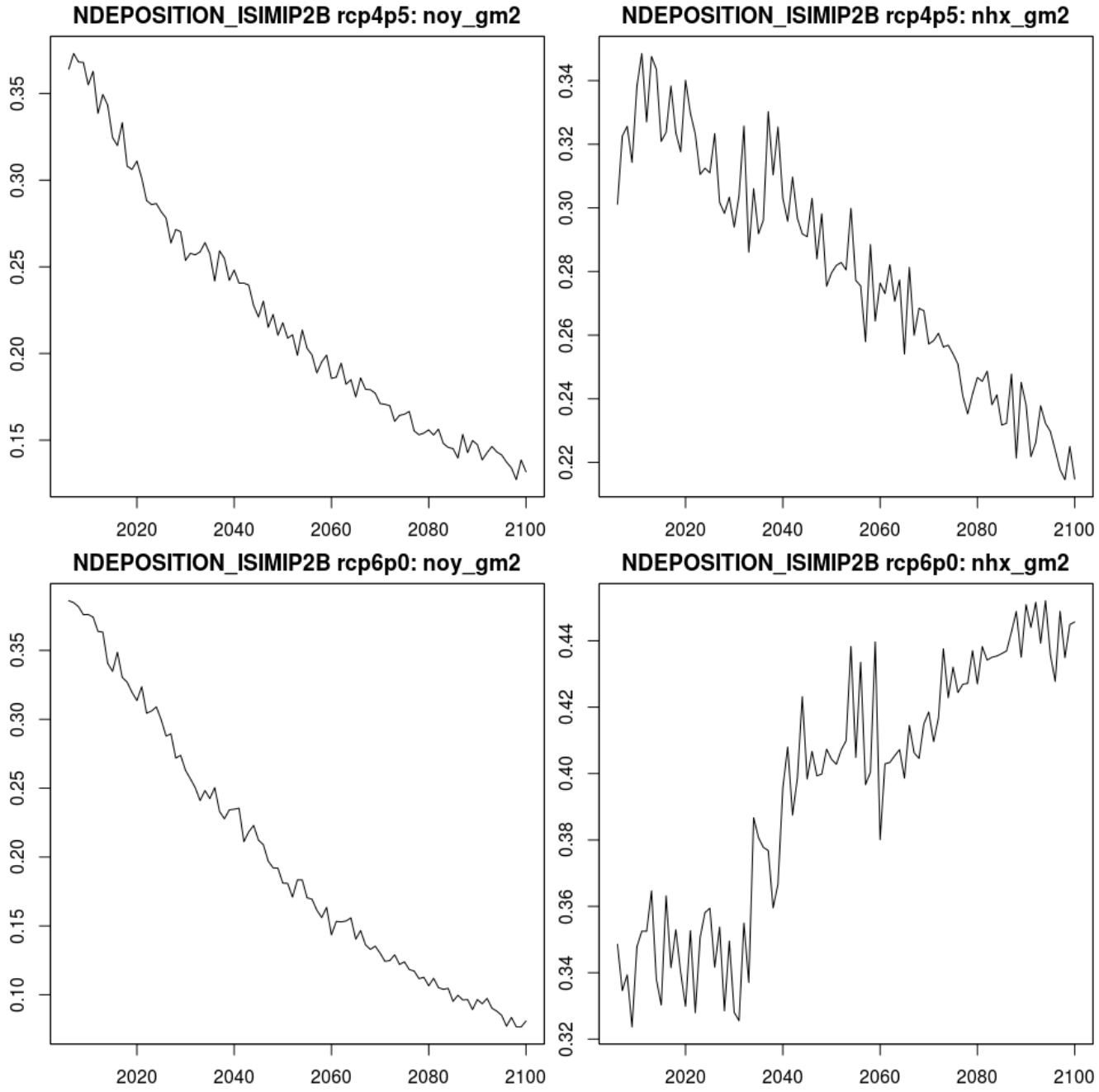
aggregated by date with FUN = mean
SOILTS: tsFMDS2_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS1_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS2_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS3_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS4_degC
aggregated by date with FUN = mean

NDEPOSITION_EMEP



NDEPOSITION_ISIMIP2B

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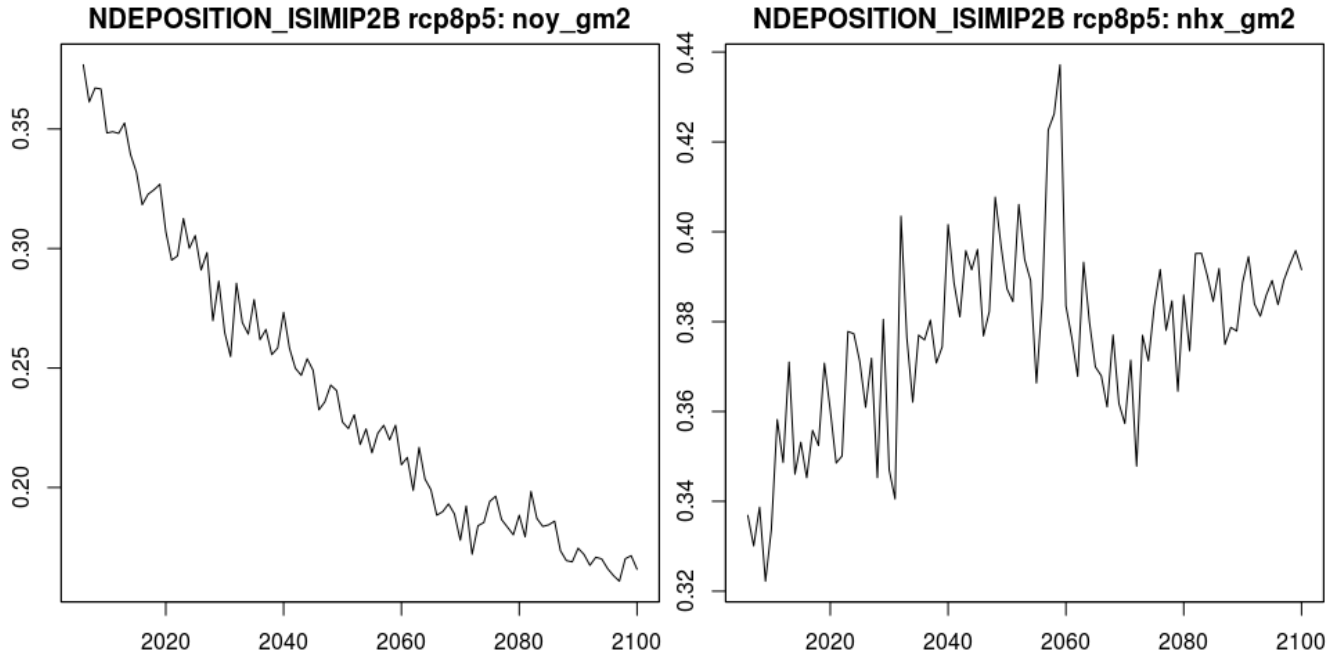
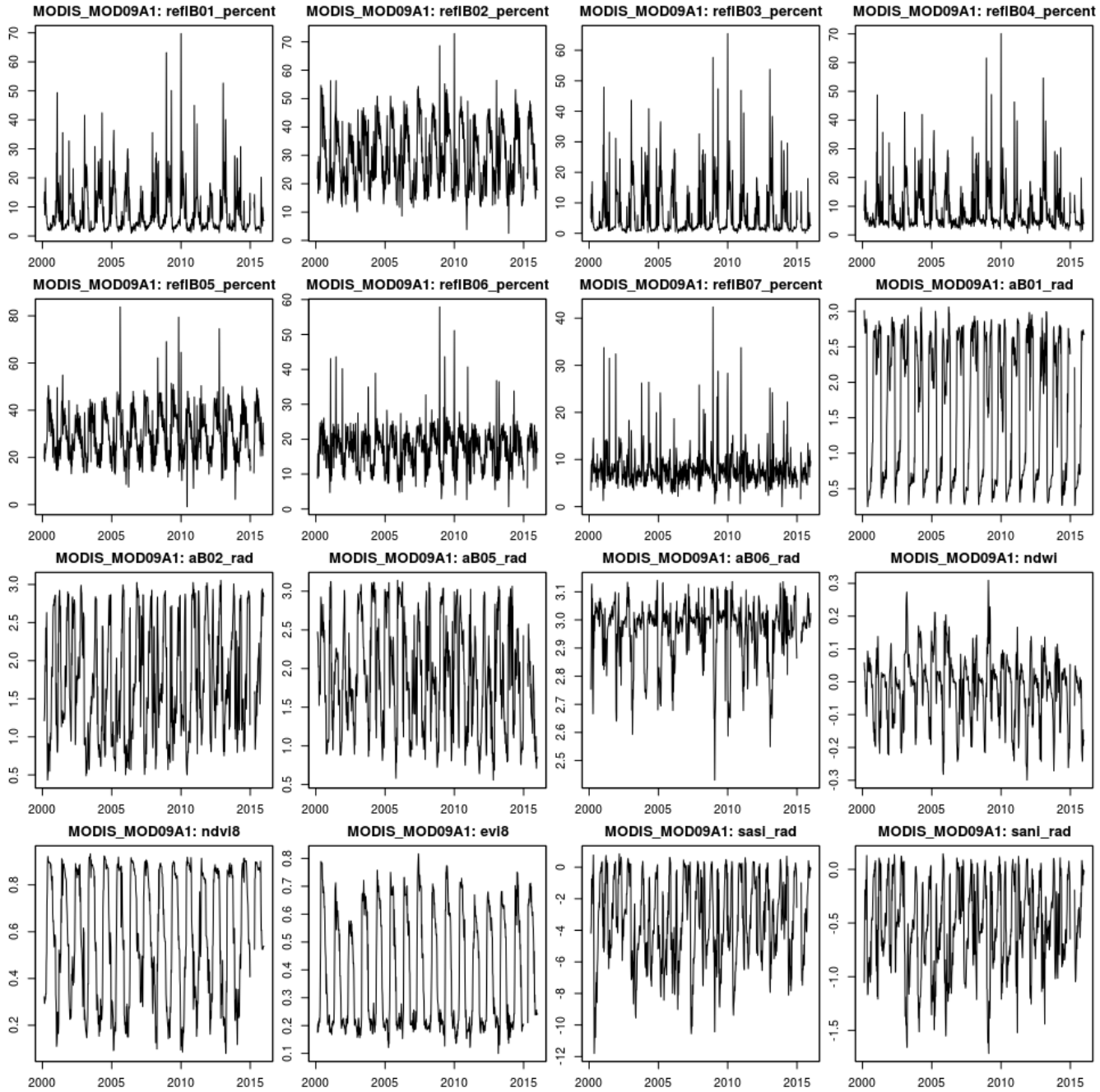
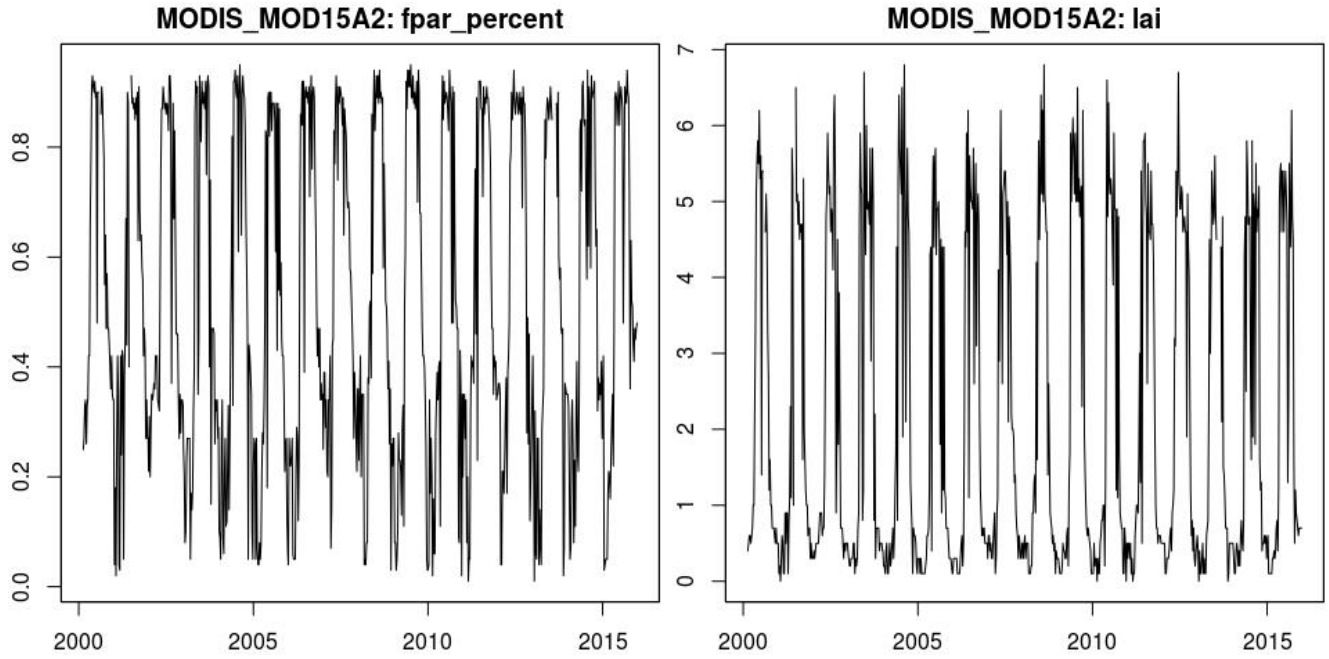
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100


NDEPOSITION_ISIMIP2B rcp8p5: noy_gm2
0.20
0.25
0.30
0.35
2020
2040
2060
2080
2100
NDEPOSITION_ISIMIP2B rcp8p5: nhx_gm2
0.32
0.34
0.36
0.38
0.40
0.42
0.44
2020
2040
2060
2080
2100

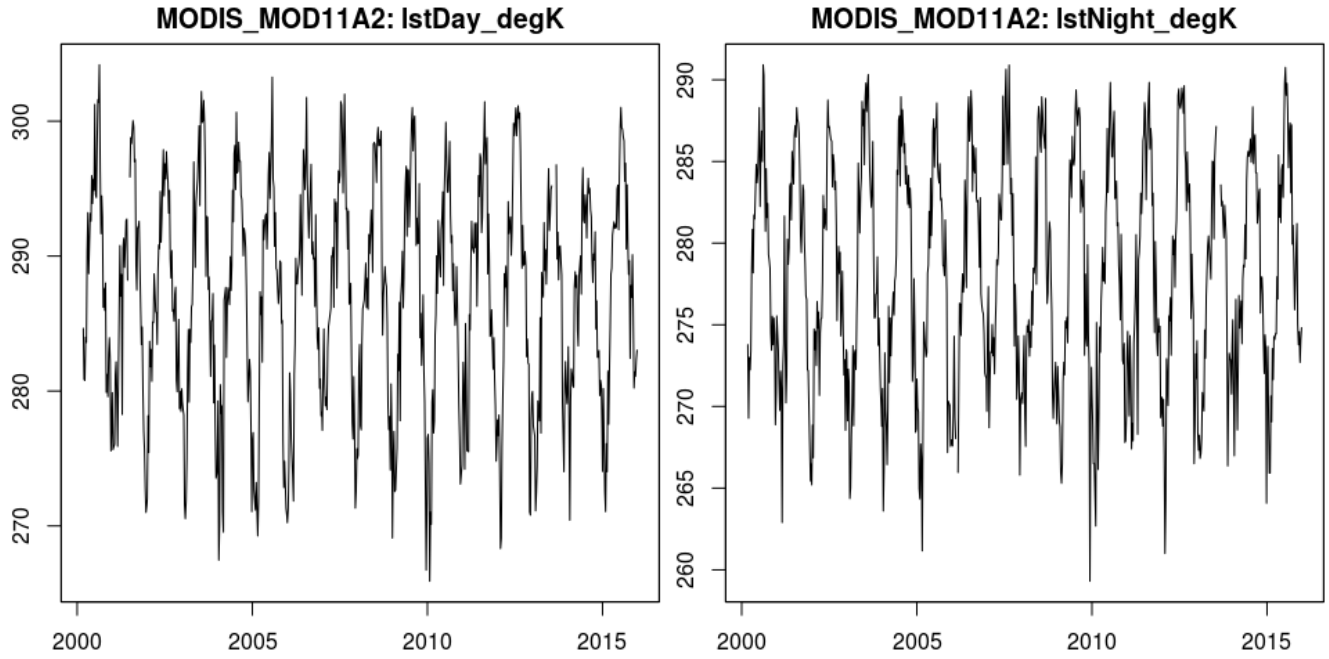
MODIS_MOD09A1



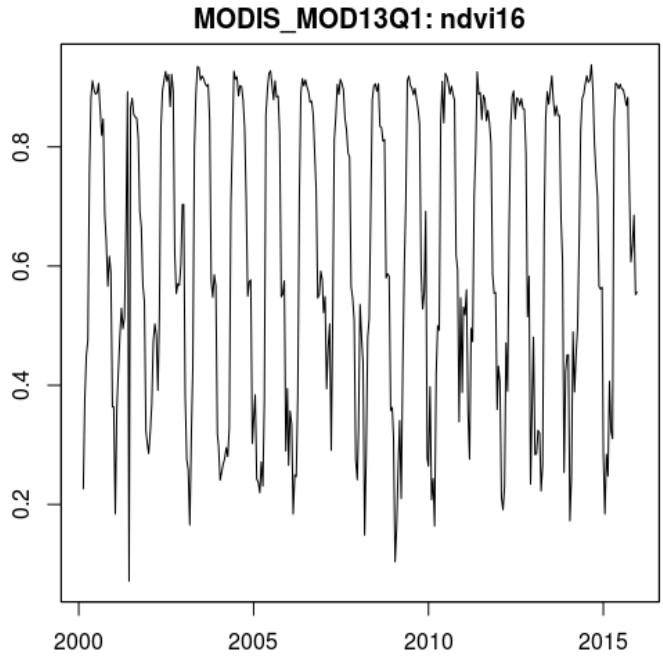
MODIS_MOD15A2

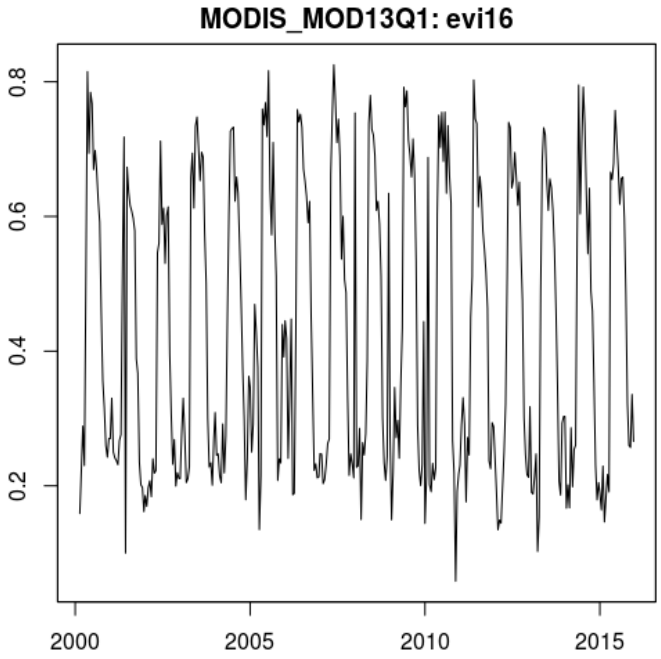


MODIS_MOD11A2

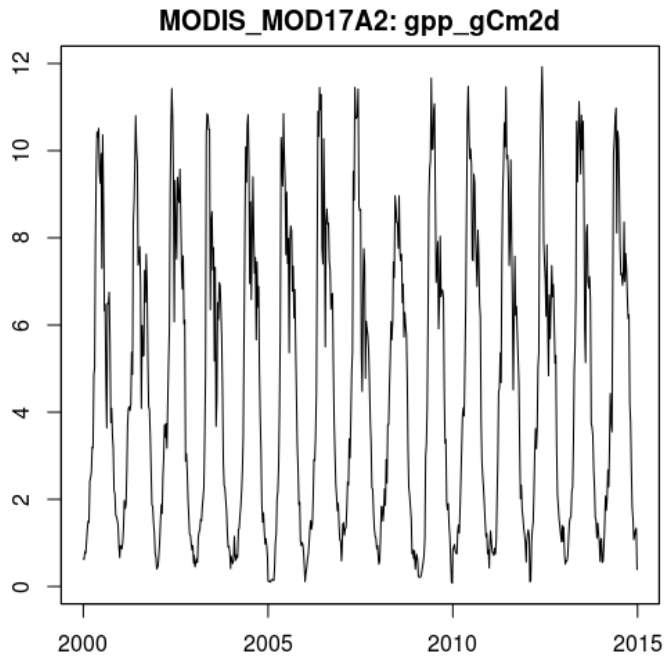


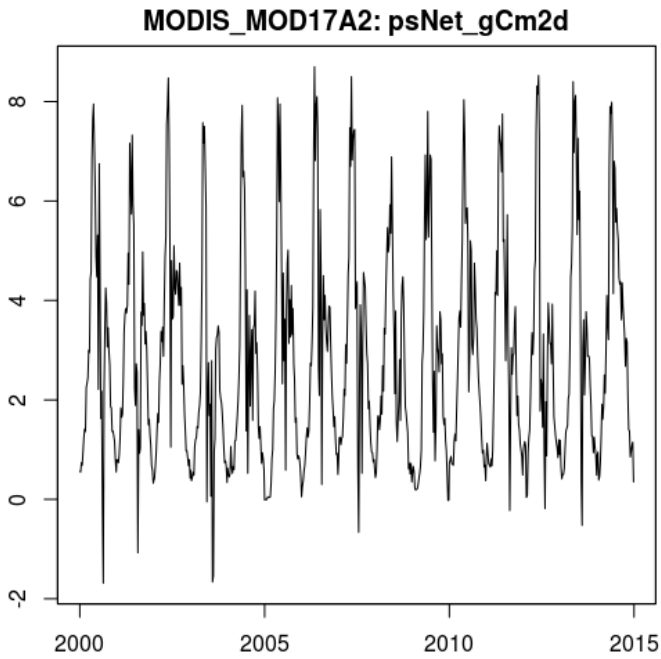
MODIS_MOD13Q1





MODIS_MOD17A2





Site hyytiala

Description

The most northern site included in the PROFOUND DB is the ICP Forests Level II site Hyytiälä, Finland. It is also a Fluxnet site and the coldest site with an annual temperature of 4.4°C and 604 mm annual precipitation during the 1996-2014 period and lies at 185 m.a.s.l. The soil is classified as a Haplic Podzol. Picea abies is the naturally dominant tree species building Fennoscandian moss-rich spruce forests with Pinus sylvestris. A Pinus sylvestris stand was sown in 1962, today with admixtures of Picea abies and hardwood species (Betula pendula, Betula pubescens and Populus tremula). Mean DBH were 17 cm for P. sylvestris, 5 cm for P. abies and 7 cm for hardwood species in the year 2008. More information about the site can be found in Haataja & Vesala (1997), Rannik et al. (2004), Vesala et al. (2005), Ilvesniemi et al. (2009), Mammarella et al. (2009) and Ilvesniemi et al. (2010).

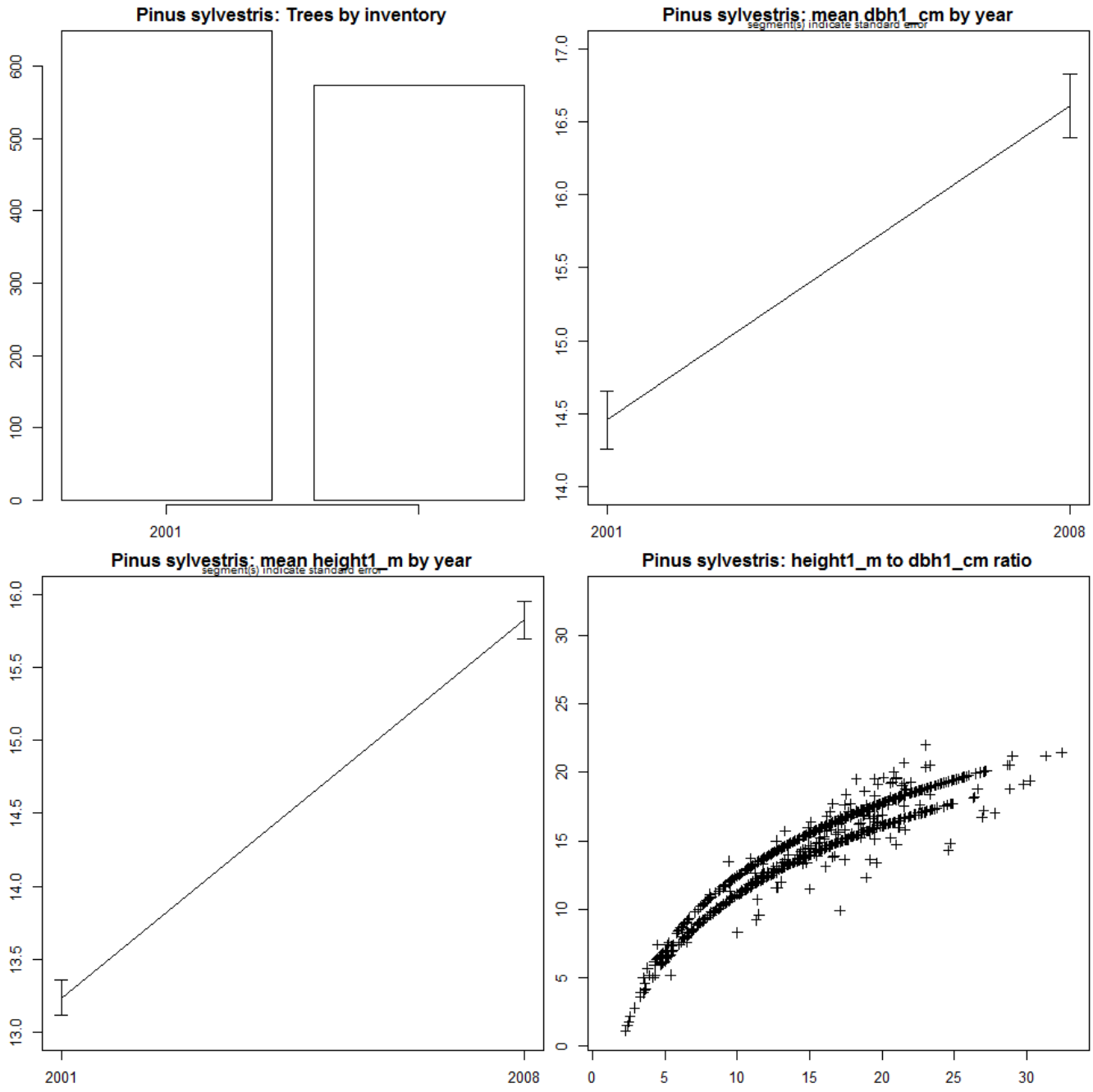
The following data is available for the site

Table 15: Available data for hyytiala

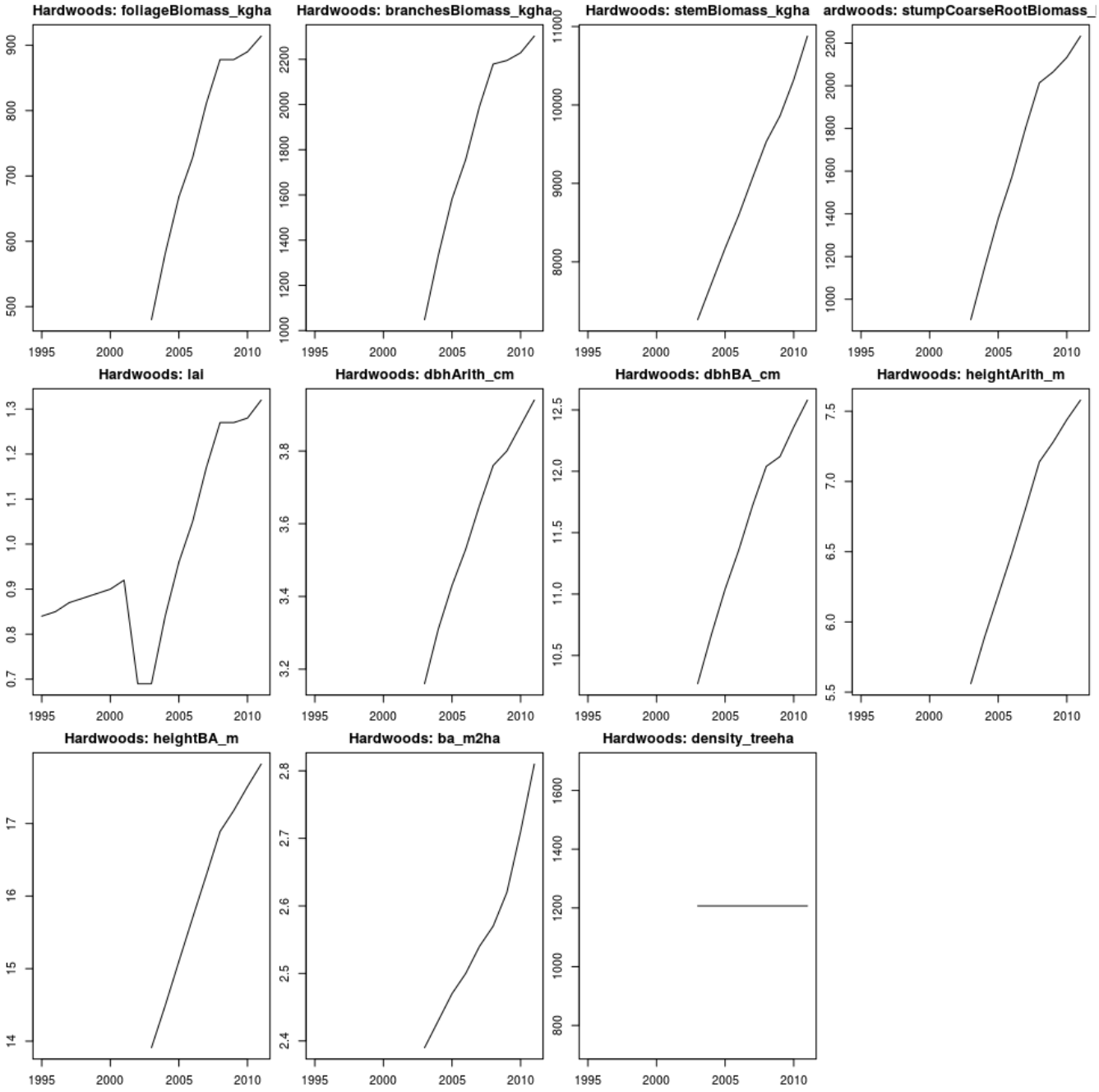
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	1
FLUX	1
ATMOSPHERICHEATCONDUCTION	1
SOILTS	1
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

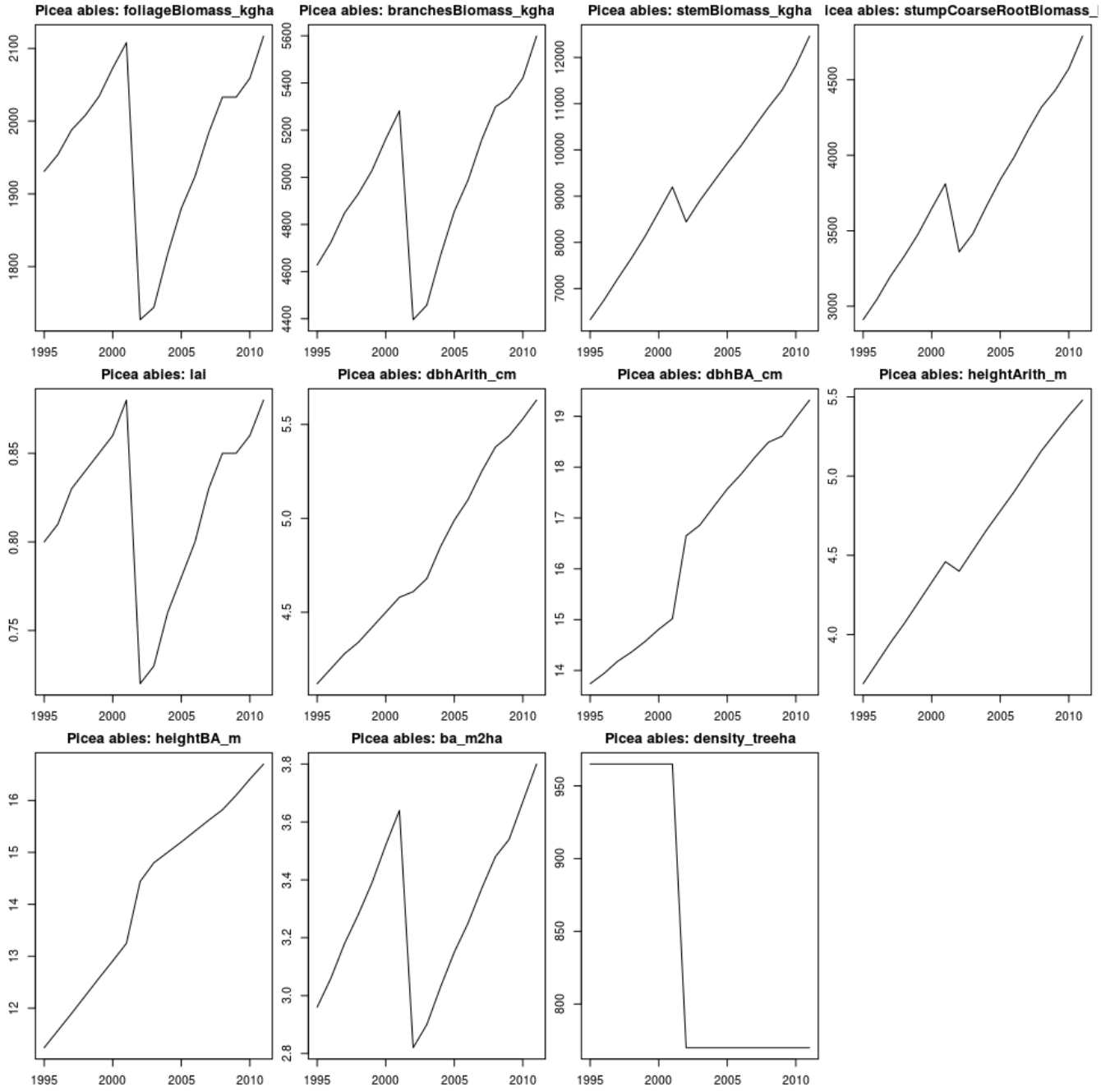
Data

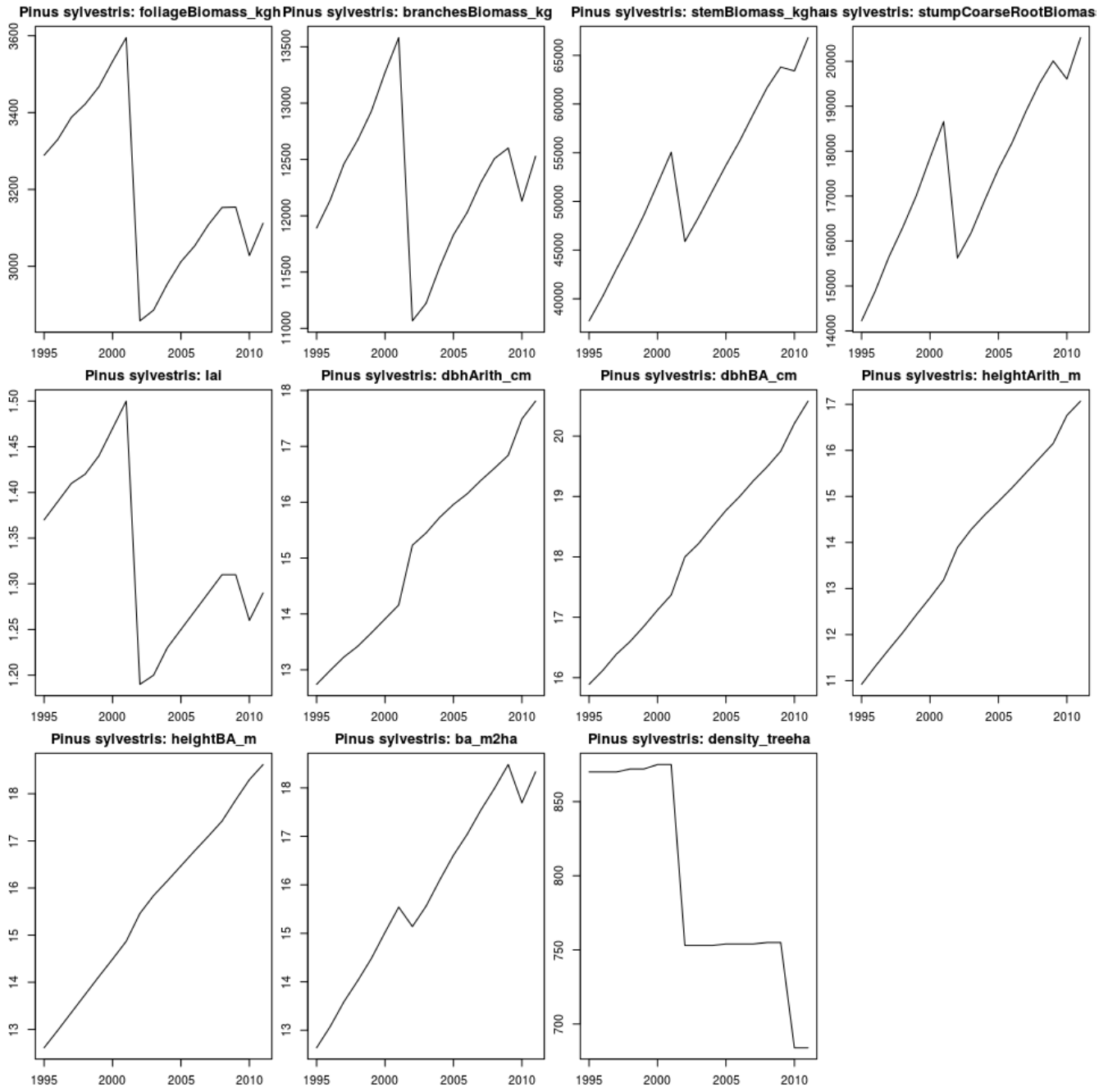
TREE


Pinus sylvestris: Trees by inventory
0
100
200
300
400
500
600
2001
Pinus sylvestris: mean dbh1_cm by year
segment(s) indicate standard error
14.0
14.5
15.0
15.5
16.0
16.5
17.0
2001
2008
Pinus sylvestris: mean height1_m by year
segment(s) indicate standard error
13.0
13.5
14.0
14.5
15.0
15.5
16.0
2001
2008
Pinus sylvestris: height1_m to dbh1_cm ratio
0
5
10
15
20
25
30
0
5
10
15
20
25
30

STAND


Hardwoods: foliageBiomass_kgha
Hardwoods: branchesBiomass_kgha
Hardwoods: stemBiomass_kgha
ardwoods: stumpCoarseRootBiomass_
Hardwoods: lai
Hardwoods: dbhArith_cm
Hardwoods: dbhBA_cm
Hardwoods: heightArith_m
Hardwoods: heightBA_m
Hardwoods: ba_m2ha
Hardwoods: density_treeha


Picea abies: foliageBiomass_kgha
Picea abies: branchesBiomass_kgha
Picea abies: stemBiomass_kgha
Icea abies: stumpCoarseRootBiomass_
Picea abies: lai
Picea abies: dbhArith_cm
Picea abies: dbhBA_cm
Picea abies: heightArith_m
Picea abies: heightBA_m
Picea abies: ba_m2ha
Picea abies: density_treeha


Pinus sylvestris: foliageBiomass_kgh
Pinus sylvestris: branchesBiomass_kg
Pinus sylvestris: stemBiomass_kgha
Pinus sylvestris: stumpCoarseRootBiomas
Pinus sylvestris: lai
Pinus sylvestris: dbhArith_cm
Pinus sylvestris: dbhBA_cm
Pinus sylvestris: heightArith_m
Pinus sylvestris: heightBA_m
Pinus sylvestris: ba_m2ha
Pinus sylvestris: density_treeha

CLIMATE_LOCAL

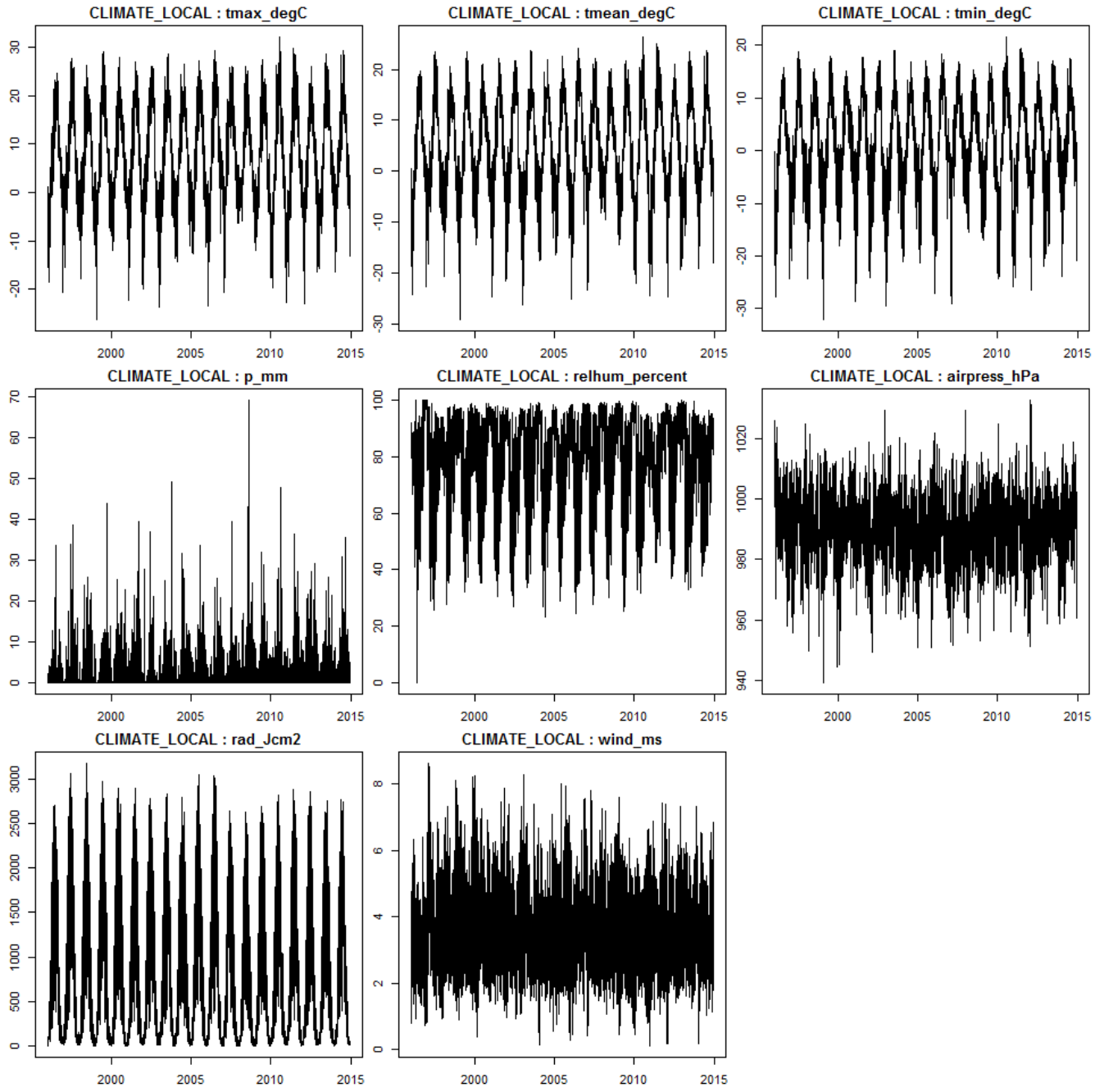


Table 16: Summary of CLIMATE_LOCAL for hyytiala. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
hyytiala	12	1996	6.4	3.4	0.321	483	78.4	996	287858	2.96
hyytiala	12	1997	7.27	4.28	0.982	475	72.8	992	342174	3.67
hyytiala	12	1998	6.42	3.44	0.28	615	79.8	991	316550	3.67
hyytiala	12	1999	7.46	4.33	0.991	459	77.7	991	333417	3.61
hyytiala	12	2000	8.23	5.31	2.2	660	79.8	991	316564	3.76
hyytiala	12	2001	6.81	3.87	0.719	608	79.4	992	298774	3.55
hyytiala	12	2002	7.56	4.37	0.875	329	75.3	992	334385	3.42
hyytiala	12	2003	7.48	4.23	0.936	482	78.3	991	301400	3.58
hyytiala	12	2004	7.27	4.23	0.957	514	77	988	298808	3.2
hyytiala	12	2005	7.84	4.71	1.4	668	77.2	990	331805	3.52
hyytiala	12	2006	8.09	4.98	1.56	504	76.4	991	354639	3.52
hyytiala	12	2007	7.88	4.9	1.69	538	79.2	988	300545	3.47
hyytiala	12	2008	7.85	5.1	2.2	894	80.6	989	269888	3.47
hyytiala	12	2009	7.08	4.04	0.876	573	79	991	299100	3.12
hyytiala	12	2010	5.9	2.73	-0.703	717	76.5	992	297073	3.09
hyytiala	12	2011	8.4	5.32	2.15	773	78.2	991	301700	3.39
hyytiala	12	2012	6.12	3.3	0.285	920	82.1	991	287373	3.25
hyytiala	12	2013	8.18	5.09	1.79	627	76.4	991	311700	3.49
hyytiala	12	2014	8.34	5.22	1.87	638	76.7	993	299194	3.28
hyytiala	12	1996-2014	7.4	4.36	1.13	604	77.9	991	309629	3.42

CLIMATE_ISIMIP2B

Table 17: Summary of CLIMATE_ISIMIP2B for hyytiala. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	7.613	3.59	-0.718	692.4	81.31	993.2	350370	2.085
GFDLESM2M	piControl	1661-2099	7.575	3.425	-1.045	716.9	82.02	993.3	351460	1.909
GFDLESM2M	rcp2p6	2006-2099	8.997	5.646	2.134	767.4	80.4	992.4	359423	2.537
GFDLESM2M	rcp4p5	2006-2099	9.4	6.081	2.614	777.5	80.82	992.5	352709	2.445
GFDLESM2M	rcp6p0	2006-2099	9.366	6.023	2.515	748.4	80.16	992.9	360065	2.729
GFDLESM2M	rcp8p5	2006-2099	9.855	6.523	3.028	779.5	80.61	992.5	351621	2.826
HadGEM2ES	historical	1861-2005	7.197	3.184	-1.12	670.4	80.55	993.7	352960	2.166
HadGEM2ES	piControl	1661-2299	7.499	3.429	-0.921	684.4	80.36	993.8	361139	2.13
HadGEM2ES	rcp2p6	2006-2299	9.764	5.987	1.994	741	79.91	993.6	364275	2.037
HadGEM2ES	rcp4p5	2006-2099	10.81	7.034	3.083	738.3	78.37	993.3	363675	2.047
HadGEM2ES	rcp6p0	2006-2099	10.71	6.921	2.944	735.2	78.69	993.6	363963	2.062
HadGEM2ES	rcp8p5	2006-2099	11.88	8.077	4.138	735.6	77.46	993.6	366764	2.036
IPSLCM5ALR	historical	1861-2005	6.926	2.885	-1.43	651.6	80.81	994.2	360964	2.141
IPSLCM5ALR	piControl	1661-2299	6.222	2.078	-2.352	610.1	80.97	994.9	370371	2.118
IPSLCM5ALR	rcp2p6	2006-2299	10.14	6.313	2.291	712.2	78.66	993.6	376308	2.14
IPSLCM5ALR	rcp4p5	2006-2299	12.11	8.364	4.491	765.7	77.44	993.4	379161	2.122
IPSLCM5ALR	rcp6p0	2006-2099	10.86	7.08	3.134	719.2	77.99	993.5	373794	2.149
IPSLCM5ALR	rcp8p5	2006-2299	17.3	13.68	10.03	931	74.79	991.9	382772	2.096
MIROC5	historical	1861-2005	7.406	3.369	-0.939	700.3	80.36	993.7	355475	2.128
MIROC5	piControl	1661-2299	7.961	3.714	-0.787	696.5	78.74	993.5	376342	2.088
MIROC5	rcp2p6	2006-2299	9.8	5.735	1.5	748.7	77.82	993.7	375667	2.136
MIROC5	rcp4p5	2006-2099	10.5	6.482	2.312	747.5	77.14	993.5	372153	2.151

MIROC5	rcp6p0	2006-2099	10.2	6.206	2.057	765.3	77.92	993.5	369725	2.139
MIROC5	rcp8p5	2006-2099	11.67	7.631	3.497	748.5	76.29	993.7	375778	2.061

CLIMATE_ISIMIP2BLBC

Table 18: Summary of CLIMATE_ISIMIP2BLBC for hyytiala. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	6.997	3.92	0.626	608	80.02	990.7	305455	3.301
GFDLESM2M	piControl	1661-2099	6.929	3.756	0.34	636.1	80.79	990.7	306373	3.023
GFDLESM2M	rcp2p6	2006-2099	8.538	5.976	3.297	670.9	79.07	989.7	313714	4.02
GFDLESM2M	rcp4p5	2006-2099	8.95	6.412	3.77	679.1	79.52	989.7	307819	3.874
GFDLESM2M	rcp6p0	2006-2099	8.911	6.354	3.68	652.6	78.83	990.2	315303	4.323
GFDLESM2M	rcp8p5	2006-2099	9.402	6.853	4.187	676.8	79.28	989.8	306825	4.477
HadGEM2ES	historical	1861-2005	6.051	2.944	-0.417	561.8	79.37	991.8	305875	3.469
HadGEM2ES	piControl	1661-2299	6.341	3.189	-0.209	578.6	79.11	991.8	314005	3.41
HadGEM2ES	rcp2p6	2006-2299	8.672	5.747	2.634	624.4	78.56	991.5	317798	3.261
HadGEM2ES	rcp4p5	2006-2099	9.721	6.794	3.718	612.7	76.92	991.1	317878	3.278
HadGEM2ES	rcp6p0	2006-2099	9.619	6.681	3.583	611.4	77.3	991.5	318136	3.302
HadGEM2ES	rcp8p5	2006-2099	10.78	7.837	4.772	608.4	75.98	991.3	321198	3.26
IPSLCM5ALR	historical	1861-2005	5.908	2.778	-0.599	580	79.55	992	312060	3.446
IPSLCM5ALR	piControl	1661-2299	5.181	1.971	-1.5	541.3	79.81	992.7	320743	3.409
IPSLCM5ALR	rcp2p6	2006-2299	9.176	6.206	3.075	634.3	76.93	991.2	326784	3.445
IPSLCM5ALR	rcp4p5	2006-2299	11.16	8.257	5.25	681.8	75.75	990.9	330909	3.416
IPSLCM5ALR	rcp6p0	2006-2099	9.901	6.974	3.904	636.4	76.27	991	325232	3.46
IPSLCM5ALR	rcp8p5	2006-2299	16.38	13.57	10.74	817.4	73.17	989.1	337623	3.374
MIROC5	historical	1861-2005	5.952	2.856	-0.472	603.3	79.37	991.8	302579	3.444
MIROC5	piControl	1661-2299	6.459	3.201	-0.275	599.3	77.73	991.6	321461	3.38
MIROC5	rcp2p6	2006-2299	8.342	5.223	1.963	644.5	76.73	991.6	320906	3.455
MIROC5	rcp4p5	2006-2099	9.054	5.969	2.76	641.6	76.12	991.4	317513	3.479

MIROC5	rcp6p0	2006-2099	8.755	5.692	2.499	661.4	76.83	991.4	315470	3.458
MIROC5	rcp8p5	2006-2099	10.21	7.118	3.944	641.4	75.24	991.6	321647	3.334

CLIMATE_ISIMIP2A

Table 19: Summary of CLIMATE_ISIMIP2A for hyytiala. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	7.404	3.411	-0.796	694.6	84.61	998	350401	3.476
PRINCETON	1901-2012	7.235	3.438	-0.968	540.5	85.91	1008	326425	3.513
WATCH	1901-2001	7.148	3.067	-0.856	667.9	82.01	994.1	284340	2.404
WFDEI	1901-2010	7.226	3.189	-0.796	667.3	81.28	994	297054	2.337

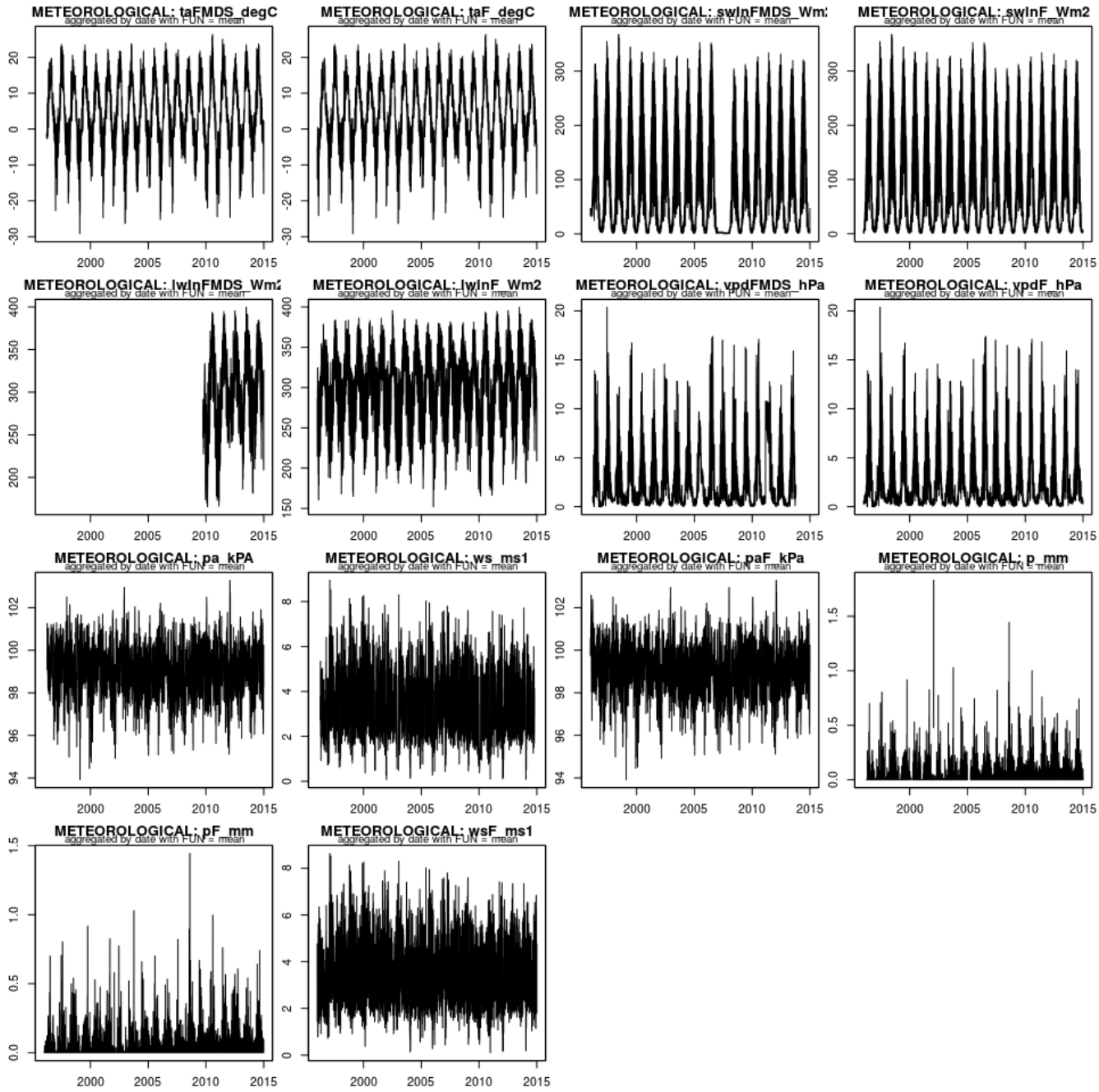
CLIMATE_ISIMIPFT

Table 20: Summary of CLIMATE_ISIMIPFT for hyytiala. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

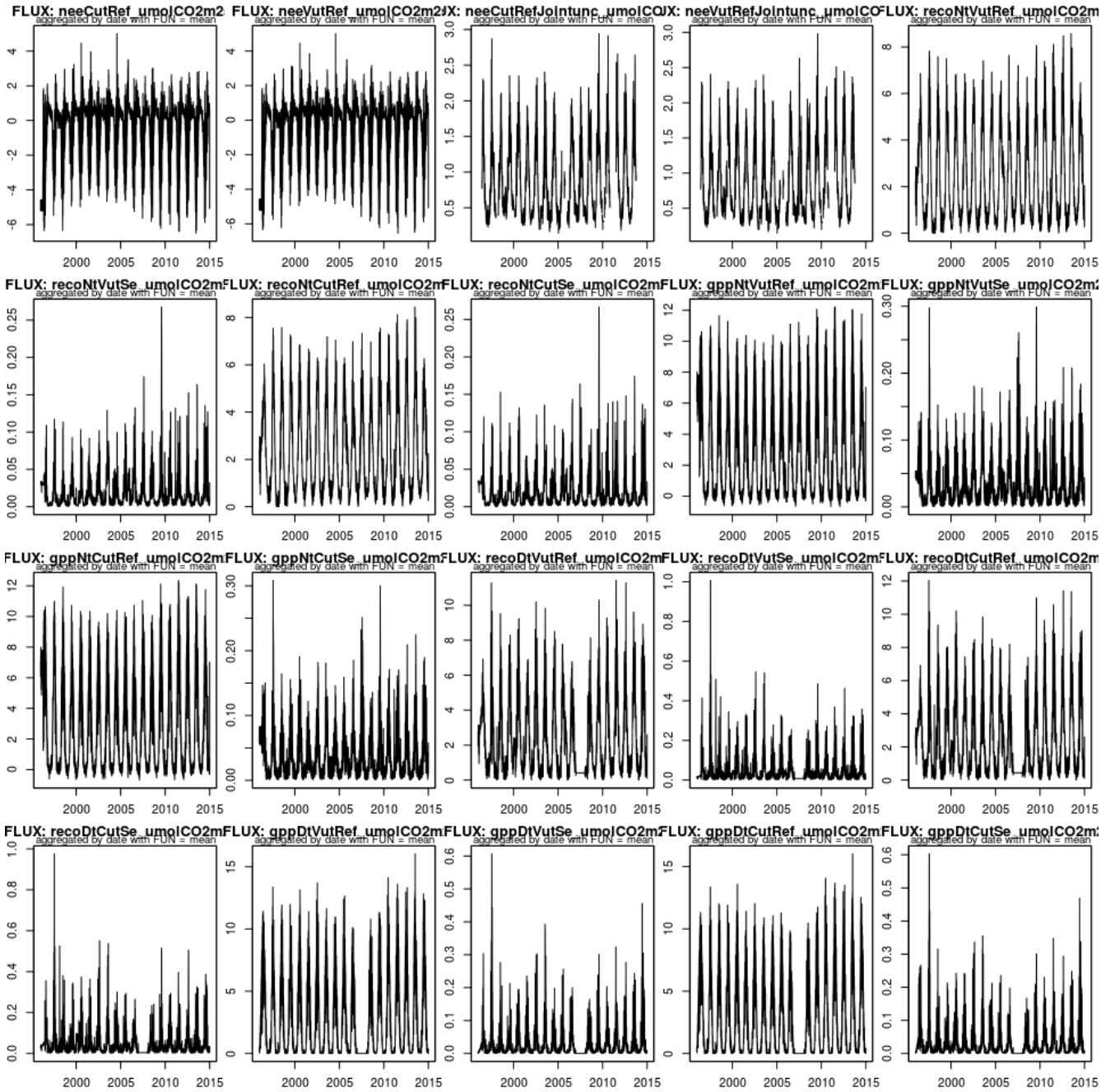
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	7.357	3.164	-0.889	680.3	88.6	994.2	283301	2.386
GFDLESM2M	rcp2p6	2006-2099	8.613	5.062	1.686	749.3	87.85	993.3	291310	2.877
GFDLESM2M	rcp4p5	2006-2099	9.016	5.508	2.178	759.4	88.17	993.4	285794	2.747
GFDLESM2M	rcp6p0	2006-2099	8.981	5.442	2.07	731.8	87.62	993.8	292444	3.037
GFDLESM2M	rcp8p5	2006-2099	9.472	5.962	2.622	762.2	88.04	993.4	284917	3.15
HadGEM2ES	historical	1950-2004	7.374	3.181	-0.854	671.1	82.68	994.2	281120	2.392
HadGEM2ES	rcp2p6	2005-2099	9.715	5.623	1.744	696	81.33	994.4	290975	2.303
HadGEM2ES	rcp4p5	2005-2099	10.59	6.552	2.739	714.2	80.5	994.1	290974	2.308
HadGEM2ES	rcp6p0	2005-2099	10.51	6.456	2.624	706.2	80.75	994.4	291447	2.32
HadGEM2ES	rcp8p5	2005-2099	11.65	7.593	3.794	712.6	79.58	994.3	293028	2.298
IPSLCM5ALR	historical	1950-2005	7.54	3.367	-0.651	685	84.39	993.9	279859	2.407
IPSLCM5ALR	rcp2p6	2006-2099	10.51	6.49	2.643	745.2	82.58	993.5	291522	2.429
IPSLCM5ALR	rcp4p5	2006-2099	11.26	7.289	3.503	751.9	81.93	993.6	293278	2.422
IPSLCM5ALR	rcp6p0	2006-2099	11.16	7.222	3.467	738.4	81.86	993.6	290916	2.431
IPSLCM5ALR	rcp8p5	2006-2099	12.52	8.619	4.926	788.3	80.84	993.4	295375	2.416
MIROCESMCHEM	historical	1950-2005	7.28	3.077	-0.952	680.9	90.17	993.8	286055	2.45
MIROCESMCHEM	rcp2p6	2006-2099	10.84	6.712	2.87	777.7	88.45	993.3	301850	2.278
MIROCESMCHEM	rcp4p5	2006-2099	11.41	7.328	3.562	797	88.42	993.4	298065	2.182
MIROCESMCHEM	rcp6p0	2006-2099	11.44	7.372	3.61	783.1	88.37	993.2	298949	2.146
MIROCESMCHEM	rcp8p5	2006-2099	12.65	8.561	4.798	813.7	88.04	993.3	300516	2.105
NorESM1M	historical	1950-2005	7.511	3.354	-0.65	681.5	80.69	994.1	279727	2.399
NorESM1M	rcp2p6	2006-2099	9.275	5.115	1.114	709.3	79.27	994.1	291195	2.41

NorESM1M	rcp4p5	2006-2099	9.867	5.713	1.718	721.9	78.92	993.9	290569	2.392
NorESM1M	rcp6p0	2006-2099	9.818	5.747	1.828	701.5	78.48	993.6	292257	2.551
NorESM1M	rcp8p5	2006-2099	10.61	6.535	2.624	715.6	77.73	994	293543	2.585

METEOROLOGICAL



FLUX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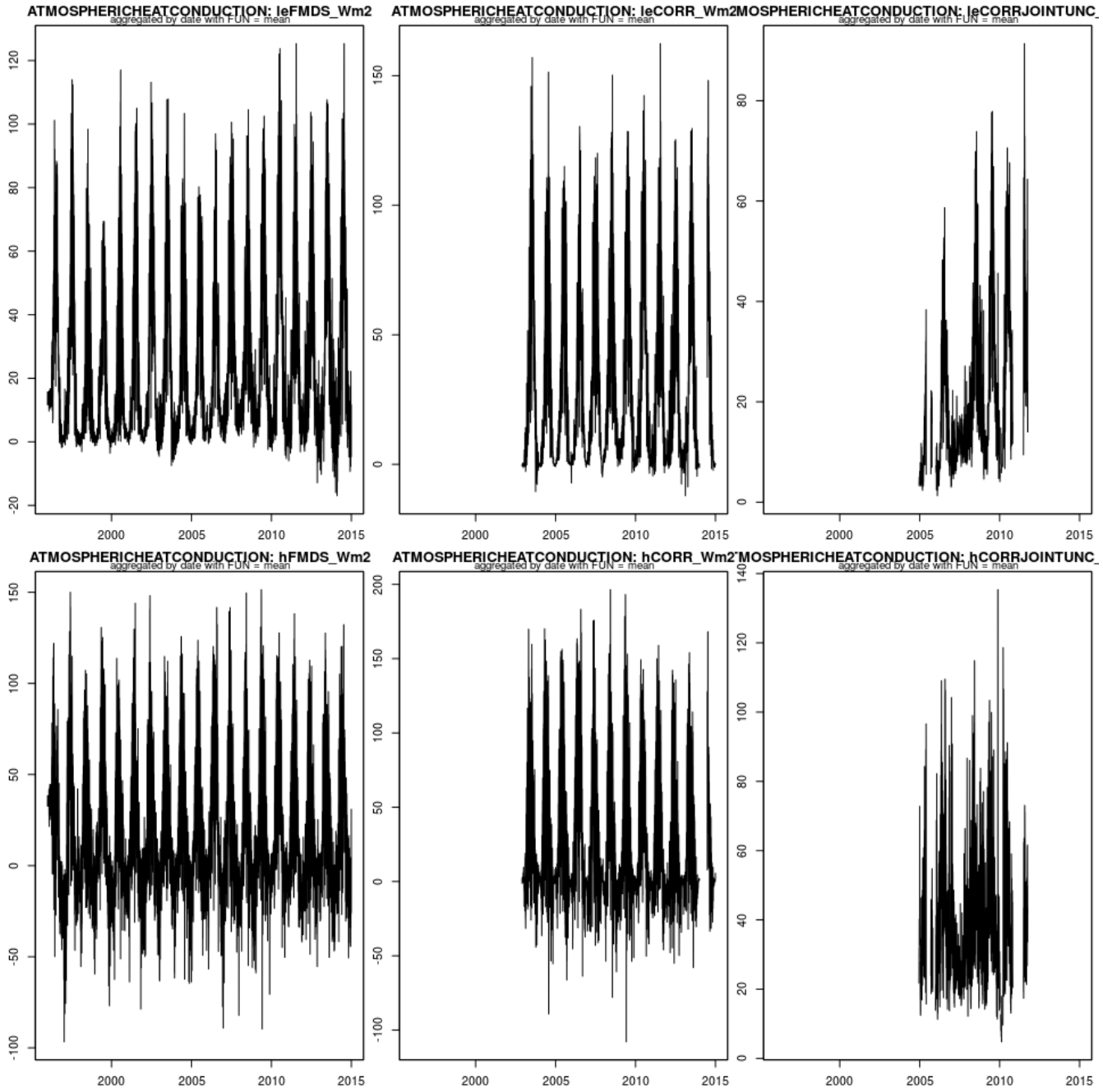
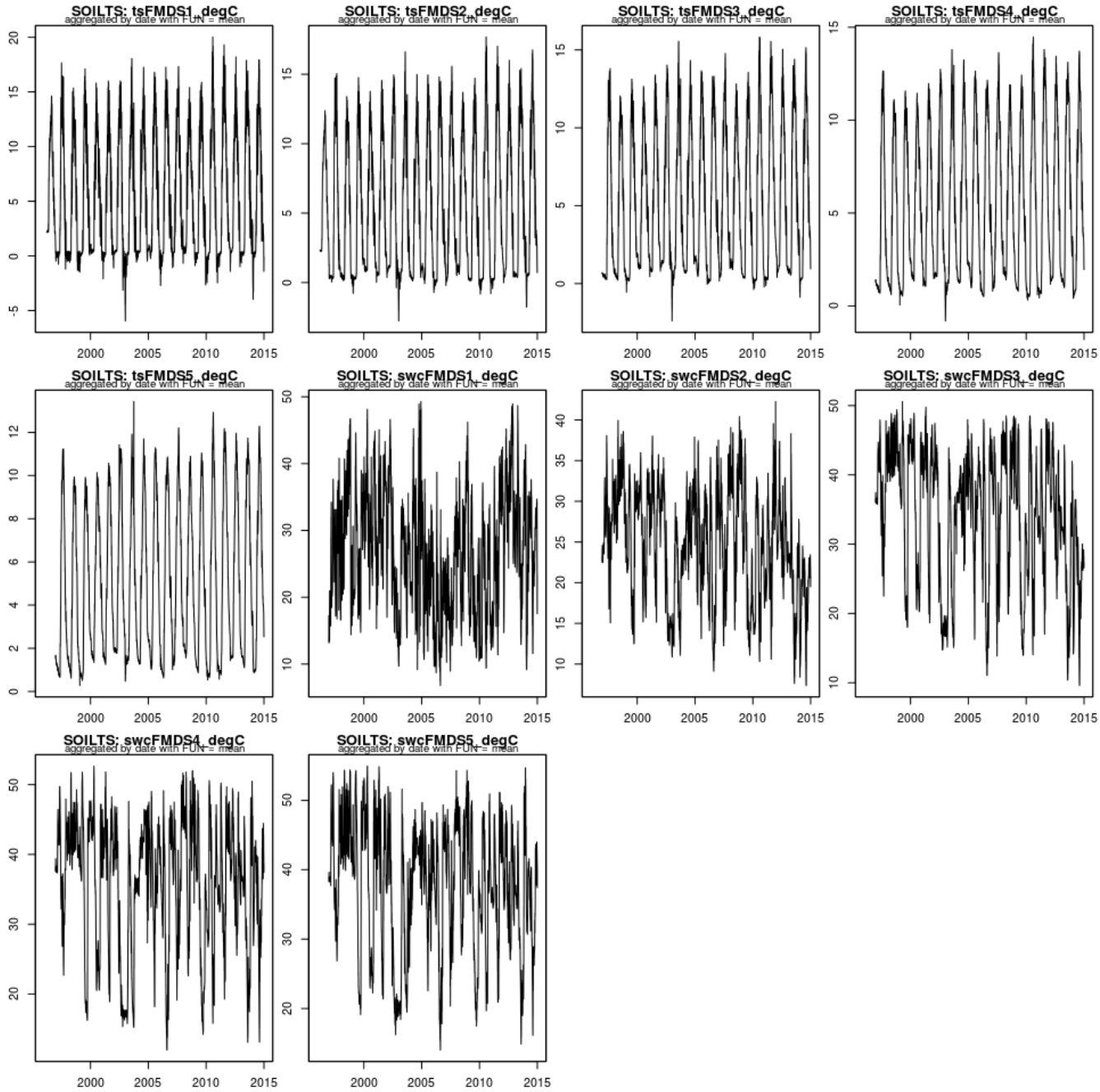
FLUX: neeVutRef_umolCO2m2
FLUX: neeCutRefJointunc_umolCO
FLUX: neeVutRefJointunc_umolCO
FLUX: recoNtVutRef_umolCO2m
FLUX: recoNtVutSe_umolCO2m
FLUX: recoNtCutRef_umolCO2m
FLUX: recoNtCutSe_umolCO2m
FLUX: gppNtVutRef_umolCO2m
FLUX: gppNtVutSe_umolCO2m
FLUX: gppNtCutRef_umolCO2m
FLUX: gppNtCutSe_umolCO2m
FLUX: recoDtVutRef_umolCO2m
FLUX: recoDtVutSe_umolCO2m
FLUX: recoDtCutRef_umolCO2m
FLUX: recoDtCutSe_umolCO2m
FLUX: gppDtVutRef_umolCO2m
FLUX: gppDtVutSe_umolCO2m
FLUX: gppDtCutRef_umolCO2m
FLUX: gppDtCutSe_umolCO2m
aggregated by date with FUN = mean

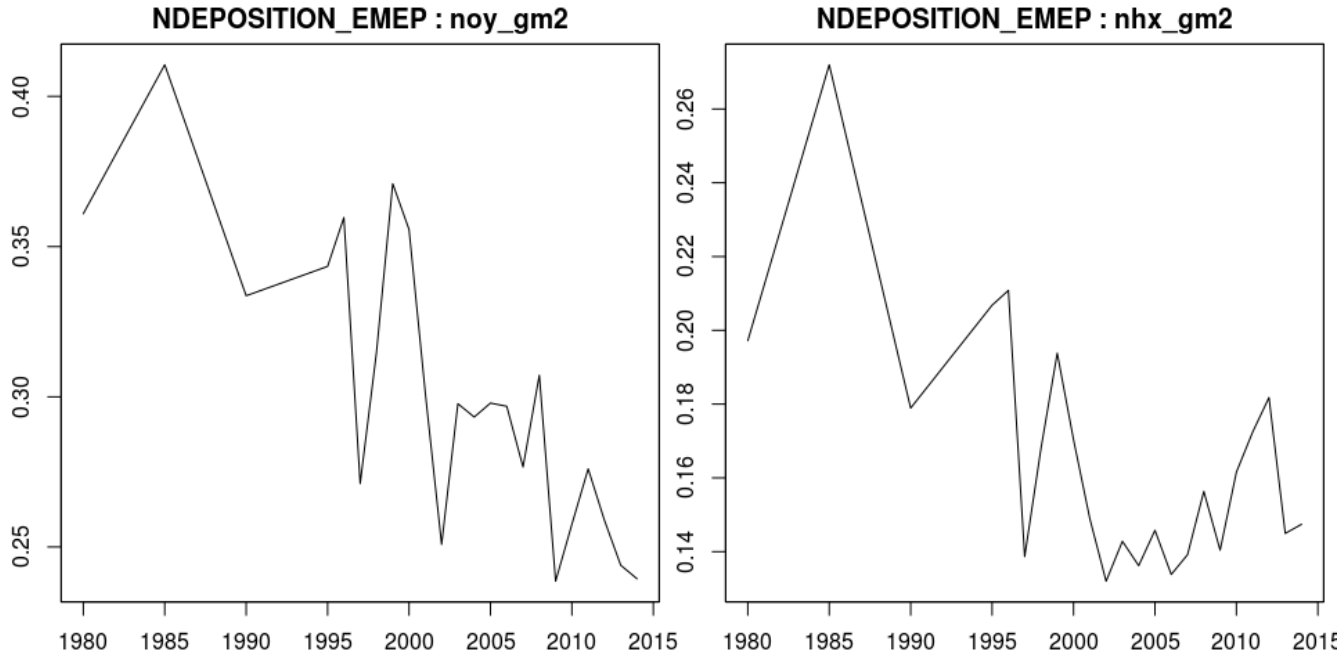
ATMOSPHERICHEATCONDUCTION



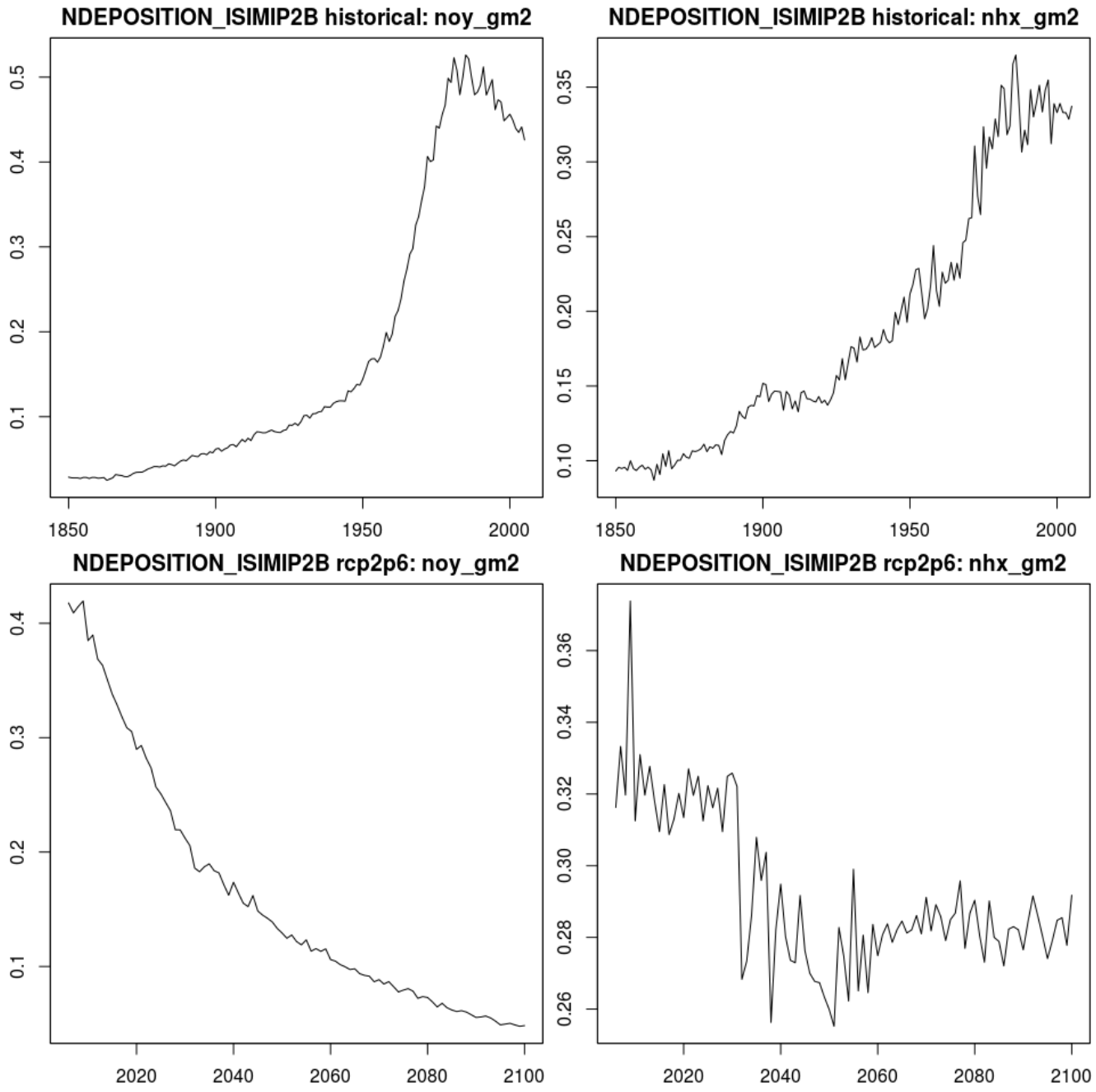
SOILTS

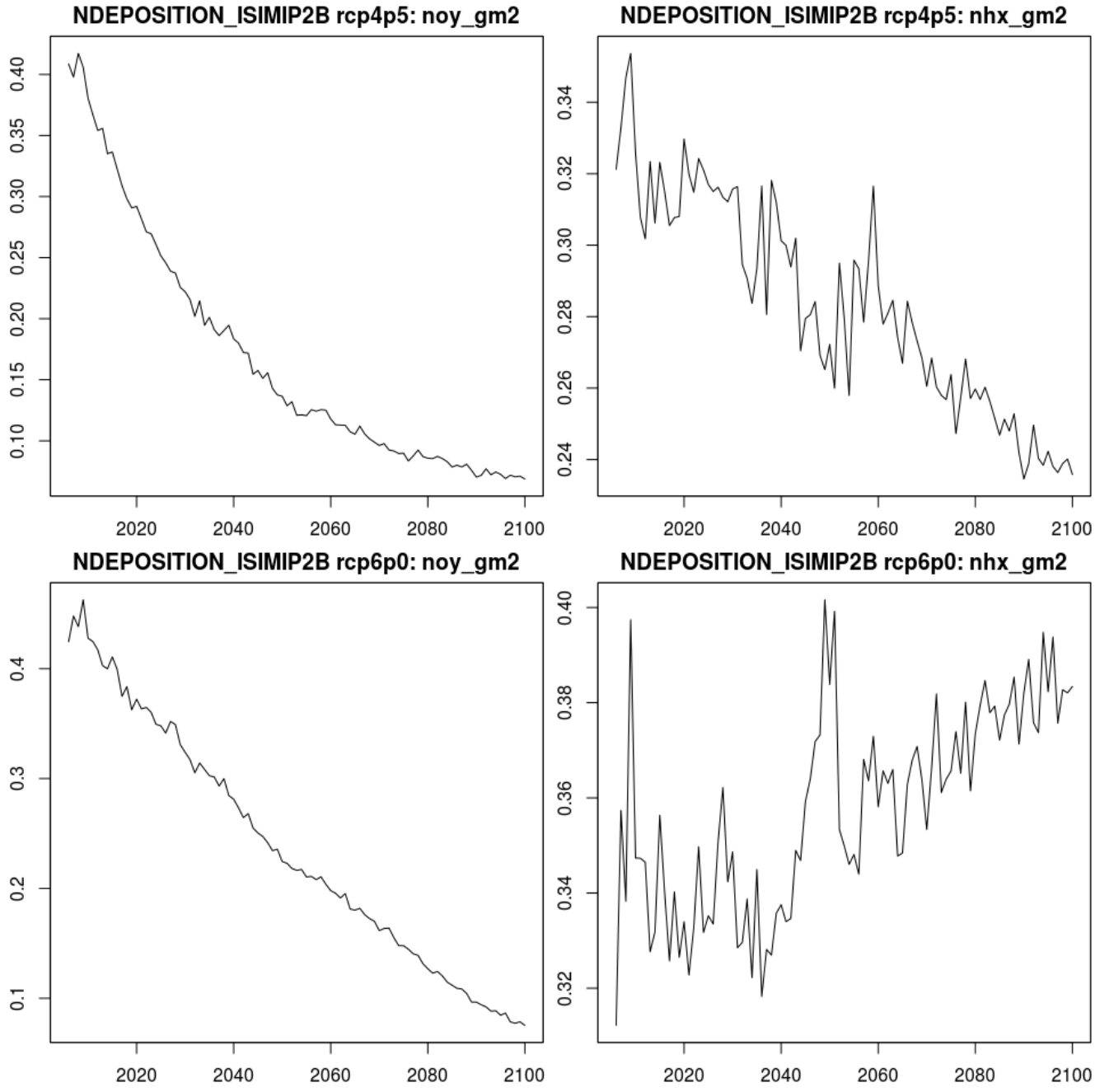

SOILTS: tsFMDS1_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS2_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS3_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS4_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS5_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS1_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS2_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS3_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS4_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS5_degC
aggregated by date with FUN = mean

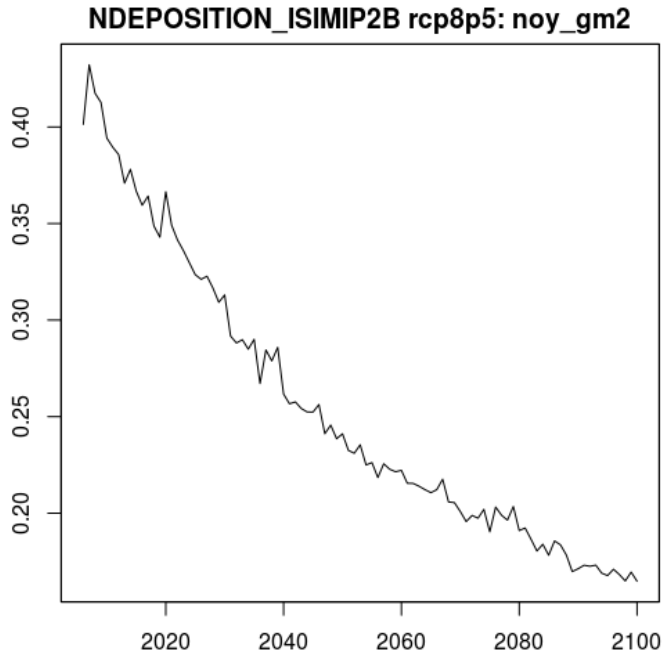
NDEPOSITION_EMEP

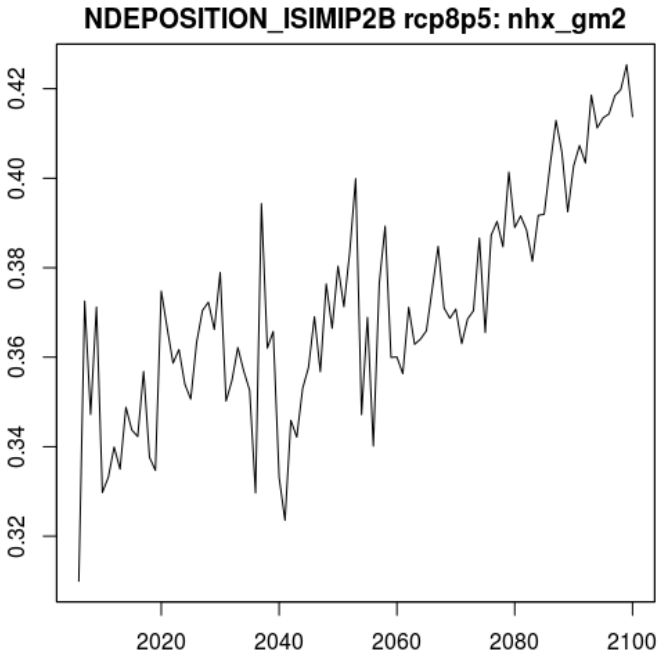


NDEPOSITION_ISIMIP2B

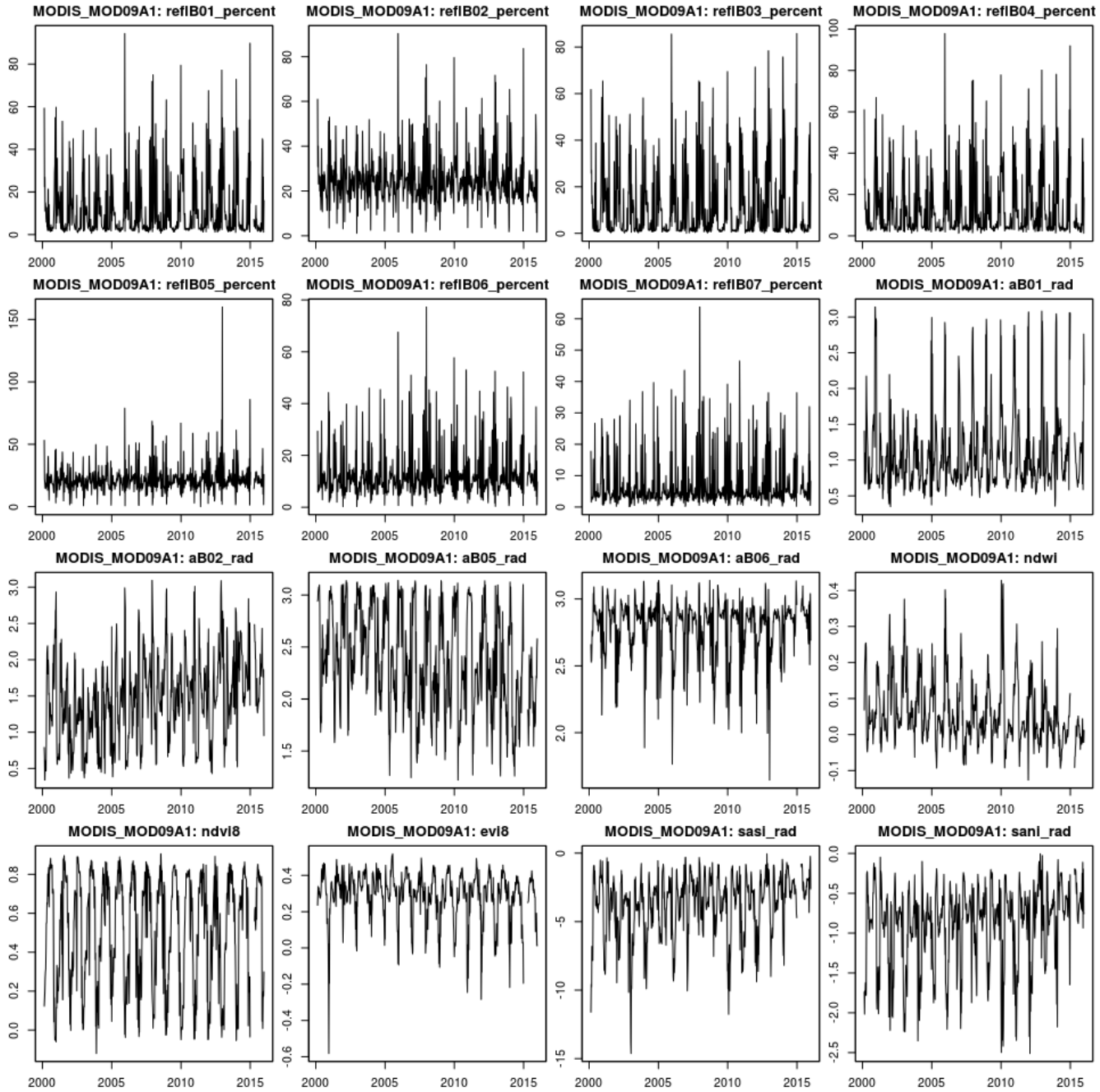



NDEPOSITION_ISIMIP2B rcp4p5: noy_gm2
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100

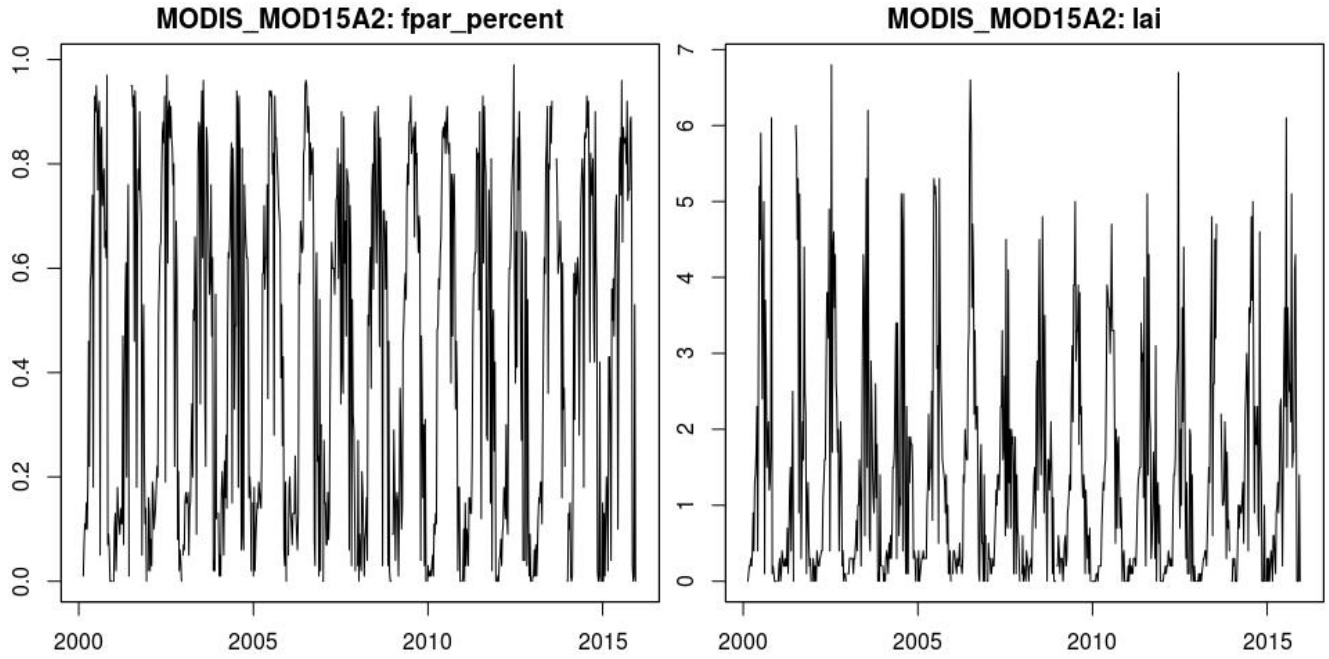

NDEPOSITION_ISIMIP2B rcp8p5: noy_gm2
0.20
0.25
0.30
0.35
0.40
2020
2040
2060
2080
2100


NDEPOSITION_ISIMIP2B rcp8p5: nhx_gm2
0.32
0.34
0.36
0.38
0.40
0.42
2020
2040
2060
2080
2100

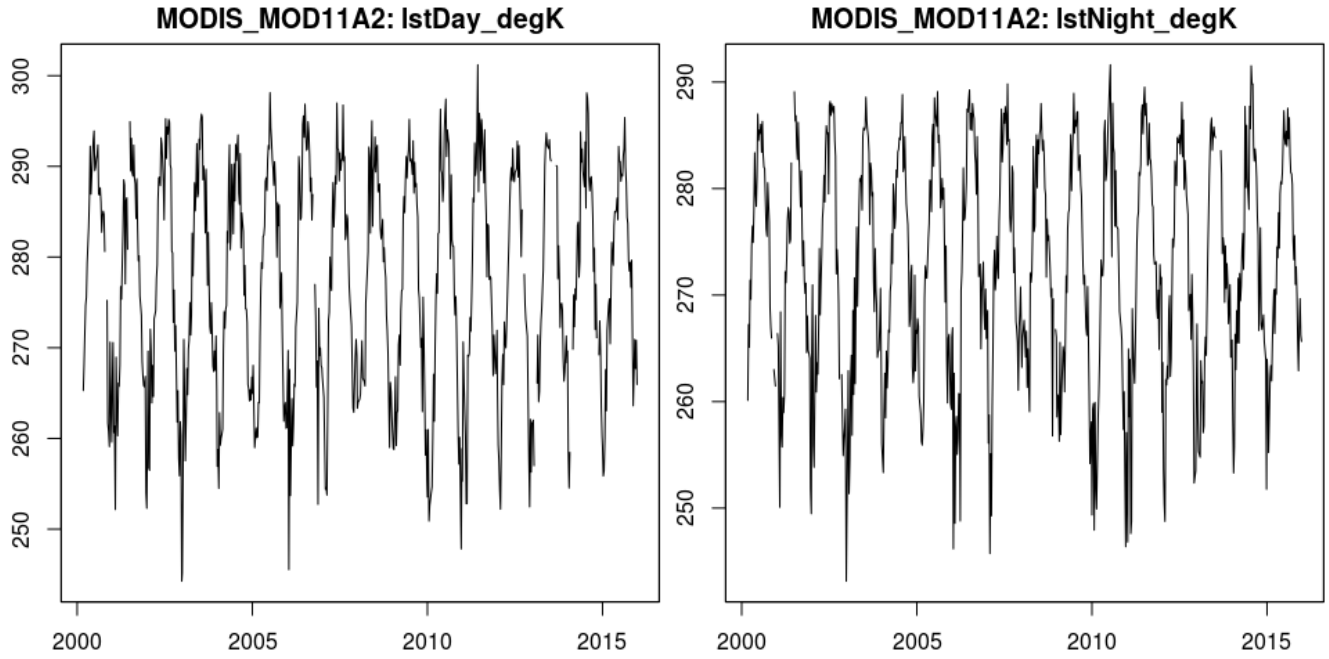
MODIS_MOD09A1



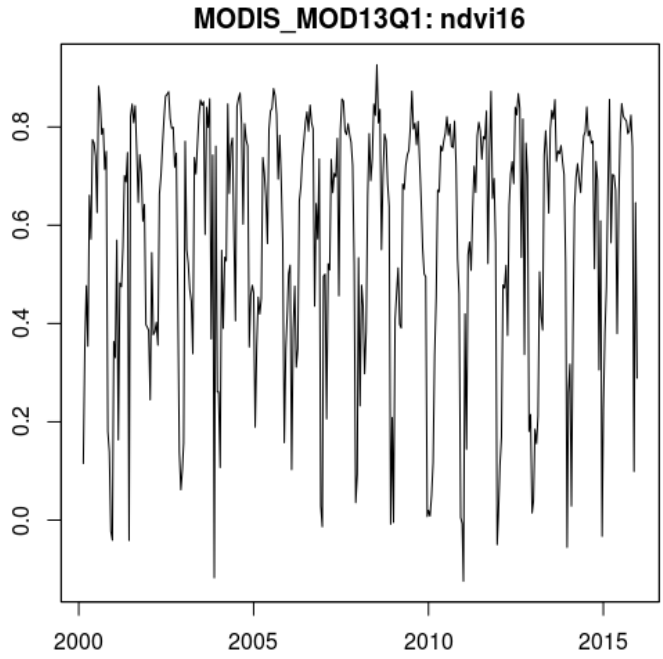
MODIS_MOD15A2

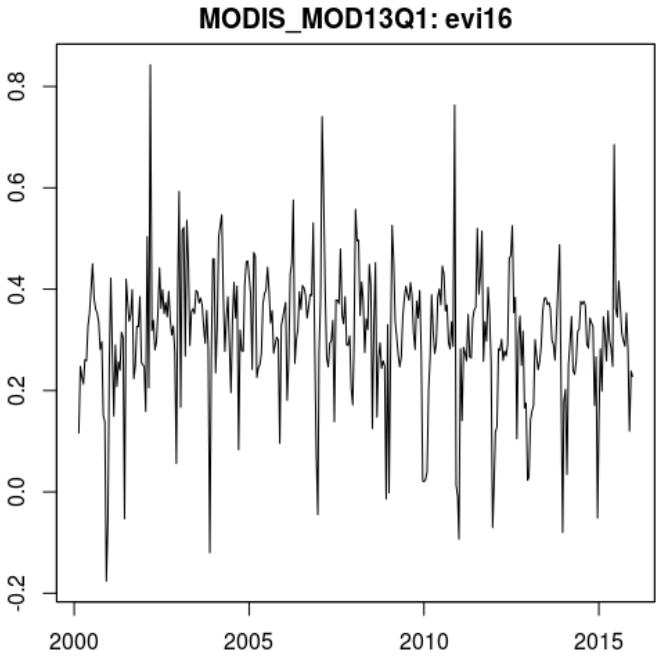


MODIS_MOD11A2

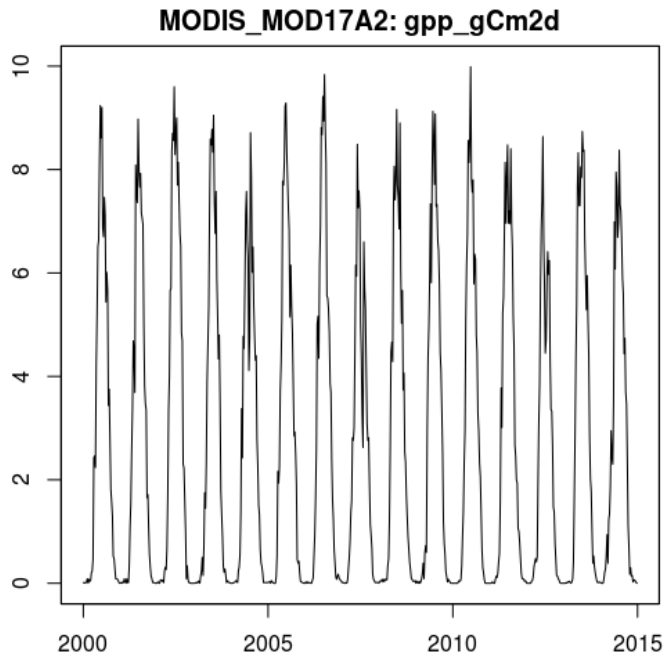


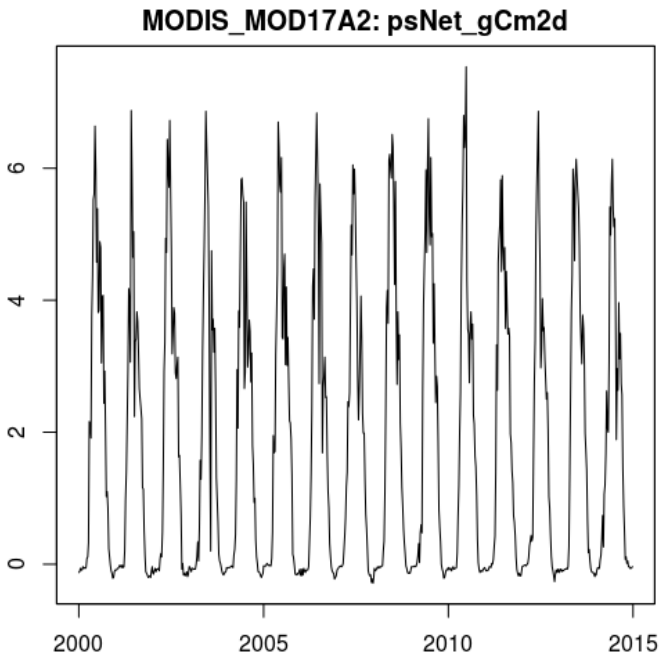
MODIS_MOD13Q1





MODIS_MOD17A2





Site kroof

Description

The KROOF forest belongs to the “Kranzberg Forest Roof Experiment” of the Technical University Munich (TUM) and the Helmholtz-Zentrum Munich. The site is located close to Freising, Germany, in the Kranzberger Forst in 502 m.a.s.l (wc-alt.). Mean annual temperature is around 8.2°C, annual rainfall around 849 mm during the period 1998-2010. The soil type, Luvisol, is typical for the region. The potential natural vegetation is (sessile oak-) beech forest (Fagus sylvatica, Quercus petraea, Quercus robur). The establishment of the research plot dates back to 1992. The mixed stand comprises large groups of Fagus sylvatica surrounded by Picea abies with mean DBH of 26 cm and 33 cm in 2010, respectively. Other occurring species are Acer platanoides (20 cm), Pinus sylvestris (31 cm), Larix decidua (26 cm) and Quercus robur (29 cm). More information about the site can be found in Pretzsch et al. (1998; 2014) and Matyssek et al. (2014).

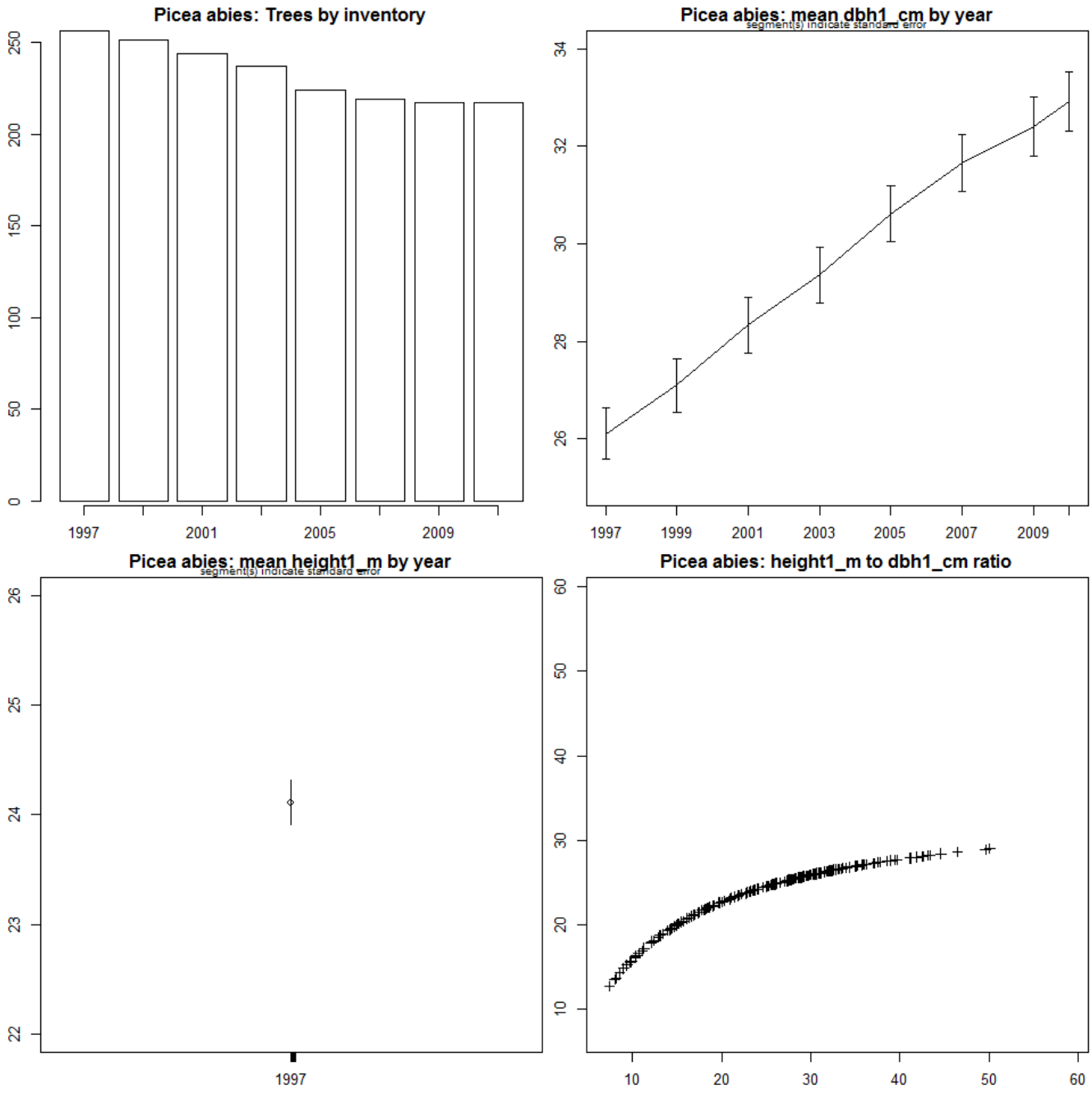
The following data is available for the site

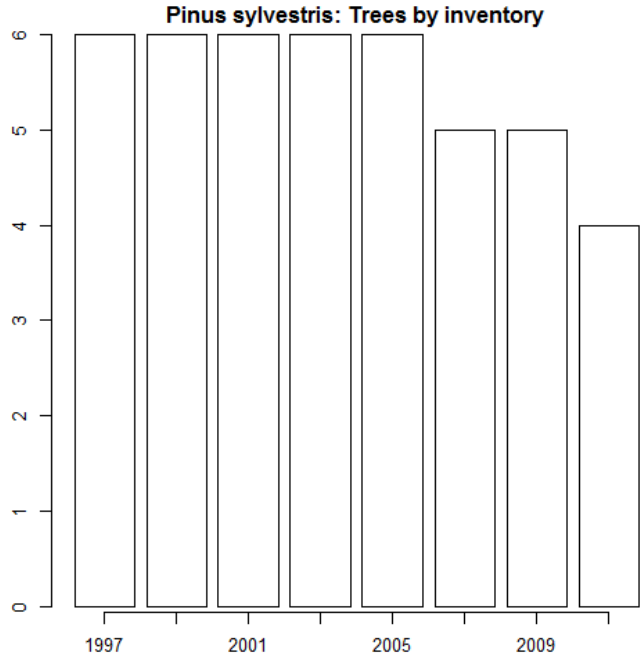
Table 21: Available data for kroof

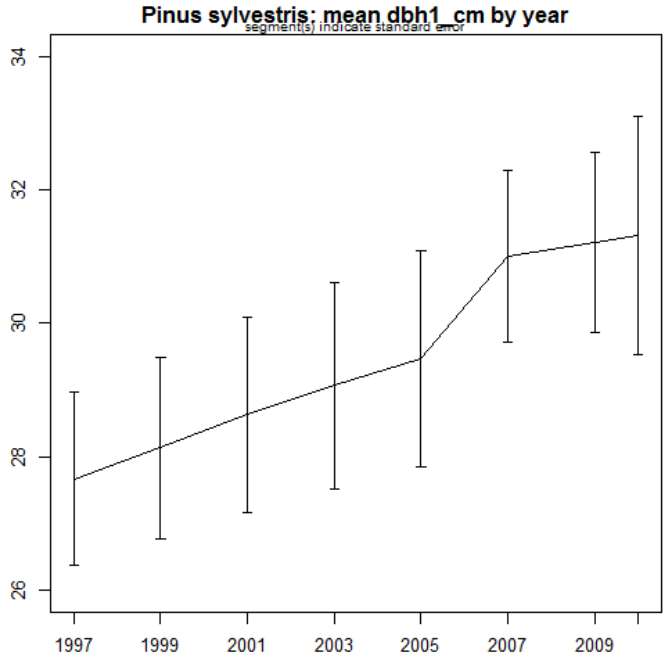
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	0
FLUX	0
ATMOSPHERICHEATCONDUCTION	0
SOILTS	0
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

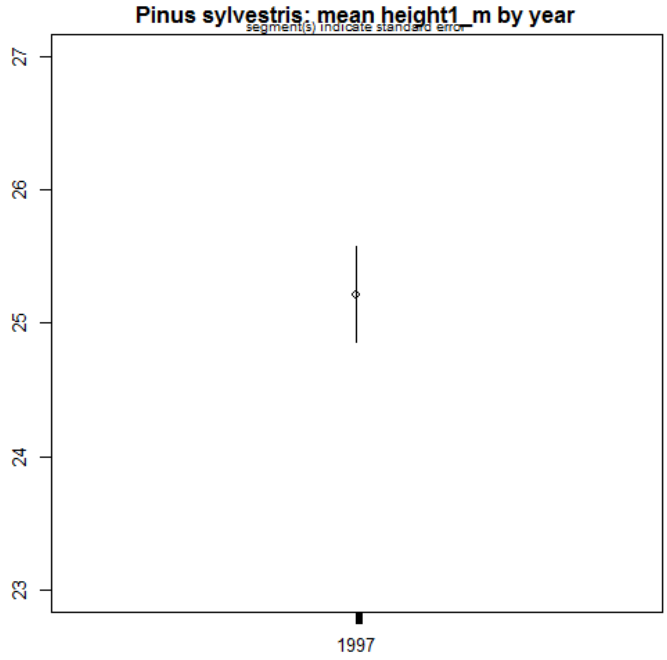
Data

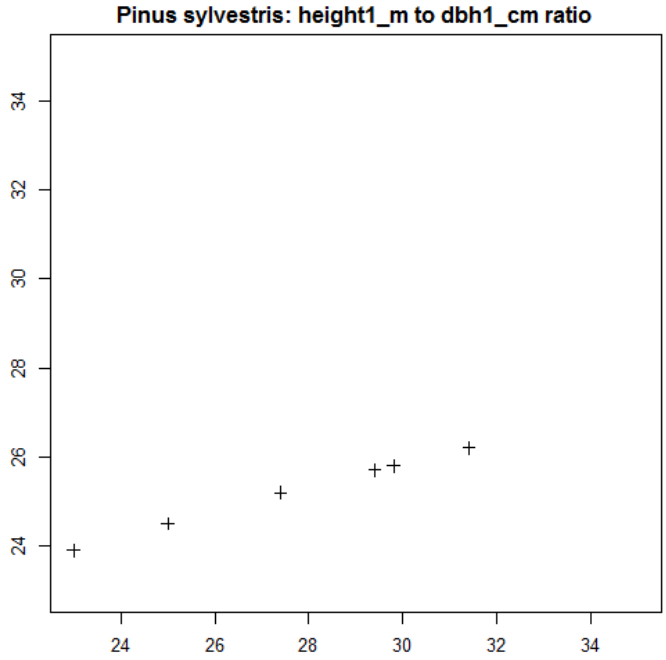
TREE

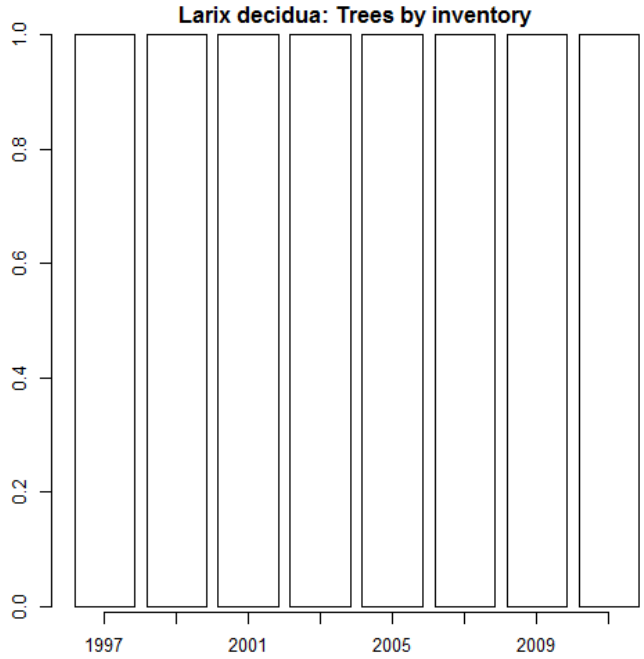

Picea abies: Trees by inventory
0
50
100
150
200
250
1997
2001
2005
2009
Picea abies: mean dbh1_cm by year
segment(s) indicate standard error
26
28
30
32
34
1997
1999
2001
2003
2005
2007
2009
Picea abies: mean height1_m by year
segment(s) indicate standard error
22
23
24
25
26
1997
Picea abies: height1_m to dbh1_cm ratio
10
20
30
40
50
60
10
20
30
40
50
60

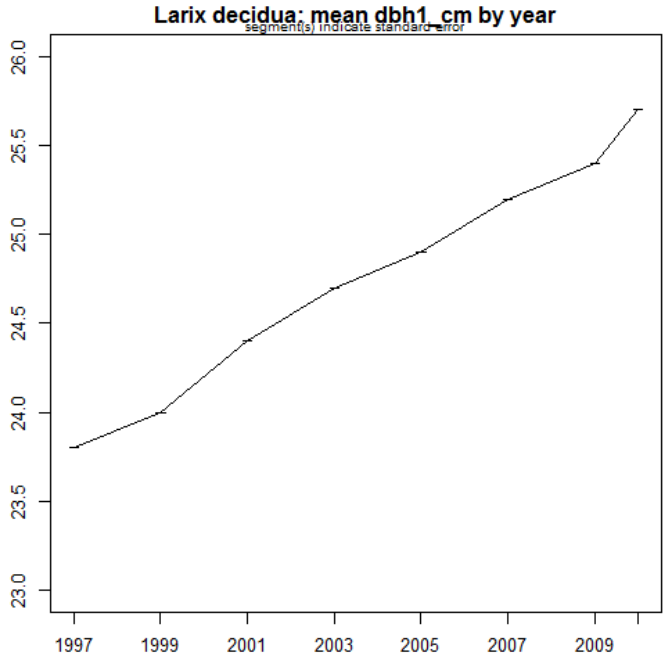

Pinus sylvestris: Trees by inventory
0
1
2
3
4
5
6
1997
2001
2005
2009

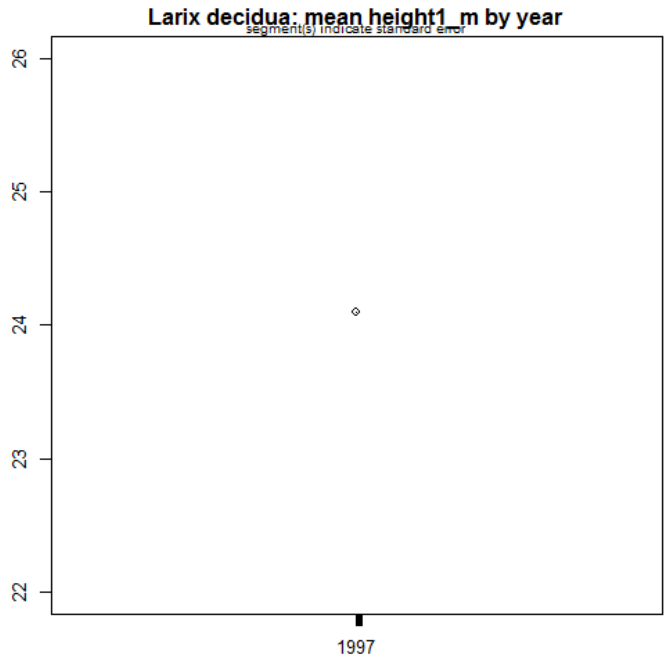

Pinus sylvestris: mean dbh1_cm by year
segment(s) indicate standard error
26
28
30
32
34
1997
1999
2001
2003
2005
2007
2009

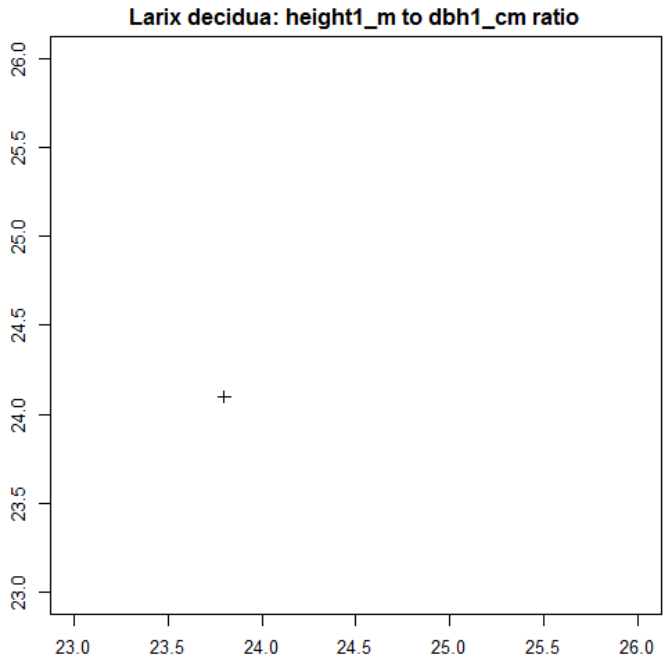

Pinus sylvestris: mean height1_m by year
segment(s) indicate standard error
23
24
25
26
27
1997

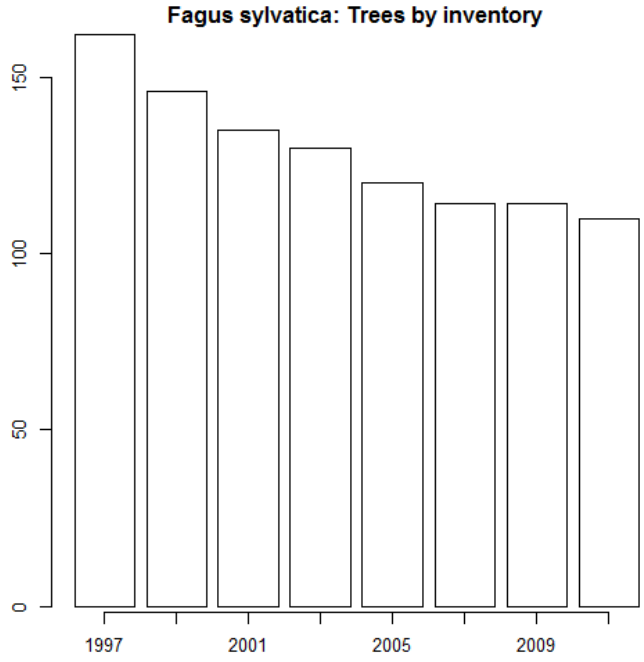

Pinus sylvestris: height1_m to dbh1_cm ratio
24
26
28
30
32
34

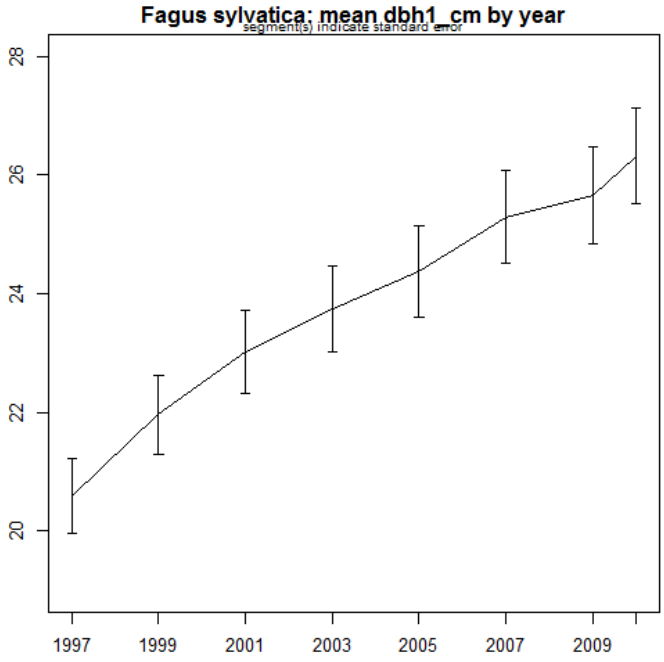

Larix decidua: Trees by inventory
0.0
0.2
0.4
0.6
0.8
1.0
1997
2001
2005
2009

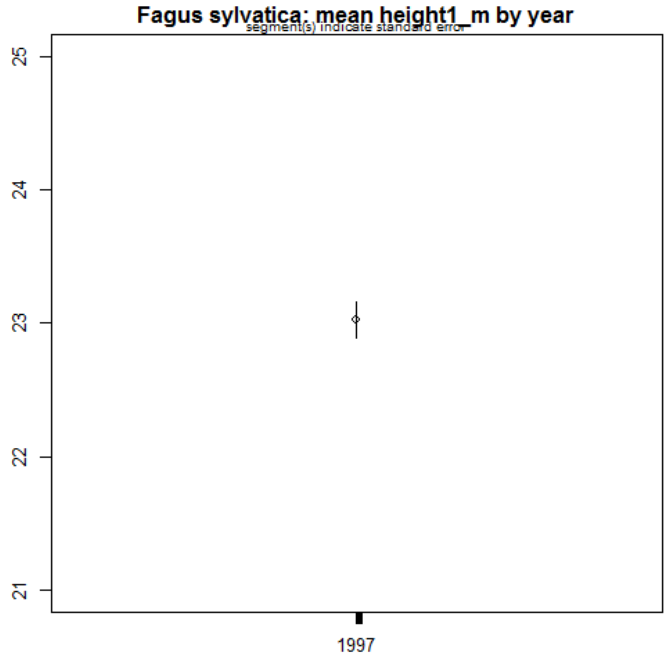

Larix decidua: mean dbh1_cm by year
segment(s) indicate standard error
23.0
23.5
24.0
24.5
25.0
25.5
26.0
1997
1999
2001
2003
2005
2007
2009

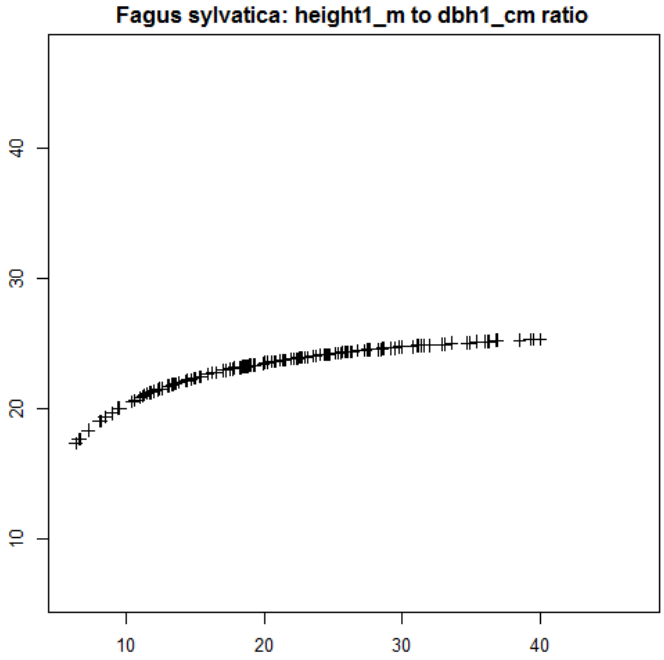

Larix decidua: mean height1_m by year
segment(s) indicate standard error
22
23
24
25
26
1997


Larix decidua: height1_m to dbh1_cm ratio
23.0
23.5
24.0
24.5
25.0
25.5
26.0

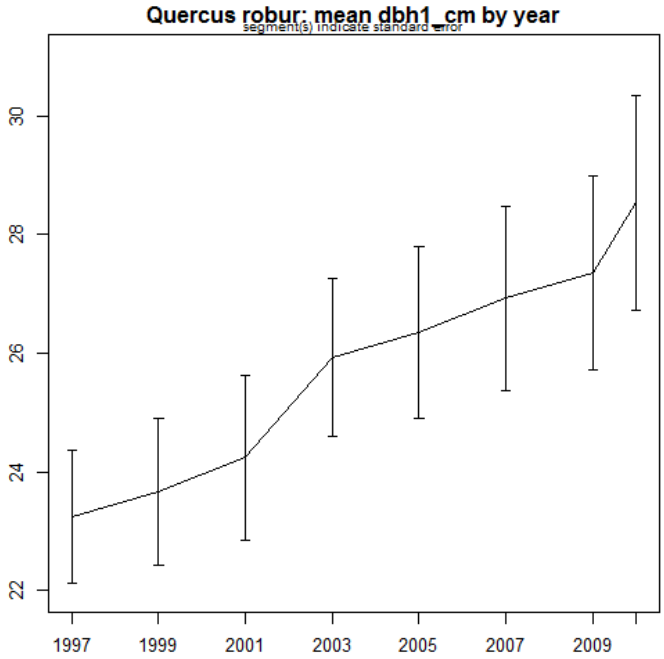

Fagus sylvatica: Trees by inventory
0
50
100
150
1997
2001
2005
2009

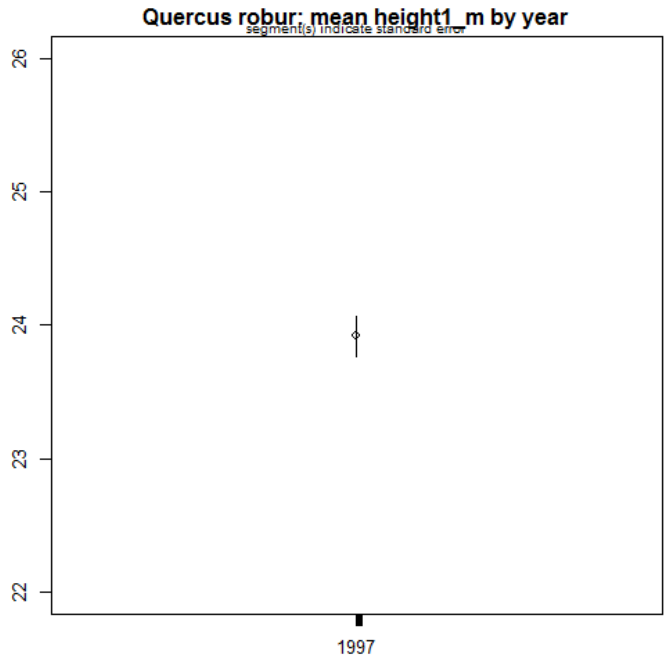

Fagus sylvatica: mean dbh1_cm by year
segment(s) indicate standard error
20
22
24
26
28
1997
1999
2001
2003
2005
2007
2009

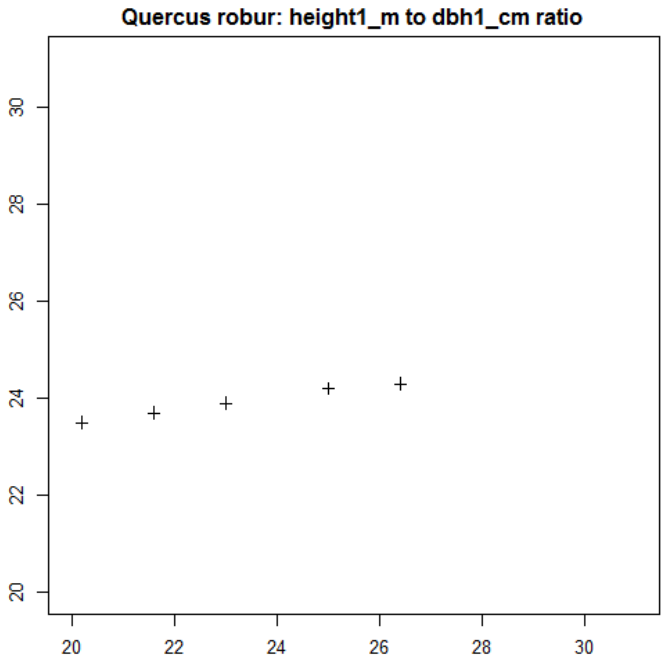

Fagus sylvatica: mean height1_m by year
segment(s) indicate standard error
21
22
23
24
25
1997

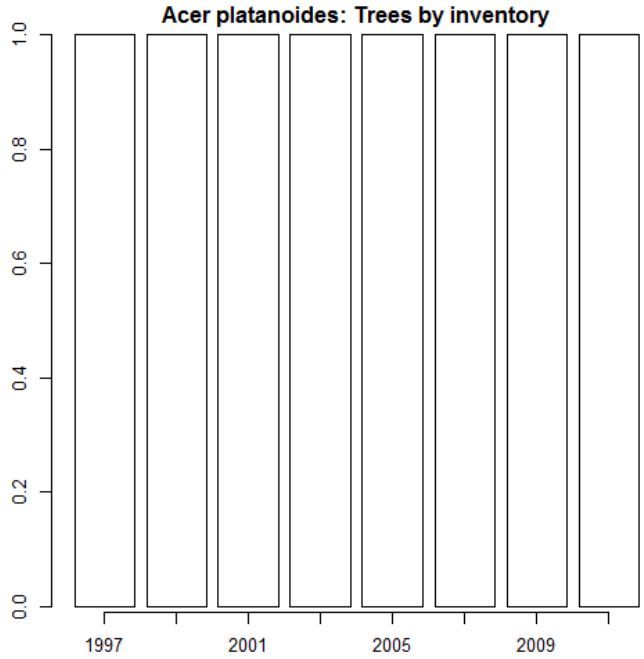

Fagus sylvatica: height1_m to dbh1_cm ratio
10
20
30
40
10
20
30
40

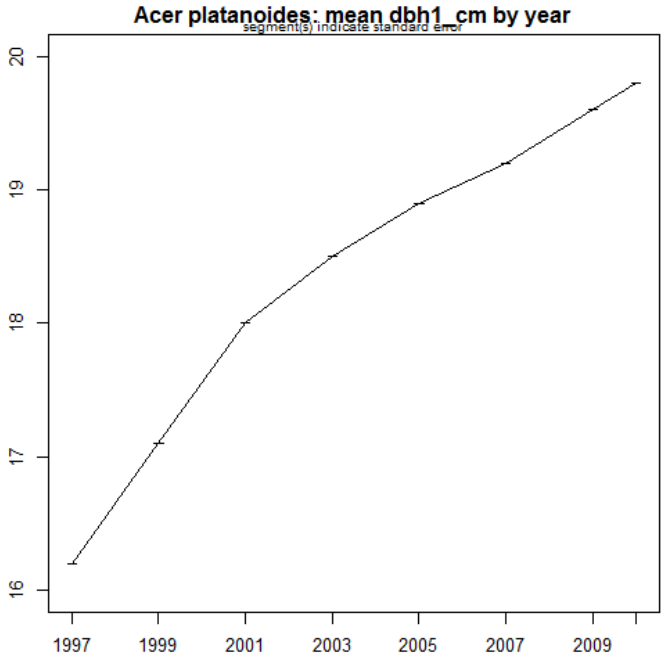

Quercus robur: Trees by inventory
0
1
2
3
4
5
1997
2001
2005
2009

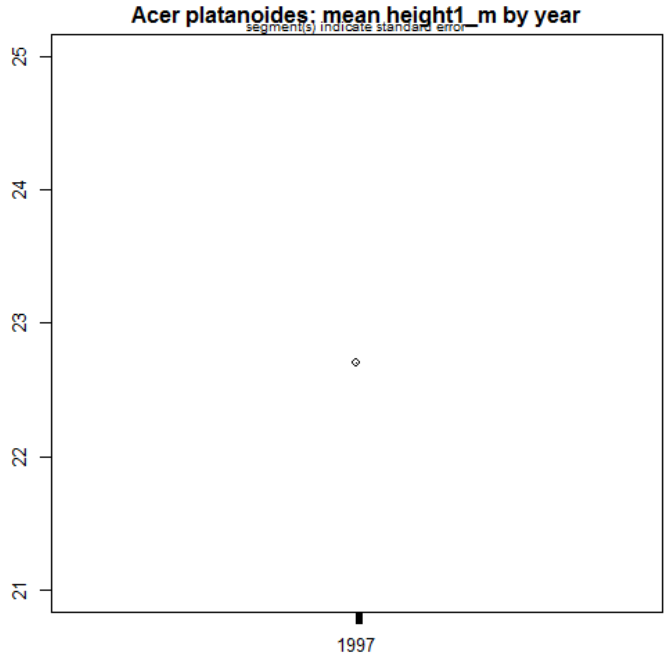

Quercus robur: mean dbh1_cm by year
segment(s) indicate standard error
22
24
26
28
30
1997
1999
2001
2003
2005
2007
2009

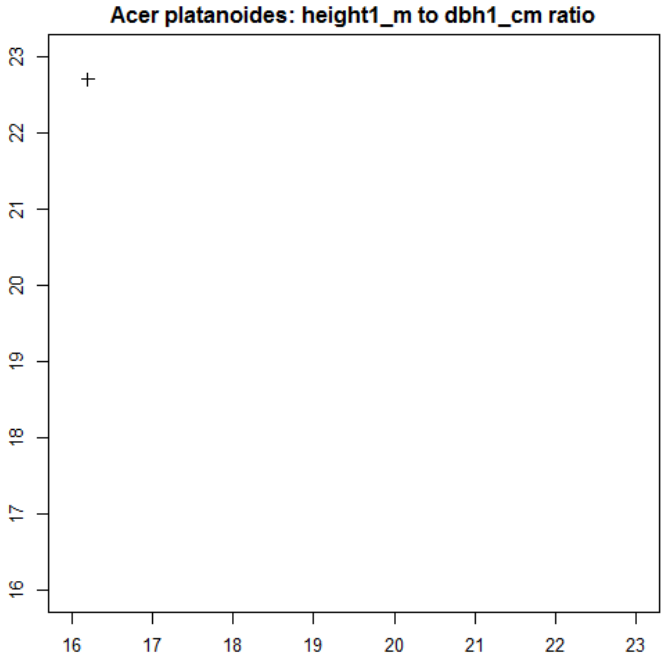

Quercus robur: mean height1_m by year
segment(s) indicate standard error
22
23
24
25
26
1997


Quercus robur: height1_m to dbh1_cm ratio
20
22
24
26
28
30

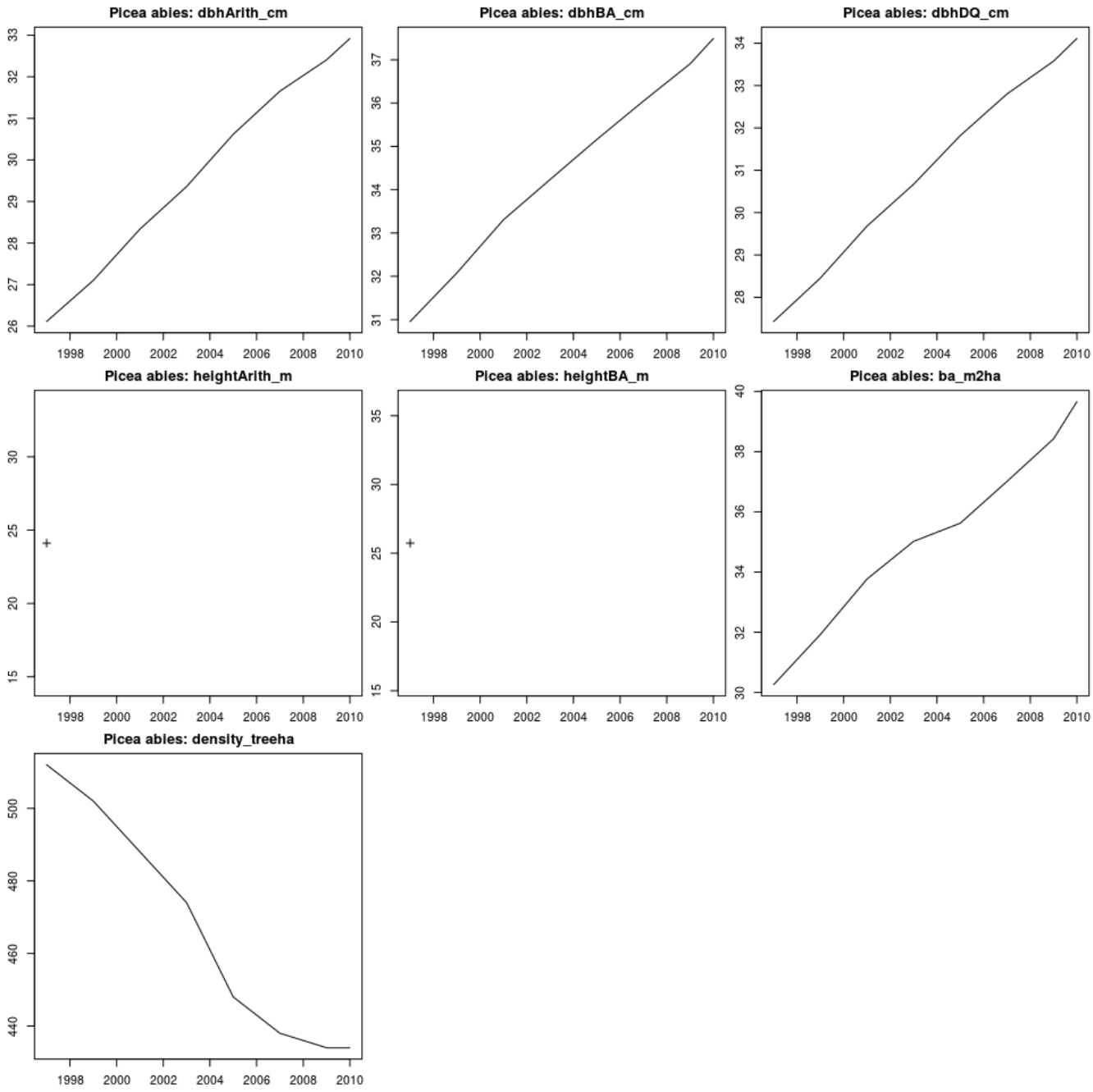

Acer platanoides: Trees by inventory
0.0
0.2
0.4
0.6
0.8
1.0
1997
2001
2005
2009

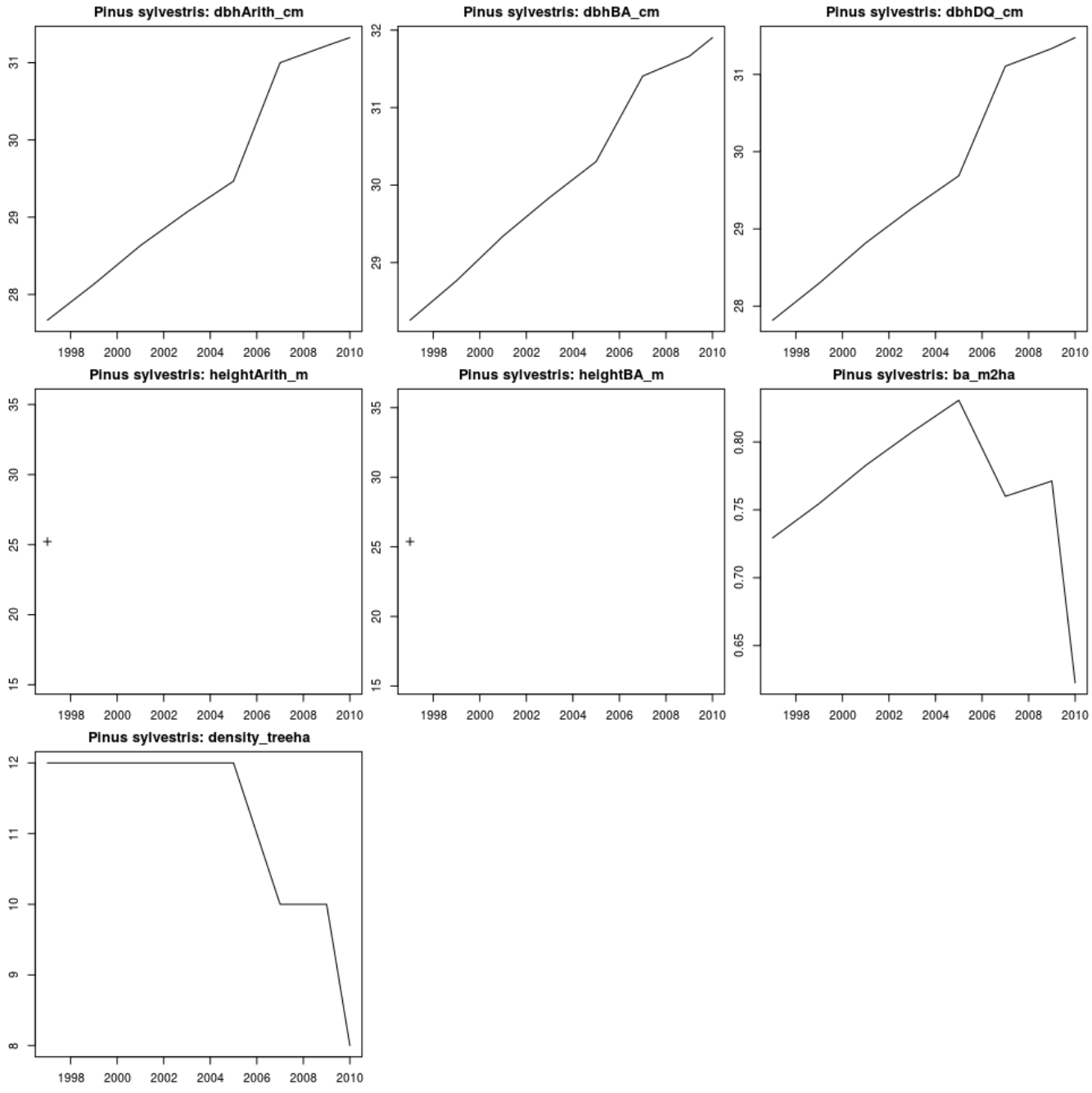

Acer platanoides: mean dbh1_cm by year
segment(s) indicate standard error
16
17
18
19
20
1997
1999
2001
2003
2005
2007
2009

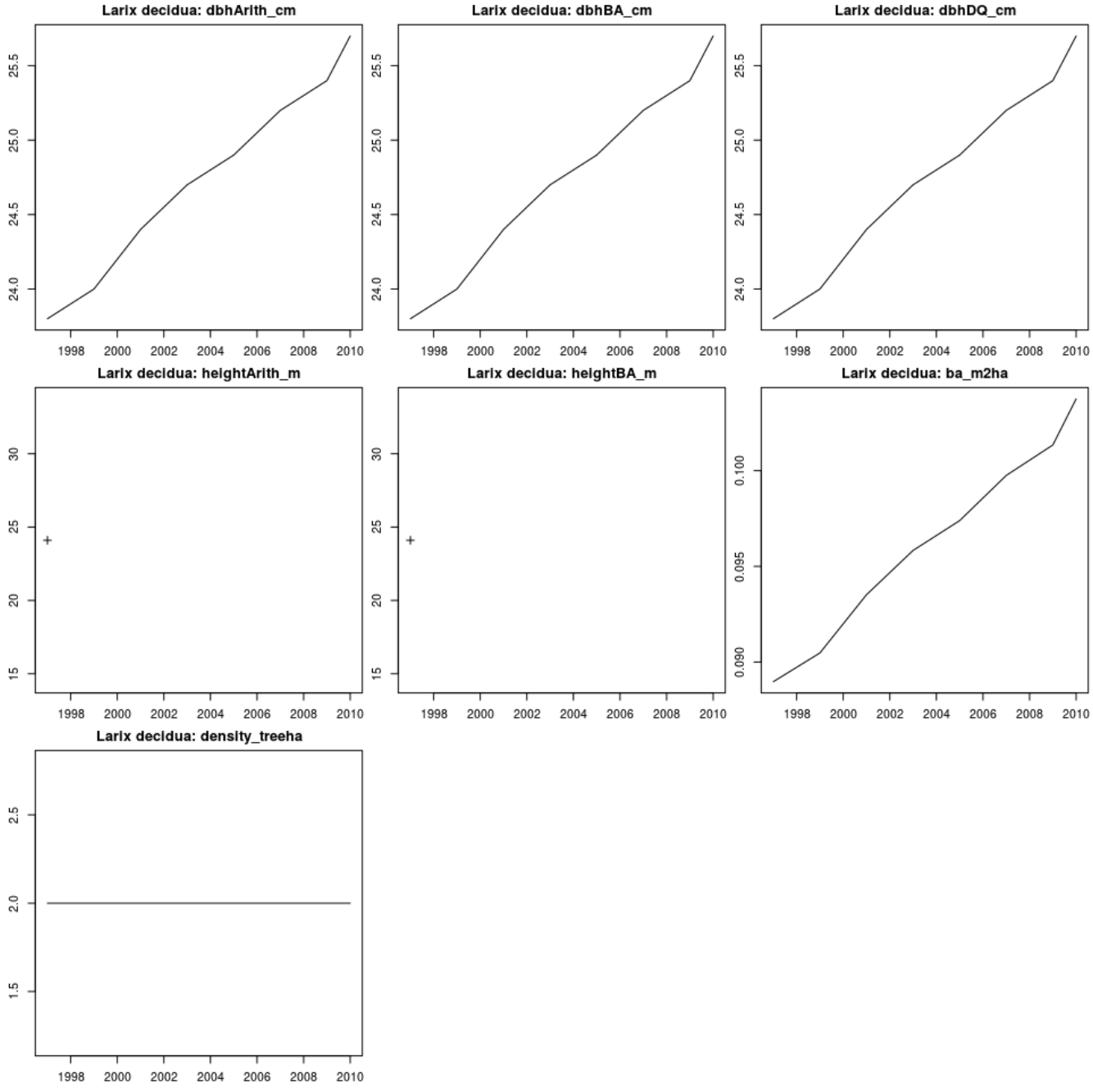

Acer platanoides: mean height1_m by year
segment(s) indicate standard error
21
22
23
24
25
1997

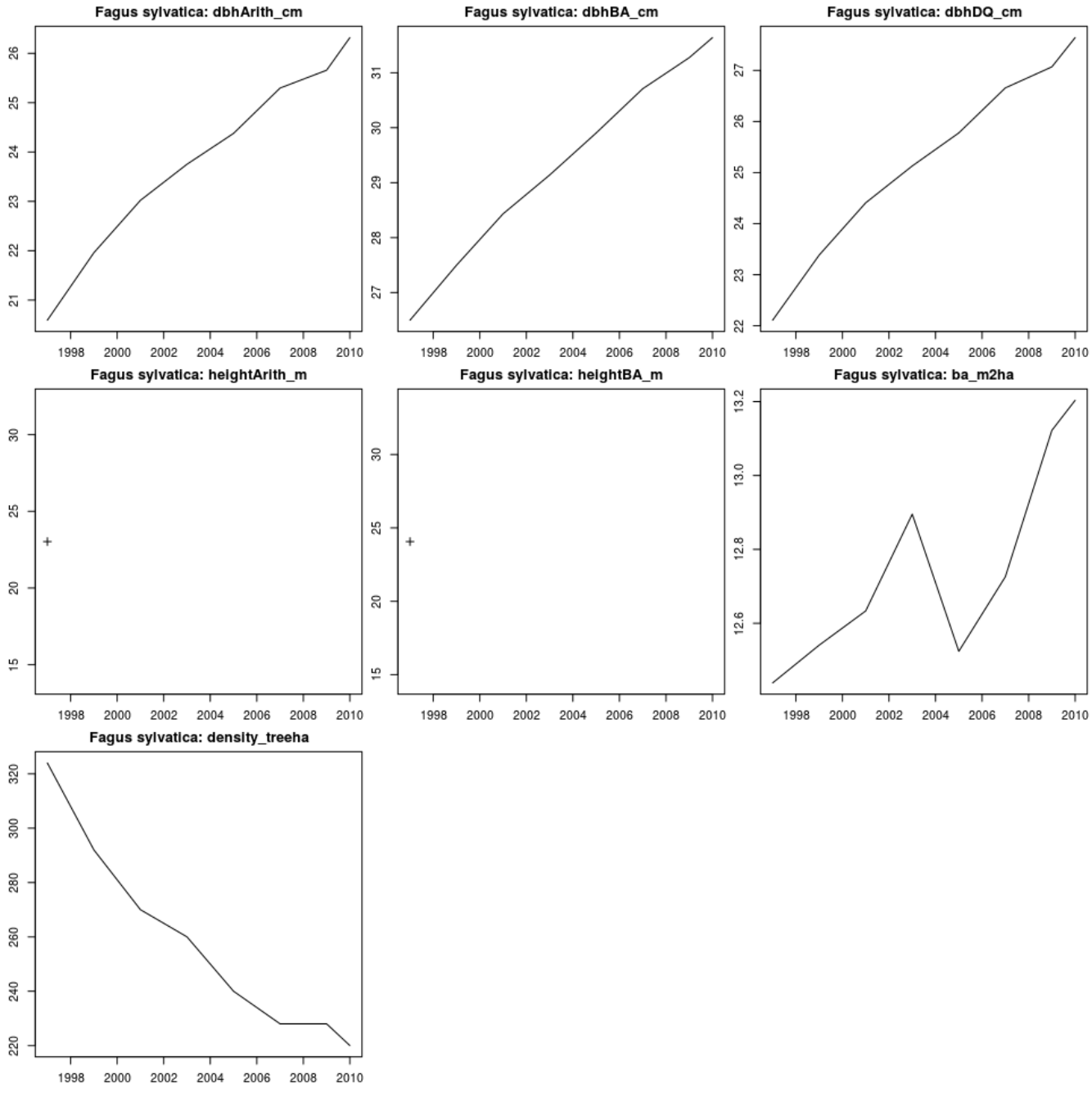

Acer platanoides: height1_m to dbh1_cm ratio
16
17
18
19
20
21
22
23

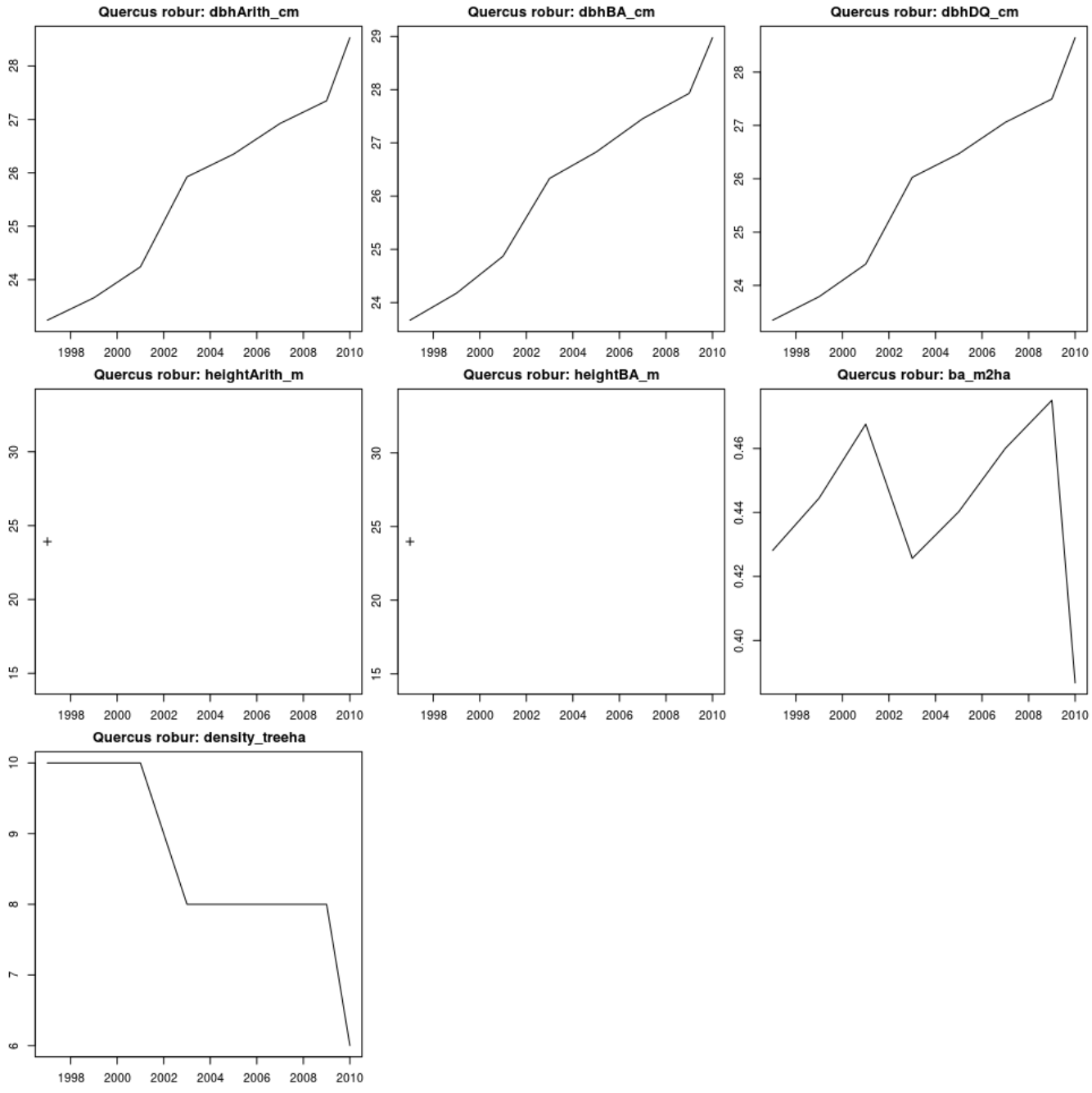
STAND

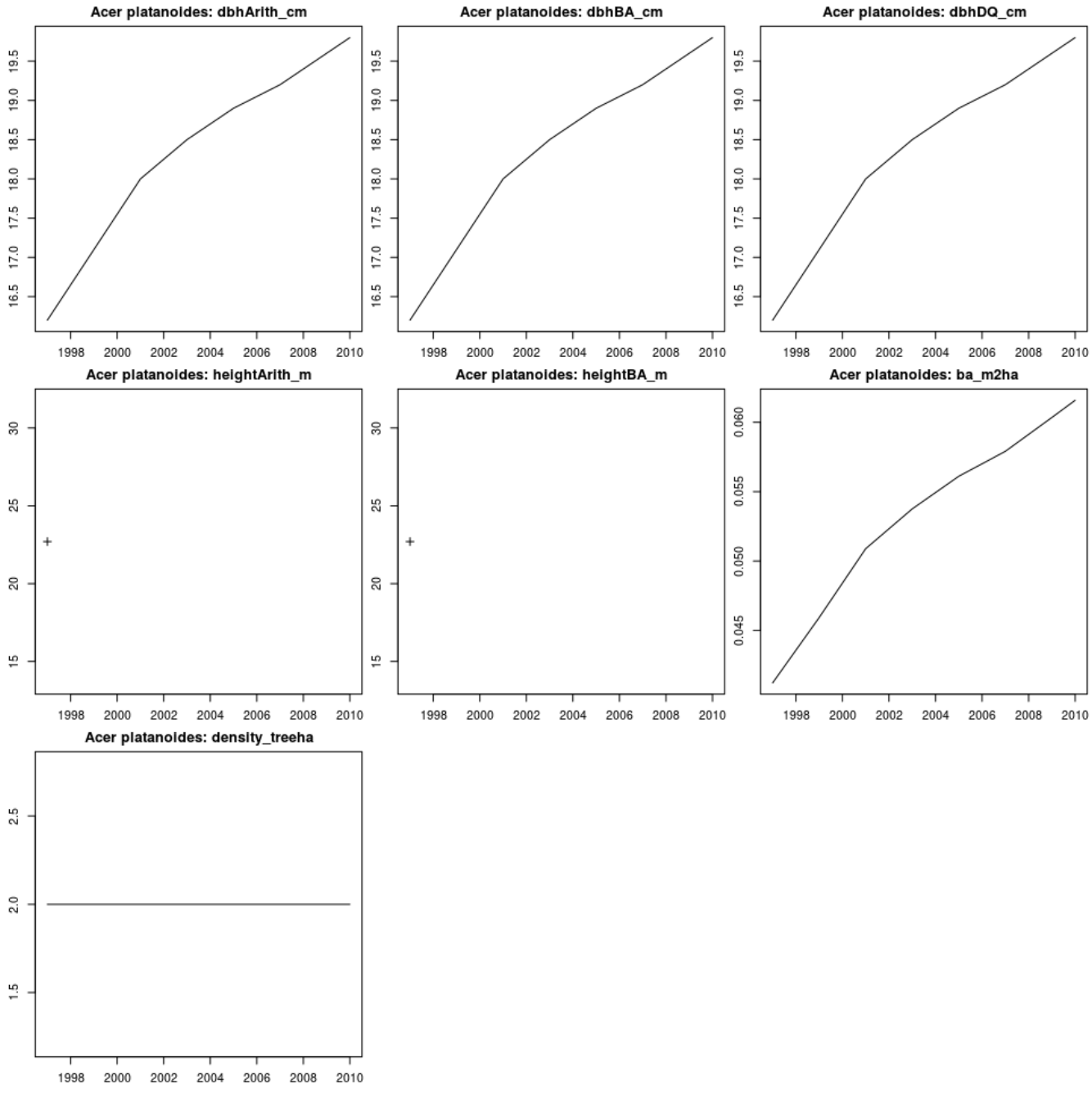

Picea abies: dbhArith_cm
Picea abies: dbhBA_cm
Picea abies: dbhDQ_cm
Picea abies: heightArith_m
Picea abies: heightBA_m
Picea abies: ba_m2ha
Picea abies: density_treeha


Pinus sylvestris: dbhArith_cm
Pinus sylvestris: dbhBA_cm
Pinus sylvestris: dbhDQ_cm
Pinus sylvestris: heightArith_m
Pinus sylvestris: heightBA_m
Pinus sylvestris: ba_m2ha
Pinus sylvestris: density_treeha


Larix decidua: dbhArith_cm
Larix decidua: dbhBA_cm
Larix decidua: dbhDQ_cm
Larix decidua: heightArith_m
Larix decidua: heightBA_m
Larix decidua: ba_m2ha
Larix decidua: density_treeha


Fagus sylvatica: dbhArith_cm
Fagus sylvatica: dbhBA_cm
Fagus sylvatica: dbhDQ_cm
Fagus sylvatica: heightArith_m
Fagus sylvatica: heightBA_m
Fagus sylvatica: ba_m2ha
Fagus sylvatica: density_treeha


Quercus robur: dbhArith_cm
Quercus robur: dbhBA_cm
Quercus robur: dbhDQ_cm
Quercus robur: heightArith_m
Quercus robur: heightBA_m
Quercus robur: ba_m2ha
Quercus robur: density_treeha


Acer platanoides: dbhArith_cm
Acer platanoides: dbhBA_cm
Acer platanoides: dbhDQ_cm
Acer platanoides: heightArith_m
Acer platanoides: heightBA_m
Acer platanoides: ba_m2ha
Acer platanoides: density_treeha

CLIMATE_LOCAL

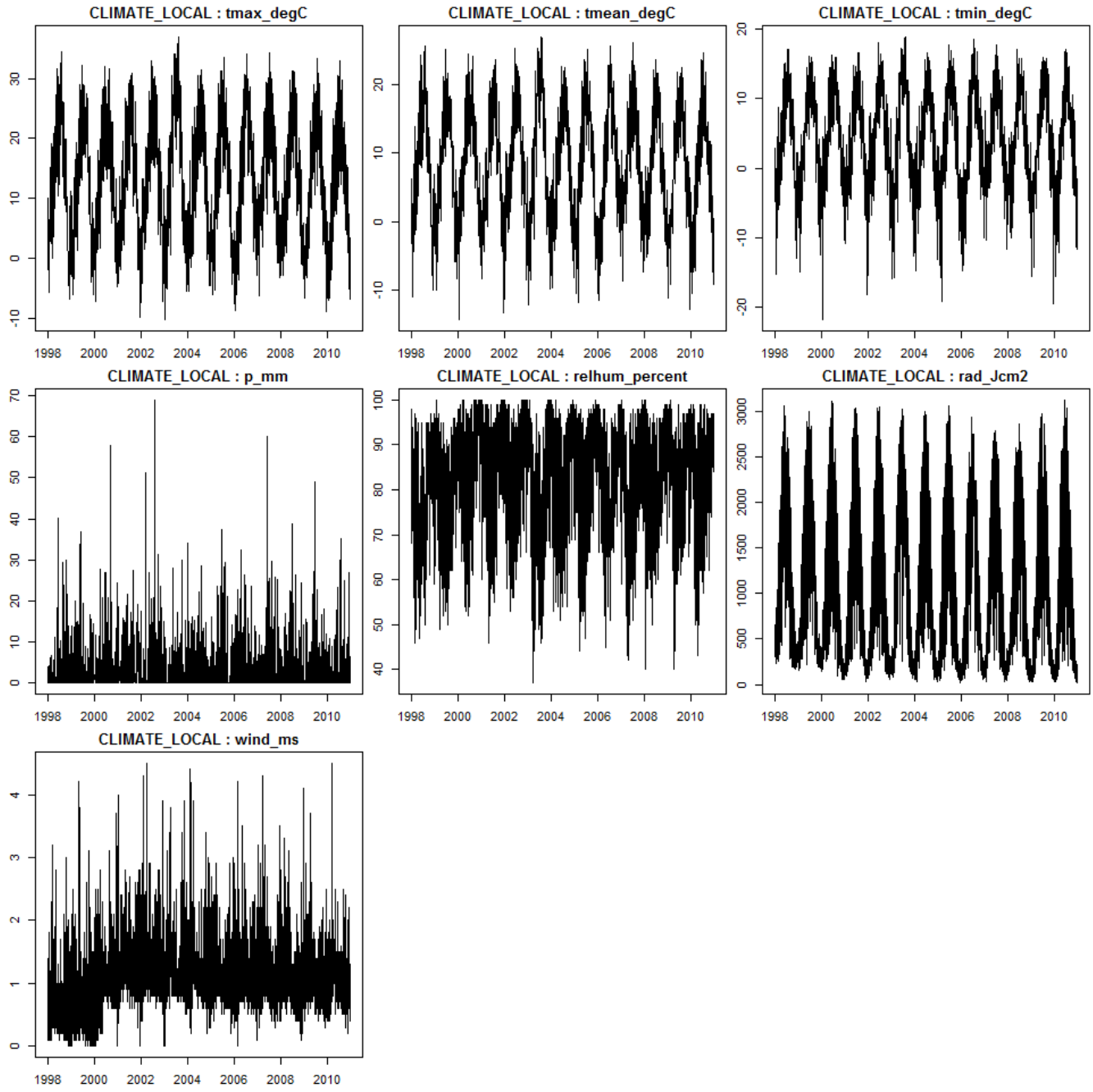


Table 22: Summary of CLIMATE_LOCAL for kroof. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
kroof	13	1998	12.9	8.07	3.85	751	77.2	–	419048	0.657
kroof	13	1999	12.7	8.05	4.02	849	78.9	–	411581	0.67
kroof	13	2000	13.5	8.75	4.67	941	84	–	4e+05	1.01
kroof	13	2001	12.3	7.71	3.73	1142	83.9	–	381004	1.24
kroof	13	2002	13.8	8.88	4.59	1020	82.9	–	388231	1.33
kroof	13	2003	14.4	8.81	3.91	558	76.9	–	436174	1.23
kroof	13	2004	12.8	8.08	3.88	792	80.5	–	386975	1.2
kroof	13	2005	12.4	7.68	3.41	856	81.6	–	375663	1.11
kroof	13	2006	13.1	8.14	3.74	772	81.2	–	379420	1.14
kroof	13	2007	13.7	8.8	4.42	876	79.3	–	388698	1.2
kroof	13	2008	13.1	8.22	4.07	793	80.6	–	374891	1.09
kroof	13	2009	12.7	7.9	3.72	808	81.2	–	384831	1.07
kroof	13	2010	11.5	6.84	2.82	884	81.3	–	364195	1.08
kroof	13	1998-2010	13	8.15	3.91	849	80.7	–	391564	1.08

CLIMATE_ISIMIP2B

Table 23: Summary of CLIMATE_ISIMIP2B for kroof. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	13.5	8.906	4.663	972.9	77.16	954.2	409921	2.383
GFDLESM2M	piControl	1661-2099	13.51	8.893	4.673	1005	78.11	954	411105	2.065
GFDLESM2M	rcp2p6	2006-2099	14.74	10.02	5.61	993.9	77.13	955.3	414355	2.602
GFDLESM2M	rcp4p5	2006-2099	15.16	10.37	5.902	960.9	76.69	955.6	418265	2.614
GFDLESM2M	rcp6p0	2006-2099	15.15	10.35	5.922	977.8	77.04	955.6	416933	2.544
GFDLESM2M	rcp8p5	2006-2099	15.94	10.95	6.421	948.4	75.75	955.9	418171	2.362
HadGEM2ES	historical	1861-2005	13.36	8.639	4.234	939.5	76.84	954.6	417311	2.638
HadGEM2ES	piControl	1661-2299	13.75	8.973	4.515	972.6	76.66	954.3	433553	2.621
HadGEM2ES	rcp2p6	2006-2299	15.61	11.01	6.77	1038	76.36	954.3	437596	2.481
HadGEM2ES	rcp4p5	2006-2099	16.7	11.91	7.543	979.3	73.98	954.8	445398	2.475
HadGEM2ES	rcp6p0	2006-2099	16.56	11.81	7.463	971.1	74.34	954.8	444319	2.522
HadGEM2ES	rcp8p5	2006-2099	17.85	12.98	8.567	967.6	72.71	955	452306	2.528
IPSLCM5ALR	historical	1861-2005	13.01	8.328	3.966	936.8	77.89	953.7	414536	2.614
IPSLCM5ALR	piControl	1661-2299	12.5	7.746	3.279	936	78.4	953.4	430472	2.613
IPSLCM5ALR	rcp2p6	2006-2299	15.23	10.64	6.407	1034	75.75	954	434514	2.526
IPSLCM5ALR	rcp4p5	2006-2299	16.76	12.07	7.77	1024	74	954.8	441644	2.388
IPSLCM5ALR	rcp6p0	2006-2099	15.77	11.15	6.896	1003	74.6	954.4	434018	2.555
IPSLCM5ALR	rcp8p5	2006-2299	22.54	17.59	13.02	994.3	68.29	954.9	460244	2.382
MIROC5	historical	1861-2005	13.59	8.888	4.492	917.5	77.1	954.4	413313	2.515
MIROC5	piControl	1661-2299	14.61	9.543	4.91	1021	76.53	953.9	461003	2.279
MIROC5	rcp2p6	2006-2299	16.09	10.95	6.213	1036	75.06	955	472695	2.563
MIROC5	rcp4p5	2006-2099	16.39	11.26	6.535	1026	75.03	955.2	465566	2.545
MIROC5	rcp6p0	2006-2099	16.14	11.07	6.386	1044	75.27	955	462644	2.571

MIROC5	rcp8p5	2006-2099	17.45	12.21	7.43	1057	74.94	955.5	470872	2.44

CLIMATE_ISIMIP2BLBC

Table 24: Summary of CLIMATE_ISIMIP2BLBC for kroof. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	12.19	7.348	3.128	840.9	80.82	–	392192	0.991
GFDLESM2M	piControl	1661-2099	12.21	7.335	3.133	865.5	81.67	–	393145	0.859
GFDLESM2M	rcp2p6	2006-2099	13.41	8.459	4.083	860.9	80.79	–	396112	1.081
GFDLESM2M	rcp4p5	2006-2099	13.85	8.805	4.374	832.9	80.4	–	399896	1.086
GFDLESM2M	rcp6p0	2006-2099	13.84	8.791	4.392	846.2	80.69	–	398339	1.057
GFDLESM2M	rcp8p5	2006-2099	14.66	9.392	4.887	826.9	79.52	–	399646	0.981
HadGEM2ES	historical	1861-2005	11.89	7.041	2.788	837.2	81.25	–	385513	1.109
HadGEM2ES	piControl	1661-2299	12.28	7.374	3.068	865.9	81.07	–	400374	1.104
HadGEM2ES	rcp2p6	2006-2299	14.13	9.412	5.319	929.8	80.84	–	403007	1.044
HadGEM2ES	rcp4p5	2006-2099	15.24	10.32	6.098	882.7	78.47	–	410577	1.041
HadGEM2ES	rcp6p0	2006-2099	15.09	10.21	6.015	872.4	78.85	–	409413	1.062
HadGEM2ES	rcp8p5	2006-2099	16.4	11.38	7.125	873	77.16	–	417666	1.063
IPSLCM5ALR	historical	1861-2005	11.97	6.996	2.644	794	81.45	–	393492	1.101
IPSLCM5ALR	piControl	1661-2299	11.45	6.415	1.96	792.9	81.8	–	408697	1.101
IPSLCM5ALR	rcp2p6	2006-2299	14.19	9.307	5.081	876.5	79.53	–	410305	1.062
IPSLCM5ALR	rcp4p5	2006-2299	15.74	10.74	6.443	869	77.74	–	416749	1.003
IPSLCM5ALR	rcp6p0	2006-2099	14.74	9.823	5.569	850.4	78.36	–	409514	1.074
IPSLCM5ALR	rcp8p5	2006-2299	21.53	16.27	11.7	858.6	71.85	–	434653	0.997
MIROC5	historical	1861-2005	11.96	7.217	2.974	772	81.15	–	374458	1.074
MIROC5	piControl	1661-2299	12.99	7.872	3.4	853.4	80.72	–	420498	0.972
MIROC5	rcp2p6	2006-2299	14.46	9.278	4.708	871.8	79.28	–	433005	1.095
MIROC5	rcp4p5	2006-2099	14.76	9.59	5.029	862.5	79.23	–	425229	1.087

MIROC5	rcp6p0	2006-2099	14.51	9.395	4.877	877.3	79.47	–	422558	1.099
MIROC5	rcp8p5	2006-2099	15.83	10.54	5.924	890.9	79.16	–	430741	1.042

CLIMATE_ISIMIP2A

Table 25: Summary of CLIMATE_ISIMIP2A for kroof. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	13.36	8.708	4.445	929.1	81.29	954.2	420816	2.976
PRINCETON	1901-2012	13.1	8.745	4.172	769.5	86.97	934.2	436757	3.099
WATCH	1901-2001	13.2	8.653	4.352	894.7	75.75	959.1	328758	2.371
WFDEI	1901-2010	13.29	8.714	4.403	898.4	76.05	957.6	355673	2.396

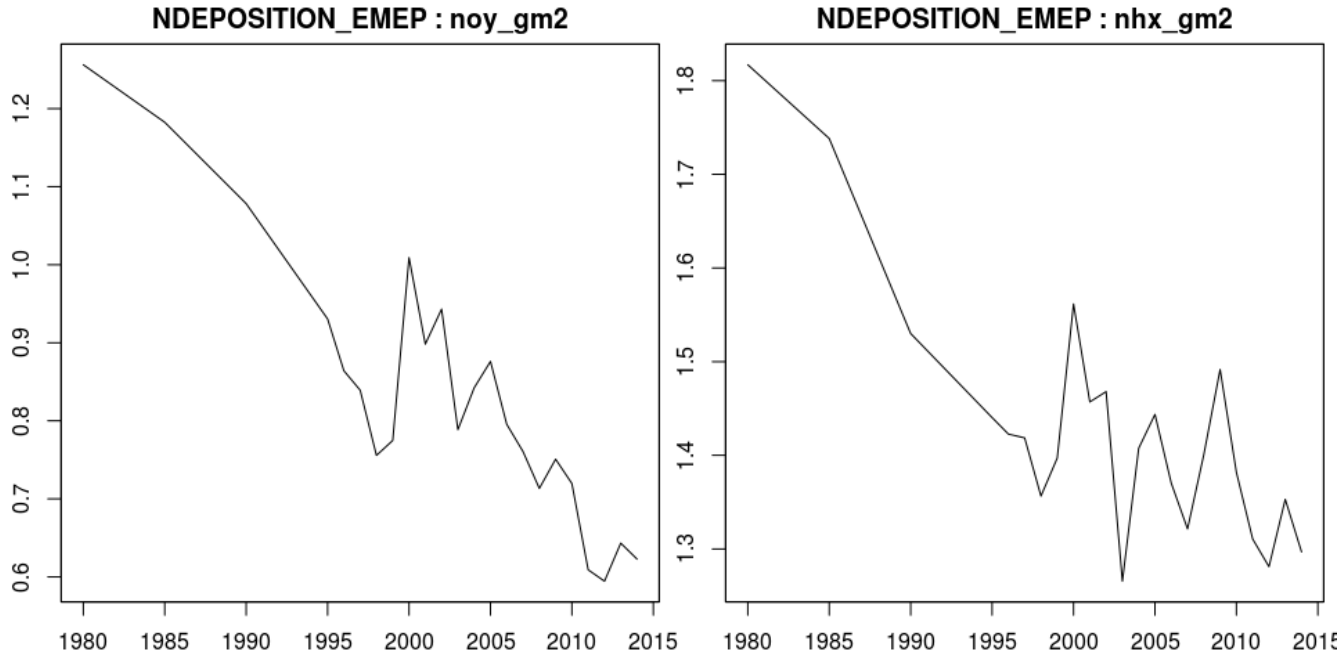
CLIMATE_ISIMIPFT

Table 26: Summary of CLIMATE_ISIMIPFT for kroof. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

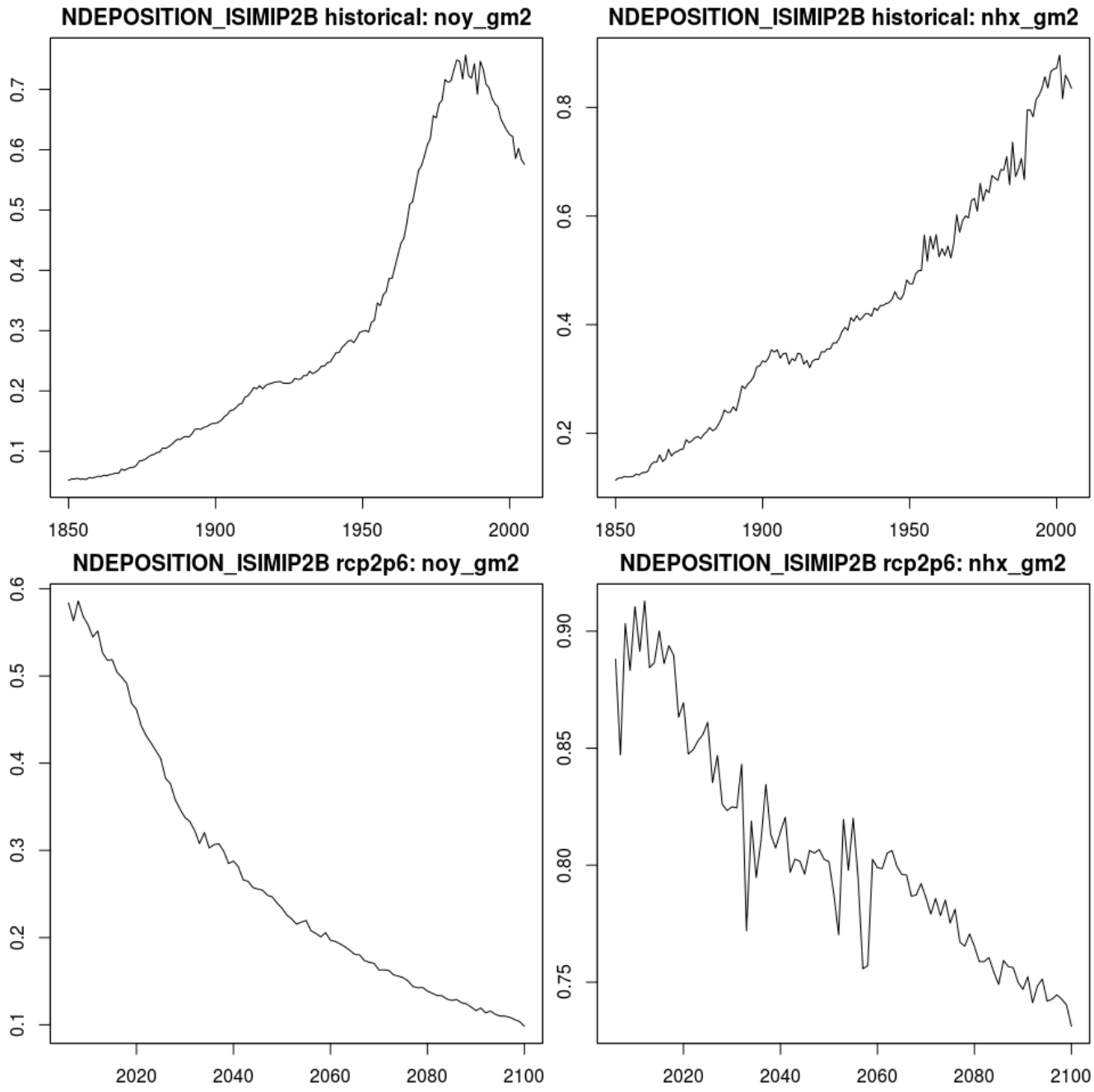
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	13.56	9.024	4.75	952	86.78	959.2	325863	2.342
GFDLESM2M	rcp2p6	2006-2099	14.62	10	5.625	995.3	87.04	960.1	328883	2.473
GFDLESM2M	rcp4p5	2006-2099	15.03	10.33	5.892	971.2	86.92	960.5	331550	2.461
GFDLESM2M	rcp6p0	2006-2099	15.03	10.34	5.949	981.3	86.92	960.5	329986	2.387
GFDLESM2M	rcp8p5	2006-2099	15.74	10.88	6.39	957.7	86.08	960.8	331311	2.287
HadGEM2ES	historical	1950-2004	13.39	8.849	4.561	946.9	80.81	959.2	324336	2.353
HadGEM2ES	rcp2p6	2005-2099	15.9	11.23	6.89	965.1	79.11	959.6	343947	2.231
HadGEM2ES	rcp4p5	2005-2099	16.68	11.95	7.576	953.1	77.73	960.1	344634	2.224
HadGEM2ES	rcp6p0	2005-2099	16.53	11.84	7.497	945.1	78.06	960.1	344909	2.272
HadGEM2ES	rcp8p5	2005-2099	17.82	13	8.585	941.6	76.44	960.5	348260	2.268
IPSLCM5ALR	historical	1950-2005	13.52	9.016	4.764	952.5	80.67	959.2	322530	2.375
IPSLCM5ALR	rcp2p6	2006-2099	15.45	10.95	6.717	1030	78.79	959.4	339625	2.315
IPSLCM5ALR	rcp4p5	2006-2099	15.88	11.36	7.151	1025	78.14	960.1	337563	2.257
IPSLCM5ALR	rcp6p0	2006-2099	15.87	11.39	7.189	1018	78.03	959.7	336743	2.346
IPSLCM5ALR	rcp8p5	2006-2099	17.1	12.51	8.21	1012	76.63	960.2	344327	2.282
MIROCESMCHEM	historical	1950-2005	13.57	8.996	4.678	959.9	91.38	959	332970	2.38
MIROCESMCHEM	rcp2p6	2006-2099	16.07	11.41	7.054	1049	91.5	959.9	382600	1.946
MIROCESMCHEM	rcp4p5	2006-2099	16.07	11.55	7.307	1024	91.75	960.3	378516	1.936
MIROCESMCHEM	rcp6p0	2006-2099	16.28	11.63	7.301	1057	91.49	960	381116	1.948
MIROCESMCHEM	rcp8p5	2006-2099	17.17	12.62	8.368	1060	91.56	960.7	387032	1.941
NorESM1M	historical	1950-2005	13.46	8.861	4.513	942.1	82.38	959.2	324657	2.332
NorESM1M	rcp2p6	2006-2099	15.13	10.52	6.158	997.6	79.83	959.8	354406	2.392
NorESM1M	rcp4p5	2006-2099	15.68	10.95	6.499	965.1	78.97	960.1	359270	2.35

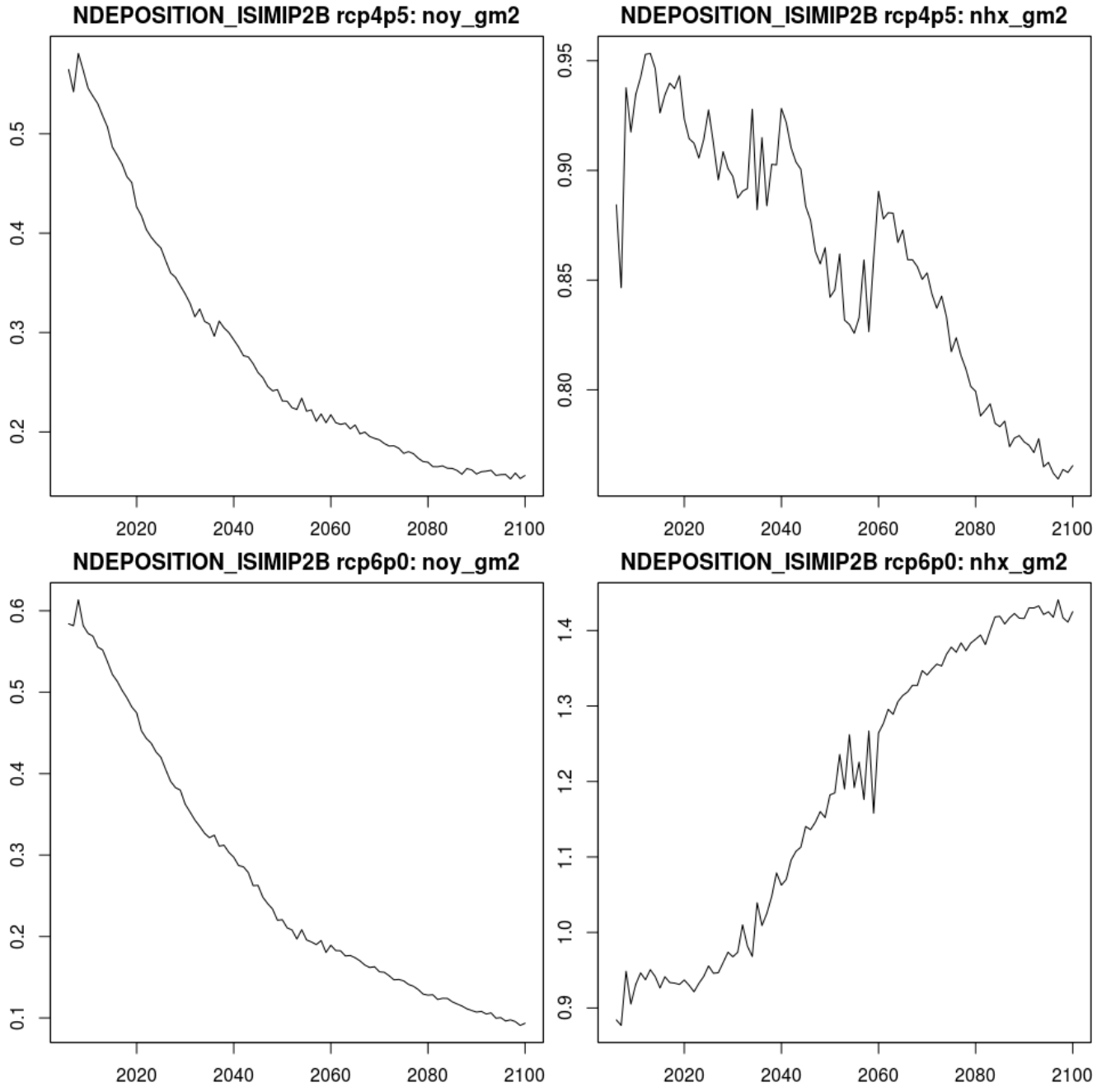
NorESM1M	rcp6p0	2006-2099	15.78	10.77	6.122	979.9	80.46	960.2	355919	2.32
NorESM1M	rcp8p5	2006-2099	16.82	11.17	6.02	1008	80.64	960.5	360565	2.233

NDEPOSITION_EMEP



NDEPOSITION_ISIMIP2B

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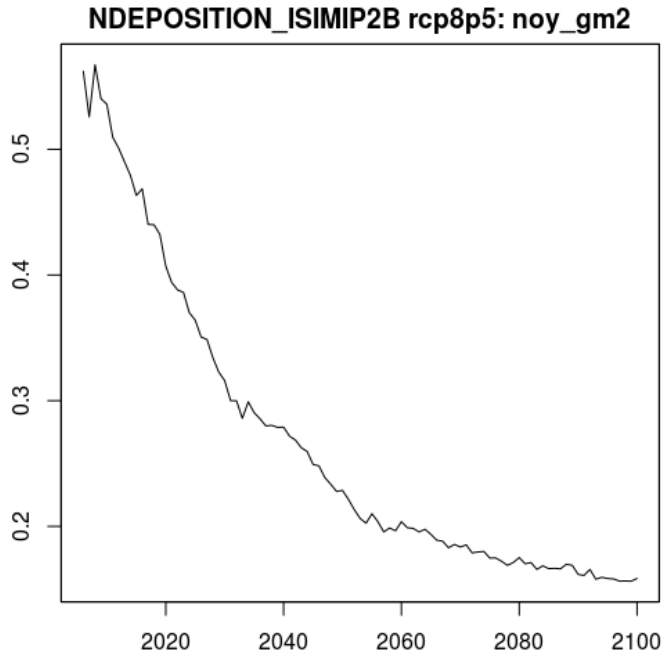
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100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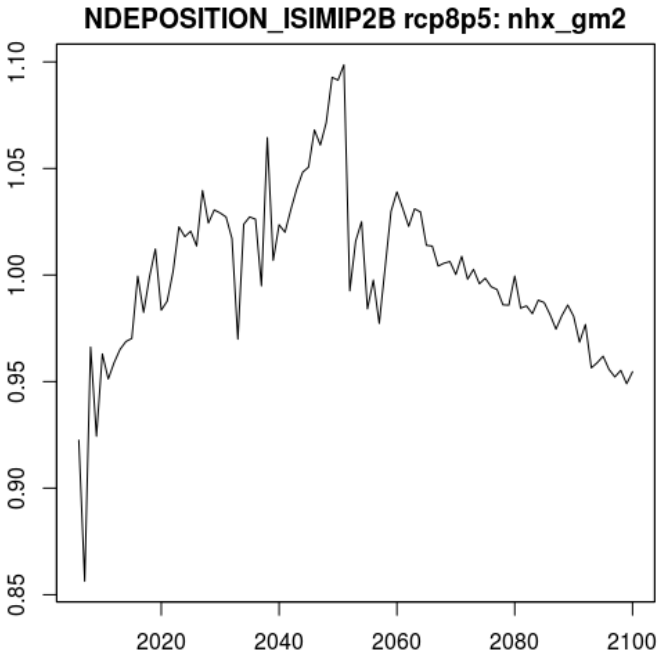
0.3
0.4
0.5
2020
2040
2060
2080
2100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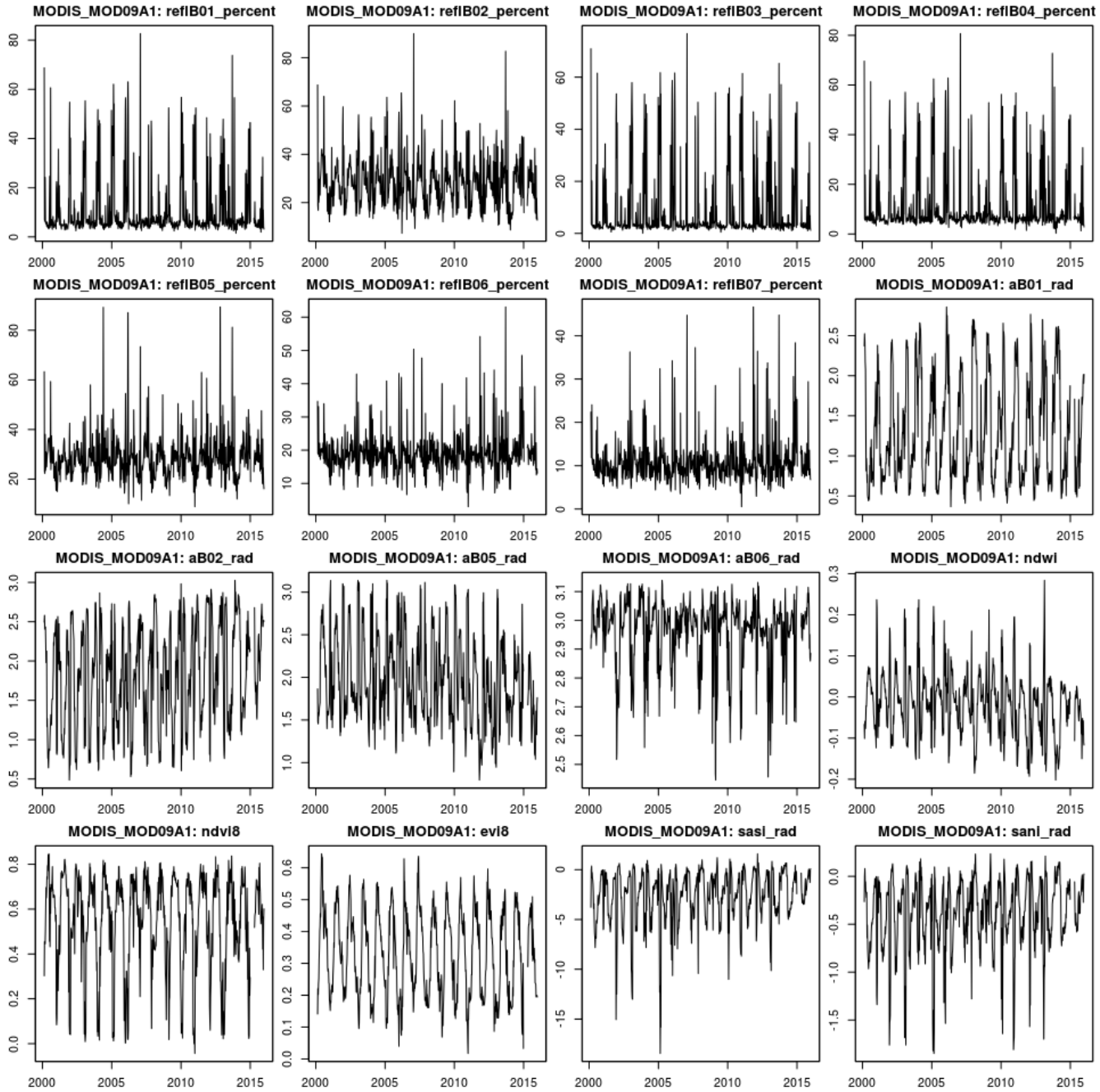
0.85
0.90
0.95
1.00
1.05
1.10
2020
2040
2060
2080
2100

MODIS_MOD09A1



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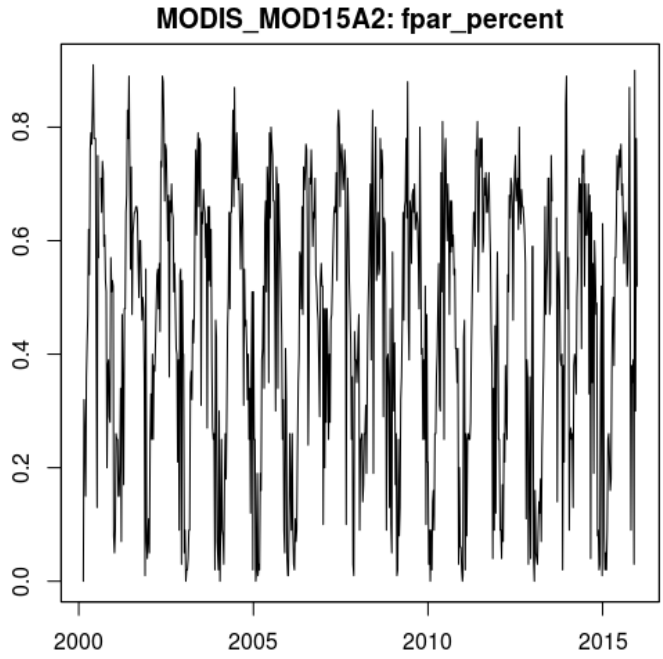

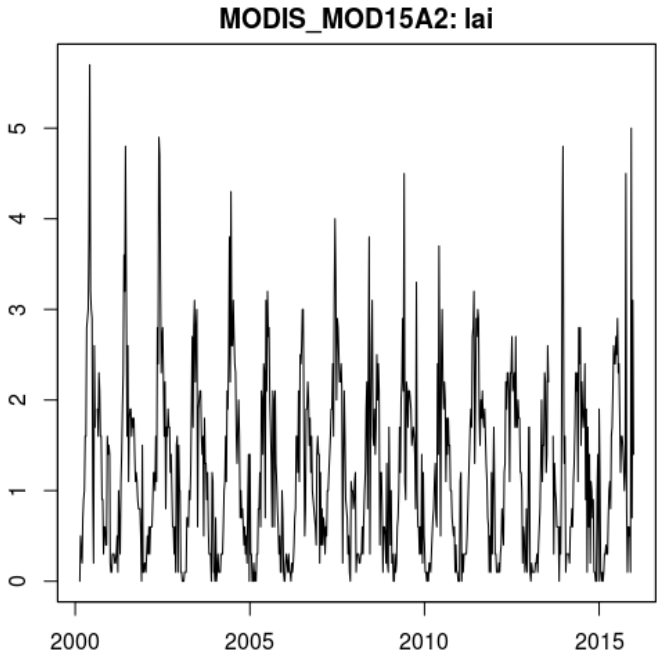

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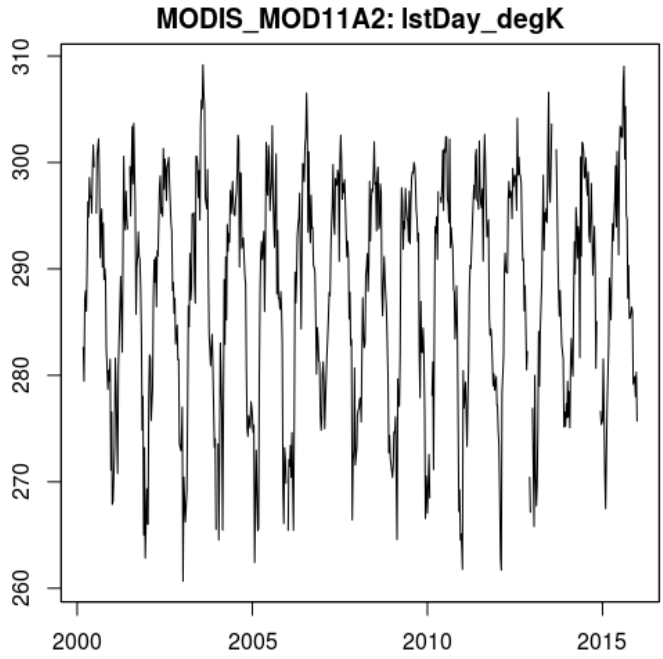

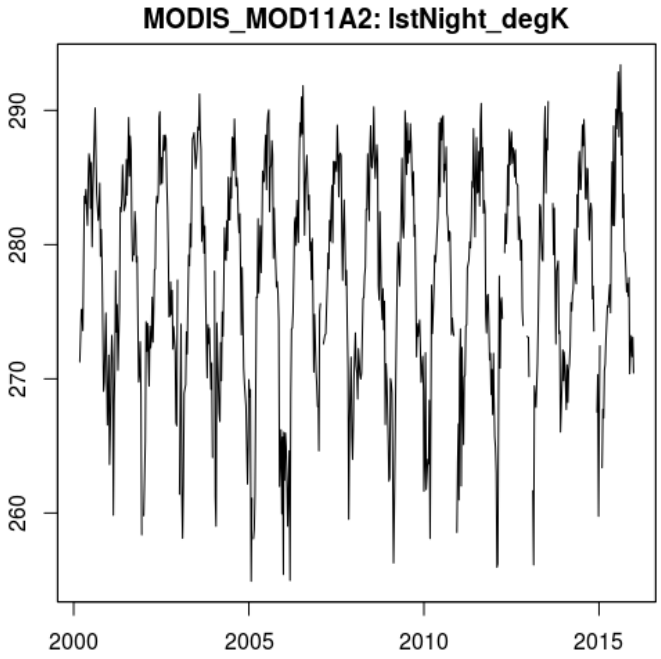

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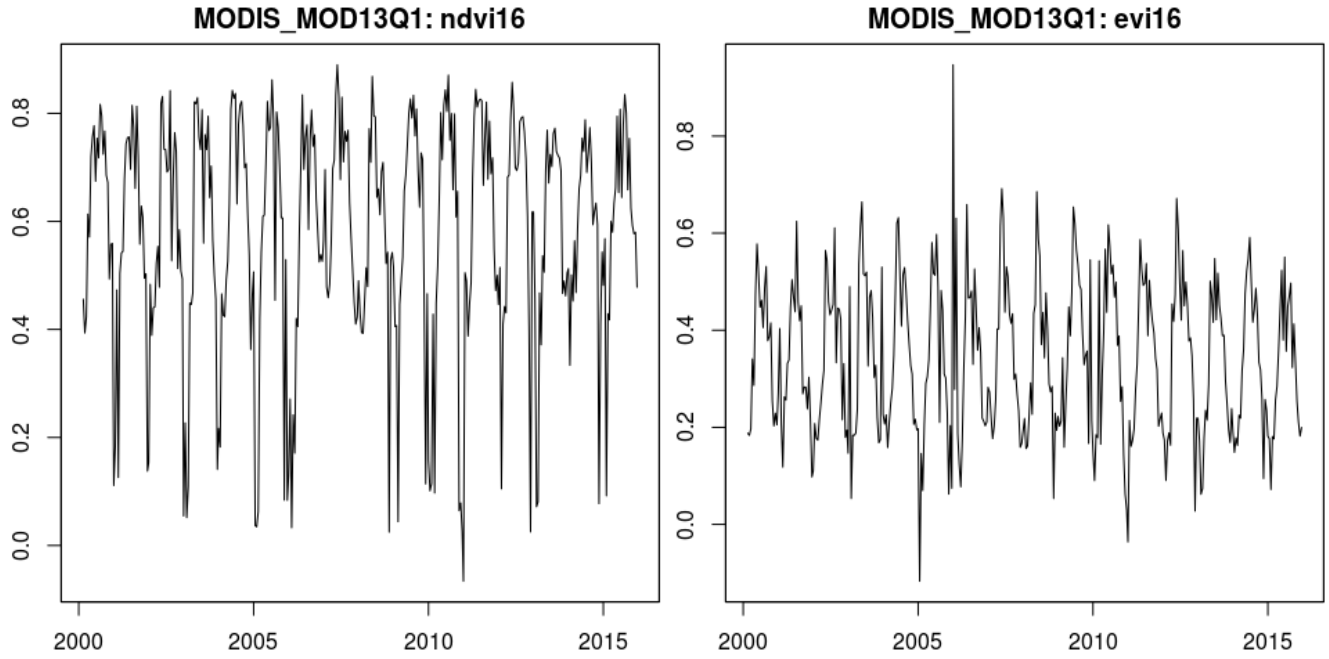

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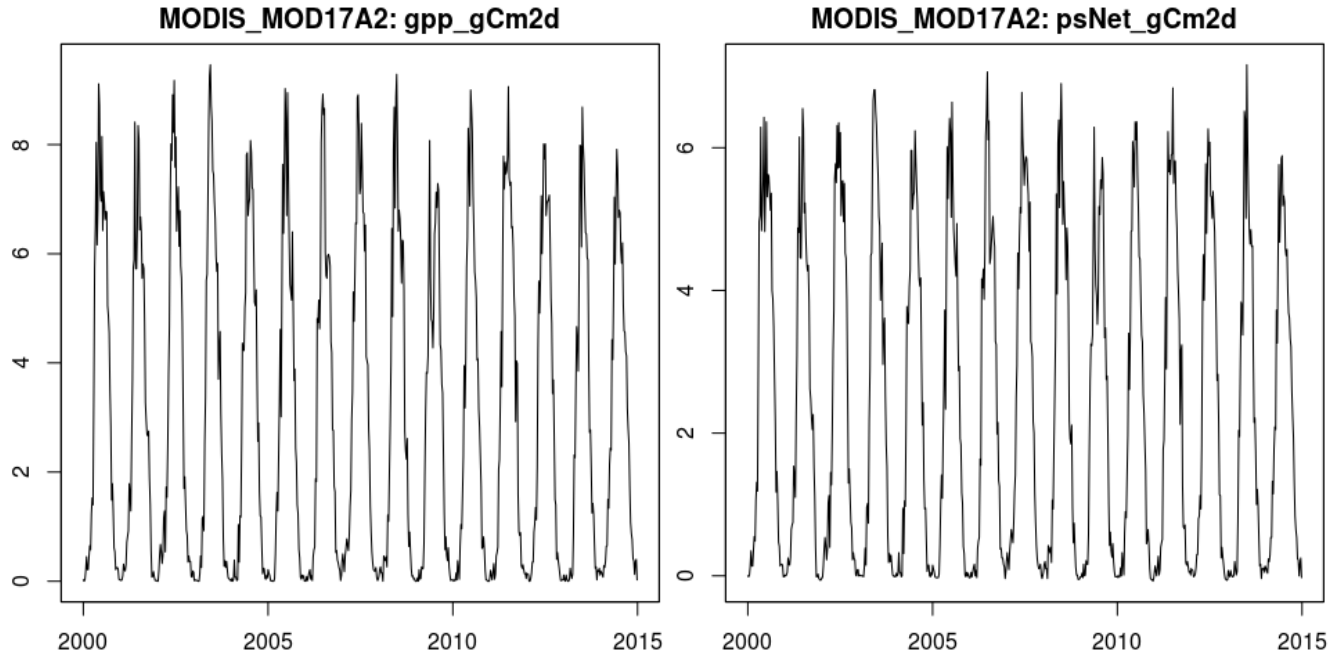


Site le_bray

Description

The ICP Forests site Le Bray is located 20 km south-west of Bordeaux, France, at an altitude of 61 m.a.s.l. Mean annual temperature is about 13.4°C and precipitation 920 mm during the 1996-2008 period, constituting a moderate oceanic climate. The soil type is Arenosol (sandy and hydromorphic podzol), which is one of the most common soils in the region. The natural vegetation is formed by deciduous broadleaf forests such as pedunculate oak forests (Quercus robur), partly with Quercus pyrenaica, Quercus suber and Pinus pinaster. First measurements were made in 1986 in the monospecific planted Pinus pinaster stand. The site experienced a storm in 1999 and lost a large amount of trees. In 2009, the mean DBH was 35 cm. The final clear cut of the site occurred at the beginning of 2009. More information about the site can be found in Porté & Loustau (1998), Bosc et al. (2003) and Berbigier et al. (2001).

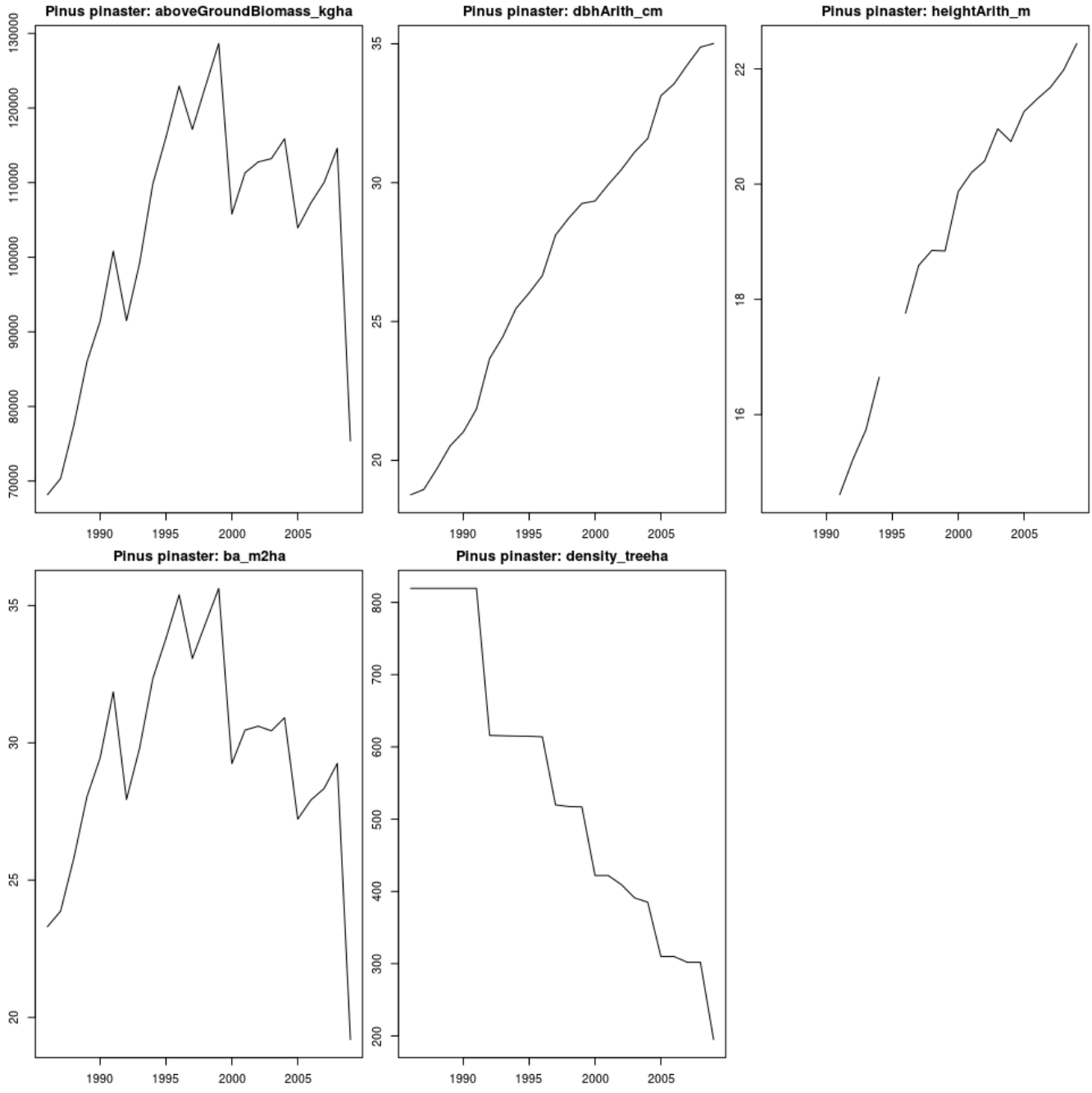
The following data is available for the site

Table 27: Available data for le_bray

dataset	availability
SITES	1
TREE	0
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	1
FLUX	1
ATMOSPHERICHEATCONDUCTION	1
SOILTS	1
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

Data

STAND


Pinus pinaster: aboveGroundBiomass_kgha
Pinus pinaster: dbhArith_cm
Pinus pinaster: heightArith_m
Pinus pinaster: ba_m2ha
Pinus pinaster: density_treeha

CLIMATE_LOCAL

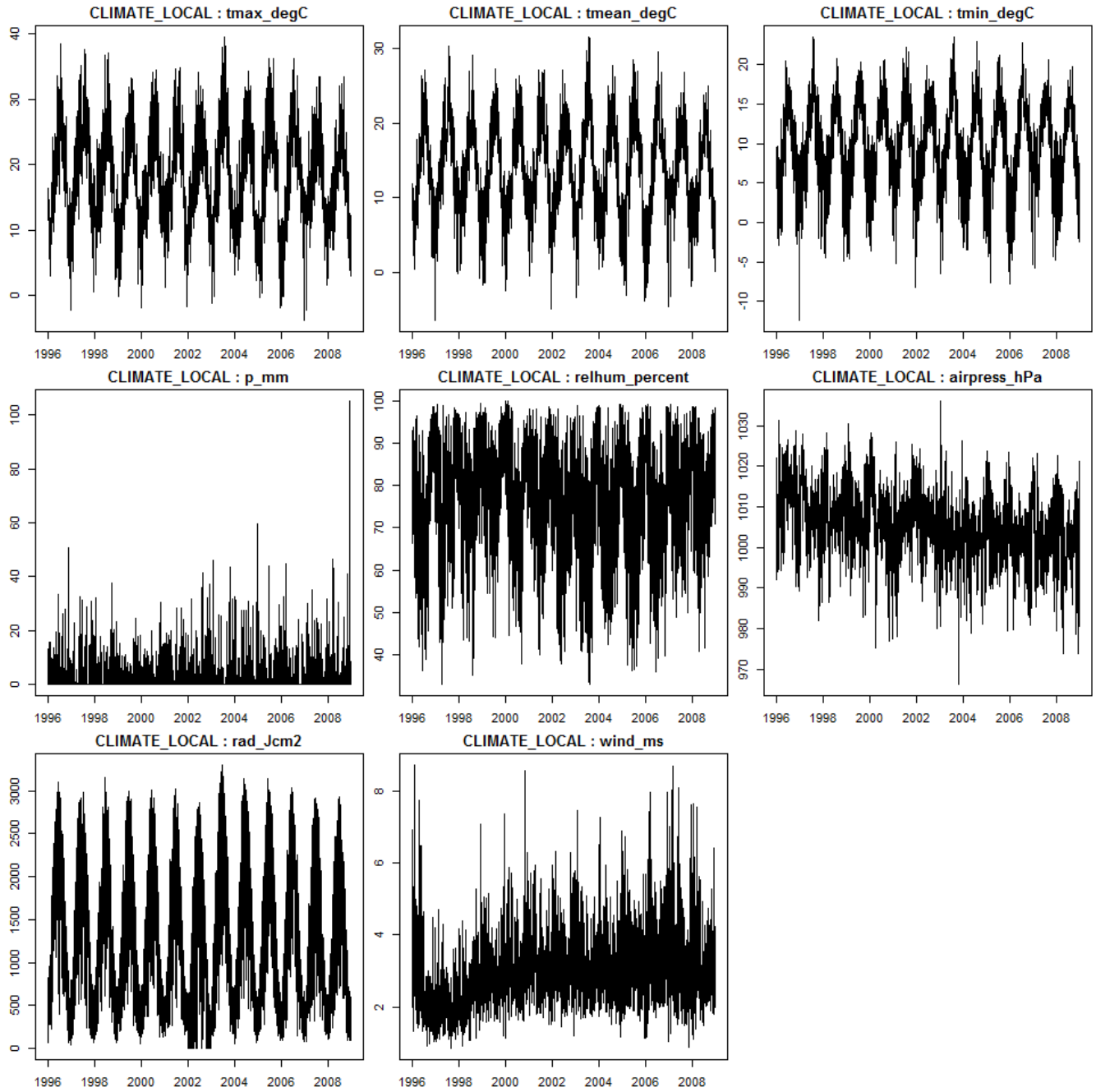


Table 28: Summary of CLIMATE_LOCAL for le_bray. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
le_bray	14	1996	17.6	13	8.85	931	73	1012	520559	2.68
le_bray	14	1997	20.3	14.9	10	998	75.4	1009	505790	2.06
le_bray	14	1998	17.9	13.2	8.99	846	77.1	1009	483163	2.54
le_bray	14	1999	17.6	13.6	9.81	746	83.1	1008	459015	2.99
le_bray	14	2000	17.7	13.8	10.1	890	77.6	1007	450137	3.19
le_bray	14	2001	17.4	13.4	9.67	844	77.7	1007	448570	3.09
le_bray	14	2002	18	13.8	10.1	926	74.2	1007	396366	3.26
le_bray	14	2003	18.7	14	9.77	887	71.7	1003	527420	3.19
le_bray	14	2004	17.1	12.7	8.78	1086	75.2	1002	501334	3.12
le_bray	14	2005	17.3	12.6	8.38	813	73.1	1004	492121	3.26
le_bray	14	2006	17.8	13.3	9.29	841	73.1	1002	470300	3.36
le_bray	14	2007	16.8	12.9	9.33	992	79.3	1003	447195	3.33
le_bray	14	2008	16.6	12.7	9.05	1160	78.8	1001	446255	3.19
le_bray	14	1996-2008	17.8	13.4	9.39	920	76.1	1006	472940	3.02

CLIMATE_ISIMIP2B

Table 29: Summary of CLIMATE_ISIMIP2B for le_bray. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	18.25	13.51	9.176	1026	72.09	1011	481618	2.866
GFDLESM2M	piControl	1661-2099	18.4	13.43	8.965	1041	73.22	1011	483144	2.491
GFDLESM2M	rcp2p6	2006-2099	19.36	14.4	9.872	987.9	71.83	1013	480682	2.83
GFDLESM2M	rcp4p5	2006-2099	19.71	14.68	10.09	976.6	71.73	1013	480271	2.746
GFDLESM2M	rcp6p0	2006-2099	19.7	14.76	10.23	970.4	71.62	1013	484675	2.878
GFDLESM2M	rcp8p5	2006-2099	20.29	15.12	10.41	943	70.8	1013	487530	2.829
HadGEM2ES	historical	1861-2005	18.29	13.31	8.813	980	71.97	1012	487189	2.835
HadGEM2ES	piControl	1661-2299	18.6	13.54	8.962	999.5	71.85	1012	504842	2.878
HadGEM2ES	rcp2p6	2006-2299	20.46	15.37	10.85	1038	71.56	1011	513563	2.69
HadGEM2ES	rcp4p5	2006-2099	21.2	15.99	11.39	966.8	70.14	1012	514663	2.686
HadGEM2ES	rcp6p0	2006-2099	21.06	15.86	11.28	964.4	70.42	1012	511141	2.716
HadGEM2ES	rcp8p5	2006-2099	22.19	16.87	12.22	928.8	69.17	1012	520103	2.68
IPSLCM5ALR	historical	1861-2005	17.62	12.79	8.439	1074	72.94	1011	479266	2.888
IPSLCM5ALR	piControl	1661-2299	16.96	12.17	7.827	1109	73.37	1011	484639	2.959
IPSLCM5ALR	rcp2p6	2006-2299	19.68	14.8	10.41	1085	72.03	1011	500954	2.775
IPSLCM5ALR	rcp4p5	2006-2299	21.26	16.19	11.65	994.6	70.14	1011	513932	2.691
IPSLCM5ALR	rcp6p0	2006-2099	20.33	15.36	10.9	1024	70.56	1011	502302	2.834
IPSLCM5ALR	rcp8p5	2006-2299	27	21.86	17.22	865.4	64.24	1010	527558	2.654
MIROC5	historical	1861-2005	18.58	13.61	9.14	1032	71.91	1012	486953	2.794
MIROC5	piControl	1661-2299	19.04	13.95	9.377	1055	71.28	1011	514908	2.83
MIROC5	rcp2p6	2006-2299	20.49	15.16	10.44	1037	70.8	1012	523041	2.717
MIROC5	rcp4p5	2006-2099	20.64	15.36	10.64	1020	70.79	1012	515981	2.768

MIROC5	rcp6p0	2006-2099	20.45	15.23	10.55	1028	71.04	1012	511106	2.766
MIROC5	rcp8p5	2006-2099	21.59	16.21	11.46	1012	70.77	1012	519902	2.662

CLIMATE_ISIMIP2BLBC

Table 30: Summary of CLIMATE_ISIMIP2BLBC for le_bray. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	17.03	12.75	8.835	918.1	75.64	1006	476781	3.155
GFDLESM2M	piControl	1661-2099	17.16	12.67	8.64	926.9	76.62	1006	478228	2.742
GFDLESM2M	rcp2p6	2006-2099	18.12	13.64	9.552	888.6	75.33	1007	475842	3.115
GFDLESM2M	rcp4p5	2006-2099	18.46	13.91	9.773	874.2	75.22	1007	475372	3.021
GFDLESM2M	rcp6p0	2006-2099	18.45	13.99	9.911	867.3	75.11	1007	479935	3.167
GFDLESM2M	rcp8p5	2006-2099	19.03	14.36	10.11	851.1	74.3	1007	482721	3.111
HadGEM2ES	historical	1861-2005	17.11	12.68	8.675	852.1	76.1	1006	471415	3.056
HadGEM2ES	piControl	1661-2299	17.41	12.91	8.833	873.4	76.01	1006	487824	3.104
HadGEM2ES	rcp2p6	2006-2299	19.27	14.74	10.72	909.5	75.72	1006	496263	2.9
HadGEM2ES	rcp4p5	2006-2099	19.99	15.37	11.27	843.1	74.3	1006	497515	2.898
HadGEM2ES	rcp6p0	2006-2099	19.85	15.23	11.15	844.7	74.6	1006	493972	2.929
HadGEM2ES	rcp8p5	2006-2099	20.96	16.25	12.1	810.3	73.31	1006	503201	2.894
IPSLCM5ALR	historical	1861-2005	16.48	12.1	8.141	938.3	76.82	1006	474160	3.112
IPSLCM5ALR	piControl	1661-2299	15.82	11.48	7.527	967.2	77.21	1006	479222	3.19
IPSLCM5ALR	rcp2p6	2006-2299	18.53	14.11	10.12	947.6	75.97	1006	490673	2.986
IPSLCM5ALR	rcp4p5	2006-2299	20.09	15.5	11.37	870.7	74.09	1006	503783	2.895
IPSLCM5ALR	rcp6p0	2006-2099	19.16	14.67	10.61	896.5	74.53	1006	492014	3.05
IPSLCM5ALR	rcp8p5	2006-2299	25.82	21.17	16.95	760.3	67.83	1004	520170	2.856
MIROC5	historical	1861-2005	17.2	12.86	8.902	892	76.08	1006	469452	3.038
MIROC5	piControl	1661-2299	17.65	13.19	9.149	913.2	75.48	1005	496136	3.079
MIROC5	rcp2p6	2006-2299	19.07	14.41	10.22	899.7	74.98	1006	504142	2.954
MIROC5	rcp4p5	2006-2099	19.23	14.6	10.43	886.9	74.97	1006	497361	3.011

MIROC5	rcp6p0	2006-2099	19.04	14.47	10.34	890.8	75.22	1006	492488	3.009
MIROC5	rcp8p5	2006-2099	20.16	15.46	11.25	878.7	74.95	1007	501300	2.893

CLIMATE_ISIMIP2A

Table 31: Summary of CLIMATE_ISIMIP2A for le_bray. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	17.72	12.88	8.293	937.5	75.48	1014	483910	4.889
PRINCETON	1901-2012	17.3	12.93	7.866	929.7	83.26	989	486215	3.997
WATCH	1901-2001	17.72	12.89	8.34	1017	77.27	1022	392291	4.281
WFDEI	1901-2010	17.9	13.01	8.493	1009	76.56	1019	425802	3.86

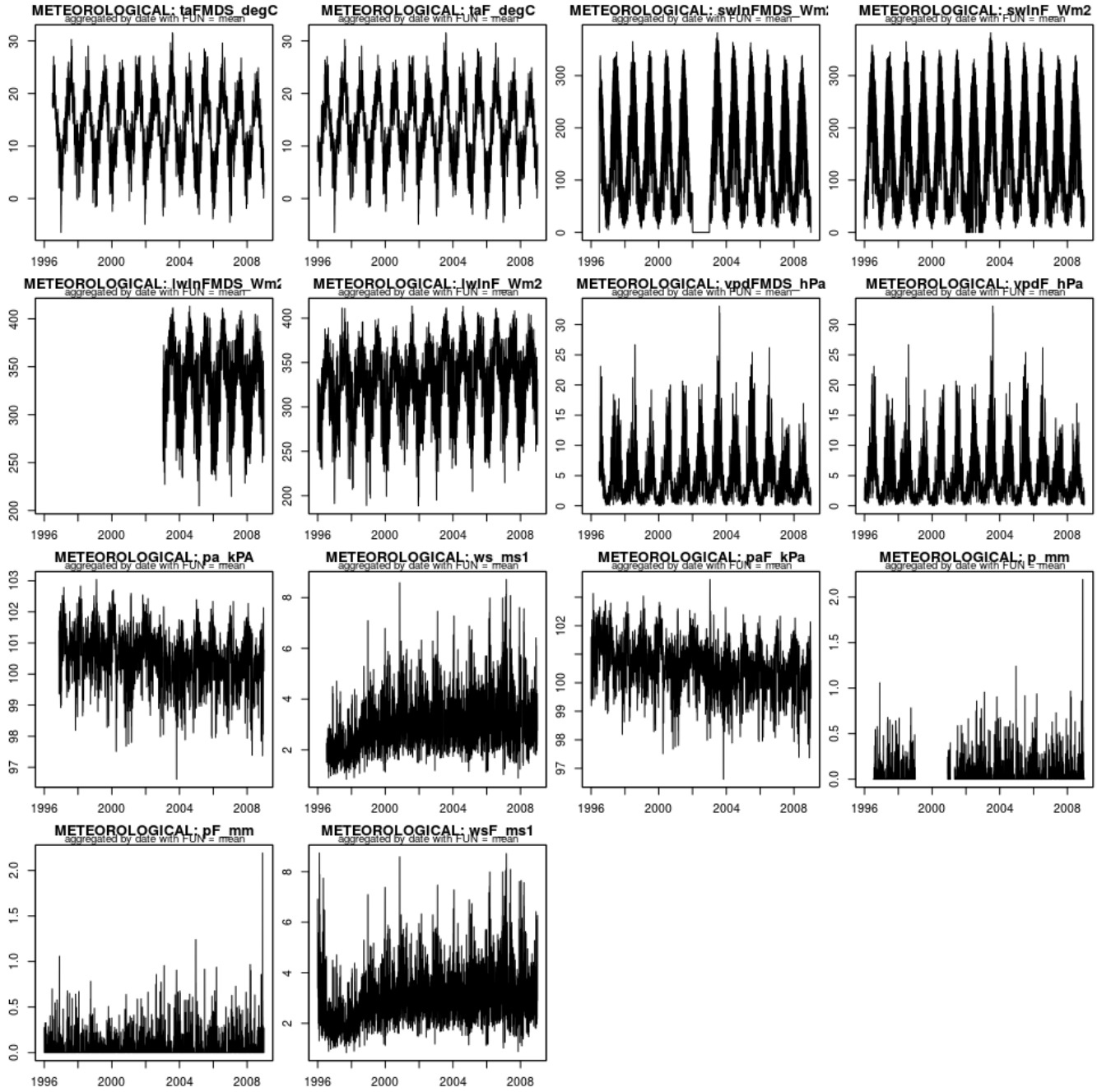
CLIMATE_ISIMIPFT

Table 32: Summary of CLIMATE_ISIMIPFT for le_bray. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

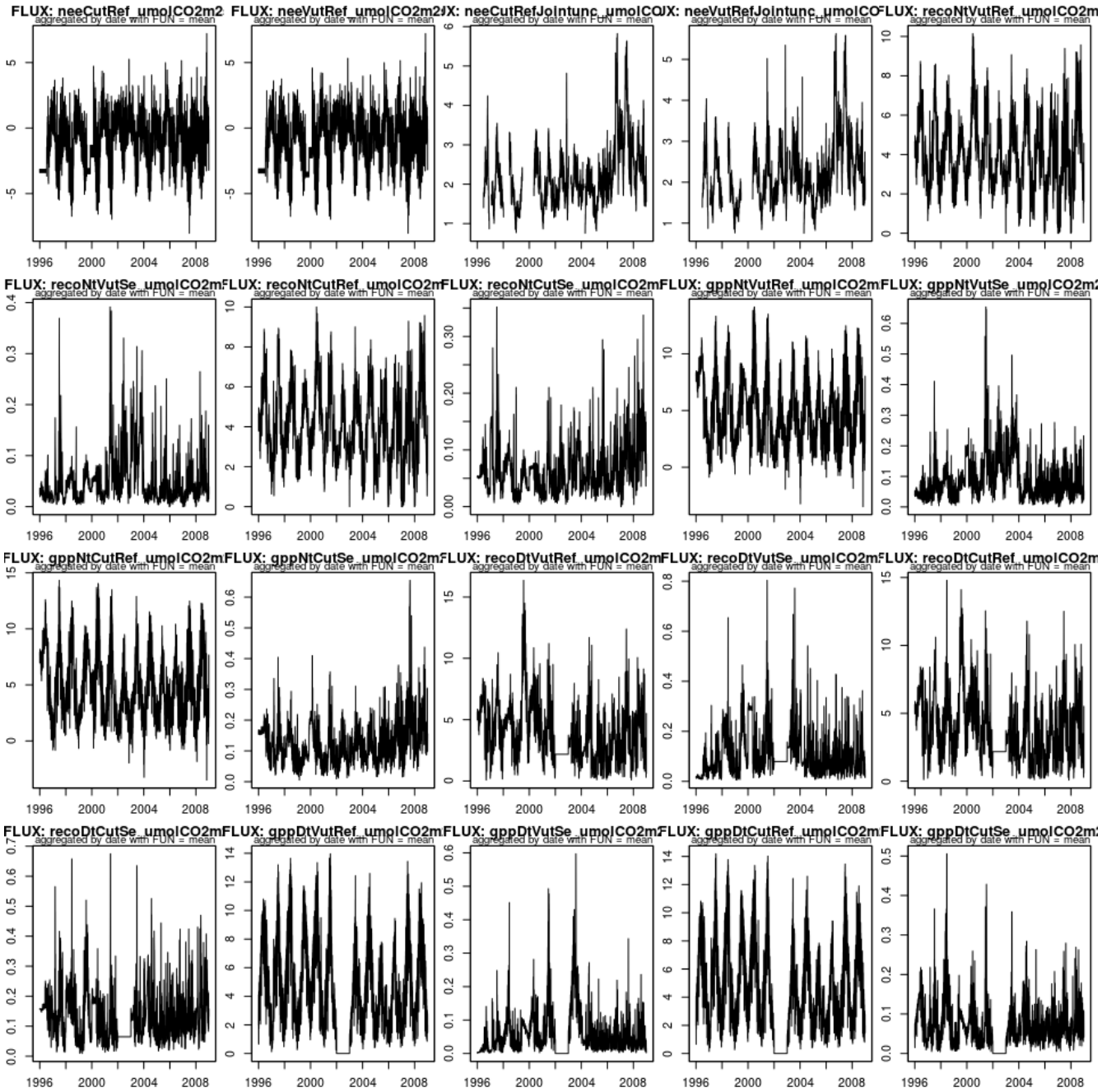
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	18.07	13.28	8.782	1095	81.57	1022	391501	4.283
GFDLESM2M	rcp2p6	2006-2099	19.08	14.08	9.376	1037	80.54	1023	396770	4.368
GFDLESM2M	rcp4p5	2006-2099	19.46	14.38	9.623	1026	80.34	1023	395991	4.226
GFDLESM2M	rcp6p0	2006-2099	19.42	14.43	9.724	1025	80.31	1023	399116	4.466
GFDLESM2M	rcp8p5	2006-2099	20.1	14.88	9.965	990.3	79.13	1023	402261	4.411
HadGEM2ES	historical	1950-2004	17.9	13.09	8.595	1082	77.62	1022	390374	4.272
HadGEM2ES	rcp2p6	2005-2099	20.12	15.03	10.34	1052	75.63	1021	413596	4.157
HadGEM2ES	rcp4p5	2005-2099	20.63	15.55	10.86	1035	75.32	1022	411653	4.132
HadGEM2ES	rcp6p0	2005-2099	20.51	15.44	10.77	1029	75.51	1022	410752	4.179
HadGEM2ES	rcp8p5	2005-2099	21.56	16.38	11.64	988.4	74.56	1022	416035	4.104
IPSLCM5ALR	historical	1950-2005	17.98	13.19	8.701	1090	73.55	1022	389487	4.329
IPSLCM5ALR	rcp2p6	2006-2099	19.55	14.7	10.14	1084	72.5	1022	402647	4.242
IPSLCM5ALR	rcp4p5	2006-2099	20.13	15.18	10.55	1040	71.96	1022	405755	4.175
IPSLCM5ALR	rcp6p0	2006-2099	20.06	15.17	10.58	1059	71.8	1022	402176	4.321
IPSLCM5ALR	rcp8p5	2006-2099	21.19	16.22	11.55	1013	70.76	1022	408470	4.169
MIROCESMCHEM	historical	1950-2005	18.06	13.2	8.637	1077	89.97	1022	397708	4.373
MIROCESMCHEM	rcp2p6	2006-2099	20.79	15.53	10.69	1090	88.24	1022	450221	4.194
MIROCESMCHEM	rcp4p5	2006-2099	20.83	15.64	10.85	1054	88.42	1023	443380	4.178
MIROCESMCHEM	rcp6p0	2006-2099	21.36	15.86	10.87	1073	87.79	1023	445312	4.144
MIROCESMCHEM	rcp8p5	2006-2099	22.48	16.88	11.81	1029	86.61	1023	457528	4.142
NorESM1M	historical	1950-2005	17.99	13.17	8.653	1070	80.9	1022	392073	4.272
NorESM1M	rcp2p6	2006-2099	19.36	14.44	9.843	1068	79.29	1022	412750	4.275

NorESM1M	rcp4p5	2006-2099	19.96	14.82	10.01	1042	78.74	1022	418252	4.228
NorESM1M	rcp6p0	2006-2099	19.69	14.95	10.47	1037	78.73	1022	415242	4.362
NorESM1M	rcp8p5	2006-2099	20.53	15.57	10.91	1001	77.94	1023	422040	4.342

METEOROLOGICAL



FLUX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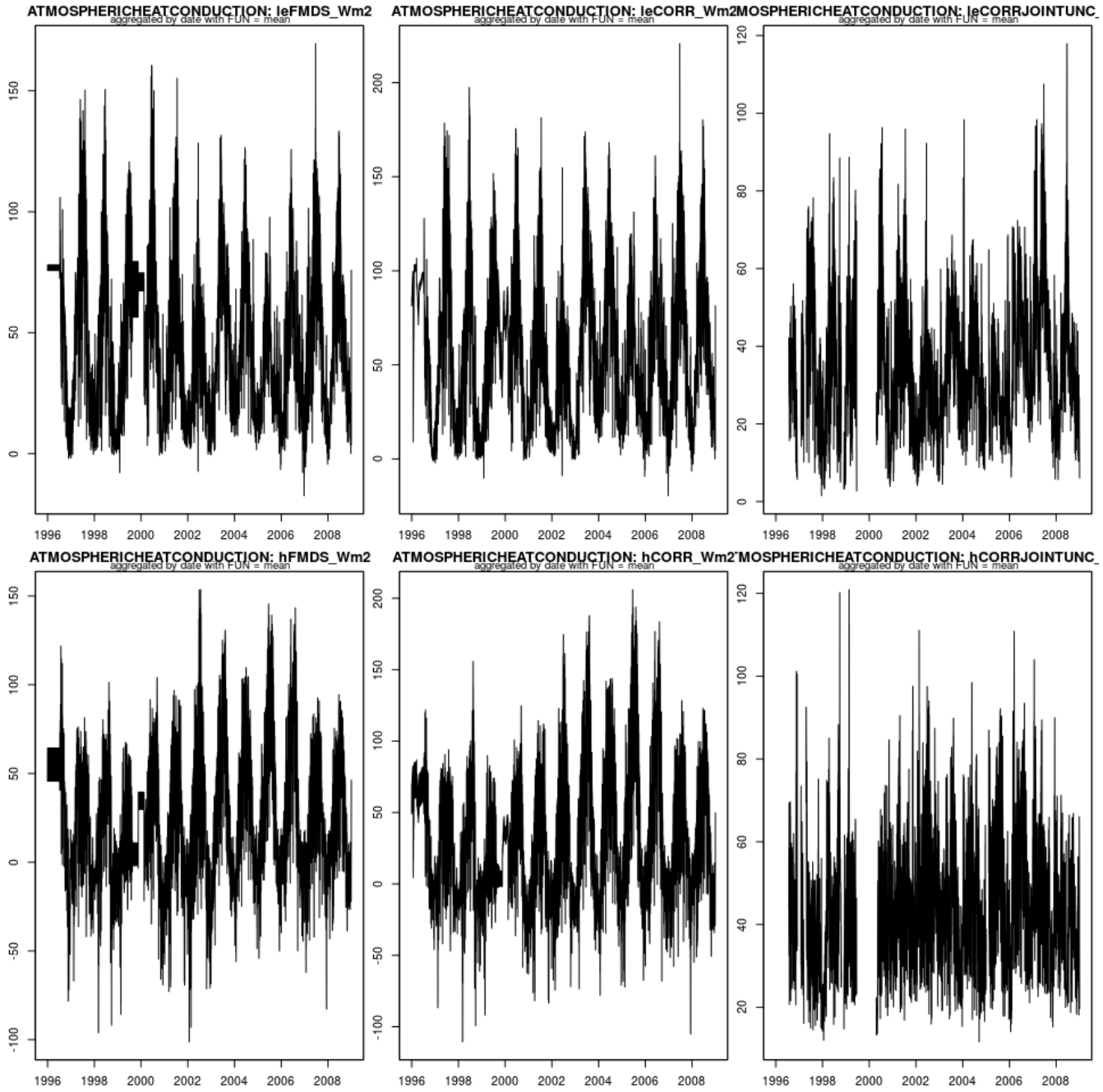
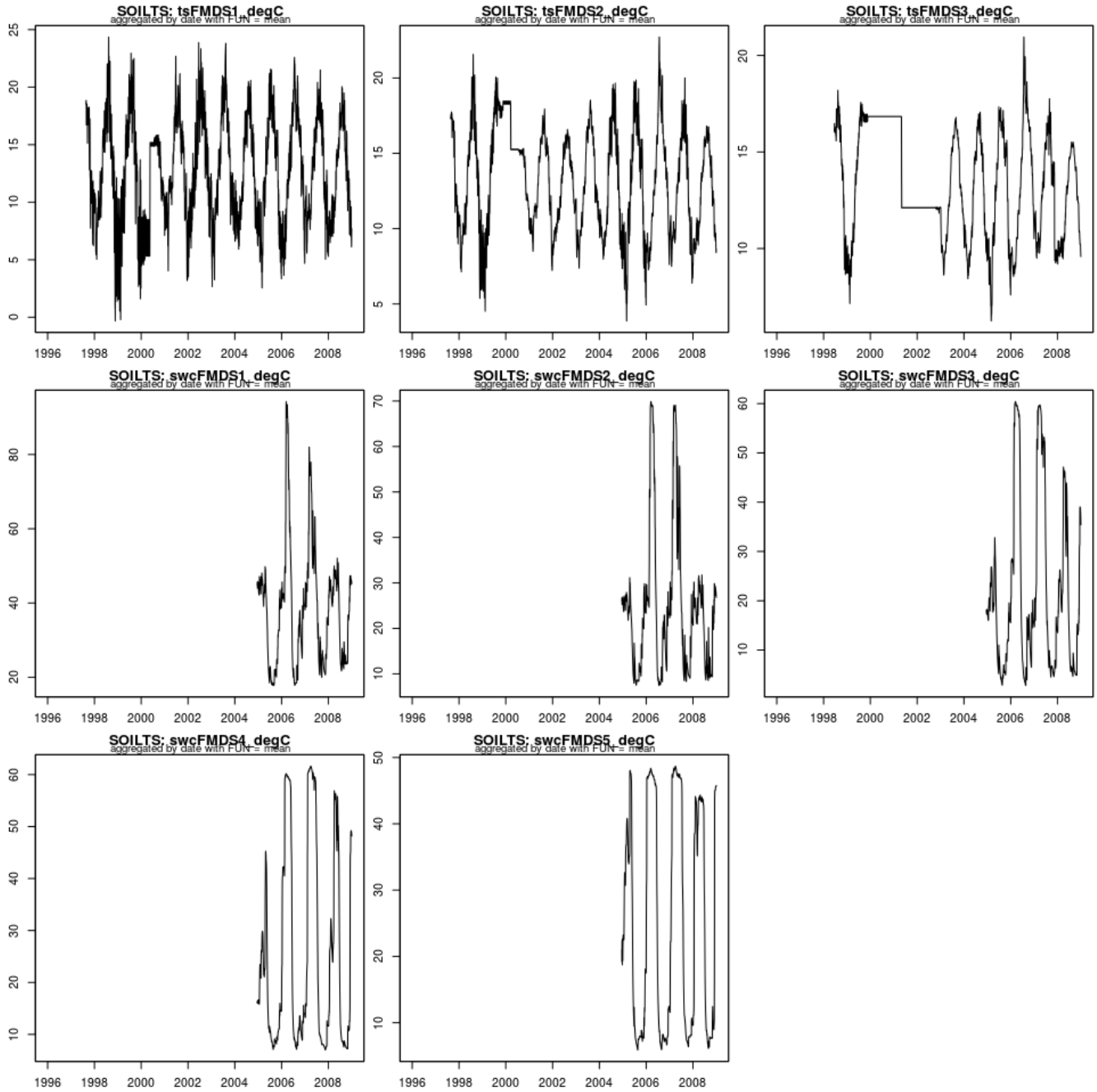
FLUX: neeVutRef_umolCO2m2
FLUX: neeCutRefJointunc_umolCO
FLUX: neeVutRefJointunc_umolCO
FLUX: recoNtVutRef_umolCO2m
FLUX: recoNtVutSe_umolCO2m
FLUX: recoNtCutRef_umolCO2m
FLUX: recoNtCutSe_umolCO2m
FLUX: gppNtVutRef_umolCO2m
FLUX: gppNtVutSe_umolCO2m
FLUX: gppNtCutRef_umolCO2m
FLUX: gppNtCutSe_umolCO2m
FLUX: recoDtVutRef_umolCO2m
FLUX: recoDtVutSe_umolCO2m
FLUX: recoDtCutRef_umolCO2m
FLUX: recoDtCutSe_umolCO2m
FLUX: gppDtVutRef_umolCO2m
FLUX: gppDtVutSe_umolCO2m
FLUX: gppDtCutRef_umolCO2m
FLUX: gppDtCutSe_umolCO2m
aggregated by date with FUN = mean

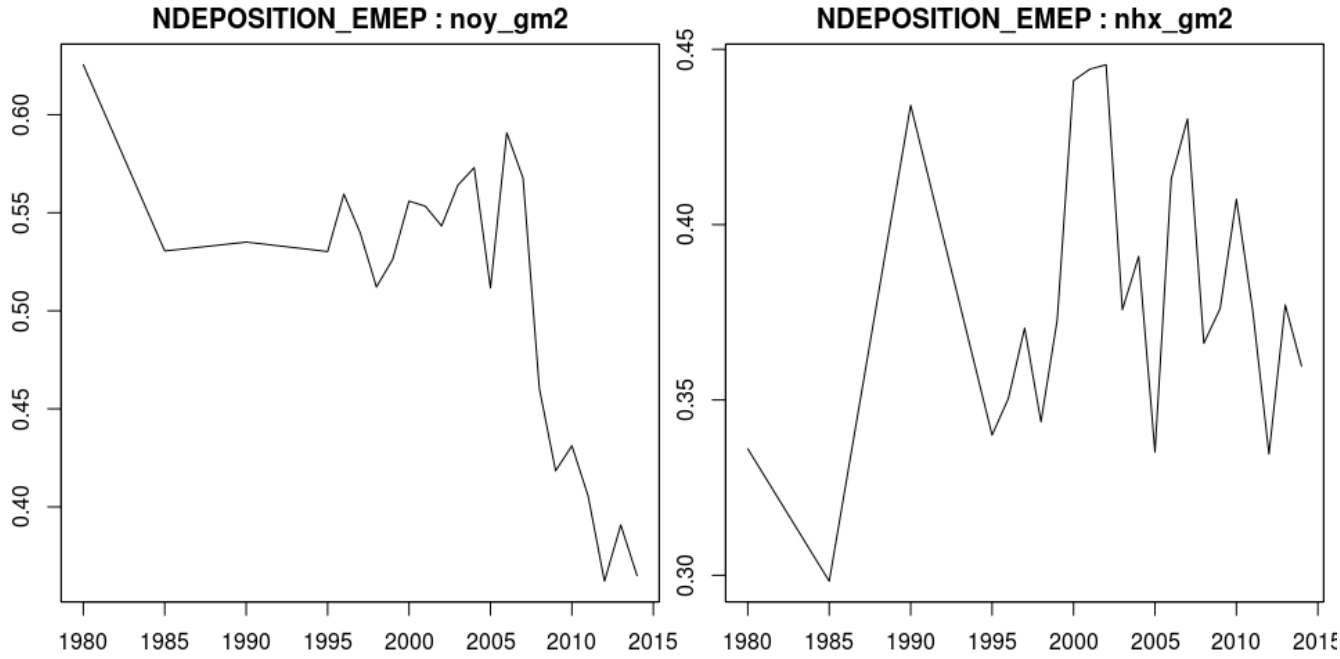
ATMOSPHERICHEATCONDUCTION



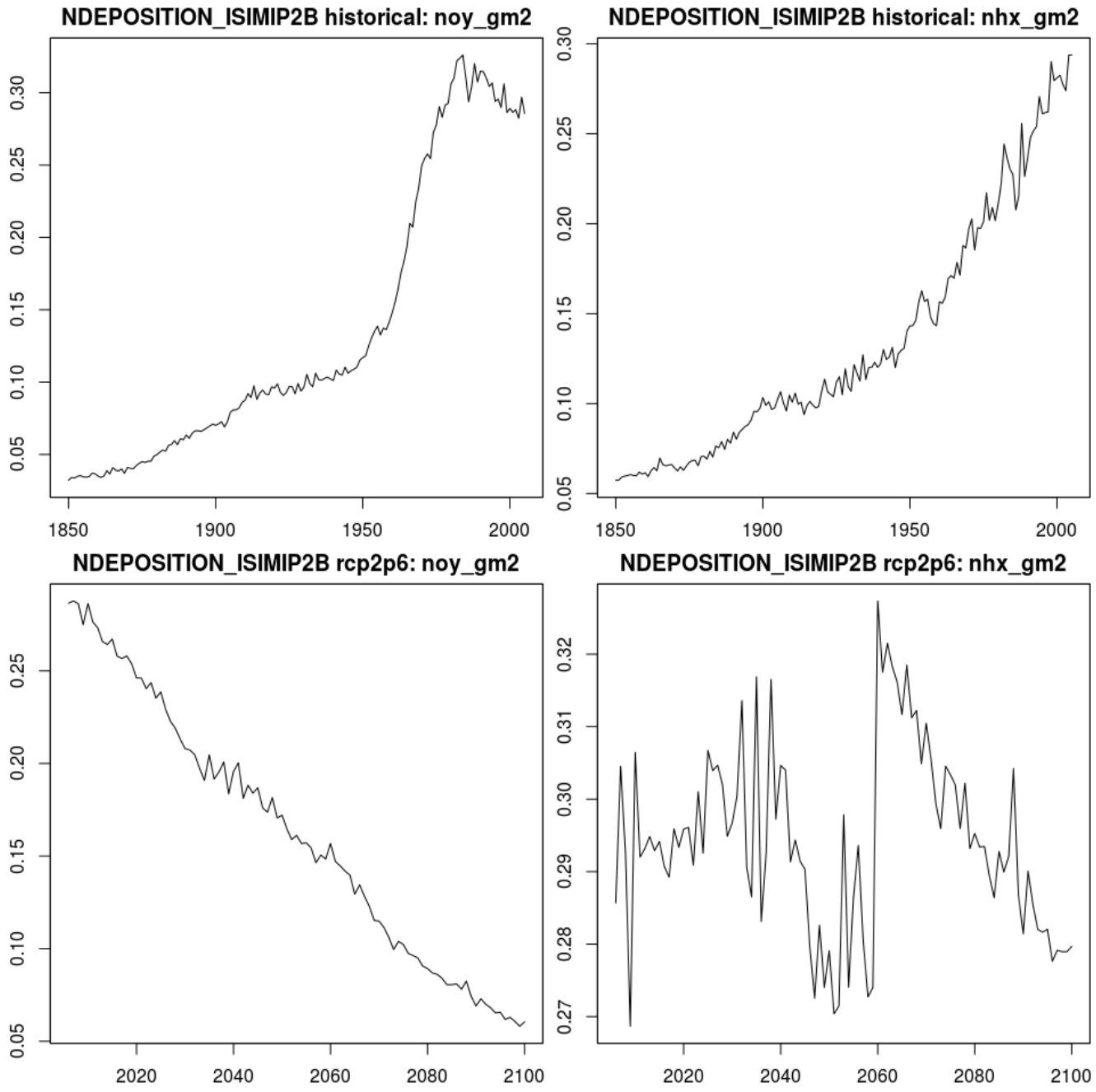
SOILTS

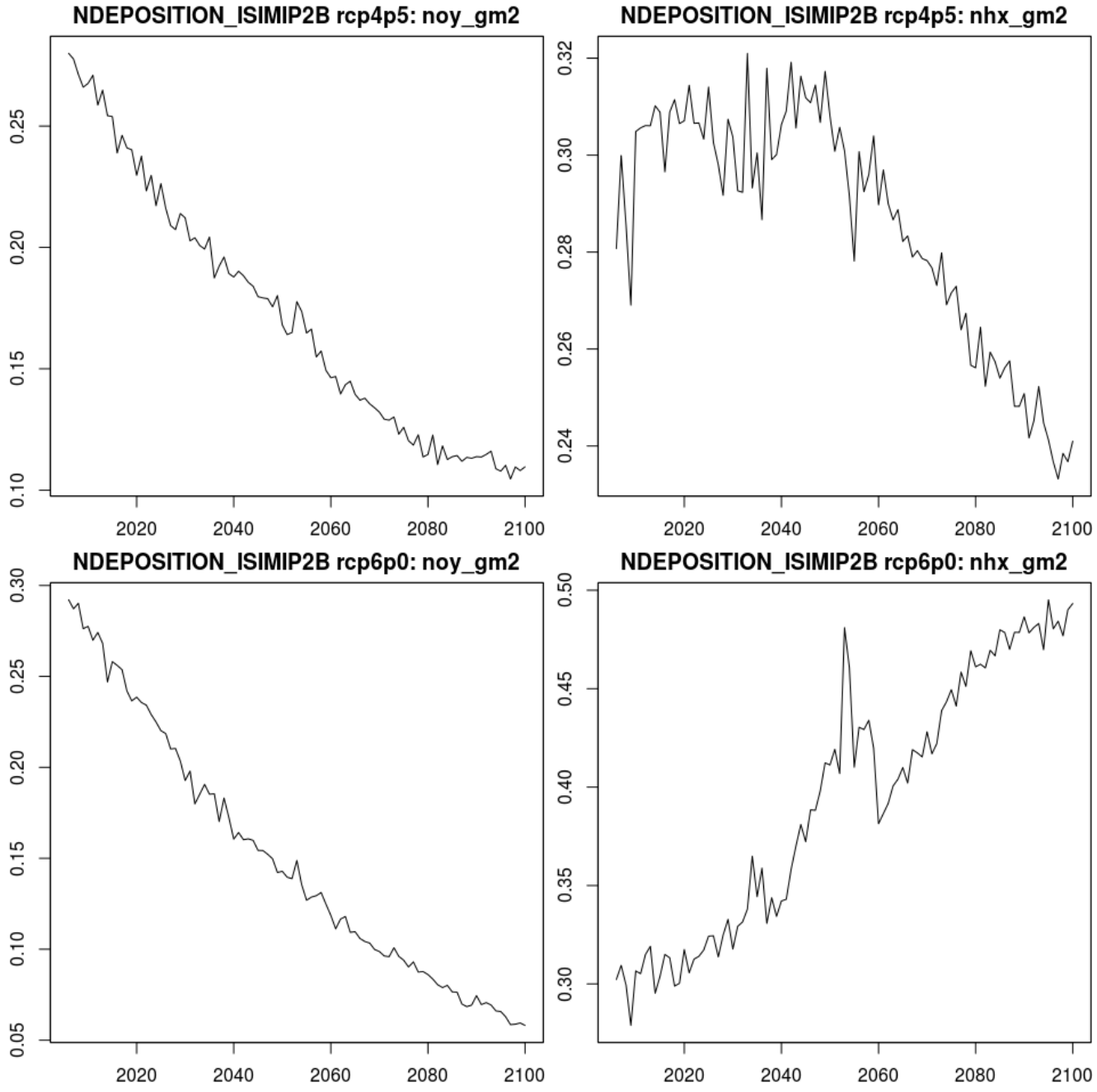

SOILTS: tsFMDS1_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS2_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS3_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS1_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS2_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS3_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS4_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS5_degC
aggregated by date with FUN = mean

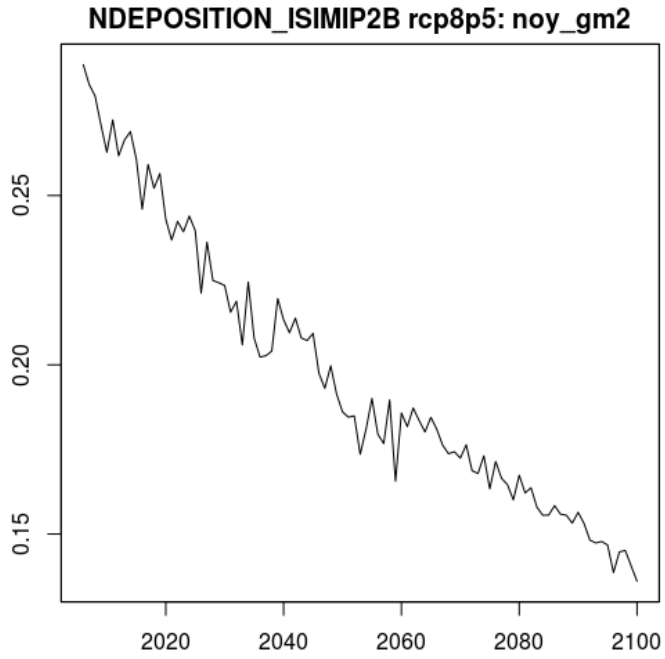
NDEPOSITION_EMEP

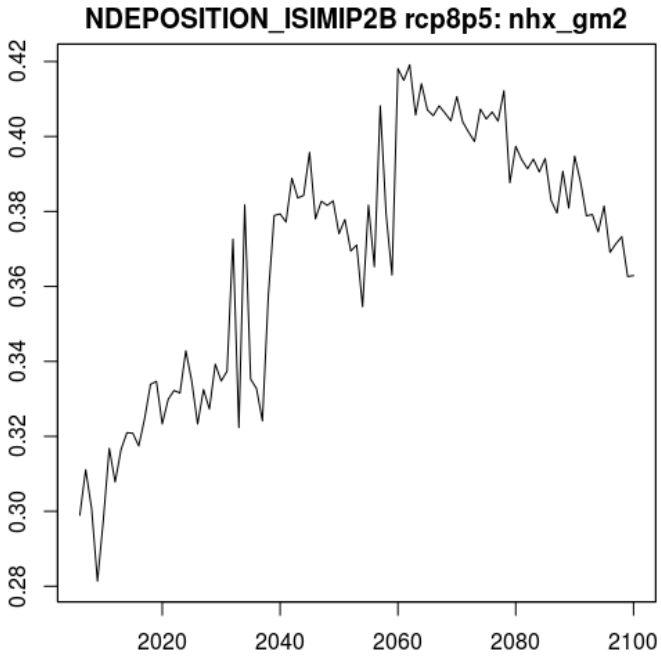


NDEPOSITION_ISIMIP2B

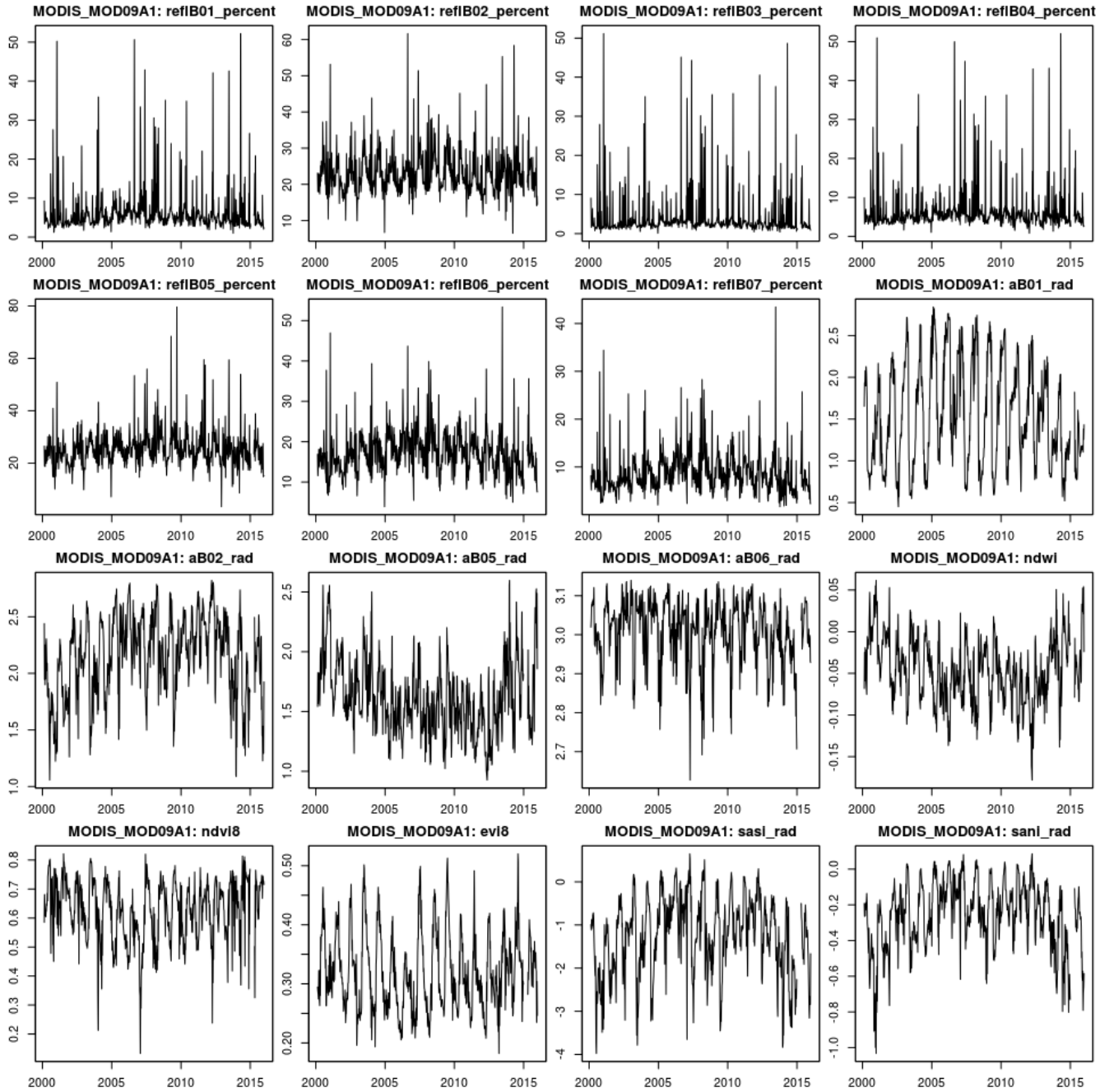



NDEPOSITION_ISIMIP2B rcp4p5: noy_gm2
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100

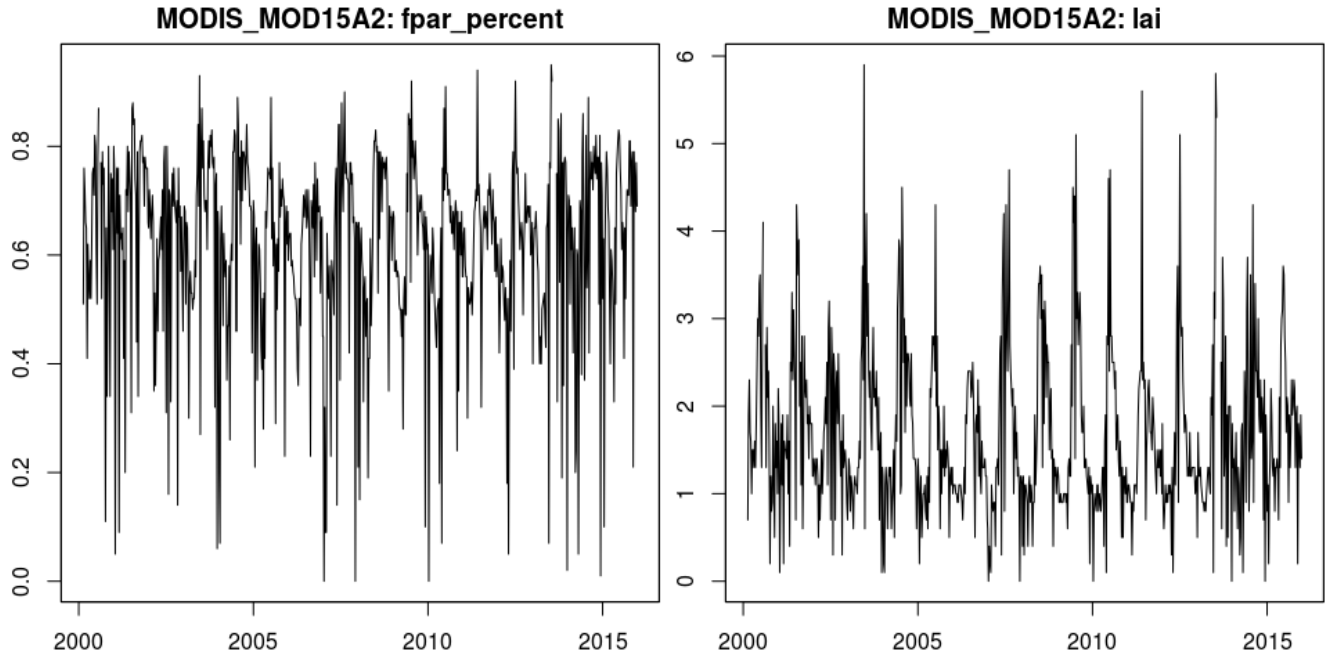

NDEPOSITION_ISIMIP2B rcp8p5: noy_gm2
0.25
0.20
0.15
2020
2040
2060
2080
2100


NDEPOSITION_ISIMIP2B rcp8p5: nhx_gm2
0.42
0.40
0.38
0.36
0.34
0.32
0.30
0.28
2020
2040
2060
2080
2100

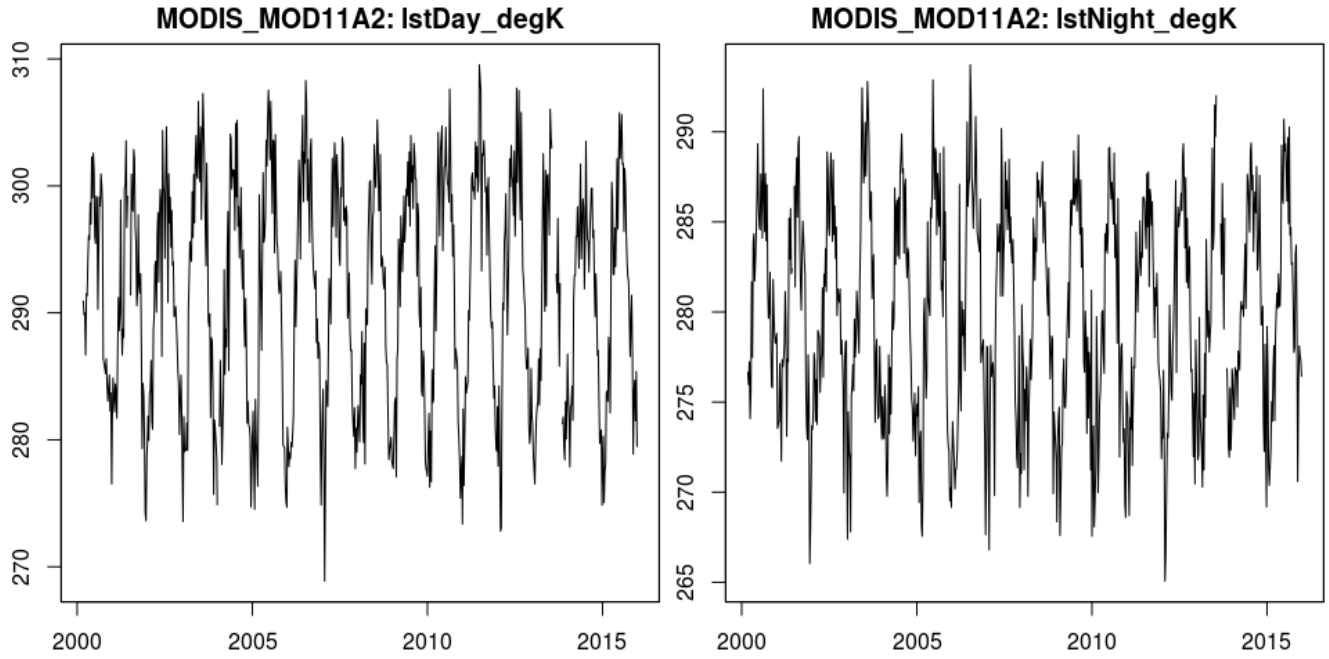
MODIS_MOD09A1



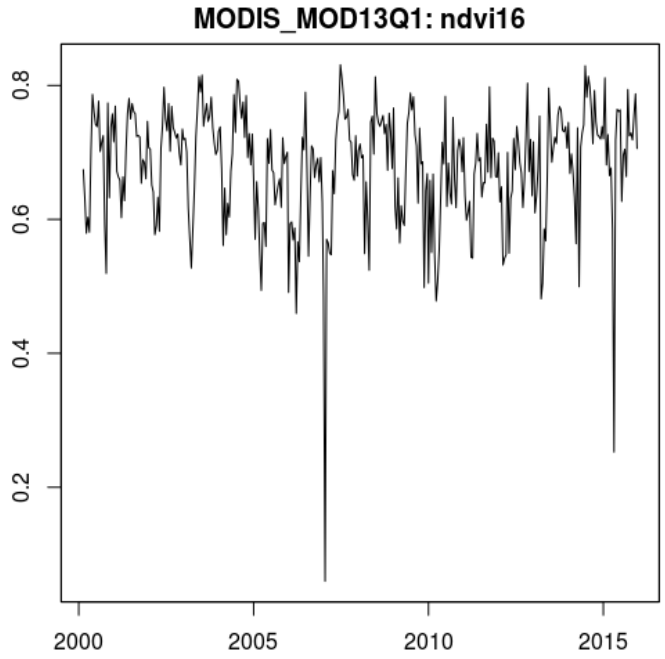
MODIS_MOD15A2

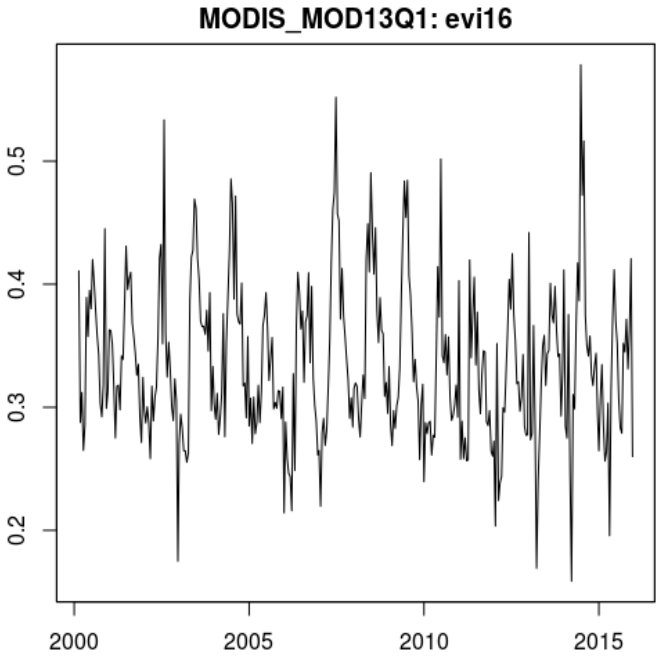


MODIS_MOD11A2

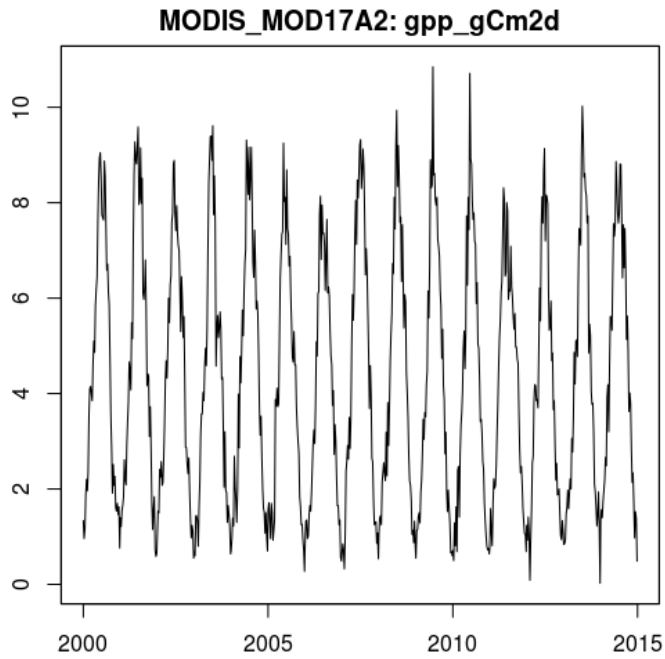


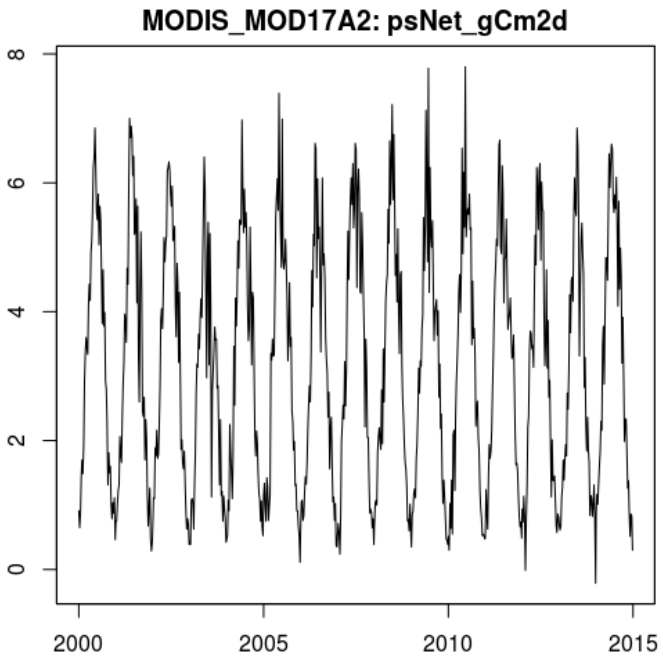
MODIS_MOD13Q1





MODIS_MOD17A2





Site peitz

Description

Peitz is a long term research plot in eastern Brandenburg, Germany. The site lies at about 50 m.a.s.l. The annual rainfall amounts to more than 608 mm and annual mean temperature is around 9.2°C during the 1901-2010 period. The soil type is a Dystric Cambisol. The potential natural vegetation is a South Scandinavian-east Central European dwarf shrub- and lichen-rich pine forests (Pinus sylvestris), partly with Quercus robur in the understorey, with Vaccinium vitis-idaea, Calluna vulgaris, Cladina spp., Dicranum polysetum on sandy soils and siliceous rocks. The forest is a pine forest (Pinus sylvestris) with a mean DBH of around 23 cm and a stand height of 17 m in 2011. The understorey consists partly of Quercus robur. Measurements were started in 1948. More information about this site can be found in Riek & Stähr (2004), Noack (2011; 2012) and about the climate data in Gerstengarbe et al. (2015).

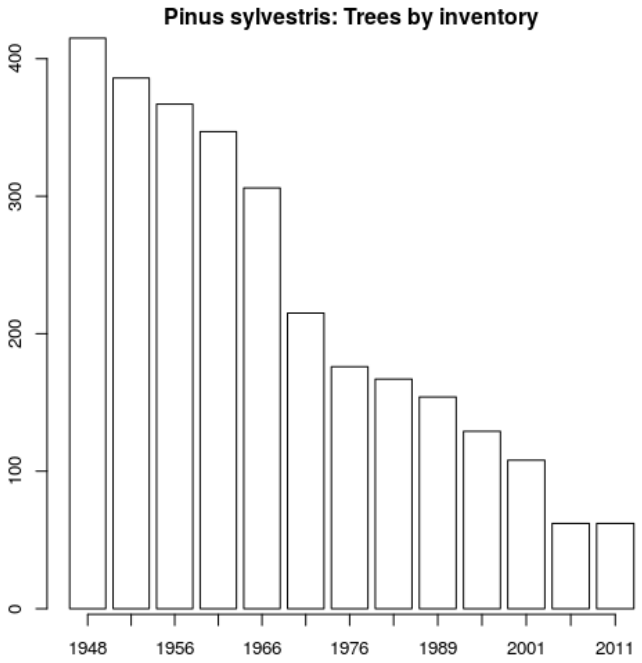
The following data is available for the site

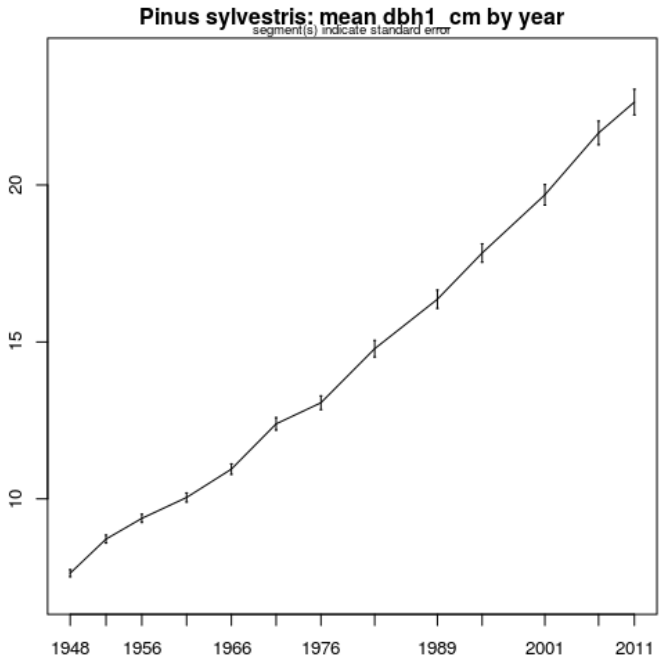
Table 33: Available data for peitz

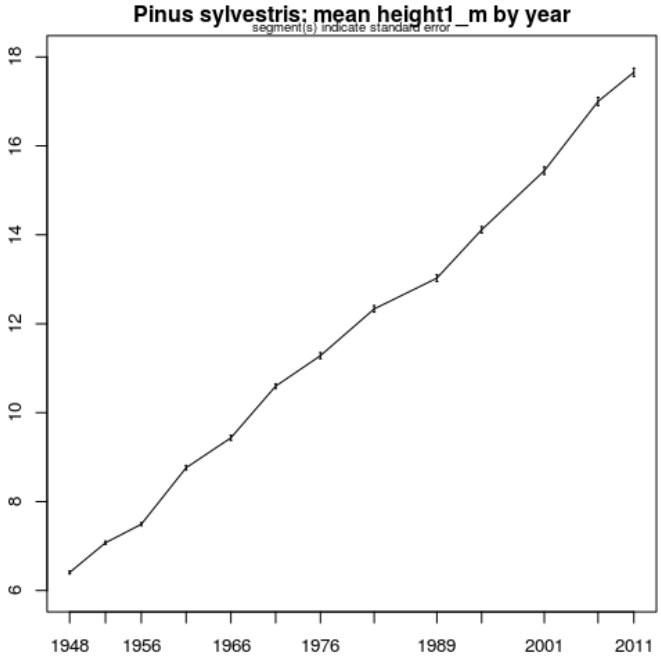
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	0
FLUX	0
ATMOSPHERICHEATCONDUCTION	0
SOILTS	0
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

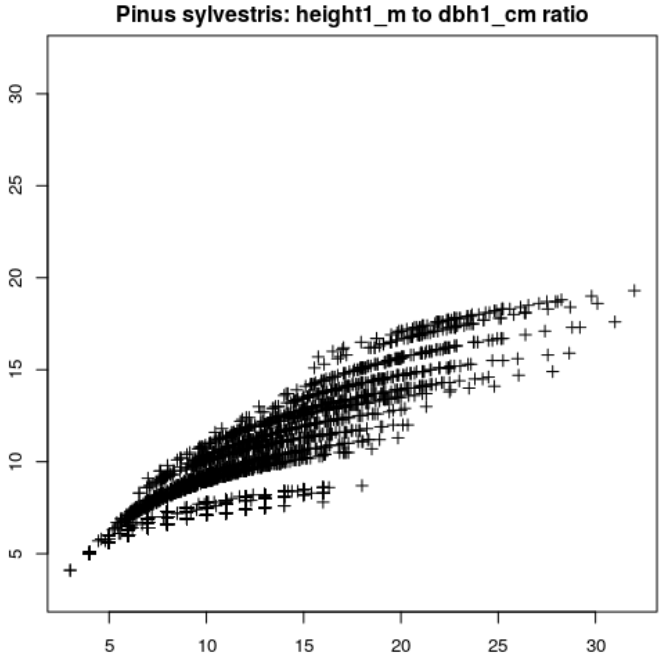
Data

TREE

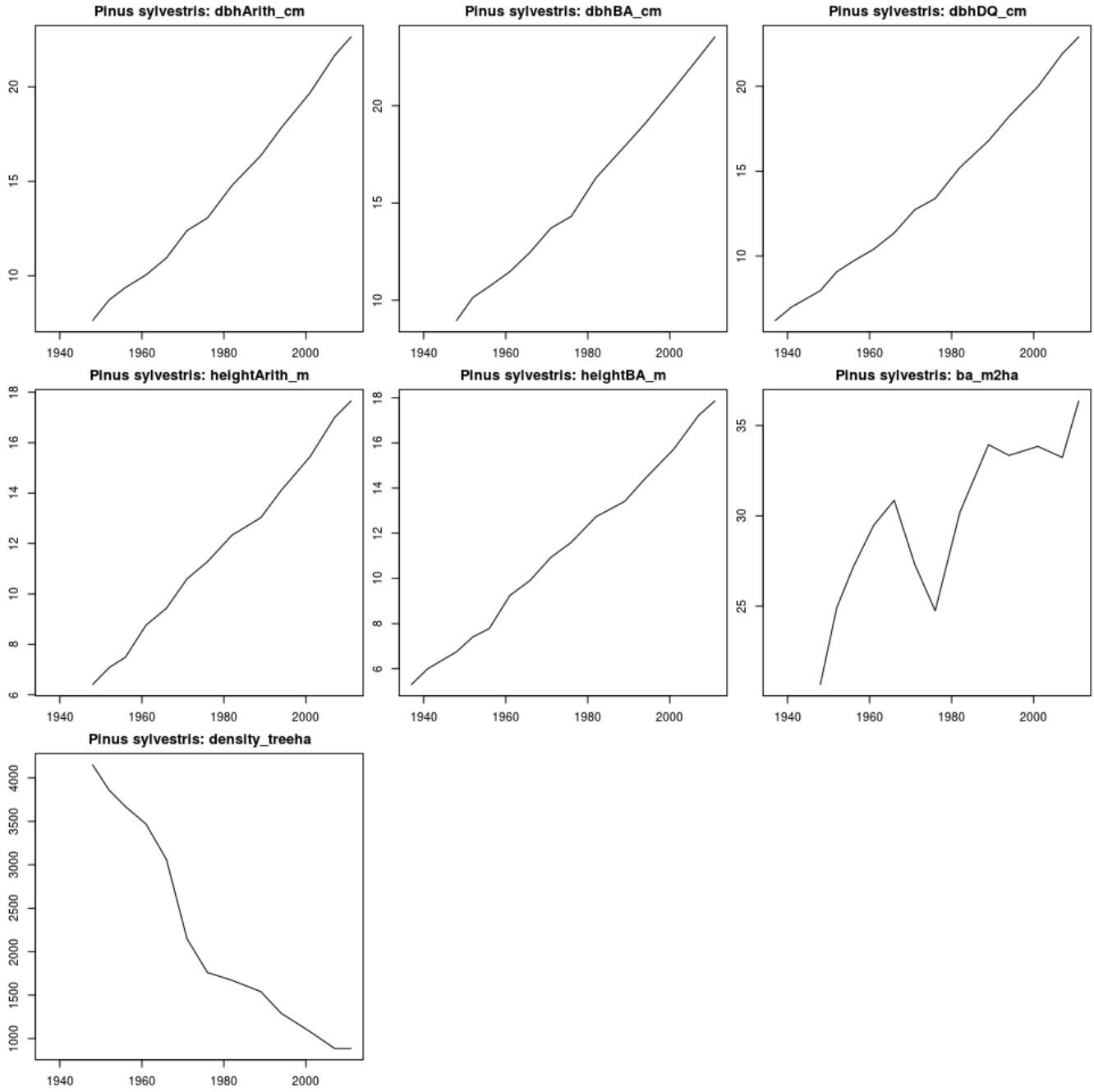

Pinus sylvestris: Trees by inventory
0
100
200
300
400
1948
1956
1966
1976
1989
2001
2011


Pinus sylvestris: mean dbh1_cm by year
segment(s) indicate standard error
10
15
20
1948
1956
1966
1976
1989
2001
2011


Pinus sylvestris: mean height1_m by year
segment(s) indicate standard error
6
8
10
12
14
16
18
1948
1956
1966
1976
1989
2001
2011


Pinus sylvestris: height1_m to dbh1_cm ratio
5
10
15
20
25
30
5
10
15
20
25
30

STAND


Pinus sylvestris: dbhArith_cm
Pinus sylvestris: dbhBA_cm
Pinus sylvestris: dbhDQ_cm
Pinus sylvestris: heightArith_m
Pinus sylvestris: heightBA_m
Pinus sylvestris: ba_m2ha
Pinus sylvestris: density_treeha

CLIMATE_LOCAL

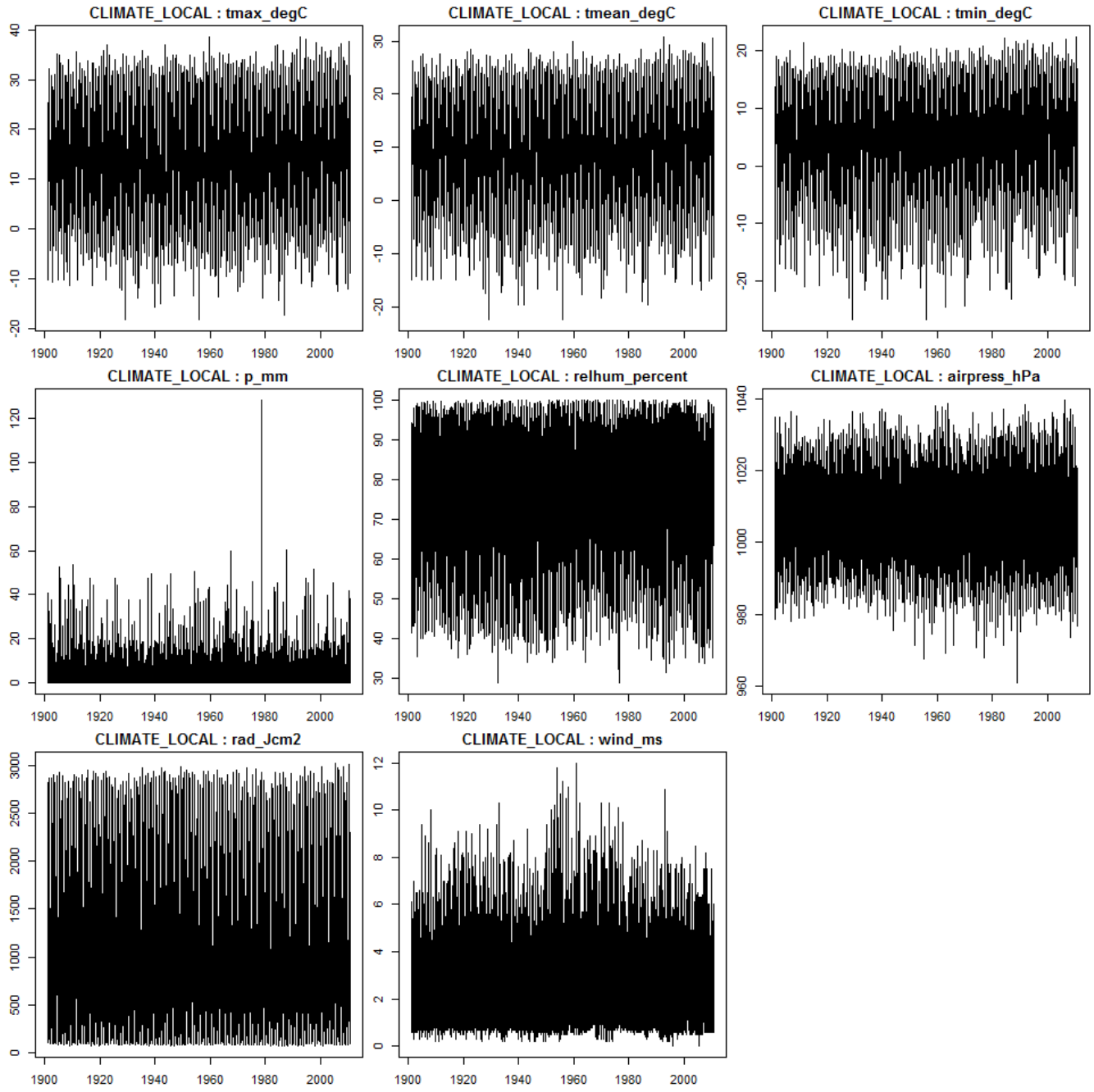


Table 34: Summary of CLIMATE_LOCAL for peitz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
peitz	16	1901	12.9	8.37	3.99	636	76.3	1008	386508	2.29
peitz	16	1902	11.6	7.24	3.4	583	77.1	1009	346137	2.38
peitz	16	1903	13.5	9.05	4.96	510	75.9	1008	374153	2.35
peitz	16	1904	13.4	8.89	4.65	334	76.3	1009	381239	2.24
peitz	16	1905	13	8.65	4.83	621	78.2	1009	352129	2.28
peitz	16	1906	13.7	9.06	4.87	556	76.1	1008	373467	2.3
peitz	16	1907	12.8	8.27	4.24	622	77.2	1009	355098	2.26
peitz	16	1908	12.7	8.06	3.88	432	77.4	1010	361680	2.26
peitz	16	1909	12.4	8.05	4.02	587	77.4	1008	354486	2.31
peitz	16	1910	13.7	9.05	5.03	672	77.3	1007	362138	2.34
peitz	16	1911	14.5	9.7	5.34	483	75.1	1009	401725	2.21
peitz	16	1912	12.7	8.17	4	423	76.7	1008	357781	2.34
peitz	16	1913	13.8	9.19	4.7	463	75.4	1009	381563	2.4
peitz	16	1914	13.7	9.14	4.87	398	75.8	1008	372152	2.38
peitz	16	1915	12.7	8.32	4.23	619	76.6	1006	359272	2.33
peitz	16	1916	13.3	9.02	5.26	678	77.3	1006	352566	2.52
peitz	16	1917	12.6	8.19	3.85	436	74.9	1009	386920	2.35
peitz	16	1918	13.8	9.58	5.43	338	76.2	1009	378110	2.35
peitz	16	1919	12.2	7.96	4.1	487	77	1008	351258	2.34
peitz	16	1920	13.9	9.12	4.87	435	76.1	1011	383393	2.22
peitz	16	1921	14.7	9.71	4.78	463	73.3	1011	421877	2.37
peitz	16	1922	11.9	7.68	3.57	545	76.8	1008	340358	2.42
peitz	16	1923	12.7	8.48	4.6	544	76.8	1007	352280	2.45
peitz	16	1924	12.6	8.02	3.82	388	76.2	1009	369746	2.26
peitz	16	1925	13.4	9.11	5.07	595	76.7	1007	356202	2.43
peitz	16	1926	13.5	9.12	5.3	618	77.7	1007	347649	2.33

peitz	16	1927	12.7	8.45	4.75	546	78.3	1007	337761	2.28
peitz	16	1928	13.2	8.72	4.62	420	75.9	1008	377566	2.36
peitz	16	1929	12.6	7.91	3.49	366	75.1	1010	381333	2.18
peitz	16	1930	13.6	9.29	5.3	560	76.7	1007	373508	2.34
peitz	16	1931	12.2	8.09	4.34	461	78.7	1008	336232	2.28
peitz	16	1932	13.5	8.97	4.77	398	76.1	1009	376084	2.26
peitz	16	1933	12.5	7.83	3.53	426	77	1010	363637	2.04
peitz	16	1934	15.3	10.5	6.15	483	74.4	1008	409030	2.33
peitz	16	1935	13.6	9.08	4.76	530	75.4	1007	379964	2.3
peitz	16	1936	13.6	9.08	5	372	76.5	1007	368201	2.34
peitz	16	1937	13.6	9.25	5.16	531	77	1006	366718	2.26
peitz	16	1938	13.9	9.41	5.07	603	76	1009	371554	2.21
peitz	16	1939	13.2	8.97	5.15	555	77.3	1007	348766	2.34
peitz	16	1940	11.4	6.88	2.51	470	76.7	1008	374118	2.13
peitz	16	1941	11.6	7.44	3.67	645	78.2	1008	339974	2.32
peitz	16	1942	12.4	7.8	3.28	435	75.6	1009	383943	2.07
peitz	16	1943	14.2	9.51	5.11	376	73.1	1010	422229	2.26
peitz	16	1944	13.3	9.04	5.21	600	76.1	1008	375160	2.47
peitz	16	1945	13.8	9.51	5.63	539	76.7	1009	362379	2.28
peitz	16	1946	13.3	8.88	4.94	493	77	1009	366007	2.22
peitz	16	1947	13.6	8.89	4.36	449	74.1	1008	412690	2.26
peitz	16	1948	14.5	9.89	5.64	428	75.2	1010	385755	2.27
peitz	16	1949	14.5	9.79	5.56	508	75.1	1010	398705	2.3
peitz	16	1950	13.7	9.28	5.38	548	75.7	1007	375022	2.51
peitz	16	1951	14.1	9.67	5.47	486	75.3	1006	392154	2.22
peitz	16	1952	12.6	8.56	4.74	441	76.1	1006	365101	2.42
peitz	16	1953	14.8	10.1	5.68	410	73.2	1011	396162	2.41
peitz	16	1954	12.6	8.31	4.24	621	76.6	1007	366748	2.51

peitz	16	1955	12.5	8.16	4.3	622	78.3	1007	358573	2.21
peitz	16	1956	11.5	7.31	3.46	658	77.3	1009	351309	2.39
peitz	16	1957	13.8	9.29	5.16	652	76.4	1009	372480	2.28
peitz	16	1958	13.1	8.92	5.18	621	78.8	1007	350295	2.45
peitz	16	1959	14.8	9.64	5.04	426	74.8	1010	398864	2.3
peitz	16	1960	13.5	9.02	5.1	526	76.5	1006	357255	2.4
peitz	16	1961	14.2	9.53	5.5	629	77.3	1008	352565	2.48
peitz	16	1962	12.4	8.01	4.12	511	76.7	1008	352935	2.47
peitz	16	1963	12.9	8.07	3.67	440	74.7	1008	381727	2.19
peitz	16	1964	13.2	8.78	4.58	460	75.2	1010	378852	2.37
peitz	16	1965	12.7	8.19	4.27	690	78.2	1006	356629	2.56
peitz	16	1966	13.4	9.22	5.39	666	78.3	1006	352327	2.35
peitz	16	1967	14.4	9.86	5.91	711	77.7	1008	370627	2.72
peitz	16	1968	13.6	8.94	5.07	553	78.6	1008	364489	2.22
peitz	16	1969	12.9	8.06	4.04	614	77.6	1008	371923	2.38
peitz	16	1970	12.7	8.17	4.22	580	78	1006	356700	2.82
peitz	16	1971	14.1	9.22	5.06	424	76.7	1009	370850	2.56
peitz	16	1972	13.2	8.64	4.86	451	77.9	1010	345201	2.33
peitz	16	1973	13.5	8.88	4.92	527	76.1	1009	368060	2.47
peitz	16	1974	14	9.56	5.99	774	76.9	1007	349799	2.44
peitz	16	1975	14.4	9.83	5.96	433	75.1	1010	373081	2.27
peitz	16	1976	13.6	8.91	4.7	338	73.7	1009	389405	2.32
peitz	16	1977	13.5	9.36	5.97	567	78.2	1008	339008	2.34
peitz	16	1978	12.9	8.76	5.05	628	77.6	1007	354561	2.37
peitz	16	1979	12.8	8.55	4.81	574	76.1	1008	363612	2.32
peitz	16	1980	12.1	7.97	4.37	596	76.9	1008	353113	2.38
peitz	16	1981	13	8.82	5.24	670	79.1	1007	347103	2.36
peitz	16	1982	14.8	9.73	5.39	362	73.6	1009	413033	2.11

peitz	16	1983	14.7	9.97	5.9	604	75.3	1009	373205	2.47
peitz	16	1984	12.9	8.5	5.01	553	77.9	1008	339113	2.38
peitz	16	1985	12.6	8.14	4.43	455	77.7	1008	352840	2.24
peitz	16	1986	13.2	8.62	4.63	616	76.6	1009	360924	2.01
peitz	16	1987	12.1	7.92	4.34	647	78.6	1009	345701	2.15
peitz	16	1988	14.1	9.73	5.91	545	75.1	1007	368181	2.52
peitz	16	1989	15.4	10.5	6.04	375	74.9	1010	393836	2.4
peitz	16	1990	15.3	10.5	6.45	502	73.3	1009	389134	2.69
peitz	16	1991	13.9	9.26	4.87	397	75.6	1011	375107	2.26
peitz	16	1992	14.9	10.2	5.71	421	73.3	1009	388264	2.38
peitz	16	1993	13.4	9.1	5.11	674	76.7	1010	375223	2.47
peitz	16	1994	14.6	10.2	6.04	694	75.5	1008	372645	2.44
peitz	16	1995	14	9.57	5.4	672	75.7	1008	370186	2.34
peitz	16	1996	11.9	7.75	3.94	525	78.5	1009	338419	2.15
peitz	16	1997	14.1	9.56	5.21	600	76.2	1010	389242	2.27
peitz	16	1998	14.2	9.98	6.1	559	78.2	1008	344198	2.59
peitz	16	1999	15	10.5	6.33	458	74.5	1007	384829	2.52
peitz	16	2000	15.3	10.9	6.75	502	75.8	1007	373628	2.51
peitz	16	2001	13.7	9.69	5.53	528	78	1008	348409	2.4
peitz	16	2002	14.4	10.1	5.95	679	78	1008	357242	2.45
peitz	16	2003	14.9	9.88	5.05	380	73.9	1010	407436	2.07
peitz	16	2004	14.1	9.8	5.51	525	75.6	1008	374325	2.28
peitz	16	2005	14.4	9.94	5.49	576	76.2	1010	395914	2.24
peitz	16	2006	15.1	10.6	6.16	391	74.7	1010	396590	2.25
peitz	16	2007	15.1	10.8	6.33	704	75	1008	394892	2.62
peitz	16	2008	14.8	10.5	6.17	632	75.9	1008	367233	2.48
peitz	16	2009	14.4	9.94	5.46	619	77.1	1008	379450	2.36
peitz	16	2010	12.9	8.6	4.05	945	77.8	1006	360486	2.26

peitz	16	1901-2010	13.5	9.02	4.93	533		76.4	1008	369795	2.35

CLIMATE_ISIMIP2B

Table 35: Summary of CLIMATE_ISIMIP2B for peitz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	13.81	9.616	5.453	612.6	74.06	1005	365465	3.375
GFDLESM2M	piControl	1661-2099	13.74	9.518	5.35	651.1	76.14	1005	366675	2.84
GFDLESM2M	rcp2p6	2006-2099	15.02	10.83	6.599	645.8	74	1005	371829	3.835
GFDLESM2M	rcp4p5	2006-2099	15.46	11.2	6.921	648.3	74.1	1006	372223	3.795
GFDLESM2M	rcp6p0	2006-2099	15.43	11.17	6.916	643.1	74.02	1006	371345	3.747
GFDLESM2M	rcp8p5	2006-2099	15.92	11.61	7.308	634.1	73.82	1006	367699	3.752
HadGEM2ES	historical	1861-2005	13.43	9.193	4.954	582.9	73.63	1006	372427	3.646
HadGEM2ES	piControl	1661-2299	14	9.635	5.264	581.4	72.5	1005	397709	3.643
HadGEM2ES	rcp2p6	2006-2299	15.93	11.62	7.362	642.4	73.01	1005	402324	3.419
HadGEM2ES	rcp4p5	2006-2099	16.94	12.55	8.192	587.4	70.42	1005	408428	3.519
HadGEM2ES	rcp6p0	2006-2099	16.88	12.5	8.166	597.5	70.6	1005	407133	3.539
HadGEM2ES	rcp8p5	2006-2099	18.04	13.58	9.186	602.8	69.58	1005	414429	3.485
IPSLCM5ALR	historical	1861-2005	13.17	8.935	4.739	612.1	75.22	1005	375094	3.552
IPSLCM5ALR	piControl	1661-2299	12.63	8.31	4.002	621.8	75.76	1005	395164	3.334
IPSLCM5ALR	rcp2p6	2006-2299	15.48	11.39	7.344	671.9	73.6	1005	399889	3.526
IPSLCM5ALR	rcp4p5	2006-2299	16.88	12.77	8.75	672	72.36	1005	400272	3.441
IPSLCM5ALR	rcp6p0	2006-2099	16	11.93	7.933	665.9	72.72	1005	393997	3.491
IPSLCM5ALR	rcp8p5	2006-2299	22.11	17.97	13.95	665	67.98	1004	405196	3.39
MIROC5	historical	1861-2005	13.55	9.377	5.214	597.8	74.17	1005	367431	3.542
MIROC5	piControl	1661-2299	14.8	10.18	5.671	622.7	71.85	1005	420279	3.261
MIROC5	rcp2p6	2006-2299	15.94	11.38	6.887	659.7	72.07	1005	428570	3.592
MIROC5	rcp4p5	2006-2099	16.16	11.71	7.344	688.4	73.4	1005	417241	3.499
MIROC5	rcp6p0	2006-2099	16.09	11.59	7.164	661.5	72.36	1005	419686	3.591

MIROC5	rcp8p5	2006-2099	17.22	12.63	8.16	681	72.48	1006	426090	3.445

CLIMATE_ISIMIP2BLBC

Table 36: Summary of CLIMATE_ISIMIP2BLBC for peitz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	13.71	9.253	5.193	551.2	76.4	1008	368831	2.272
GFDLESM2M	piControl	1661-2099	13.65	9.154	5.093	586.2	78.32	1008	369775	1.914
GFDLESM2M	rcp2p6	2006-2099	14.92	10.47	6.337	580.8	76.33	1009	375181	2.581
GFDLESM2M	rcp4p5	2006-2099	15.36	10.83	6.661	583.3	76.4	1009	375723	2.555
GFDLESM2M	rcp6p0	2006-2099	15.33	10.81	6.656	578.3	76.34	1009	374780	2.522
GFDLESM2M	rcp8p5	2006-2099	15.83	11.24	7.049	571.1	76.13	1009	370976	2.527
HadGEM2ES	historical	1861-2005	13.64	9.094	4.923	513.5	75.11	1009	382648	2.425
HadGEM2ES	piControl	1661-2299	14.21	9.534	5.234	512.9	73.96	1009	410363	2.421
HadGEM2ES	rcp2p6	2006-2299	16.15	11.52	7.33	566.8	74.48	1008	414718	2.274
HadGEM2ES	rcp4p5	2006-2099	17.16	12.45	8.163	518.7	71.83	1008	420557	2.342
HadGEM2ES	rcp6p0	2006-2099	17.1	12.4	8.136	527	72.02	1008	419628	2.354
HadGEM2ES	rcp8p5	2006-2099	18.27	13.48	9.157	532.3	70.98	1008	427065	2.32
IPSLCM5ALR	historical	1861-2005	13.38	8.866	4.752	553.1	76.82	1008	383564	2.357
IPSLCM5ALR	piControl	1661-2299	12.84	8.241	4.018	560.8	77.34	1008	405106	2.211
IPSLCM5ALR	rcp2p6	2006-2299	15.69	11.32	7.355	607	75.22	1008	410078	2.341
IPSLCM5ALR	rcp4p5	2006-2299	17.09	12.7	8.761	607.3	73.98	1008	410582	2.288
IPSLCM5ALR	rcp6p0	2006-2099	16.2	11.86	7.943	602	74.34	1008	403839	2.32
IPSLCM5ALR	rcp8p5	2006-2299	22.32	17.9	13.96	602.2	69.45	1007	416170	2.259
MIROC5	historical	1861-2005	13.82	9.316	5.201	554.6	76	1009	380958	2.353
MIROC5	piControl	1661-2299	15.11	10.12	5.662	577.6	73.65	1008	438605	2.166
MIROC5	rcp2p6	2006-2299	16.24	11.31	6.876	612.1	73.89	1009	447397	2.384
MIROC5	rcp4p5	2006-2099	16.46	11.65	7.331	638.4	75.23	1009	434969	2.324

MIROC5	rcp6p0	2006-2099	16.38	11.53	7.152	615.3	74.18	1008	437843	2.384
MIROC5	rcp8p5	2006-2099	17.52	12.57	8.148	631.7	74.31	1009	444451	2.289

CLIMATE_ISIMIP2A

Table 37: Summary of CLIMATE_ISIMIP2A for peitz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	13.48	9.222	5.34	654.2	75.73	1007	365709	3.738
PRINCETON	1901-2012	13.23	9.254	5.083	558.3	85.32	999.2	374569	3.515
WATCH	1901-2001	13.36	9.063	5.199	601.4	76.93	1007	309798	2.786
WFDEI	1901-2010	13.47	9.18	5.229	607.6	76.54	1006	335822	3.017

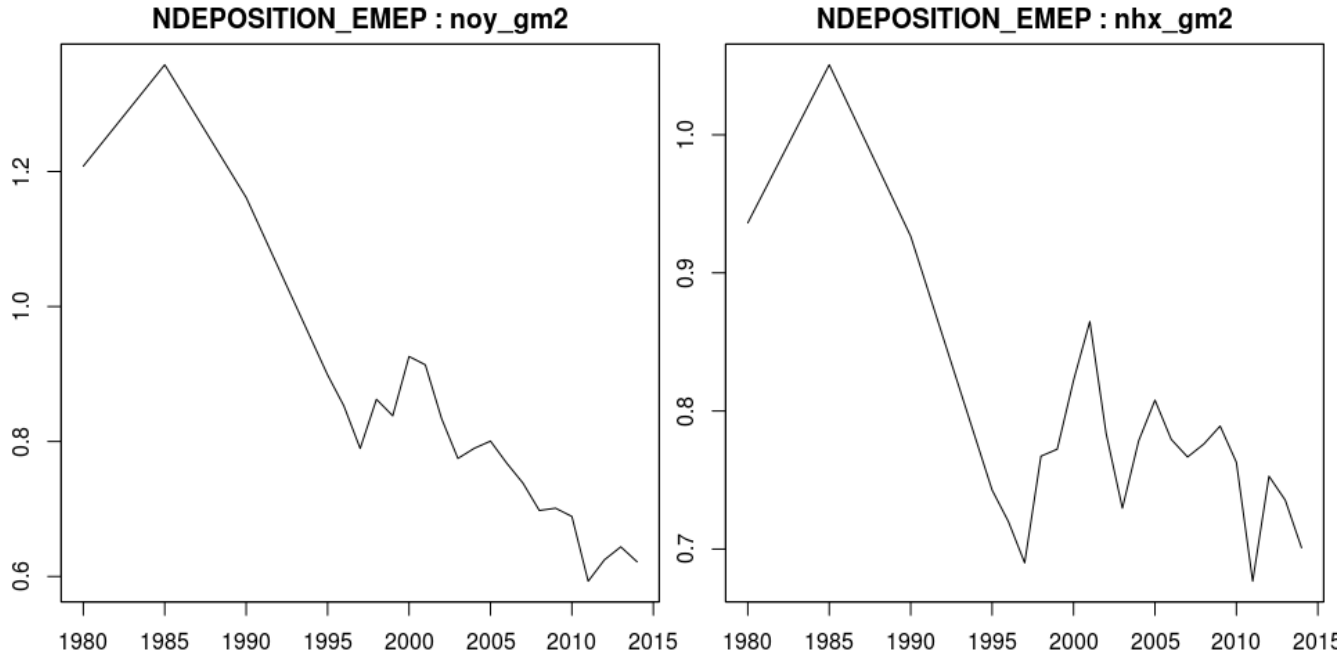
CLIMATE_ISIMIPFT

Table 38: Summary of CLIMATE_ISIMIPFT for peitz. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	13.65	9.321	5.451	603.6	81.85	1007	301382	2.76
GFDLESM2M	rcp2p6	2006-2099	14.79	10.46	6.531	640.5	81.71	1007	306896	2.984
GFDLESM2M	rcp4p5	2006-2099	15.22	10.84	6.893	641.6	81.61	1008	307086	2.963
GFDLESM2M	rcp6p0	2006-2099	15.19	10.81	6.876	637.2	81.55	1008	306633	2.938
GFDLESM2M	rcp8p5	2006-2099	15.68	11.25	7.273	632.4	81.4	1008	304045	2.942
HadGEM2ES	historical	1950-2004	13.44	9.1	5.205	605.3	76.43	1007	300671	2.751
HadGEM2ES	rcp2p6	2005-2099	16.2	11.53	7.39	603	73.53	1007	324752	2.641
HadGEM2ES	rcp4p5	2005-2099	16.96	12.27	8.101	591.9	72.4	1007	325148	2.692
HadGEM2ES	rcp6p0	2005-2099	16.91	12.23	8.086	596.4	72.4	1007	325800	2.708
HadGEM2ES	rcp8p5	2005-2099	18.06	13.28	9.086	604.9	71.57	1007	328836	2.671
IPSLCM5ALR	historical	1950-2005	13.64	9.327	5.463	605.5	77.42	1007	298839	2.766
IPSLCM5ALR	rcp2p6	2006-2099	15.71	11.48	7.713	667.8	75.69	1007	314031	2.713
IPSLCM5ALR	rcp4p5	2006-2099	16.07	11.87	8.134	664.1	75.38	1007	311371	2.697
IPSLCM5ALR	rcp6p0	2006-2099	16.09	11.91	8.196	669	75.3	1007	309354	2.724
IPSLCM5ALR	rcp8p5	2006-2099	17.17	12.93	9.153	660.5	74.27	1007	314382	2.675
MIROCESMCHEM	historical	1950-2005	13.64	9.273	5.356	606.3	89.03	1007	307006	2.875
MIROCESMCHEM	rcp2p6	2006-2099	16.44	11.86	7.829	687	88.72	1007	359300	2.417
MIROCESMCHEM	rcp4p5	2006-2099	16.42	11.99	8.091	689.3	89.36	1007	352157	2.302
MIROCESMCHEM	rcp6p0	2006-2099	16.65	12.09	8.1	697.3	88.84	1007	355831	2.386
MIROCESMCHEM	rcp8p5	2006-2099	17.67	13.12	9.157	717.8	88.84	1008	360730	2.305
NorESM1M	historical	1950-2005	13.54	9.203	5.304	592.9	80.15	1007	300126	2.752
NorESM1M	rcp2p6	2006-2099	15.21	11.04	7.226	612.3	76.58	1007	325290	2.934
NorESM1M	rcp4p5	2006-2099	15.73	11.33	7.336	601	76.48	1007	327757	2.835

NorESM1M	rcp6p0	2006-2099	15.75	11.36	7.365	611.4	76.64	1007	326850	2.837
NorESM1M	rcp8p5	2006-2099	16.43	11.86	7.761	625	76.19	1008	328316	2.793

NDEPOSITION_EMEP



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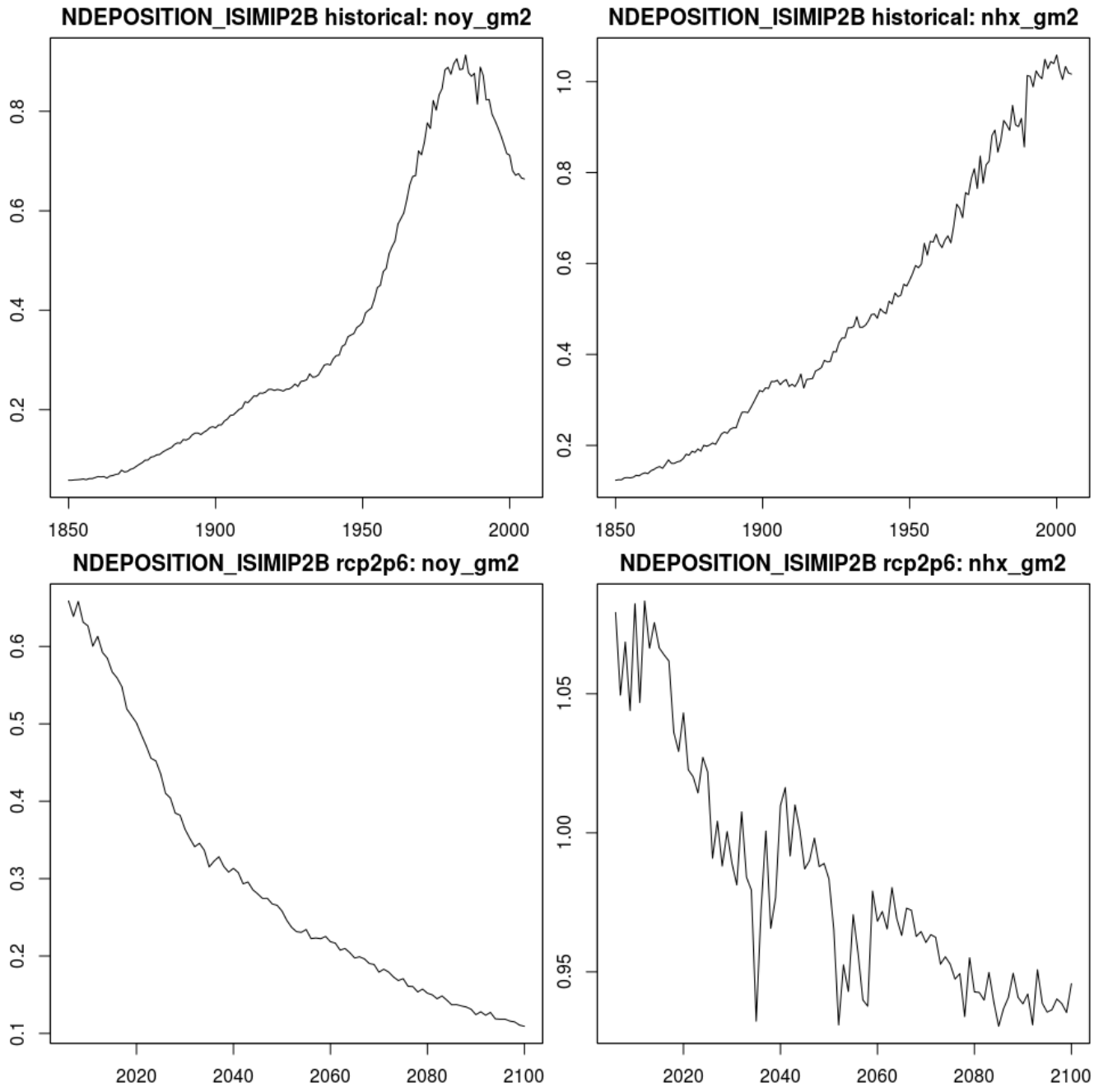

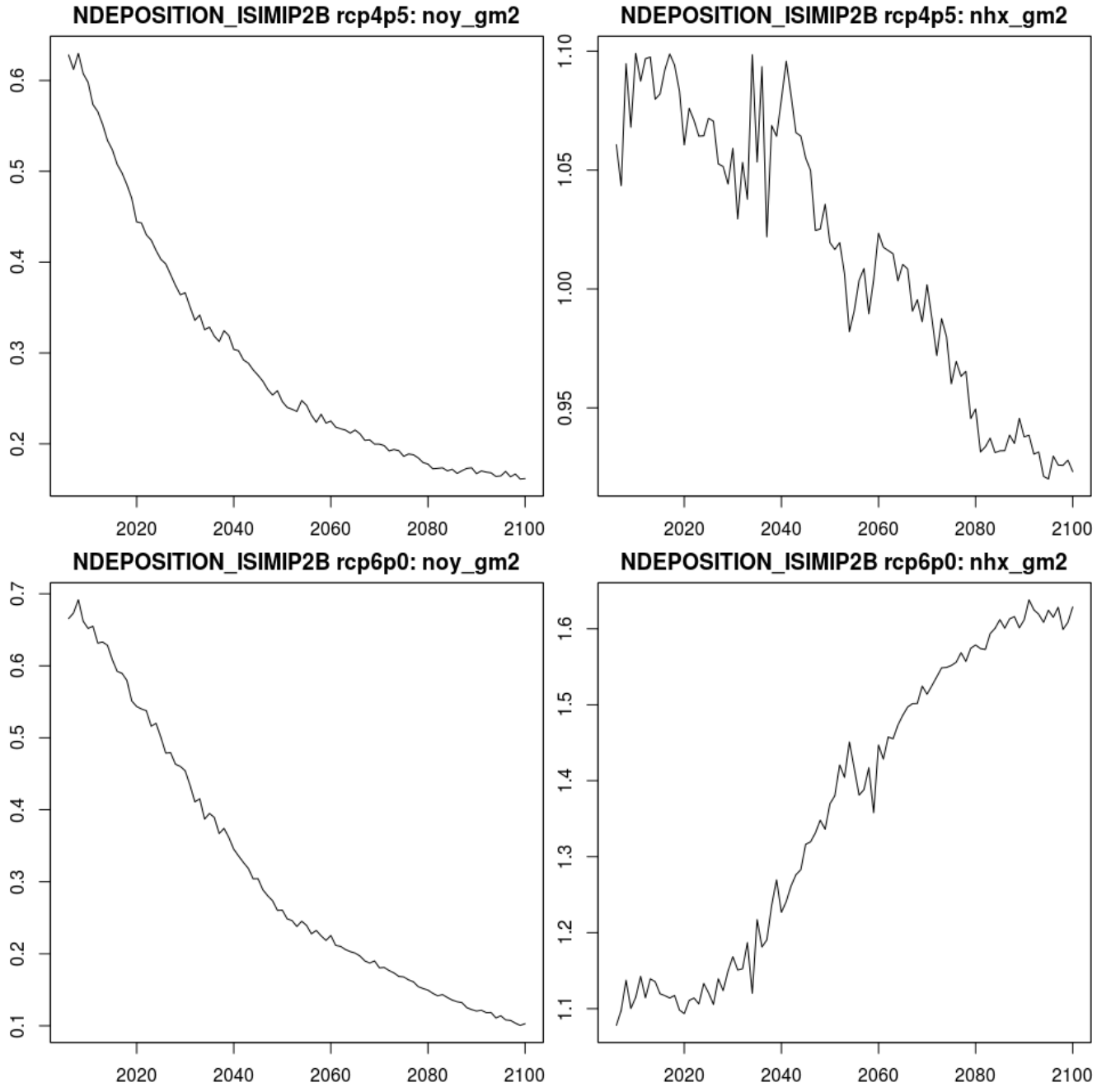
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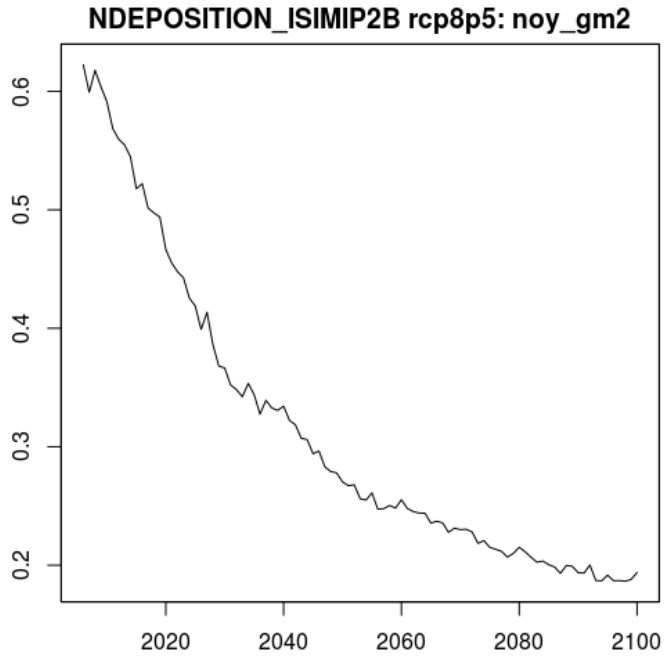
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100


NDEPOSITION_ISIMIP2B rcp8p5: noy_gm2
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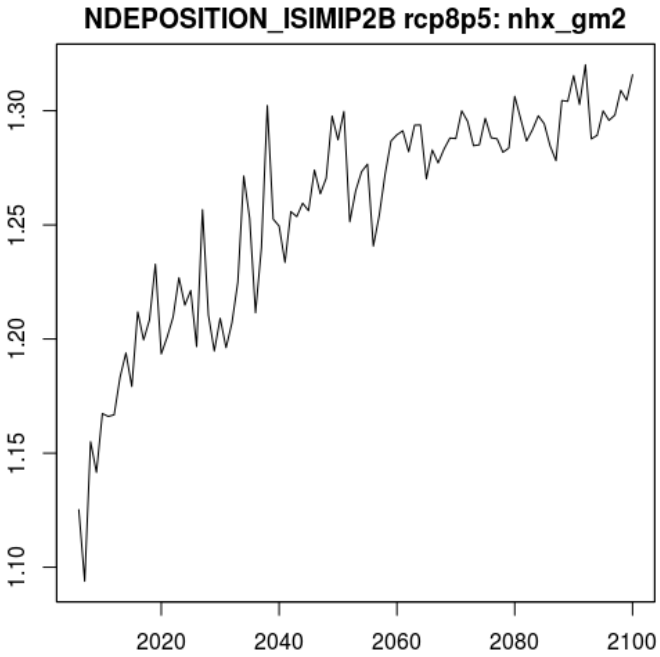
0.3
0.4
0.5
0.6
2020
2040
2060
2080
2100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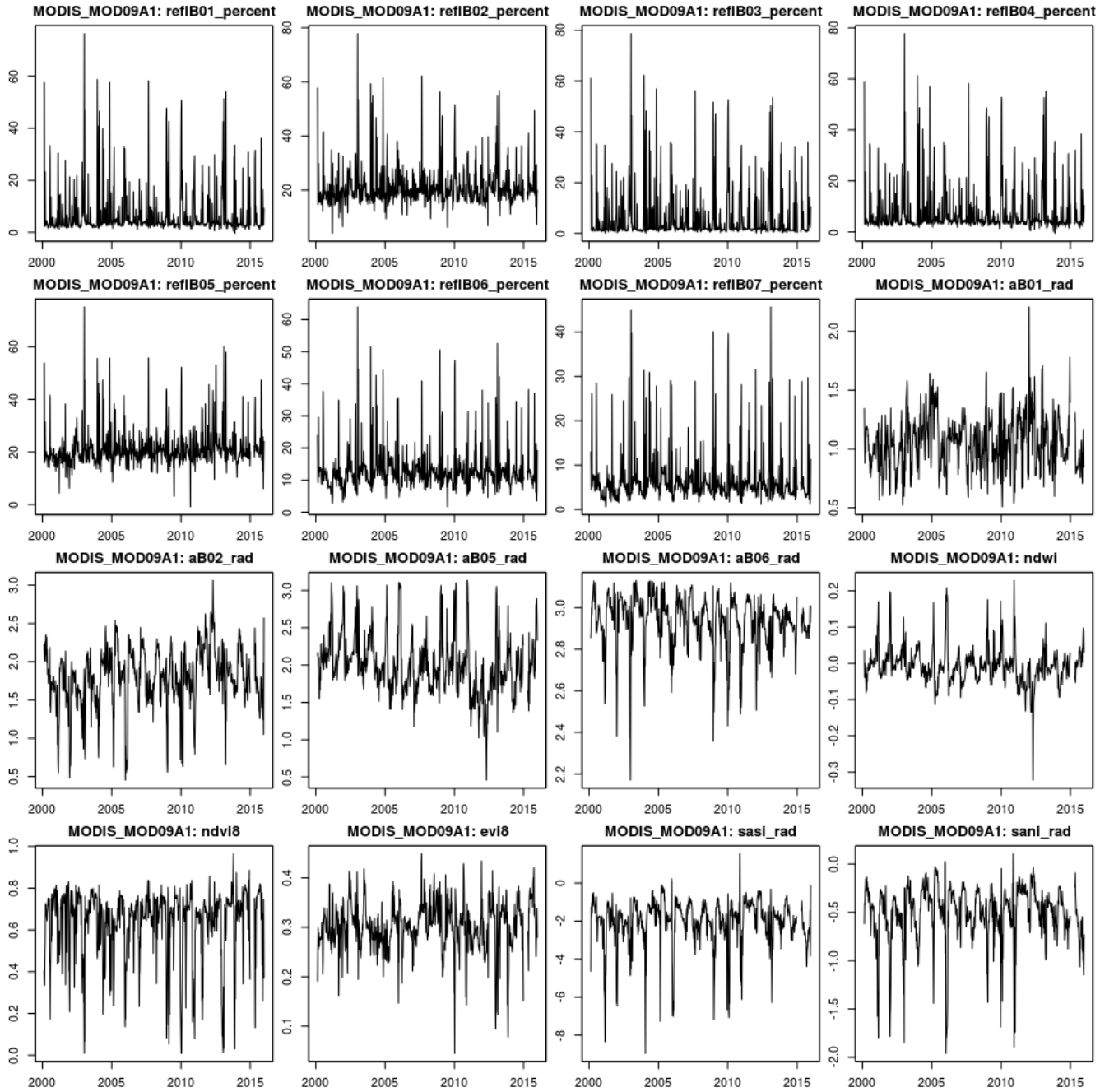
1.25
1.30
2020
2040
2060
2080
2100

MODIS_MOD09A1



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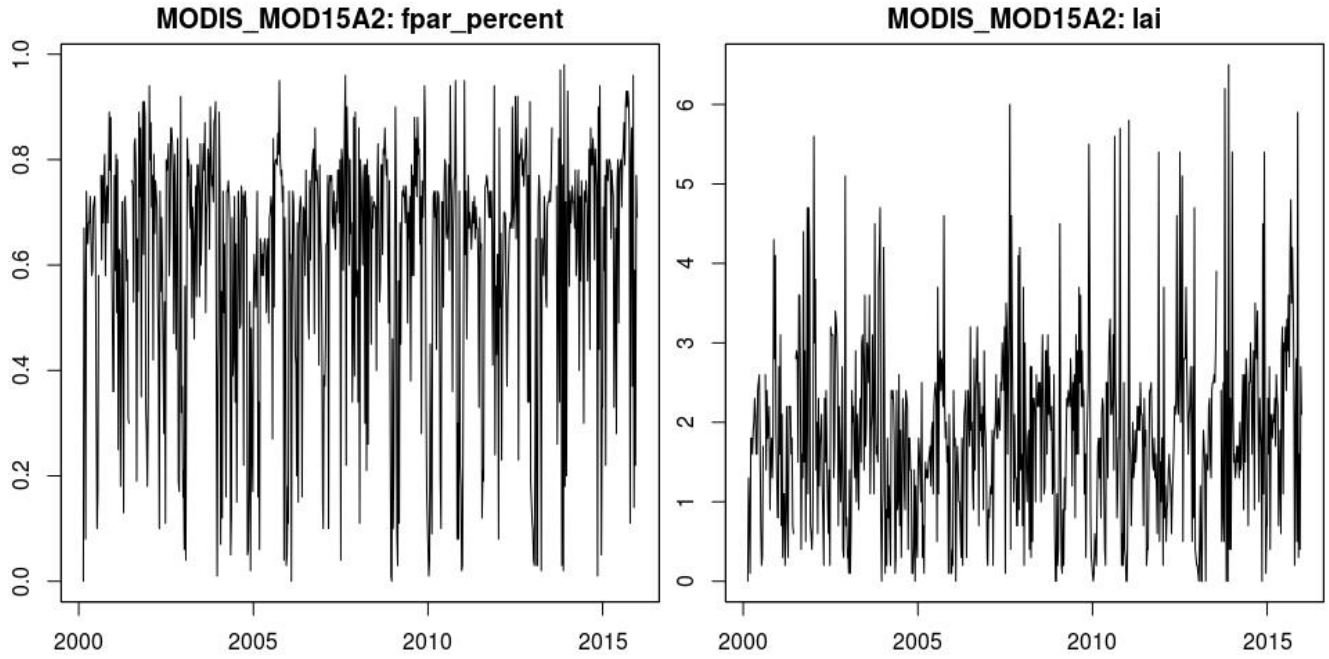

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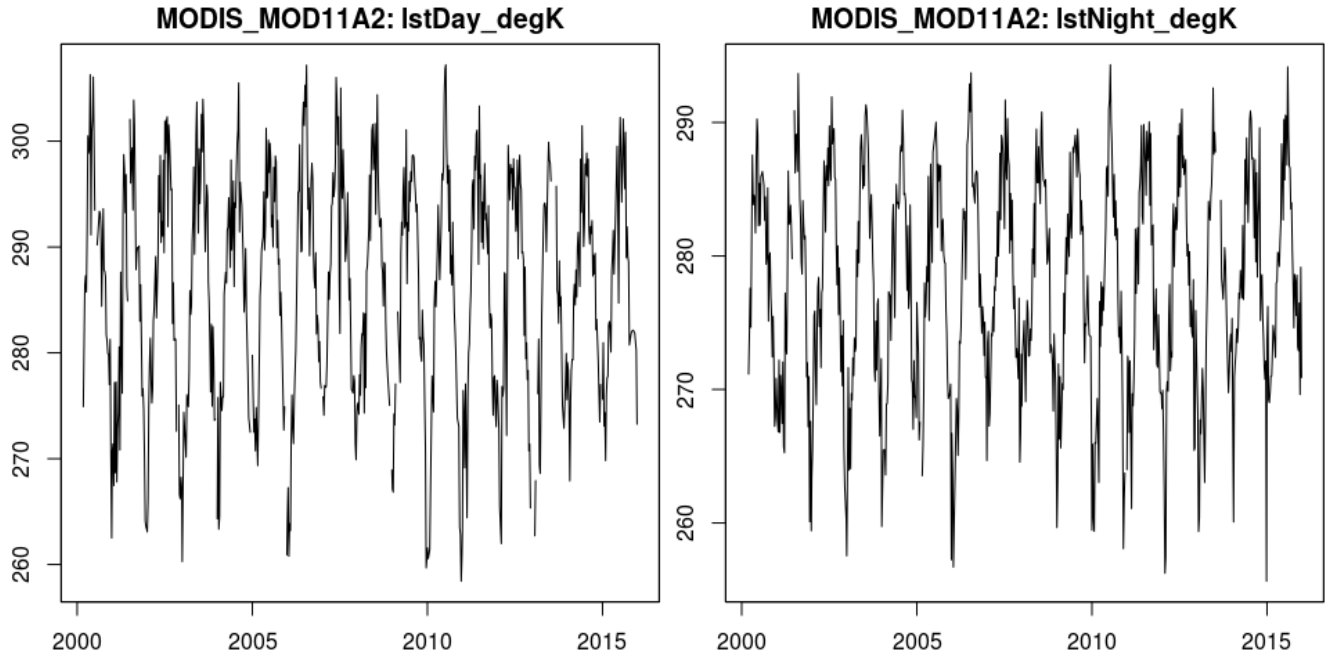

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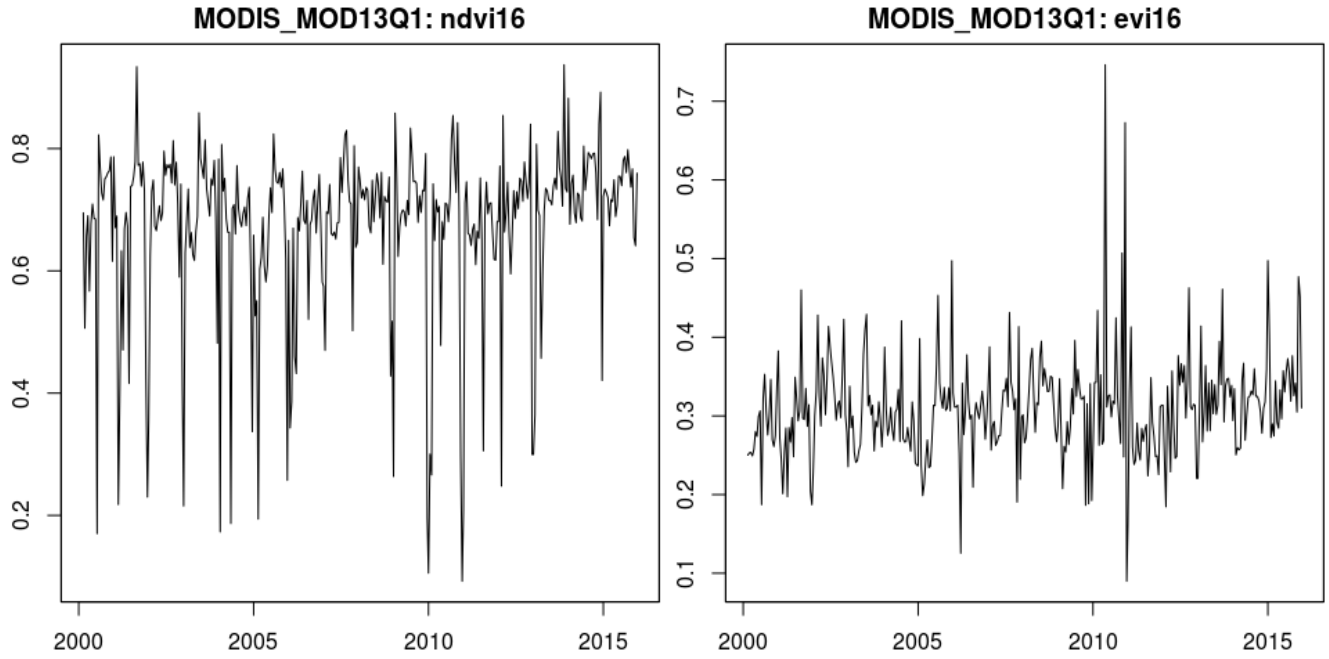
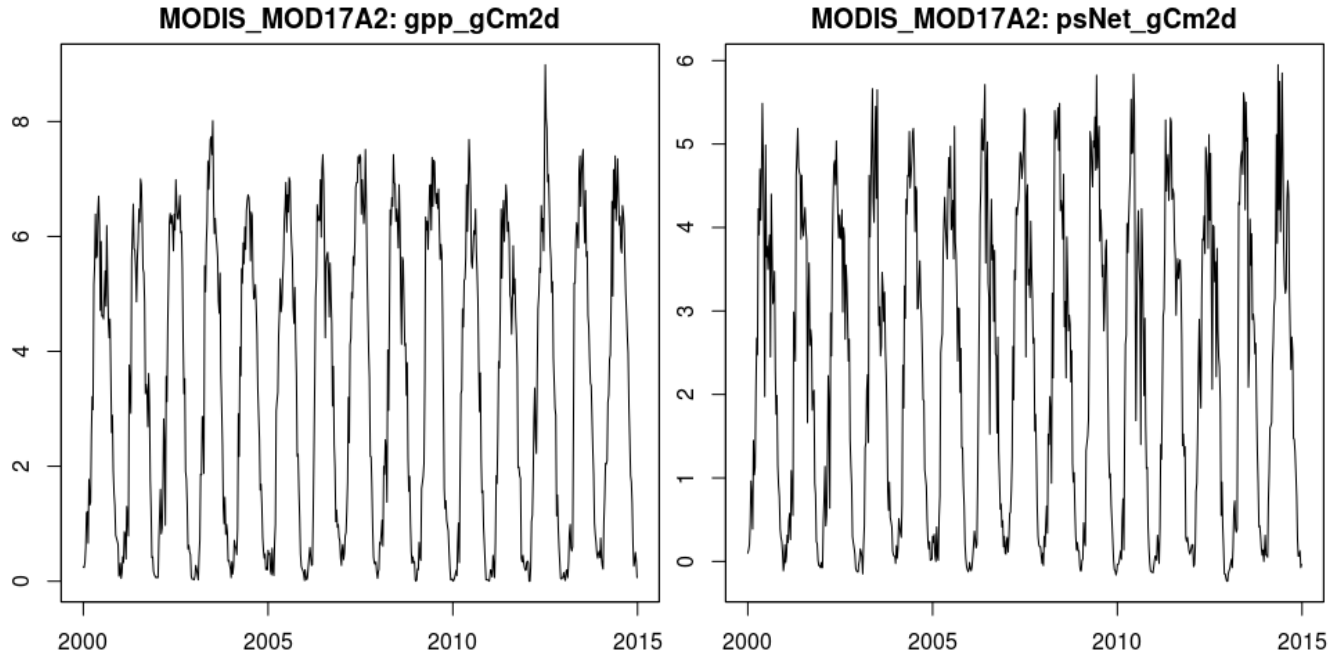


MODIS_MOD17A2



Site solling_beech

Description

Solling 304 is a long-term intensive forest monitoring plot (Level II) of the ICP Forests network in central Germany. The plot is also part of the LTER (site LTER_EU_DE_009) and of the permanent soil monitoring programme of the state of Lower Saxony. The site is situated in the center of the Solling plateau at an elevation of about 500 m a.s.l. The mean temperature was around 6.8°C and the mean annual rainfall amounted to 1113 mm during the period 1960-2013. The bedrock consist of Triassic sandstone covered with a 60 to 80 cm deep solifluction layer of loess material from which the soil, classified as an Haplic Cambisol, has developed. The humus type is a typical Moder. The tree layer consists only of European beech (Fagus sylvatica L.). Oxalis acetosella and Luzula luzuloides are the major species of the sparse ground vegetation. Actual vegetation was assigned to the Luzulo-Fagetum typicum and is close to the potential natural vegetation. The forest is a 168-year old stand with a mean DBH of 50 cm and a mean height of 30.7 m in 2016. More information about the site can be found in Meiwes et al. (2009), Meesenburg et al. (2009), Panferov et al. (2009), Le Mellec et al. (2010), Meesenburg et al. (2016) and Fleck et al. (2016).

The following data is available for the site

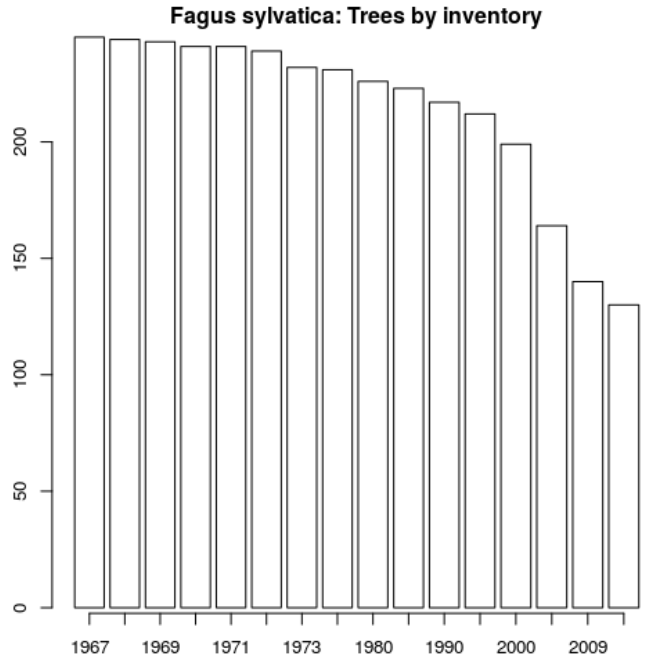
Table 39: Available data for solling_beech

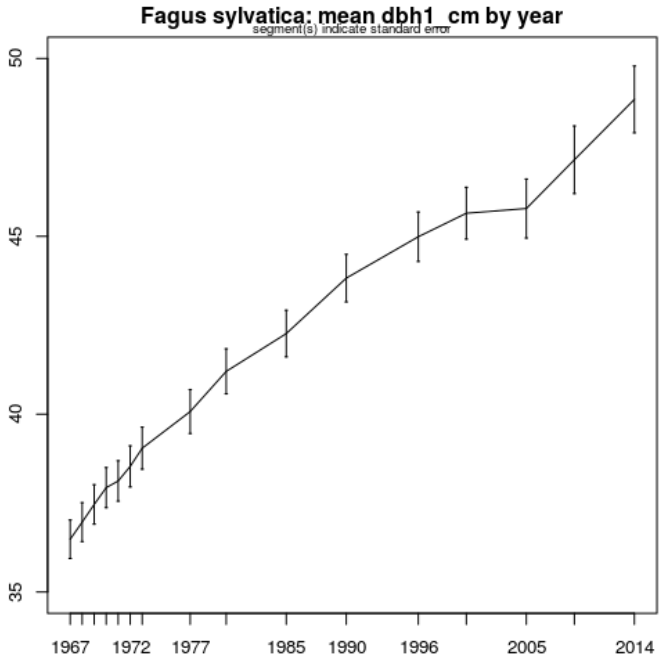
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	0
FLUX	0
ATMOSPHERICHEATCONDUCTION	0
SOILTS	0
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1

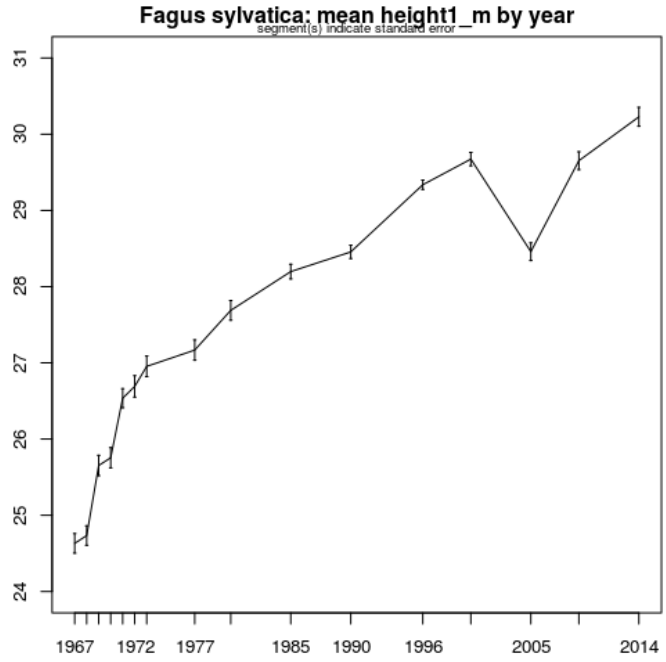
MODIS_MOD17A2	1
MODIS	1

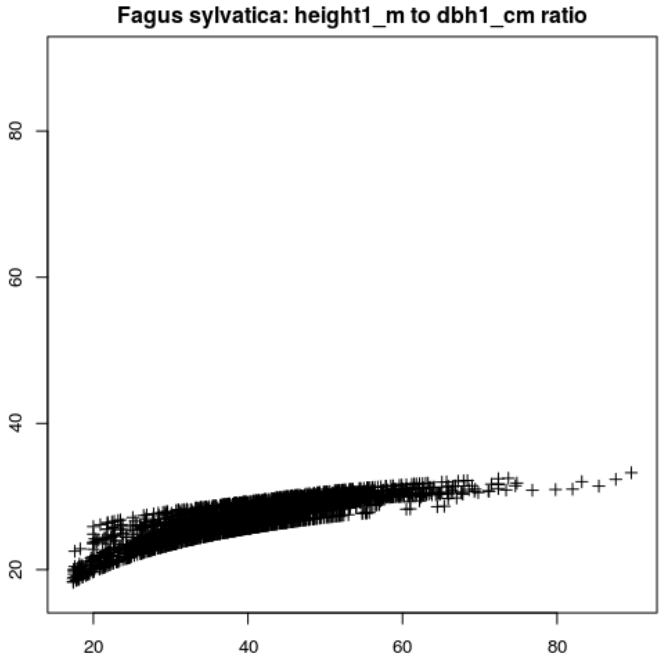
Data

TREE

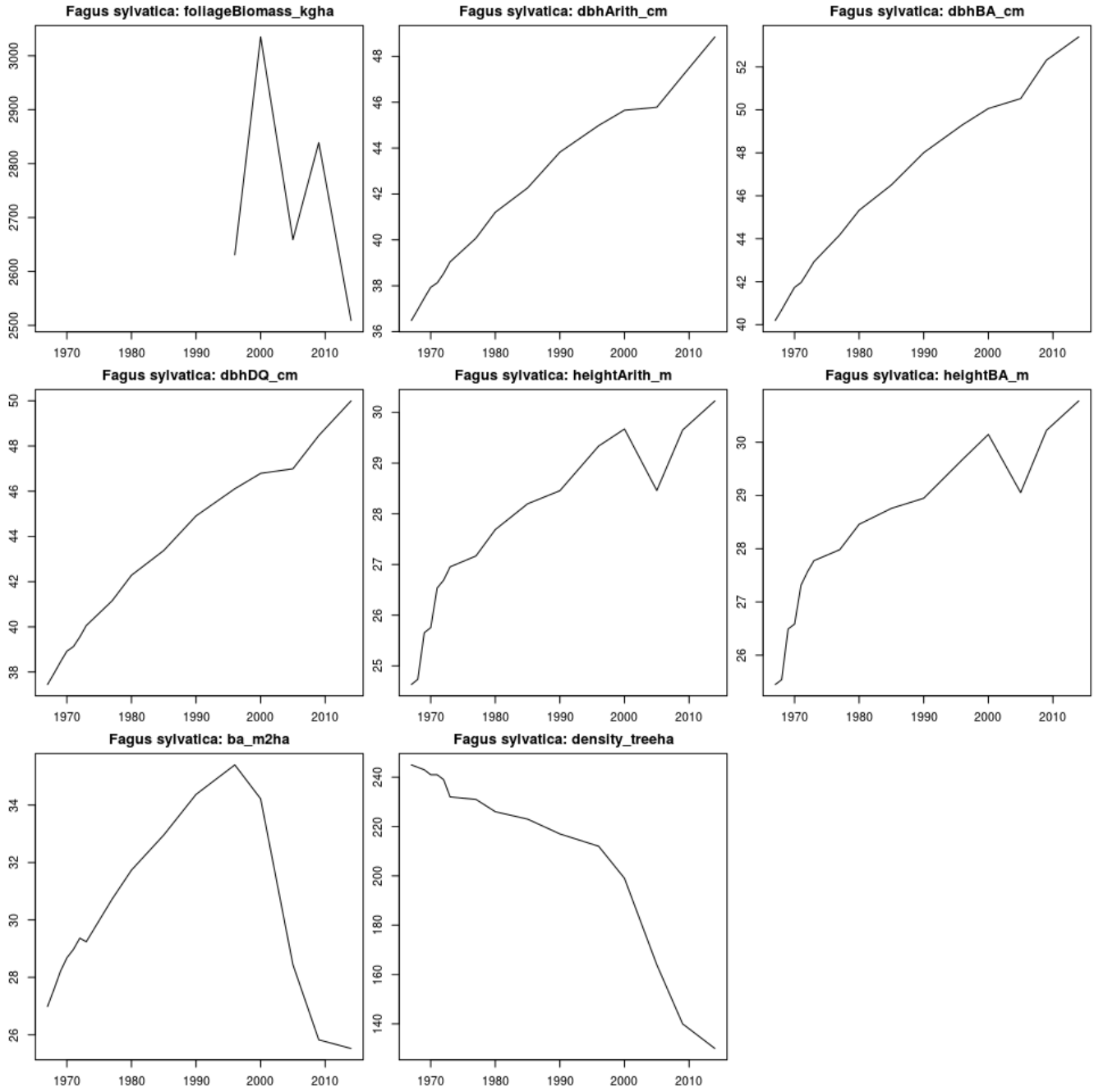








STAND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Fagus sylvatica: dbhBA_cm
Fagus sylvatica: dbhDQ_cm
Fagus sylvatica: heightArith_m
Fagus sylvatica: heightBA_m
Fagus sylvatica: ba_m2ha
Fagus sylvatica: density_treeha

CLIMATE_LOCAL

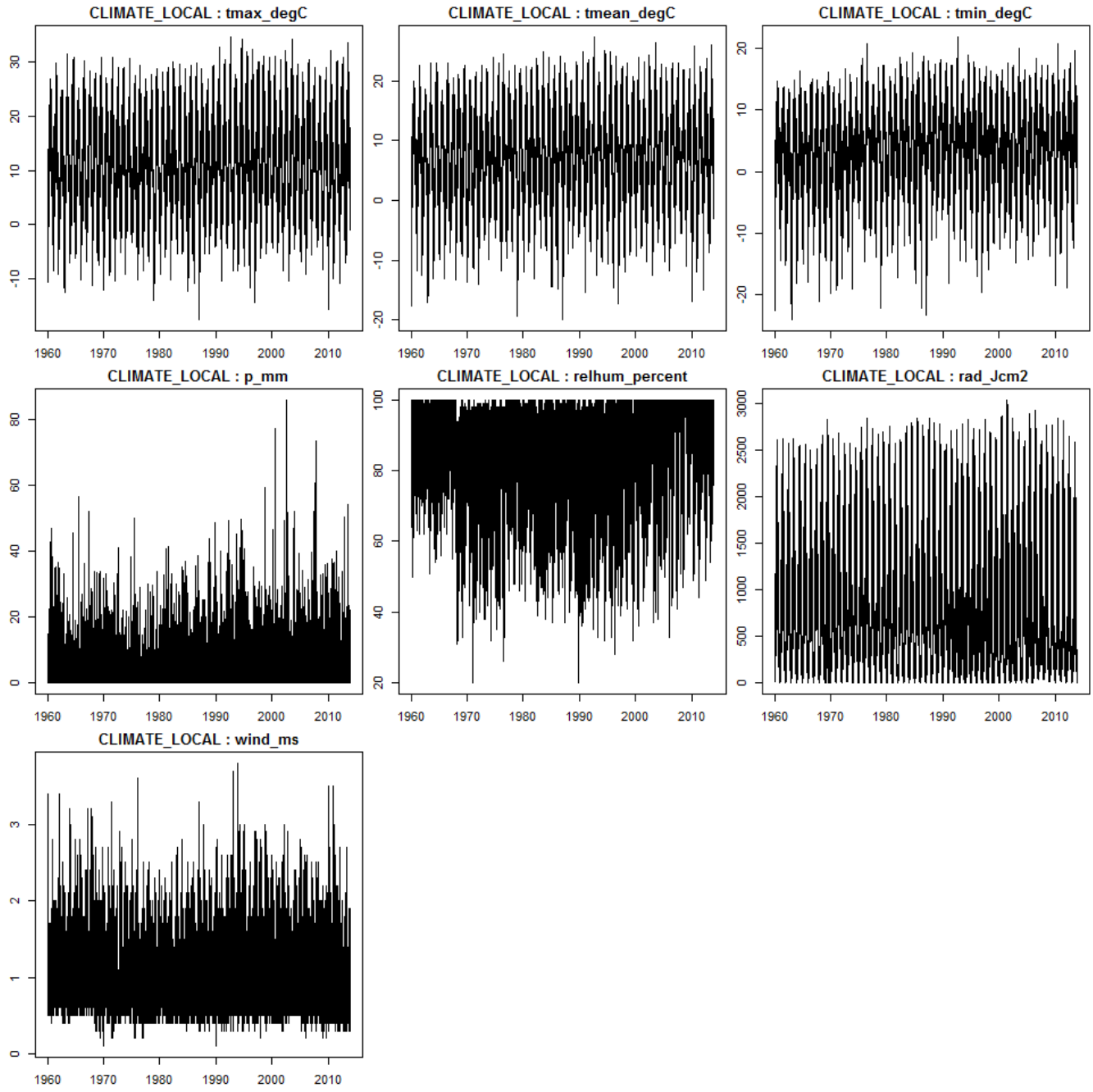


Table 40: Summary of CLIMATE_LOCAL for solling_beech. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
solling_beech	20	1960	10.4	6.61	2.89	1257	86.7	–	276096	0.934
solling_beech	20	1961	11.1	7.12	3.36	1354	88.1	–	268859	0.959
solling_beech	20	1962	9	5.16	1.5	1150	87.7	–	267883	1.03
solling_beech	20	1963	9.54	5.21	0.889	831	85.8	–	292618	0.926
solling_beech	20	1964	10.6	6.34	2.23	794	85.2	–	306326	0.983
solling_beech	20	1965	9.57	5.65	2.03	1405	88.3	–	266717	1.02
solling_beech	20	1966	10.6	6.71	3.17	1231	88.2	–	270855	0.975
solling_beech	20	1967	11.2	7.08	3.27	1195	88	–	290665	1.05
solling_beech	20	1968	10.3	6.15	2.51	1078	81.6	–	282668	0.988
solling_beech	20	1969	10	6.18	2.11	999	83.8	–	297545	1.07
solling_beech	20	1970	9.49	5.67	2.17	1438	85	–	276604	0.961
solling_beech	20	1971	10.8	6.57	2.38	771	80.5	–	302844	0.797
solling_beech	20	1972	9.91	5.86	2.04	880	83.5	–	274764	0.904
solling_beech	20	1973	10.5	6.32	2.64	958	82.5	–	295866	0.961
solling_beech	20	1974	10.5	6.7	3.53	1078	83.1	–	269149	1.02
solling_beech	20	1975	9.85	7.07	4.55	866	82.2	–	297833	0.997
solling_beech	20	1976	9.38	6.47	3.78	685	82.3	–	313807	0.939
solling_beech	20	1977	10.3	6.93	3.97	908	87	–	253898	0.966
solling_beech	20	1978	9.64	6.25	3.35	967	87.4	–	253917	0.919
solling_beech	20	1979	9.45	5.85	2.71	832	86.3	–	263678	0.944
solling_beech	20	1980	9.55	5.91	2.7	1060	85.1	–	277682	0.969
solling_beech	20	1981	9.95	6.26	3.11	1528	86.9	–	243098	0.912
solling_beech	20	1982	11.4	7.33	4.04	877	80.7	–	281095	0.879
solling_beech	20	1983	11.1	7.38	3.99	1073	79.9	–	287931	0.962
solling_beech	20	1984	9.48	6.22	3.46	1220	85.7	–	264659	0.943

solling_beech	20	1985	9.21	5.63	2.76	1021	84.4	–	280525	0.935
solling_beech	20	1986	9.74	6.12	2.97	1195	84.6	–	284680	0.997
solling_beech	20	1987	8.92	5.43	2.4	1229	85.9	–	261393	0.938
solling_beech	20	1988	10.4	7.29	4.45	1223	84.2	–	275044	1.11
solling_beech	20	1989	11.8	8.23	5.03	942	78.7	–	317569	0.982
solling_beech	20	1990	11.6	7.88	4.77	1022	80.3	–	298969	1.07
solling_beech	20	1991	10.7	6.78	3.48	861	80.9	–	293693	1.01
solling_beech	20	1992	11.6	7.76	4.43	1211	82.6	–	3e+05	1.15
solling_beech	20	1993	10.9	6.78	3.44	1274	82.8	–	290524	1.19
solling_beech	20	1994	12.1	7.97	4.55	1420	85	–	295065	1.23
solling_beech	20	1995	11.5	7.27	3.76	1247	84.5	–	298485	1.15
solling_beech	20	1996	9.68	5.46	2.11	938	85.6	–	279598	1.06
solling_beech	20	1997	11.8	7.29	3.73	994	83.4	–	314371	1.1
solling_beech	20	1998	11.2	7.21	3.96	1572	86	–	251600	1.19
solling_beech	20	1999	11.9	7.67	4.12	1120	85	–	276943	1.07
solling_beech	20	2000	11.5	7.7	4.47	1134	87.5	–	277166	1.06
solling_beech	20	2001	10.7	6.96	3.73	1299	86.6	–	293253	1.1
solling_beech	20	2002	10.9	7.35	4.21	1483	88.3	–	274009	1.11
solling_beech	20	2003	12.2	7.57	3.82	887	83.2	–	344930	1.02
solling_beech	20	2004	10.9	6.92	3.65	1207	88.7	–	287077	1.12
solling_beech	20	2005	10.4	6.79	3.55	1137	90.4	–	307362	1.06
solling_beech	20	2006	11.1	7.46	4.29	1121	90.1	–	309979	1.01
solling_beech	20	2007	11.1	7.71	4.62	1648	91.7	–	286557	1.07
solling_beech	20	2008	10.7	7.32	4.32	1078	91.6	–	298102	0.992
solling_beech	20	2009	10.6	7.14	3.92	1196	91.4	–	288789	0.876
solling_beech	20	2010	9.12	5.73	2.54	1147	88.5	–	290963	0.939
solling_beech	20	2011	11.9	7.88	4.41	1000	88	–	294815	1.01
solling_beech	20	2012	10.5	6.91	3.78	1027	89.9	–	278029	0.911

solling_beech	20	2013	11.1	7.04	3.53	1036	89.2	–	264990	0.926
solling_beech	20	1960-2013	10.5	6.75	3.39	1113	85.6	–	285027	1.01

CLIMATE_ISIMIP2B

Table 41: Summary of CLIMATE_ISIMIP2B for solling_beech. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	12.02	8.291	4.63	965.5	78.4	986	351220	3.417
GFDLESM2M	piControl	1661-2099	11.91	8.18	4.535	1020	80.61	985.8	350355	2.769
GFDLESM2M	rcp2p6	2006-2099	13.02	9.348	5.668	1026	78.29	986.6	353728	3.827
GFDLESM2M	rcp4p5	2006-2099	13.41	9.677	5.958	1031	78.23	986.9	355083	3.809
GFDLESM2M	rcp6p0	2006-2099	13.52	9.726	5.961	1012	78.09	987	359177	3.725
GFDLESM2M	rcp8p5	2006-2099	13.9	10.06	6.267	1023	78.27	987.1	351752	3.579
HadGEM2ES	historical	1861-2005	11.58	7.856	4.173	913.7	77.89	986.5	357000	3.782
HadGEM2ES	piControl	1661-2299	12	8.187	4.411	921.1	77.23	986.2	377726	3.8
HadGEM2ES	rcp2p6	2006-2299	13.97	10.15	6.42	1003	77.54	986	389972	3.632
HadGEM2ES	rcp4p5	2006-2099	14.9	11.01	7.185	957.8	75.18	986.3	394493	3.64
HadGEM2ES	rcp6p0	2006-2099	14.86	10.97	7.16	924.9	75.06	986.4	394561	3.69
HadGEM2ES	rcp8p5	2006-2099	15.92	11.93	8.069	959.9	74.25	986.6	404870	3.609
IPSLCM5ALR	historical	1861-2005	11.41	7.663	3.951	923.2	78.91	985.9	360181	3.76
IPSLCM5ALR	piControl	1661-2299	10.86	7.039	3.209	914.5	78.98	985.9	380260	3.712
IPSLCM5ALR	rcp2p6	2006-2299	13.63	10.02	6.474	1021	77.67	985.8	383126	3.671
IPSLCM5ALR	rcp4p5	2006-2299	14.96	11.32	7.772	1011	76.55	986.2	386531	3.585
IPSLCM5ALR	rcp6p0	2006-2099	14.11	10.52	7	1004	76.72	985.9	380464	3.731
IPSLCM5ALR	rcp8p5	2006-2299	20.08	16.37	12.77	1049	72.23	985.7	397025	3.511
MIROC5	historical	1861-2005	11.8	8.118	4.483	923.5	78.22	986.3	354907	3.505
MIROC5	piControl	1661-2299	12.8	8.766	4.875	979.5	76.81	985.8	404118	3.158
MIROC5	rcp2p6	2006-2299	13.99	10	6.031	1012	75.42	986.6	420823	4.025
MIROC5	rcp4p5	2006-2099	14.36	10.38	6.472	1038	76.48	986.6	410190	3.706

MIROC5	rcp6p0	2006-2099	14.14	10.17	6.252	1015	76.06	986.5	410564	3.77
MIROC5	rcp8p5	2006-2099	15.33	11.26	7.271	1051	76.07	986.9	417759	3.546

CLIMATE_ISIMIP2BLBC

Table 42: Summary of CLIMATE_ISIMIP2BLBC for solling_beech. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	10.47	6.63	3.261	1107	85.66	–	288257	0.945
GFDLESM2M	piControl	1661-2099	10.38	6.52	3.164	1170	87.22	–	286477	0.766
GFDLESM2M	rcp2p6	2006-2099	11.46	7.687	4.302	1177	85.49	–	289601	1.057
GFDLESM2M	rcp4p5	2006-2099	11.85	8.017	4.594	1183	85.43	–	291224	1.053
GFDLESM2M	rcp6p0	2006-2099	11.96	8.066	4.6	1161	85.24	–	295942	1.029
GFDLESM2M	rcp8p5	2006-2099	12.35	8.395	4.908	1174	85.45	–	287892	0.989
HadGEM2ES	historical	1861-2005	10.28	6.417	3.001	1055	84.32	–	300259	1.027
HadGEM2ES	piControl	1661-2299	10.7	6.748	3.246	1064	83.67	–	323548	1.032
HadGEM2ES	rcp2p6	2006-2299	12.67	8.714	5.254	1159	84	–	336700	0.986
HadGEM2ES	rcp4p5	2006-2099	13.62	9.565	6.023	1107	81.47	–	340986	0.988
HadGEM2ES	rcp6p0	2006-2099	13.57	9.53	5.999	1070	81.3	–	341408	1.002
HadGEM2ES	rcp8p5	2006-2099	14.63	10.49	6.91	1111	80.44	–	352407	0.98
IPSLCM5ALR	historical	1861-2005	10.09	6.254	2.848	1091	85.38	–	300351	1.024
IPSLCM5ALR	piControl	1661-2299	9.544	5.63	2.115	1081	85.36	–	320787	1.01
IPSLCM5ALR	rcp2p6	2006-2299	12.32	8.613	5.358	1208	84.26	–	324713	1
IPSLCM5ALR	rcp4p5	2006-2299	13.65	9.914	6.657	1196	83.12	–	329105	0.976
IPSLCM5ALR	rcp6p0	2006-2099	12.8	9.112	5.882	1188	83.29	–	322919	1.016
IPSLCM5ALR	rcp8p5	2006-2299	18.76	14.96	11.66	1244	78.32	–	342016	0.956
MIROC5	historical	1861-2005	10.53	6.666	3.273	1111	84.85	–	301185	0.96
MIROC5	piControl	1661-2299	11.54	7.314	3.684	1179	83.41	–	354557	0.865
MIROC5	rcp2p6	2006-2299	12.71	8.549	4.845	1217	81.92	–	373206	1.104
MIROC5	rcp4p5	2006-2099	13.08	8.924	5.283	1252	83.08	–	361628	1.016

MIROC5	rcp6p0	2006-2099	12.86	8.714	5.062	1223	82.63	–	362358	1.034
MIROC5	rcp8p5	2006-2099	14.05	9.803	6.087	1265	82.65	–	370140	0.972

CLIMATE_ISIMIP2A

Table 43: Summary of CLIMATE_ISIMIP2A for solling_beech. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	11.75	7.91	4.438	908.9	80.45	988.6	354952	3.937
PRINCETON	1901-2012	11.49	7.941	4.175	720.6	86.61	994.7	365007	3.693
WATCH	1901-2001	11.69	7.791	4.357	937.7	79.3	986	307616	2.739
WFDEI	1901-2010	11.79	7.954	4.455	940.6	79.22	986	331452	3.026

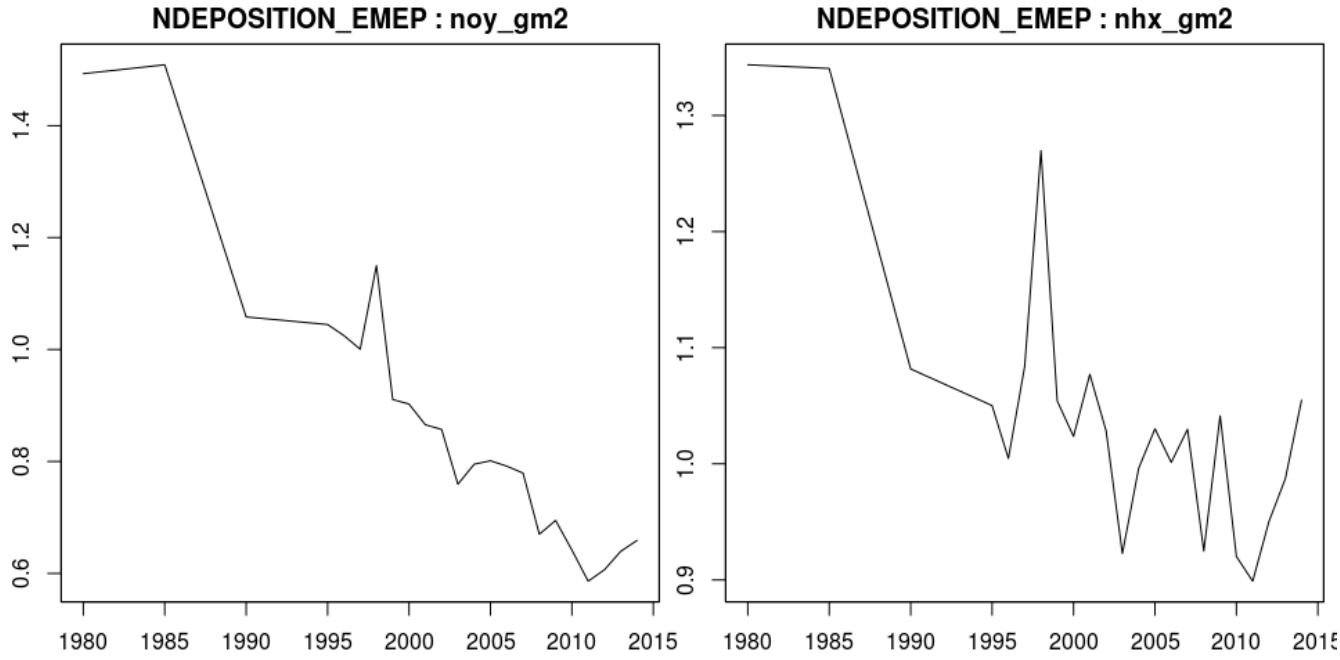
CLIMATE_ISIMIPFT

Table 44: Summary of CLIMATE_ISIMIPFT for solling_beech. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

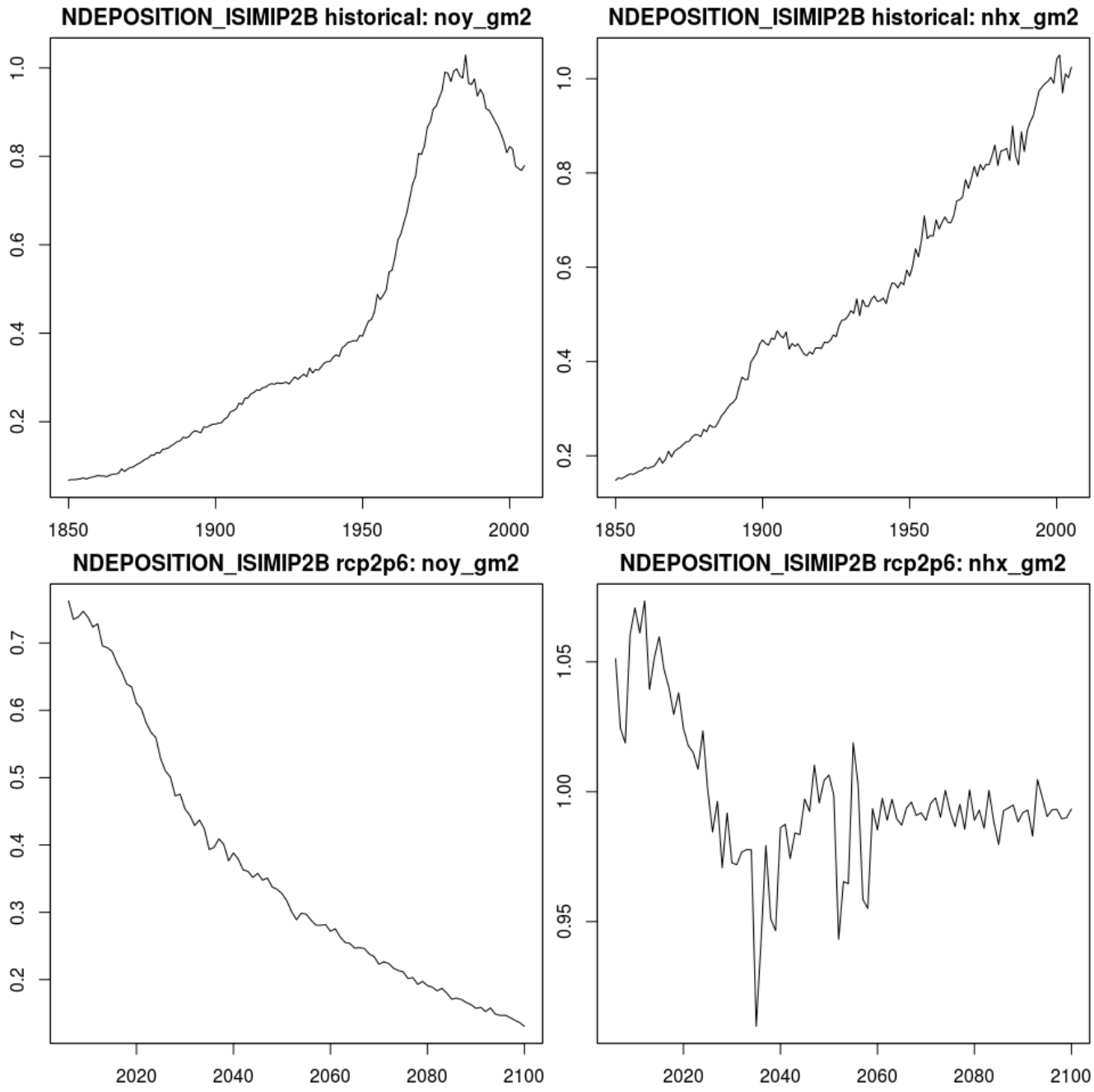
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	11.71	7.843	4.433	972.1	83.16	985.8	299367	2.703
GFDLESM2M	rcp2p6	2006-2099	12.64	8.812	5.381	1037	83.35	986.2	301939	2.928
GFDLESM2M	rcp4p5	2006-2099	13.05	9.158	5.695	1045	83.21	986.5	302757	2.887
GFDLESM2M	rcp6p0	2006-2099	13.13	9.202	5.722	1026	82.99	986.6	304269	2.821
GFDLESM2M	rcp8p5	2006-2099	13.52	9.535	6.02	1036	83.18	986.7	300243	2.765
HadGEM2ES	historical	1950-2004	11.55	7.681	4.258	970.7	76.56	985.9	299026	2.711
HadGEM2ES	rcp2p6	2005-2099	14.05	9.878	6.247	992.4	74.29	985.9	323108	2.6
HadGEM2ES	rcp4p5	2005-2099	14.83	10.62	6.95	987	73.25	986	323433	2.623
HadGEM2ES	rcp6p0	2005-2099	14.8	10.59	6.929	951.5	73.02	986.2	324949	2.662
HadGEM2ES	rcp8p5	2005-2099	15.86	11.55	7.837	993.5	72.38	986.3	328351	2.609
IPSLCM5ALR	historical	1950-2005	11.72	7.852	4.443	968.1	78.21	985.9	298085	2.733
IPSLCM5ALR	rcp2p6	2006-2099	13.65	9.858	6.522	1042	76.62	985.7	313461	2.706
IPSLCM5ALR	rcp4p5	2006-2099	14.02	10.23	6.914	1034	76.45	986.2	311196	2.673
IPSLCM5ALR	rcp6p0	2006-2099	14.04	10.28	6.991	1033	76.21	985.8	309603	2.744
IPSLCM5ALR	rcp8p5	2006-2099	15.07	11.24	7.876	1027	75.32	986	314994	2.661
MIROCESMCHEM	historical	1950-2005	11.65	7.796	4.39	983.6	91.49	985.6	305806	2.73
MIROCESMCHEM	rcp2p6	2006-2099	14.37	10.32	6.78	1124	91.05	985.9	363820	2.528
MIROCESMCHEM	rcp4p5	2006-2099	14.27	10.45	7.079	1110	91.75	986.4	357358	2.365
MIROCESMCHEM	rcp6p0	2006-2099	14.6	10.55	7.032	1122	90.97	986.1	361982	2.635
MIROCESMCHEM	rcp8p5	2006-2099	15.4	11.49	8.079	1154	91.42	986.5	366684	2.329
NorESM1M	historical	1950-2005	11.63	7.733	4.291	960.1	80.17	985.9	299444	2.7
NorESM1M	rcp2p6	2006-2099	13.18	9.272	5.774	988.2	77.63	986.2	323535	2.79

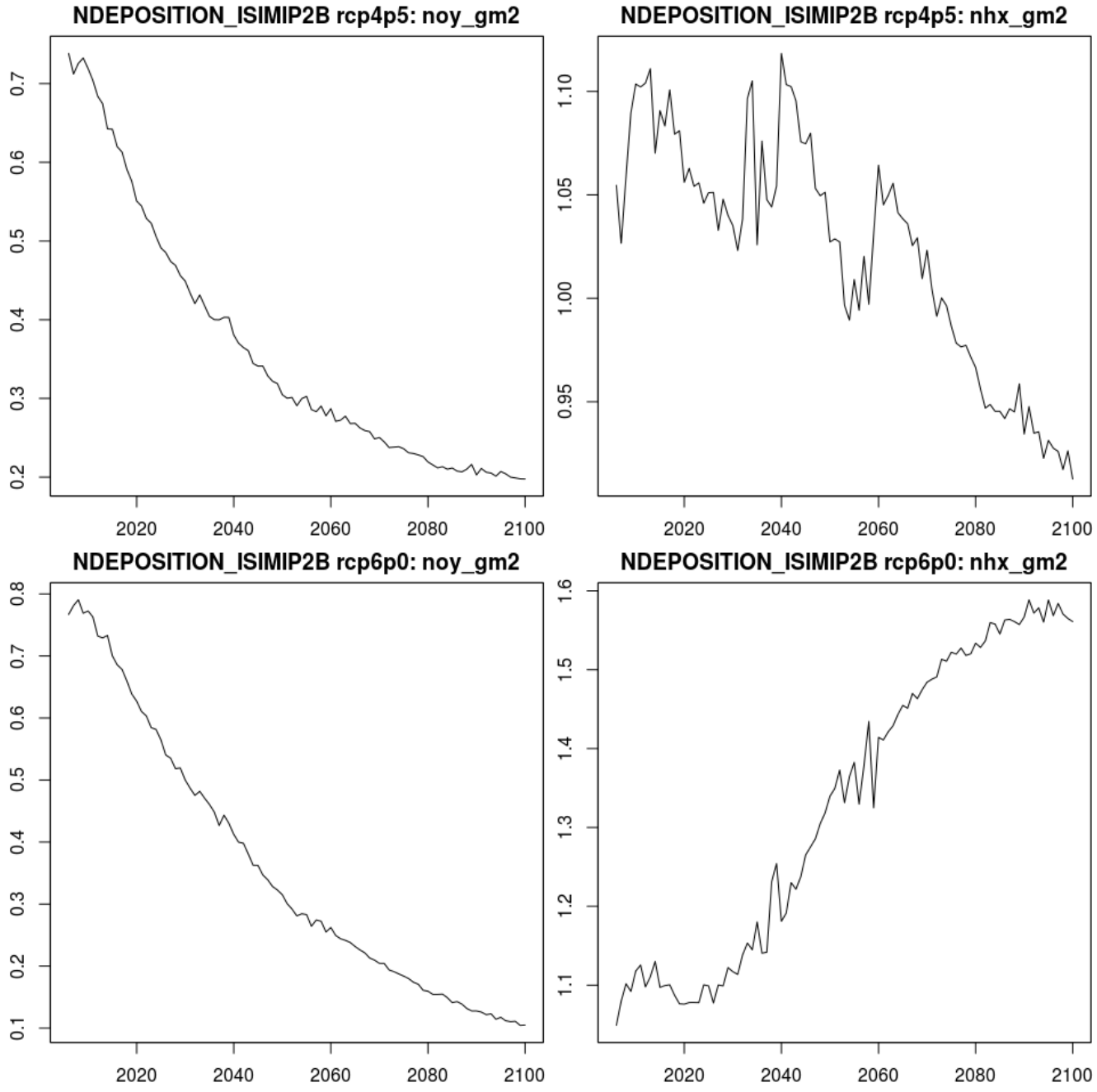
NorESM1M	rcp4p5	2006-2099	13.64	9.577	5.937	979	77.31	986.4	327072	2.745
NorESM1M	rcp6p0	2006-2099	13.69	9.587	5.933	989.3	77.71	986.5	324772	2.73
NorESM1M	rcp8p5	2006-2099	14.37	10.1	6.332	1024	77.31	986.8	327935	2.659

NDEPOSITION_EMEP



NDEPOSITION_ISIMIP2B

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NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
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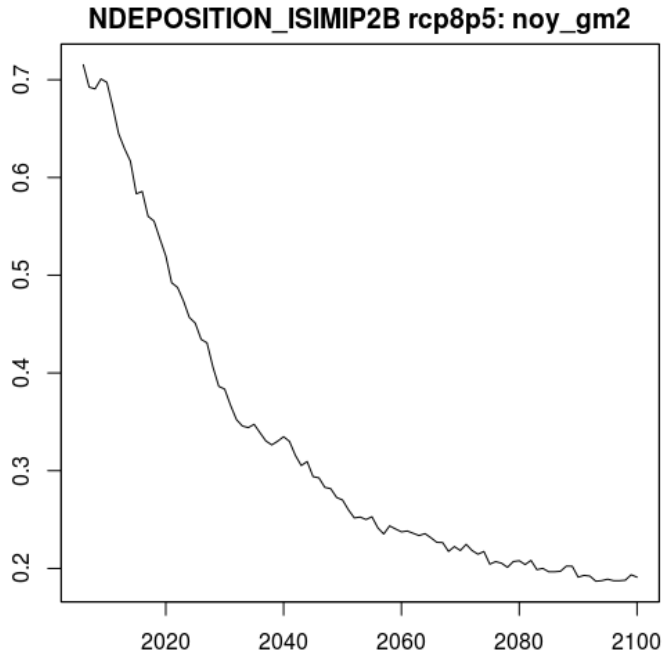
2040
2060
2080
2100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0.5
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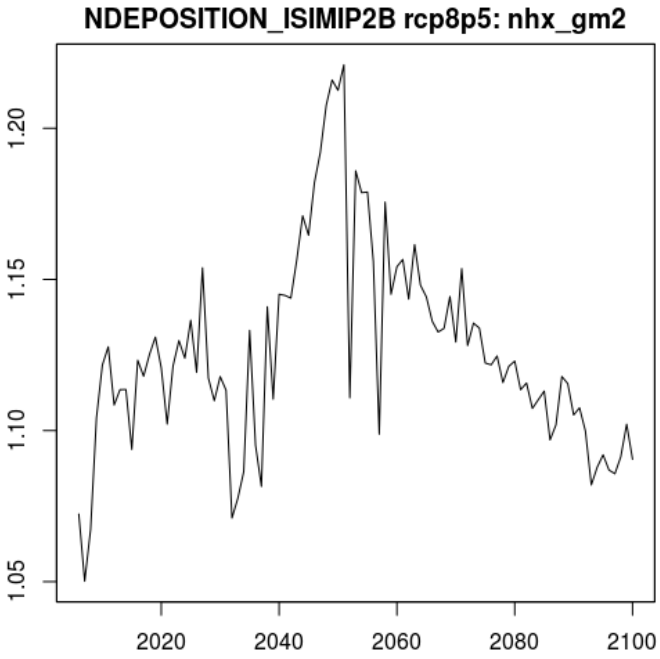
0.7
2020
2040
2060
2080
2100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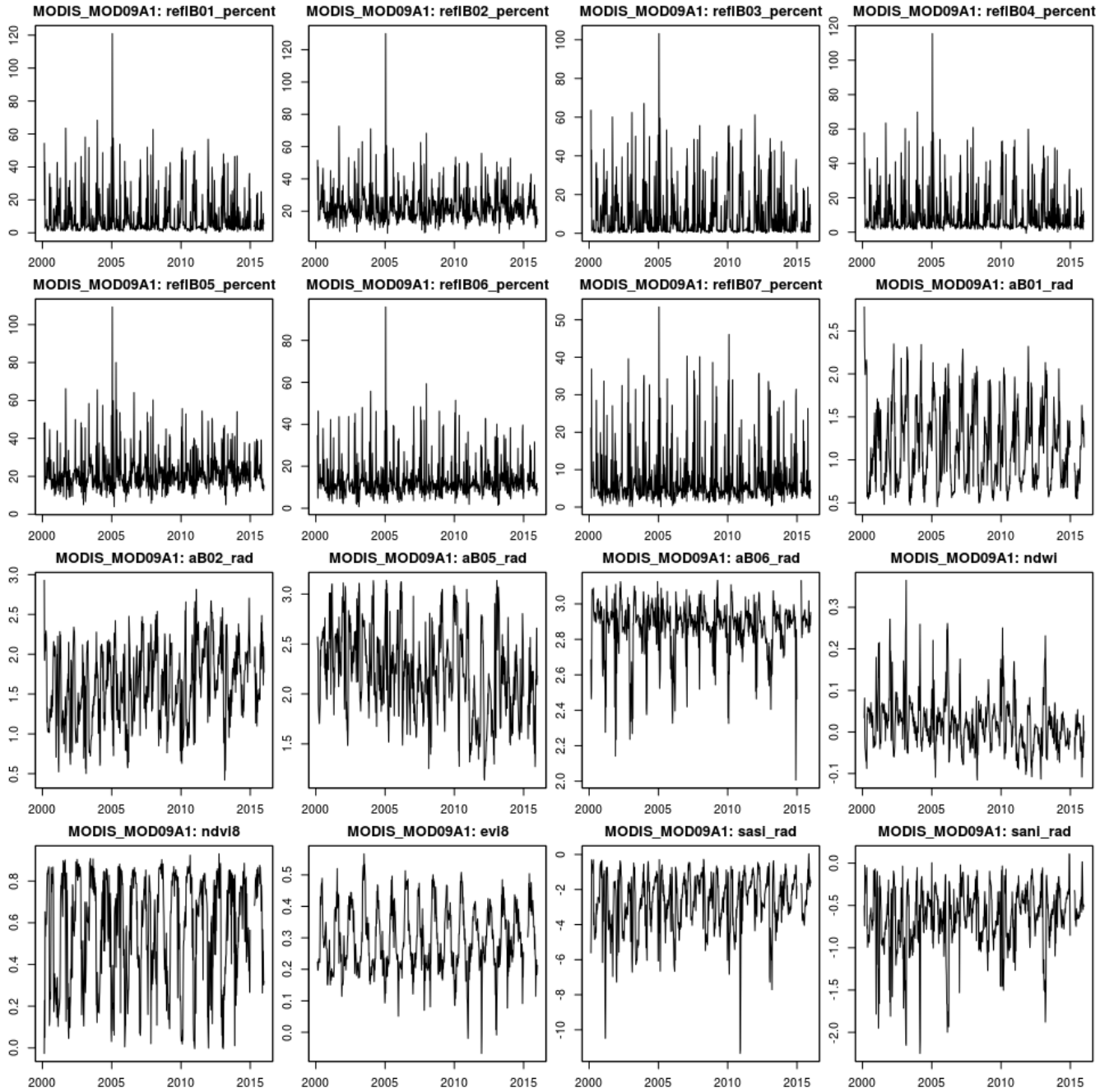
1.20
2020
2040
2060
2080
2100

MODIS_MOD09A1



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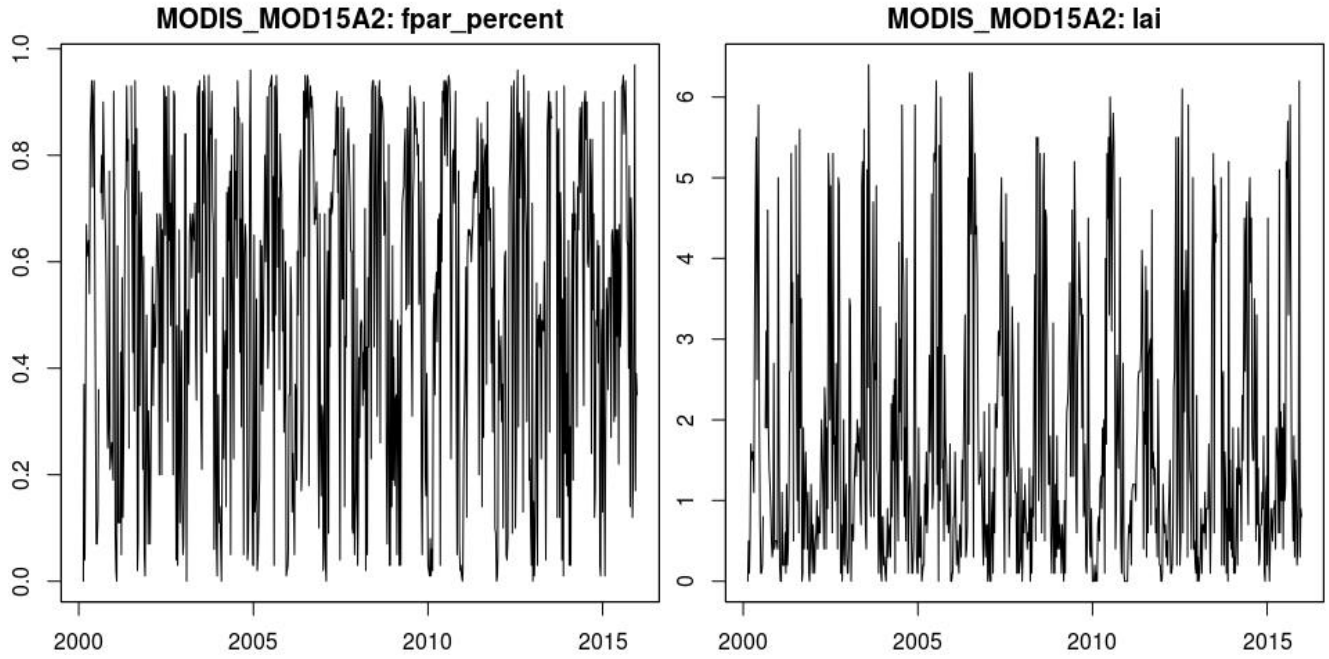

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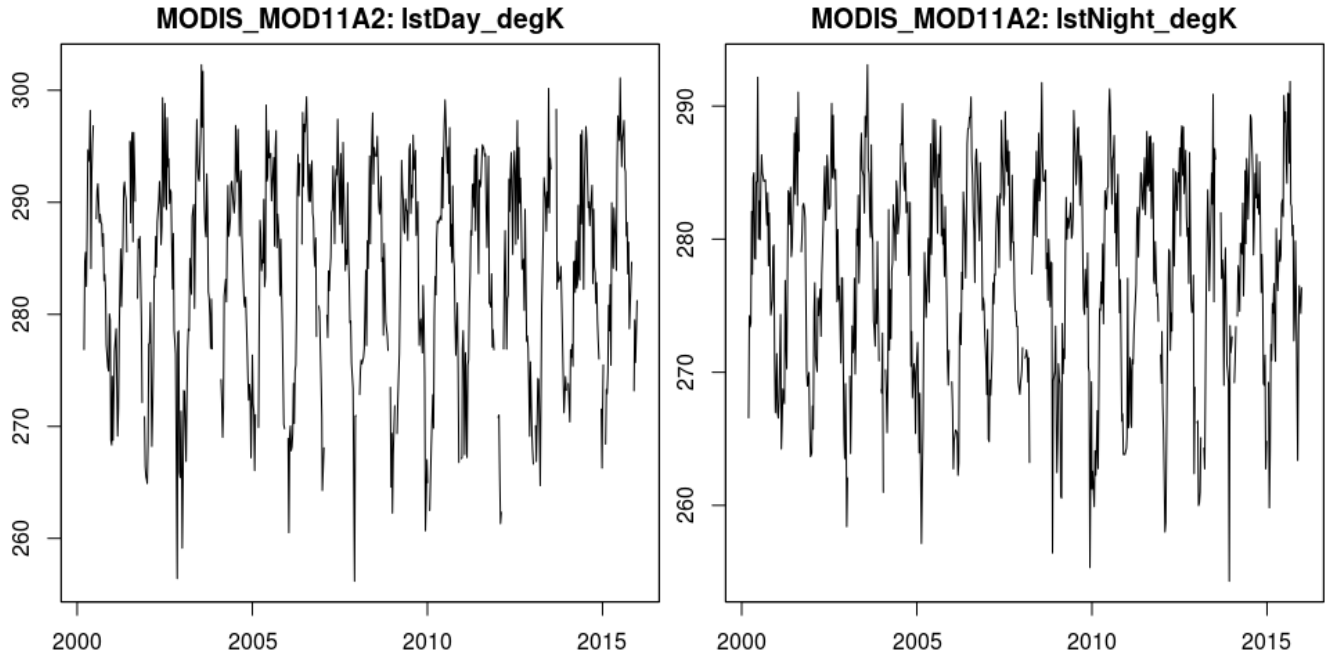

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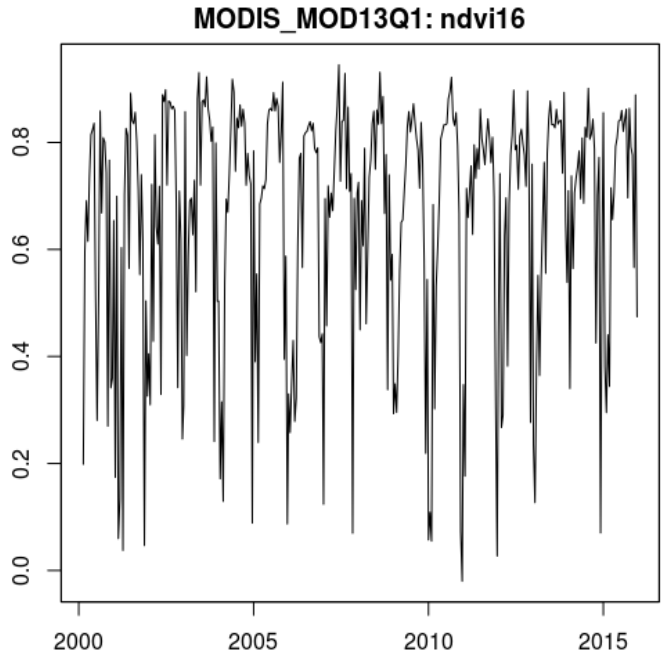

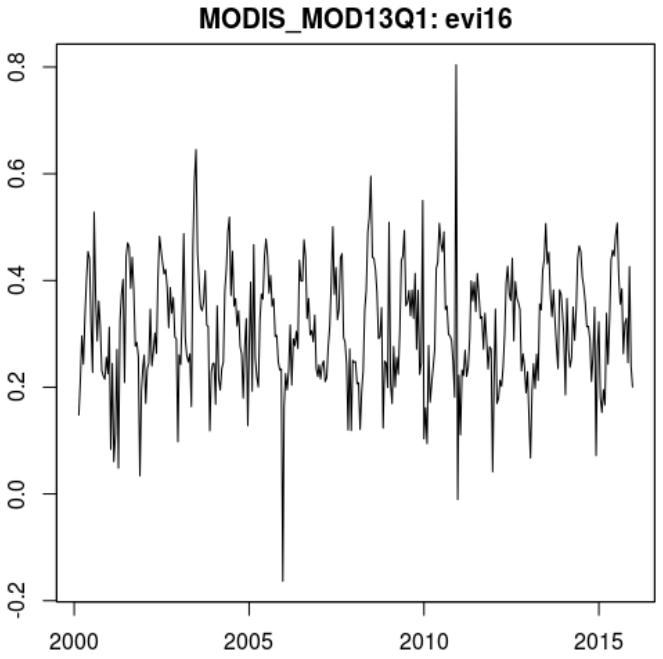

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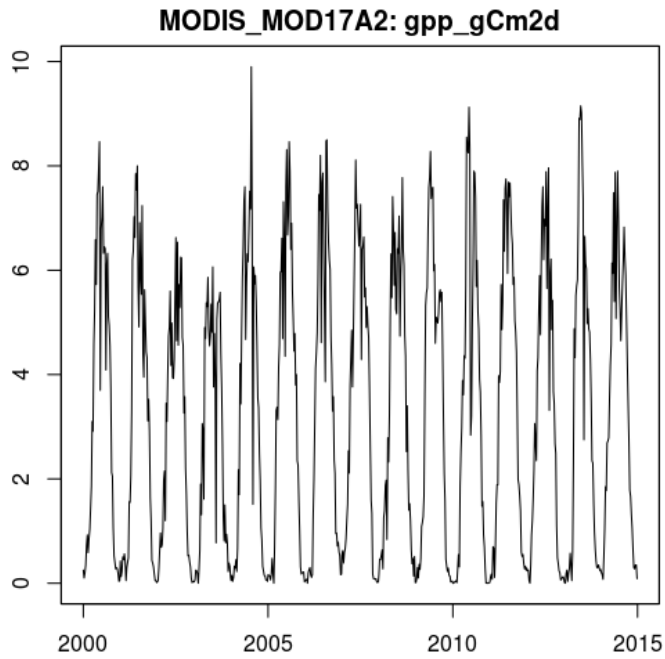
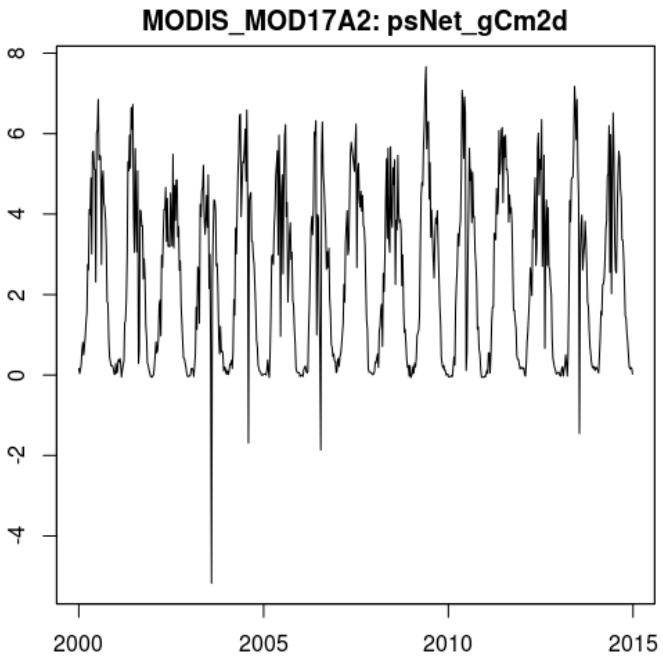




Site soro

Description

The ICOS site Sorø (DK-Sor in the FLUXNET and ICOS data bases) is located in Denmark at an elevation of 40 m.a.s.l.. The climate is warm temperate and fully humid with a mean annual temperature of 9°C and annual precipitation sum of 774 mm during the period 1996-2010. The soil has been classified as an Alfisols/Molisols. Potential natural vegetation is deciduous broad-leaved forest dominated by *Fagus sylvatica*. Other species occurring in the area are *Fraxinus excelsior*, *Larix decidua*, *Picea abies*, *Quercus* spp., Acer spp. However, the region is mostly used as cropland. Data on tree DBH are reconstructed from tree ring measurement (Babst et al. 2014) and historical management information for the time period from 1994 to 2017. The mean DBH of this *Fagus sylvatica* stand was 41 cm in the year 2017. More information about the site can be found in Ladekarl (2001), Pilegaard et al. (2003, 2011), and Wu et al. (2013).

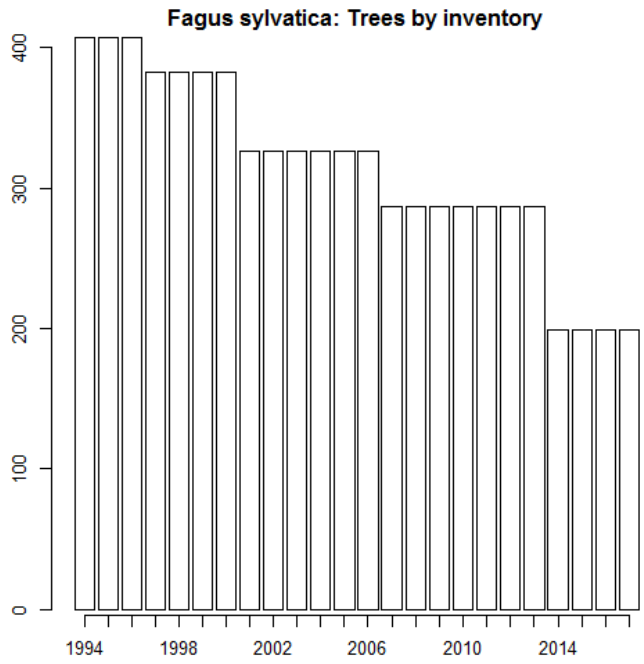
The following data is available for the site

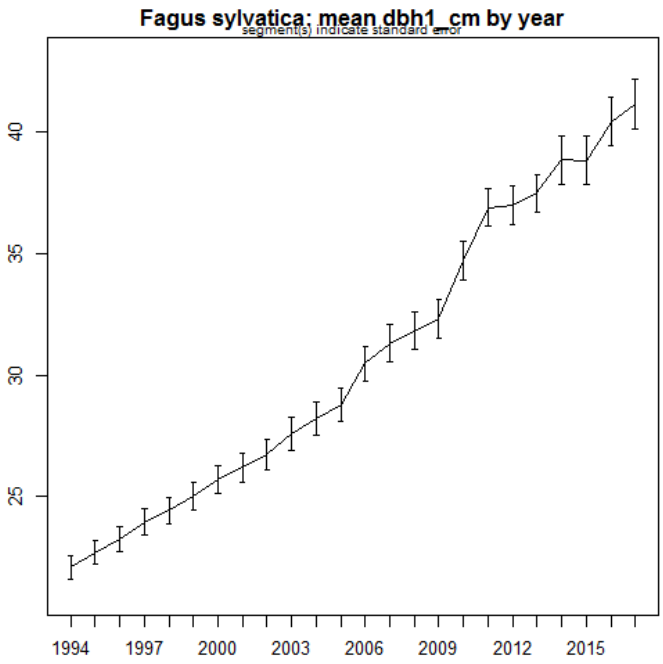
Table 45: Available data for soro

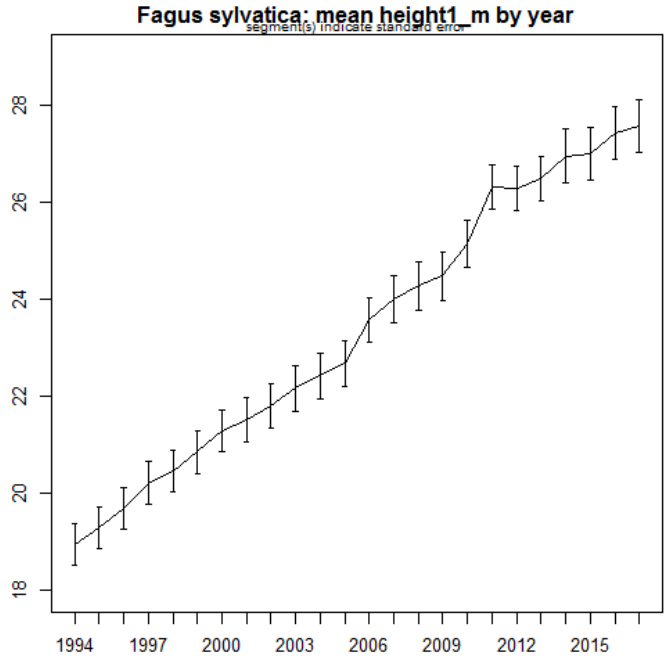
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	1
FLUX	1
ATMOSPHERICHEATCONDUCTION	1
SOILTS	1
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1

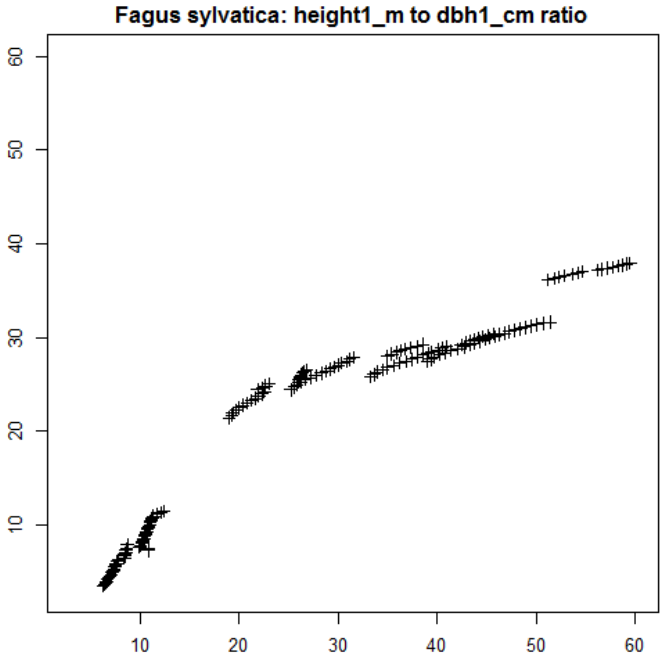
Data

TREE

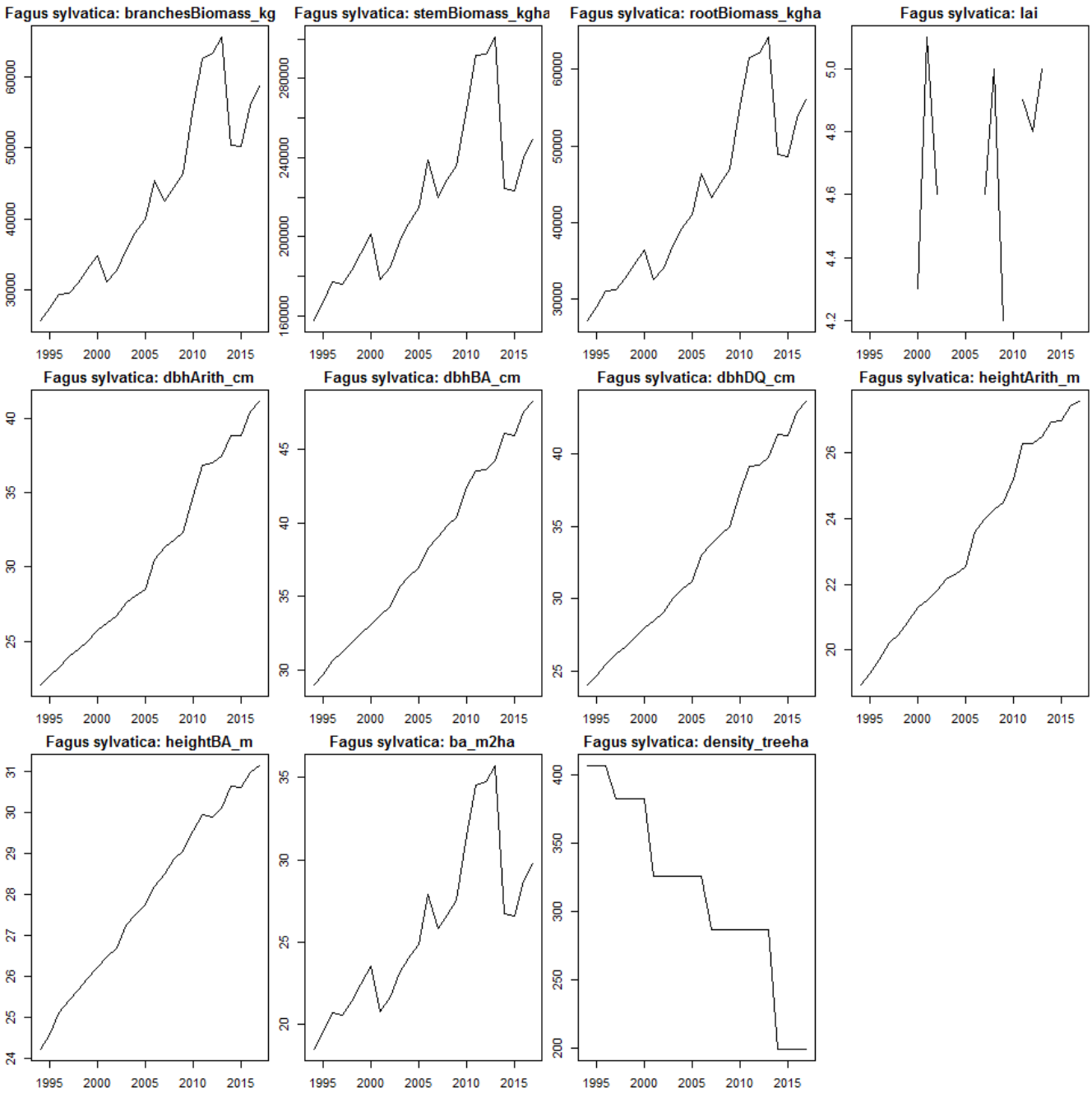

Fagus sylvatica: Trees by inventory
0
100
200
300
400
1994
1998
2002
2006
2010
2014


Fagus sylvatica: mean dbh1_cm by year
segment(s) indicate standard error
25
30
35
40
1994
1997
2000
2003
2006
2009
2012
2015


Fagus sylvatica: mean height1_m by year
segment(s) indicate standard error
18
20
22
24
26
28
1994
1997
2000
2003
2006
2009
2012
2015


Fagus sylvatica: height1_m to dbh1_cm ratio
10
20
30
40
50
60
10
20
30
40
50
60

STAND


Fagus sylvatica: branchesBiomass_kg
Fagus sylvatica: stemBiomass_kgha
Fagus sylvatica: rootBiomass_kgha
Fagus sylvatica: lai
Fagus sylvatica: dbhArith_cm
Fagus sylvatica: dbhBA_cm
Fagus sylvatica: dbhDQ_cm
Fagus sylvatica: heightArith_m
Fagus sylvatica: heightBA_m
Fagus sylvatica: ba_m2ha
Fagus sylvatica: density_treeha

CLIMATE_LOCAL

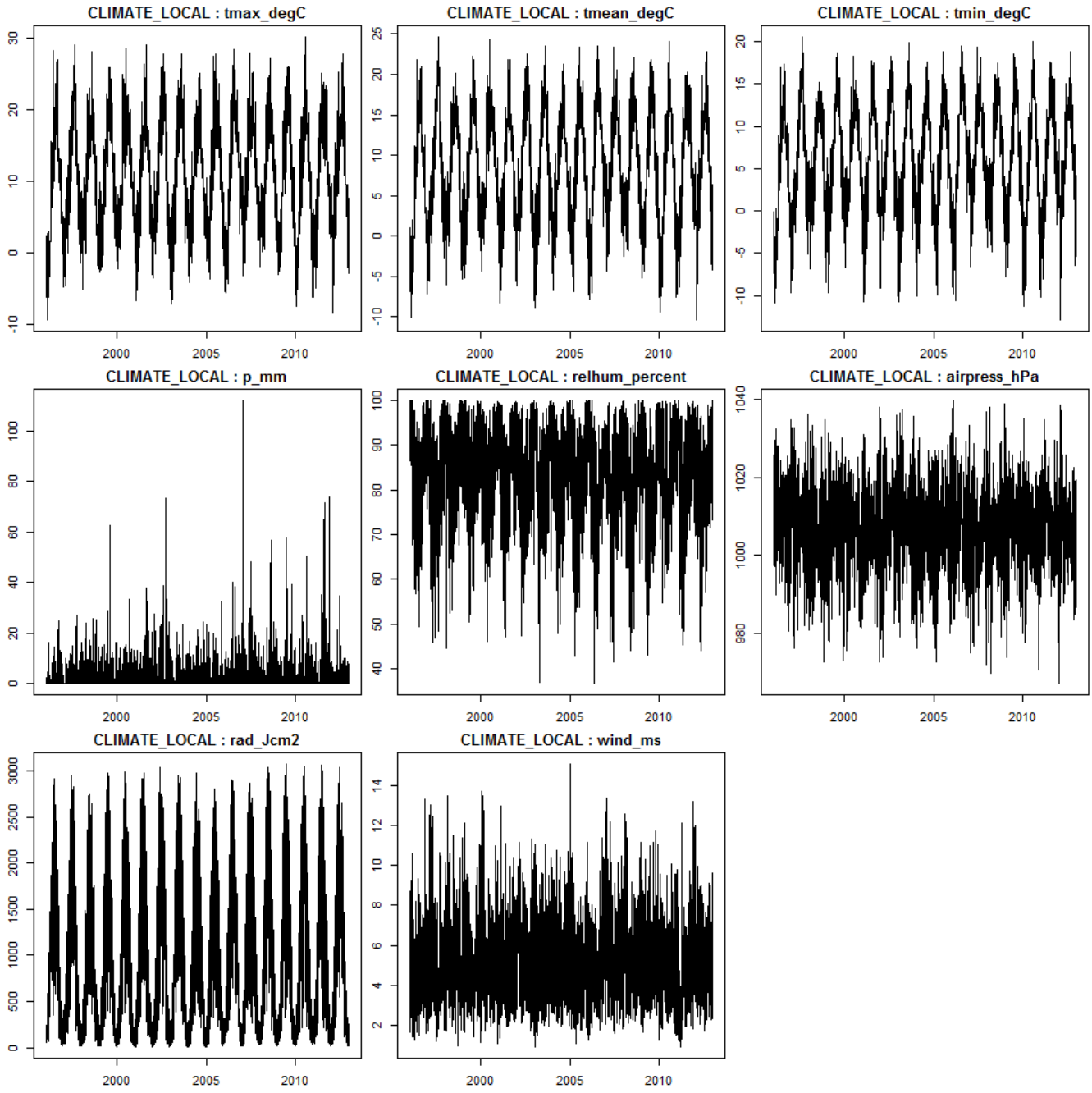


Table 46: Summary of CLIMATE_LOCAL for soro. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
soro	21	1996	8.24	6.09	3.99	457	84.2	1010	360945	4.87
soro	21	1997	10.7	8.28	5.89	552	81.1	1010	364713	5.16
soro	21	1998	10.1	7.83	5.66	816	85.3	1007	317789	5.54
soro	21	1999	11	8.62	6.24	823	84.9	1007	349664	5.12
soro	21	2000	11.1	8.79	6.51	646	84.3	1006	327691	5.4
soro	21	2001	10.3	7.89	5.57	789	84.9	1007	348938	4.97
soro	21	2002	11.1	8.67	6.28	1071	83.3	1008	356928	5.13
soro	21	2003	10.8	8.26	5.71	536	82.7	1010	381511	5.02
soro	21	2004	10.5	8.02	5.74	727	84.1	1007	348138	5.24
soro	21	2005	10.9	8.27	5.73	545	81.8	1009	363314	5.06
soro	21	2006	11.3	8.93	6.61	852	81.9	1008	368866	5
soro	21	2007	11.7	9.27	6.89	1154	81.9	1007	363945	5.49
soro	21	2008	11.5	9.2	6.83	807	80.1	1006	396308	5.39
soro	21	2009	11	8.59	6.15	686	80.8	1007	390994	5.09
soro	21	2010	9.24	6.88	4.52	863	84.5	1006	359982	4.92
soro	21	2011	11.2	8.71	6.29	1066	82.9	1008	369210	4.66
soro	21	2012	10.5	8.16	5.82	539	81.4	1007	362758	5.19
soro	21	1996-2012	10.7	8.26	5.91	761	82.9	1008	360688	5.13

CLIMATE_ISIMIP2B

Table 47: Summary of CLIMATE_ISIMIP2B for soro. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	11.19	8.683	6.221	623.8	77.94	1010	382664	4.734
GFDLESM2M	piControl	1661-2099	11.21	8.642	6.131	668.5	78.48	1009	383811	4.055
GFDLESM2M	rcp2p6	2006-2099	12.44	9.929	7.456	703.3	78.16	1009	388238	4.915
GFDLESM2M	rcp4p5	2006-2099	12.8	10.29	7.819	701.1	78.17	1010	387115	4.815
GFDLESM2M	rcp6p0	2006-2099	12.77	10.27	7.809	709	78.22	1010	385580	4.905
GFDLESM2M	rcp8p5	2006-2099	13.05	10.54	8.071	713.4	78.37	1010	381769	5.023
HadGEM2ES	historical	1861-2005	10.6	8.064	5.561	627.9	78.01	1010	383427	4.852
HadGEM2ES	piControl	1661-2299	10.94	8.333	5.778	629	77.53	1010	398756	4.729
HadGEM2ES	rcp2p6	2006-2299	12.9	10.36	7.895	674.4	77.77	1010	406224	4.653
HadGEM2ES	rcp4p5	2006-2099	13.76	11.16	8.651	643	75.76	1010	408926	4.777
HadGEM2ES	rcp6p0	2006-2099	13.76	11.15	8.632	617	75.45	1010	409975	4.776
HadGEM2ES	rcp8p5	2006-2099	14.75	12.12	9.59	620	74.49	1010	415502	4.688
IPSLCM5ALR	historical	1861-2005	10.51	7.97	5.477	593.2	78.54	1010	396035	4.842
IPSLCM5ALR	piControl	1661-2299	9.849	7.261	4.704	559.6	78.86	1010	411767	4.767
IPSLCM5ALR	rcp2p6	2006-2299	13.01	10.6	8.255	651.3	77.23	1009	410566	4.864
IPSLCM5ALR	rcp4p5	2006-2299	14.29	11.9	9.597	683.8	77.07	1009	406548	4.846
IPSLCM5ALR	rcp6p0	2006-2099	13.45	11.07	8.75	668.5	77.01	1009	403450	4.87
IPSLCM5ALR	rcp8p5	2006-2299	18.6	16.15	13.83	759.6	75.99	1008	409610	4.778
MIROC5	historical	1861-2005	11.02	8.482	5.983	607.7	77.71	1010	383252	4.866
MIROC5	piControl	1661-2299	11.65	9.041	6.468	620.8	76.72	1010	418197	4.839
MIROC5	rcp2p6	2006-2299	12.67	10.09	7.558	659.4	76.93	1010	422334	4.966
MIROC5	rcp4p5	2006-2099	13.05	10.48	7.963	677.3	77.04	1010	413614	4.916
MIROC5	rcp6p0	2006-2099	12.91	10.33	7.801	679.7	76.99	1010	414534	4.89

MIROC5	rcp8p5	2006-2099	13.92	11.35	8.835	694.1	76.79	1010	419993	4.809

CLIMATE_ISIMIP2BLBC

Table 48: Summary of CLIMATE_ISIMIP2BLBC for soro. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	10.33	7.942	5.582	721.5	82.63	1008	362952	4.983
GFDLESM2M	piControl	1661-2099	10.35	7.902	5.495	774.5	83.08	1008	363278	4.267
GFDLESM2M	rcp2p6	2006-2099	11.58	9.187	6.816	813.3	82.84	1008	368115	5.17
GFDLESM2M	rcp4p5	2006-2099	11.94	9.548	7.18	810	82.85	1008	367687	5.065
GFDLESM2M	rcp6p0	2006-2099	11.91	9.527	7.17	821.7	82.9	1008	365701	5.161
GFDLESM2M	rcp8p5	2006-2099	12.19	9.795	7.431	827.1	83.04	1008	360531	5.284
HadGEM2ES	historical	1861-2005	9.458	7.09	4.742	788	83.4	1009	350876	5.115
HadGEM2ES	piControl	1661-2299	9.787	7.358	4.961	791.2	83.04	1008	366089	4.986
HadGEM2ES	rcp2p6	2006-2299	11.75	9.385	7.074	845.6	83.27	1008	375434	4.906
HadGEM2ES	rcp4p5	2006-2099	12.61	10.19	7.835	802	81.44	1008	380892	5.033
HadGEM2ES	rcp6p0	2006-2099	12.61	10.18	7.816	768.8	81.1	1008	381824	5.034
HadGEM2ES	rcp8p5	2006-2099	13.6	11.15	8.775	768.7	80.16	1008	389268	4.94
IPSLCM5ALR	historical	1861-2005	9.524	7.088	4.683	700.8	83.21	1008	371379	5.186
IPSLCM5ALR	piControl	1661-2299	8.858	6.379	3.91	657.5	83.37	1009	388525	5.106
IPSLCM5ALR	rcp2p6	2006-2299	12.03	9.721	7.461	769.2	82.09	1008	388732	5.207
IPSLCM5ALR	rcp4p5	2006-2299	13.31	11.02	8.803	807.3	81.94	1008	385451	5.188
IPSLCM5ALR	rcp6p0	2006-2099	12.47	10.18	7.954	790.5	81.9	1008	381155	5.213
IPSLCM5ALR	rcp8p5	2006-2299	17.62	15.27	13.03	890	80.81	1007	392402	5.11
MIROC5	historical	1861-2005	9.821	7.401	5.006	696.8	82.73	1008	347706	5.184
MIROC5	piControl	1661-2299	10.45	7.961	5.496	711.7	81.76	1008	387094	5.157
MIROC5	rcp2p6	2006-2299	11.47	9.012	6.585	758.3	82.01	1008	394128	5.292
MIROC5	rcp4p5	2006-2099	11.85	9.401	6.987	777.3	82.11	1008	382168	5.239

MIROC5	rcp6p0	2006-2099	11.71	9.248	6.825	781.1	82.05	1008	384043	5.211
MIROC5	rcp8p5	2006-2099	12.72	10.27	7.861	798	81.86	1009	392196	5.124

CLIMATE_ISIMIP2A

Table 49: Summary of CLIMATE_ISIMIP2A for soro. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	11	8.354	5.826	752.1	79.33	1012	375446	5.858
PRINCETON	1901-2012	10.87	8.378	5.686	564.2	81.23	1005	364635	4.881
WATCH	1901-2001	10.78	8.035	5.786	573.8	81.87	1010	336352	5.623
WFDEI	1901-2010	10.88	8.187	5.883	593.4	82.41	1010	356059	5.397

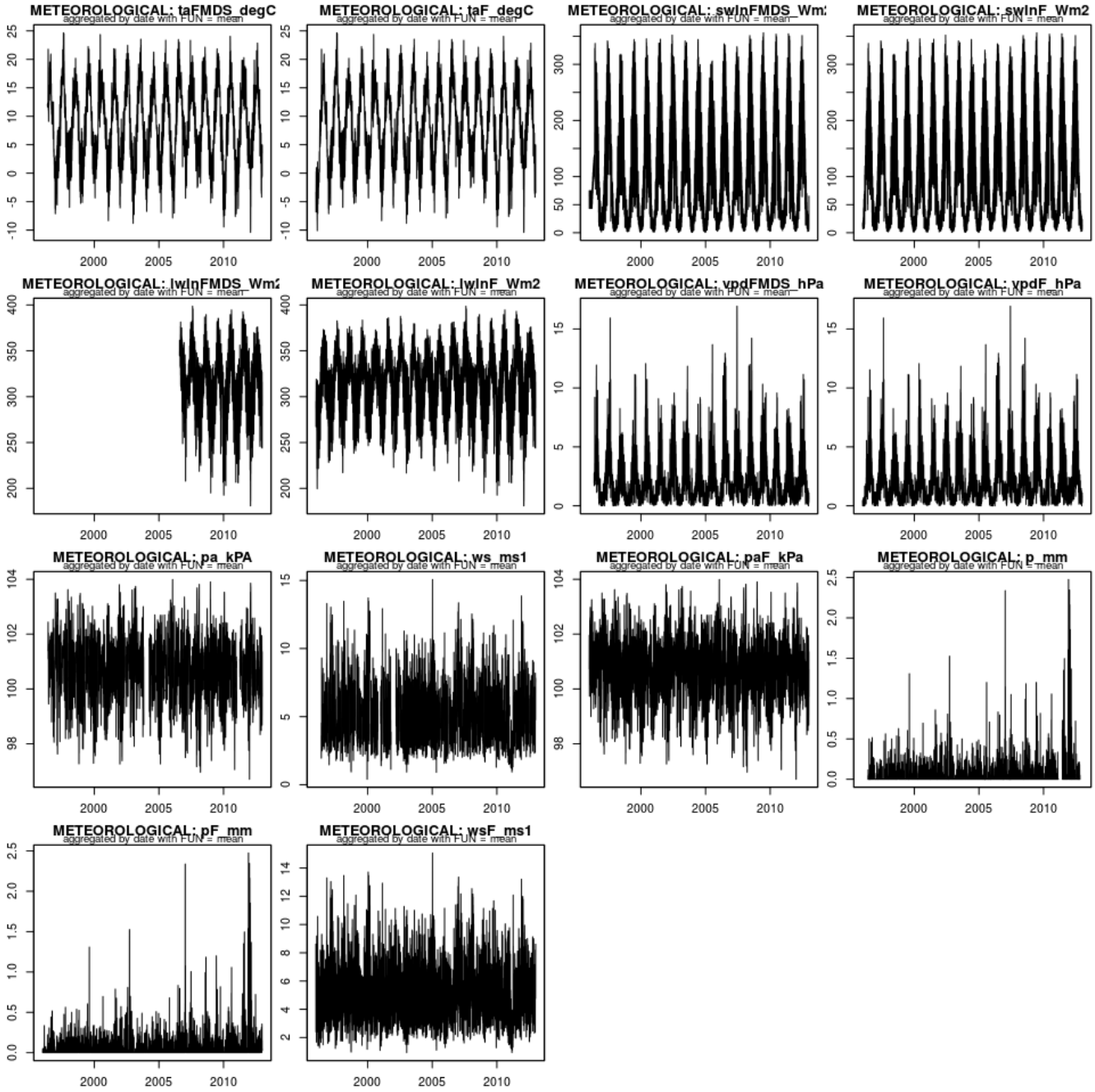
CLIMATE_ISIMIPFT

Table 50: Summary of CLIMATE_ISIMIPFT for soro. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

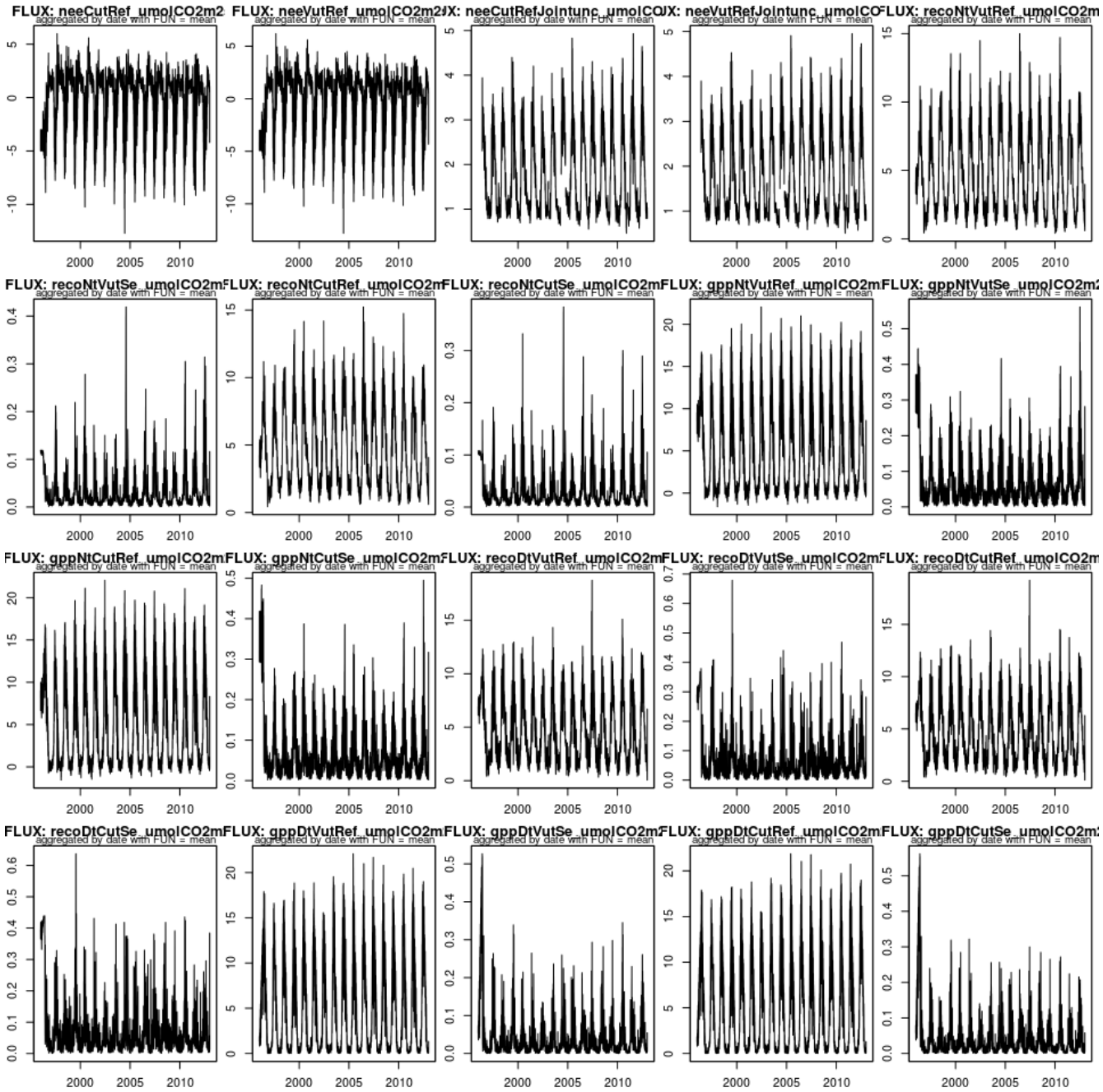
forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	10.98	8.242	6.003	593	83.34	1009	327403	5.615
GFDLESM2M	rcp2p6	2006-2099	12.12	9.407	7.168	659.2	83.49	1009	332607	5.765
GFDLESM2M	rcp4p5	2006-2099	12.5	9.771	7.529	659.6	83.46	1009	332156	5.642
GFDLESM2M	rcp6p0	2006-2099	12.47	9.747	7.512	662.8	83.48	1010	331052	5.733
GFDLESM2M	rcp8p5	2006-2099	12.77	10.03	7.787	668.4	83.66	1010	327666	5.812
HadGEM2ES	historical	1950-2004	10.81	8.061	5.809	591.4	77.63	1010	327021	5.559
HadGEM2ES	rcp2p6	2005-2099	13.02	10.13	7.805	587.2	75.87	1010	347866	5.306
HadGEM2ES	rcp4p5	2005-2099	13.76	10.87	8.534	591.7	75.11	1009	348432	5.38
HadGEM2ES	rcp6p0	2005-2099	13.75	10.84	8.502	568.5	74.8	1010	349615	5.411
HadGEM2ES	rcp8p5	2005-2099	14.76	11.82	9.466	573.7	73.96	1010	352993	5.282
IPSLCM5ALR	historical	1950-2005	10.97	8.23	5.988	591.6	80.66	1009	328549	5.621
IPSLCM5ALR	rcp2p6	2006-2099	13.17	10.53	8.356	633.1	79.28	1009	341696	5.62
IPSLCM5ALR	rcp4p5	2006-2099	13.56	10.94	8.809	649.7	79.34	1009	339131	5.643
IPSLCM5ALR	rcp6p0	2006-2099	13.56	10.96	8.832	645.7	79.25	1009	336854	5.648
IPSLCM5ALR	rcp8p5	2006-2099	14.44	11.81	9.668	656	78.88	1009	341302	5.606
MIROCESMCHEM	historical	1950-2005	10.89	8.135	5.881	604.3	88.8	1009	332272	5.605
MIROCESMCHEM	rcp2p6	2006-2099	13.73	10.79	8.44	728	87.46	1009	379324	5.692
MIROCESMCHEM	rcp4p5	2006-2099	13.94	11.02	8.68	729.3	87.62	1009	374735	5.765
MIROCESMCHEM	rcp6p0	2006-2099	14.02	11.11	8.757	728.8	87.29	1009	377032	5.794
MIROCESMCHEM	rcp8p5	2006-2099	15	12.08	9.736	760.2	87.23	1009	381137	5.816
NorESM1M	historical	1950-2005	10.89	8.157	5.917	586.4	80.34	1010	328304	5.599
NorESM1M	rcp2p6	2006-2099	12.36	9.568	7.283	602.8	79.03	1010	349078	5.702
NorESM1M	rcp4p5	2006-2099	12.77	9.913	7.57	593.2	78.65	1010	351276	5.661

NorESM1M	rcp6p0	2006-2099	12.76	9.953	7.656	581.9	78.62	1010	350688	5.79
NorESM1M	rcp8p5	2006-2099	13.35	10.46	8.105	602.9	78.12	1010	352487	5.666

METEOROLOGICAL



FLUX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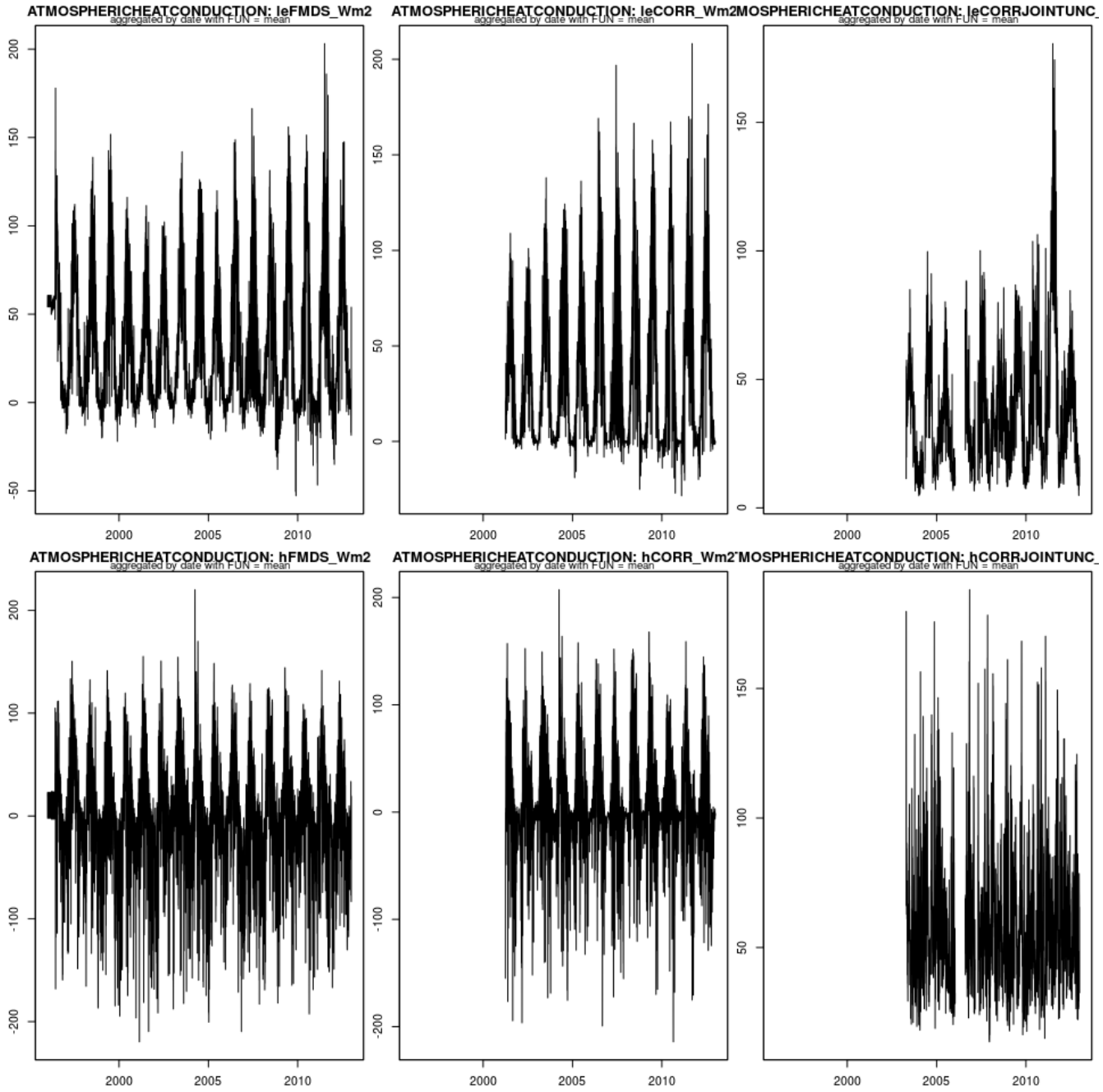
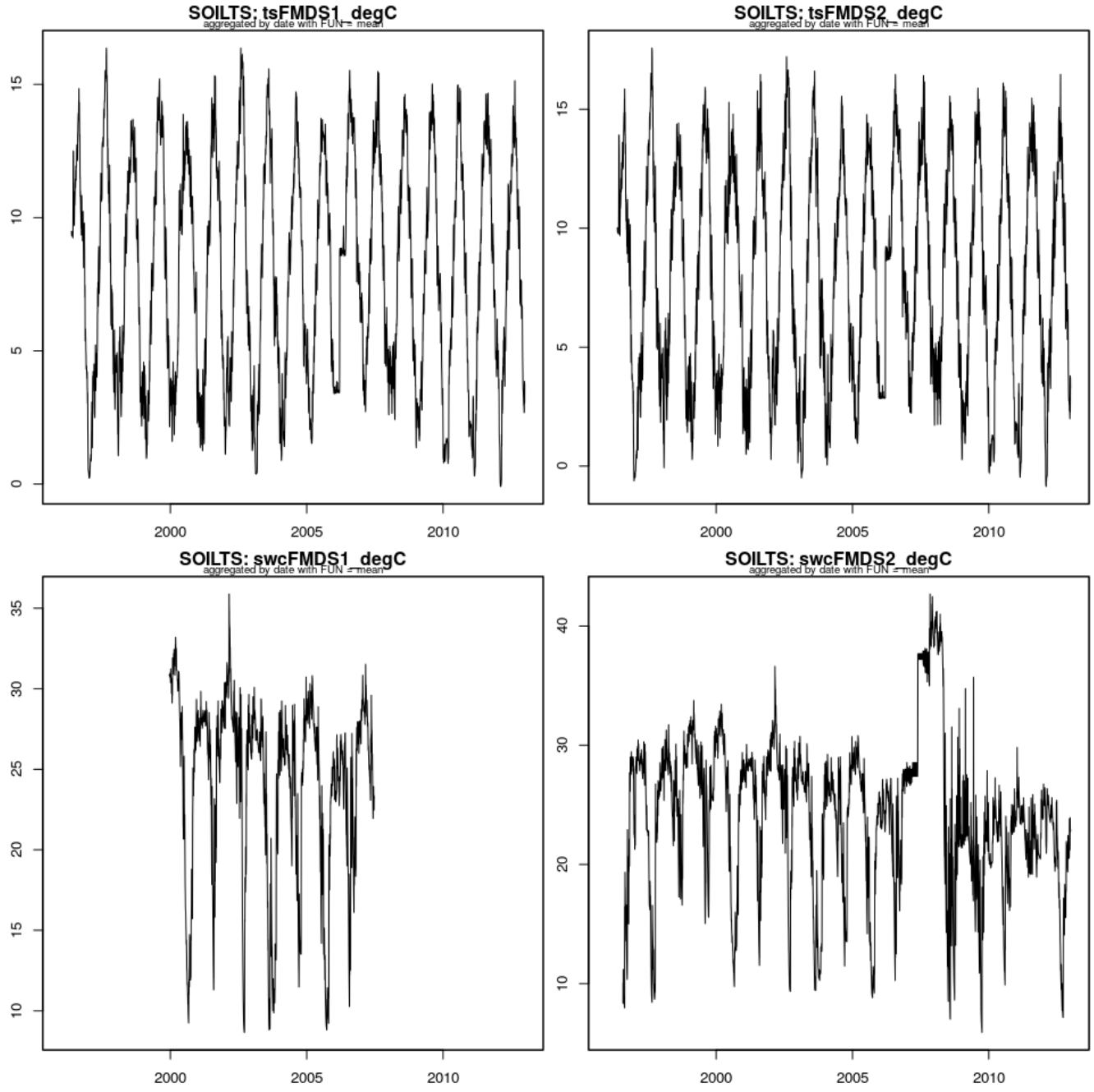
FLUX: neeVutRef_umolCO2m2
FLUX: neeCutRefJointunc_umolCO
FLUX: neeVutRefJointunc_umolCO
FLUX: recoNtVutRef_umolCO2m
FLUX: recoNtVutSe_umolCO2m
FLUX: recoNtCutRef_umolCO2m
FLUX: recoNtCutSe_umolCO2m
FLUX: gppNtVutRef_umolCO2m
FLUX: gppNtVutSe_umolCO2m
FLUX: gppNtCutRef_umolCO2m
FLUX: gppNtCutSe_umolCO2m
FLUX: recoDtVutRef_umolCO2m
FLUX: recoDtVutSe_umolCO2m
FLUX: recoDtCutRef_umolCO2m
FLUX: recoDtCutSe_umolCO2m
FLUX: gppDtVutRef_umolCO2m
FLUX: gppDtVutSe_umolCO2m
FLUX: gppDtCutRef_umolCO2m
FLUX: gppDtCutSe_umolCO2m
aggregated by date with FUN = mean

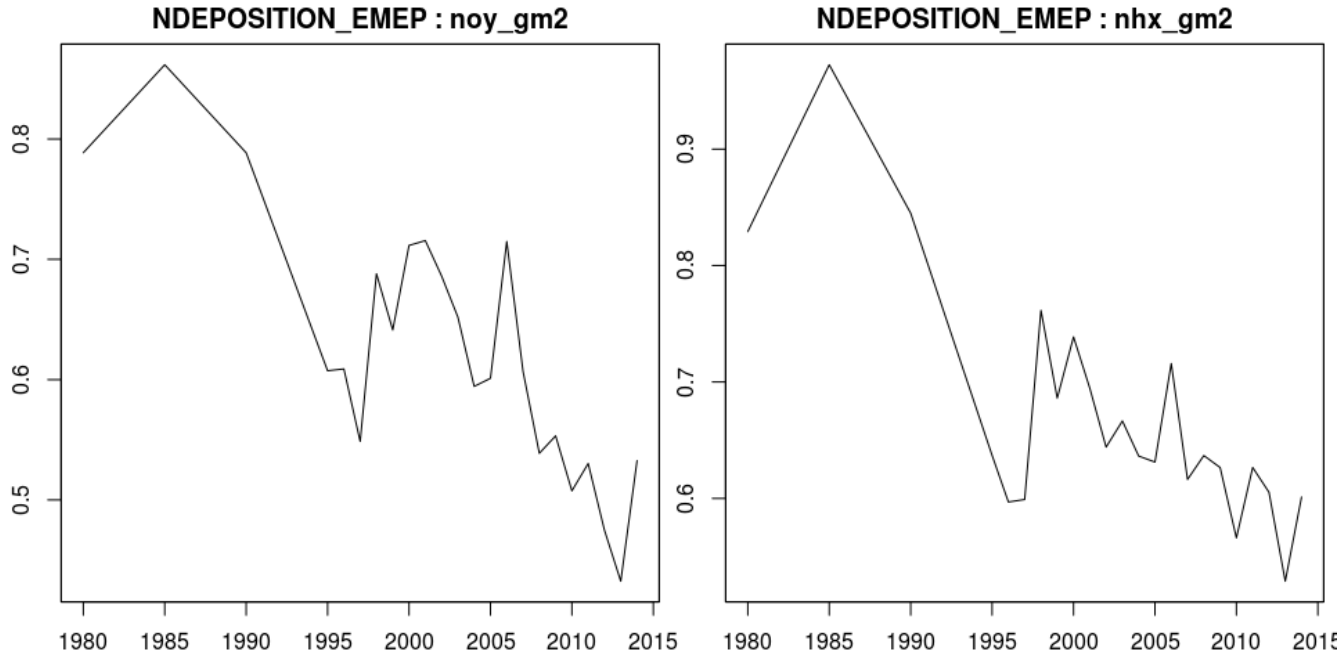
ATMOSPHERICHEATCONDUCTION



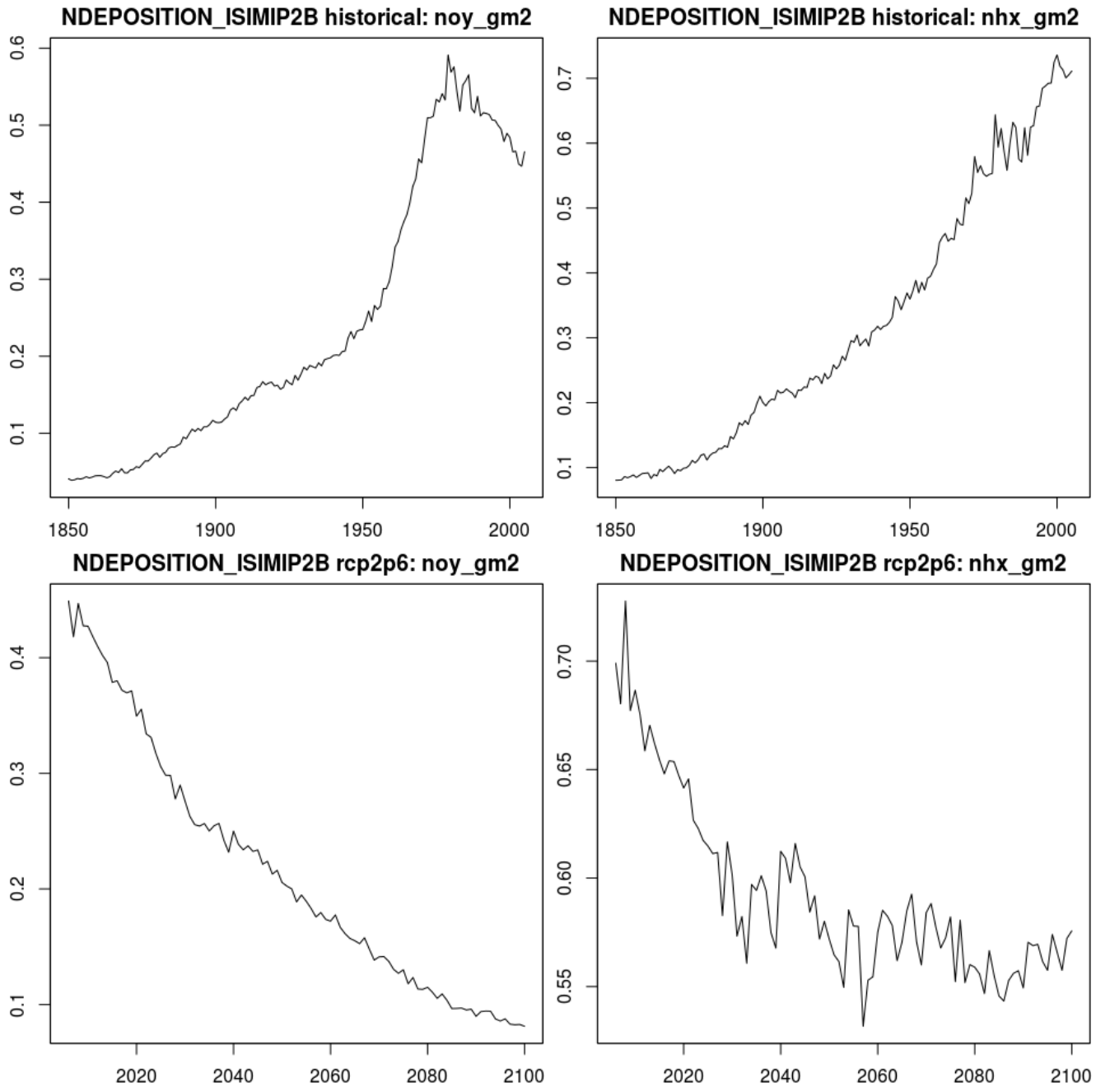
SOILTS

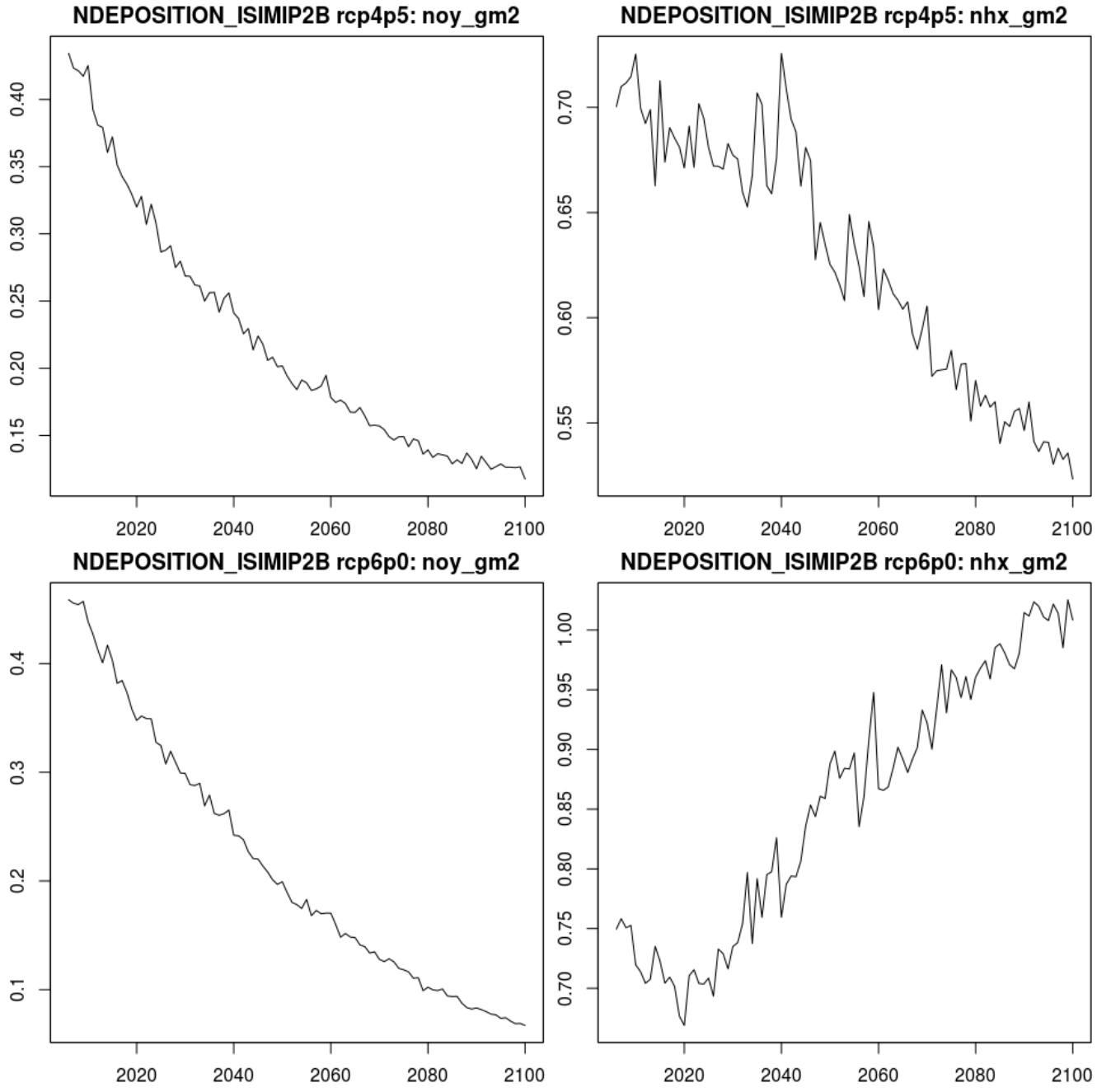

SOILTS: tsFMDS1_degC
aggregated by date with FUN = mean
SOILTS: tsFMDS2_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS1_degC
aggregated by date with FUN = mean
SOILTS: swcFMDS2_degC
aggregated by date with FUN = mean
2000
2005
2010

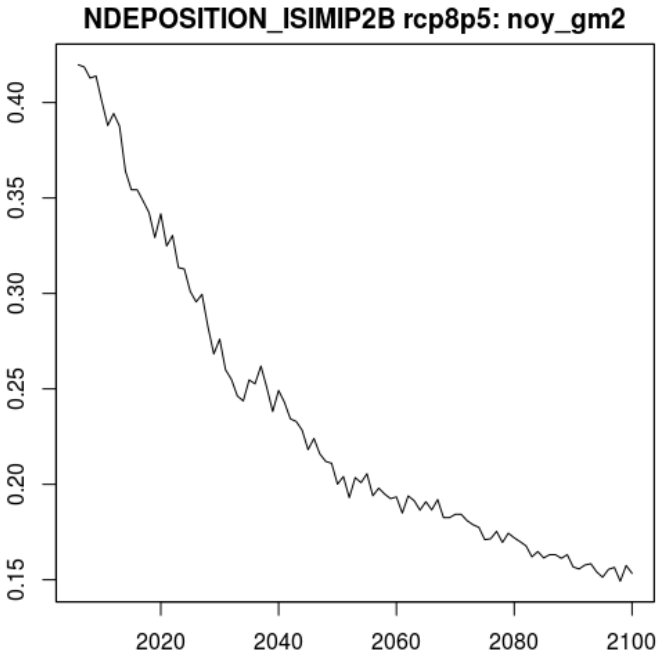
NDEPOSITION_EMEP

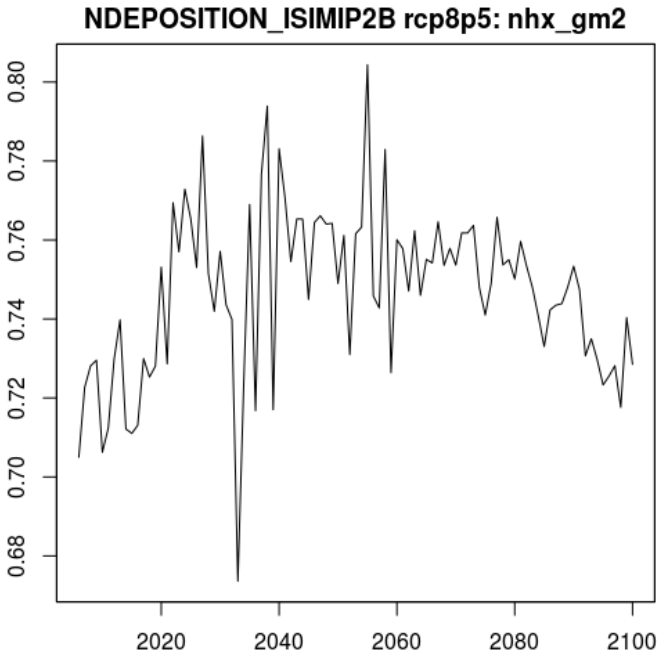


NDEPOSITION_ISIMIP2B

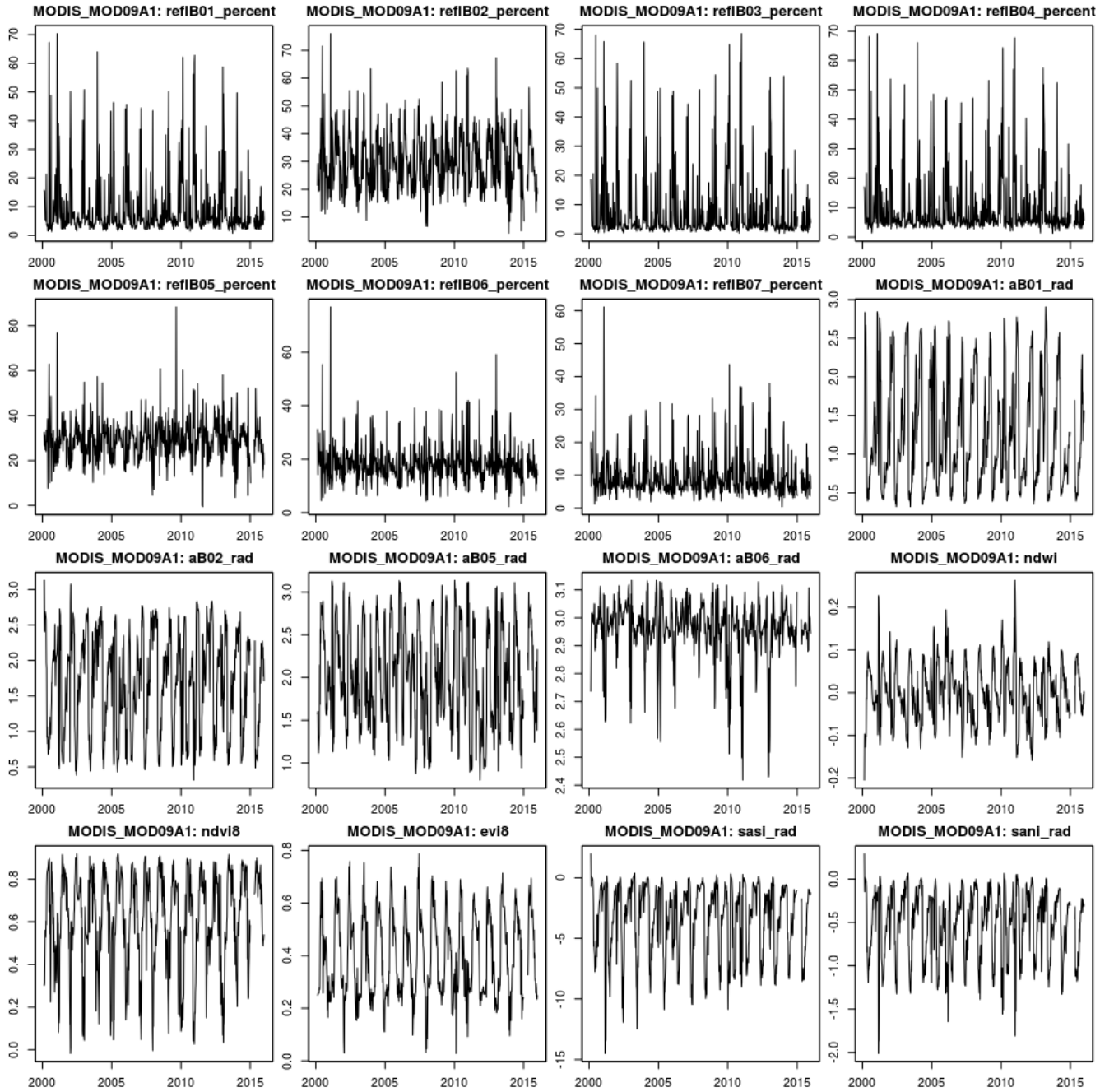



NDEPOSITION_ISIMIP2B rcp4p5: noy_gm2
NDEPOSITION_ISIMIP2B rcp4p5: nhx_gm2
NDEPOSITION_ISIMIP2B rcp6p0: noy_gm2
NDEPOSITION_ISIMIP2B rcp6p0: nhx_gm2
2020
2040
2060
2080
2100

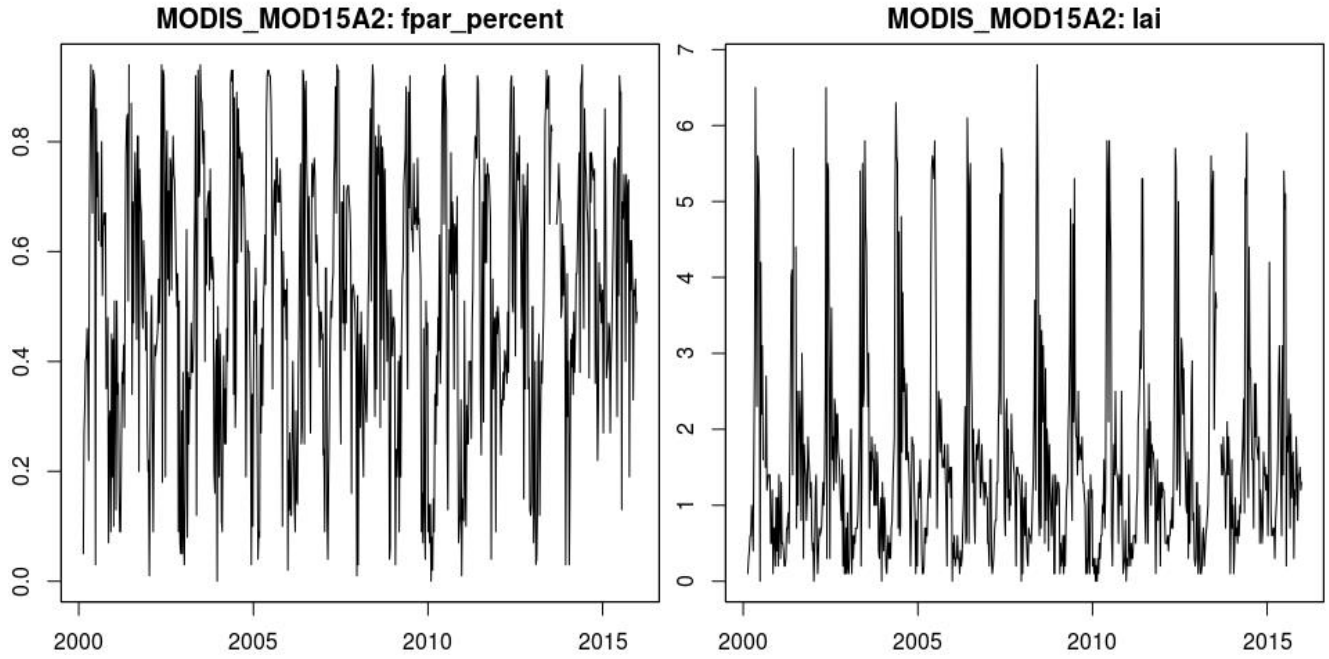

NDEPOSITION_ISIMIP2B rcp8p5: noy_gm2
0.40
0.35
0.30
0.25
0.20
0.15
2020
2040
2060
2080
2100


NDEPOSITION_ISIMIP2B rcp8p5: nhx_gm2
0.80
0.78
0.76
0.74
0.72
0.70
0.68
2020
2040
2060
2080
2100

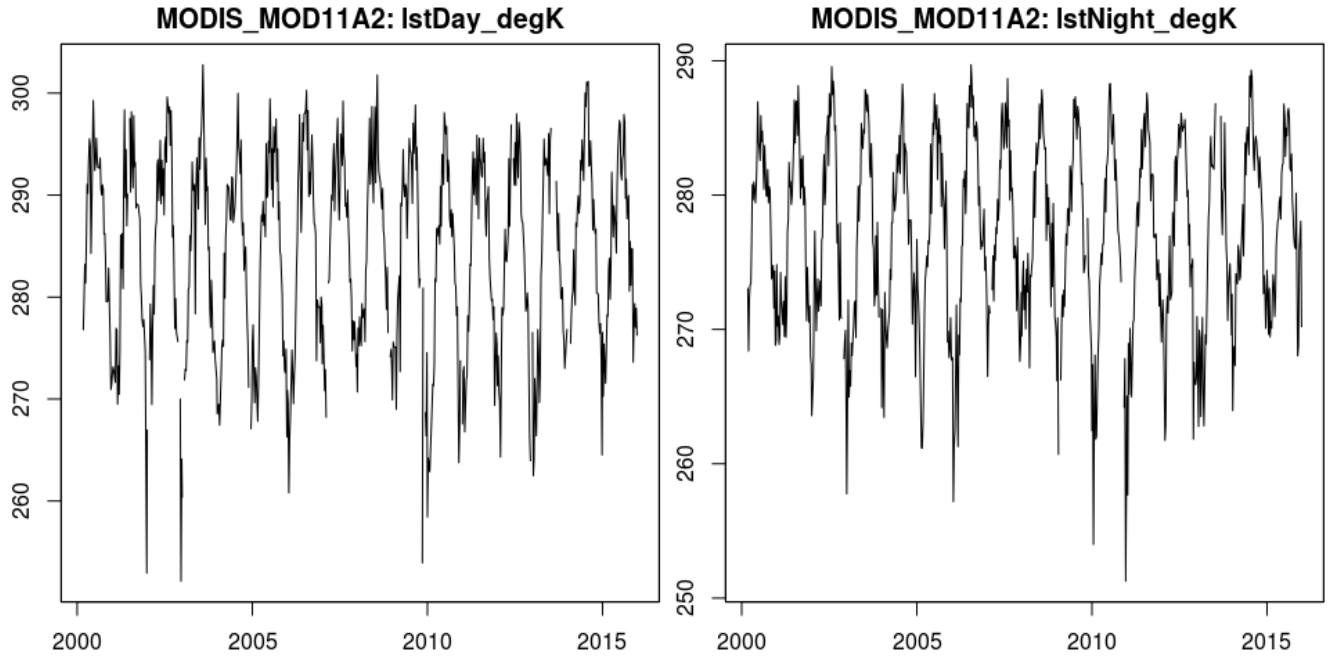
MODIS_MOD09A1



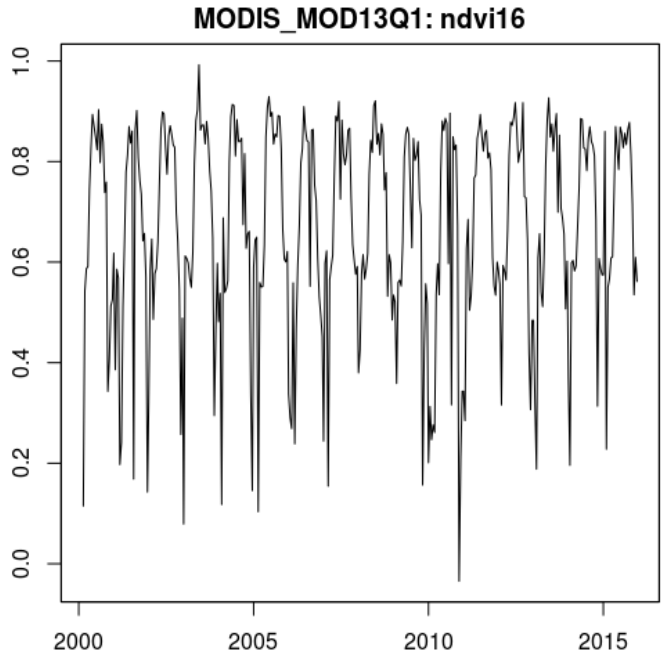
MODIS_MOD15A2

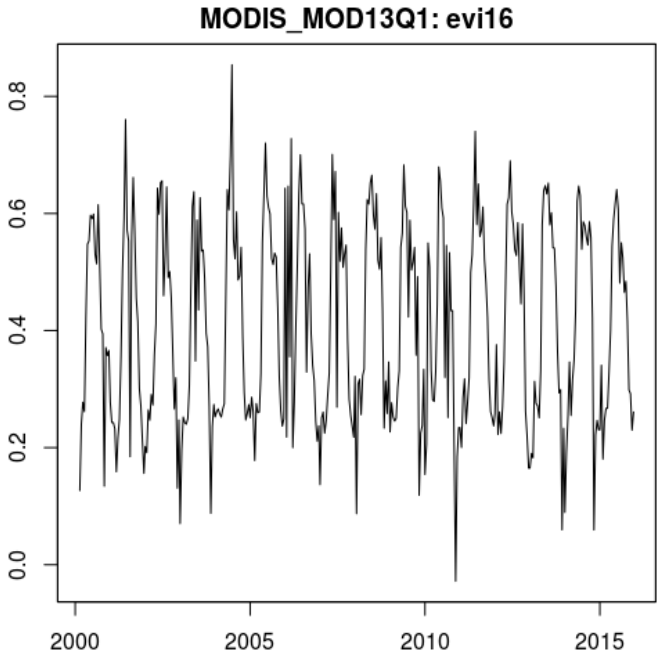


MODIS_MOD11A2

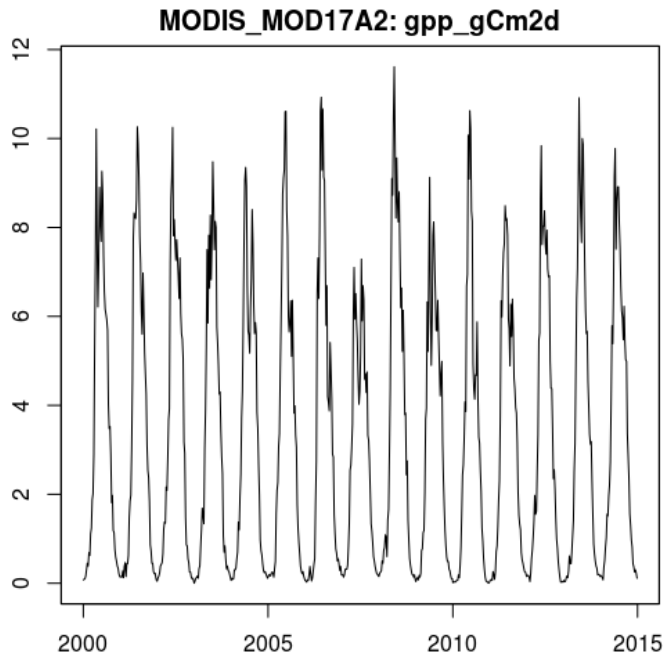


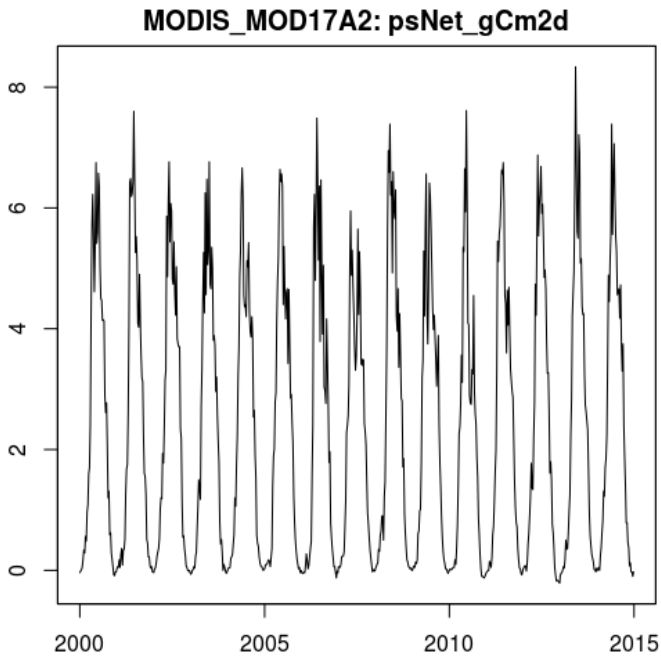
MODIS_MOD13Q1





MODIS_MOD17A2





Site solling_spruce

Description

Solling 305 is also a long-term intensive forest monitoring plot of the ICP Forests Level II network in central Germany. As the Solling beech site it belongs to the LTER (site LTER_EU_DE_009) and is a permanent soil monitoring plot of the state of Lower Saxony. It is situated close to the Solling beech site at an elevation of about 508 m a.s.l and has similar site conditions as the Solling beech stand. Potential natural vegetation is a Luzulo luzuloido Fagetum. Dominant species of the actual ground vegetation are Vaccinium myrtillus, Polytrichum formosum and Dechampsia flexuosa (Bolte et al. 2004). The forest is a 133-year old Norway spruce (Picea abies) stand with a mean DBH of 46.6 cm and a mean height of 33.1 m in 2016. More information about the site can be found in Le Mellec et al. (2010), Bonten et al. (2011), Meesenburg et al. (2016), Fleck et al. (2016) and Wegehenkel et al. (2017).

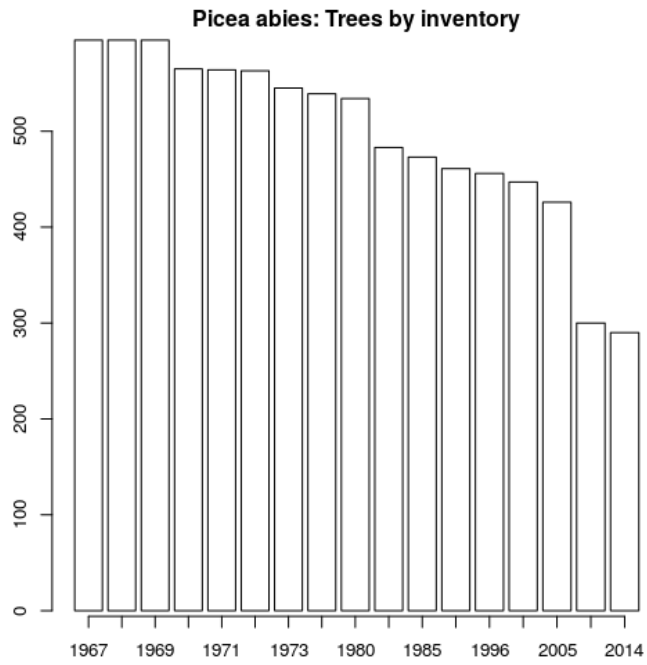
The following data is available for the site

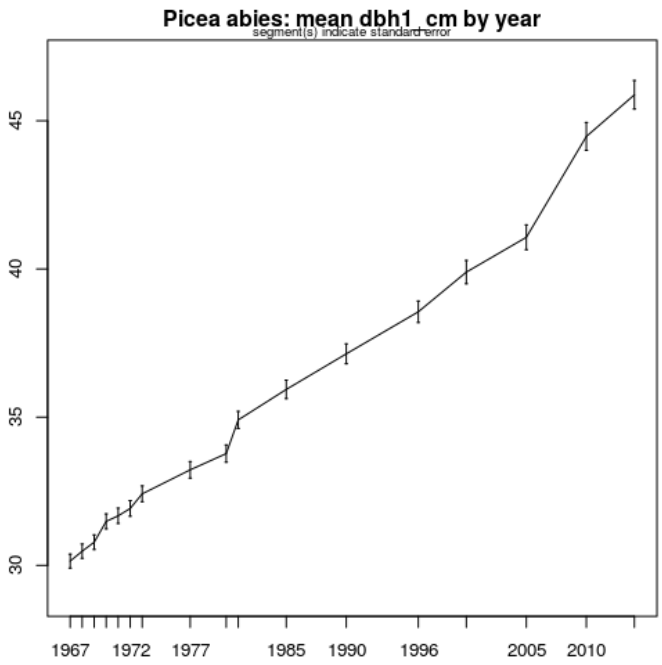
Table 51: Available data for solling_spruce

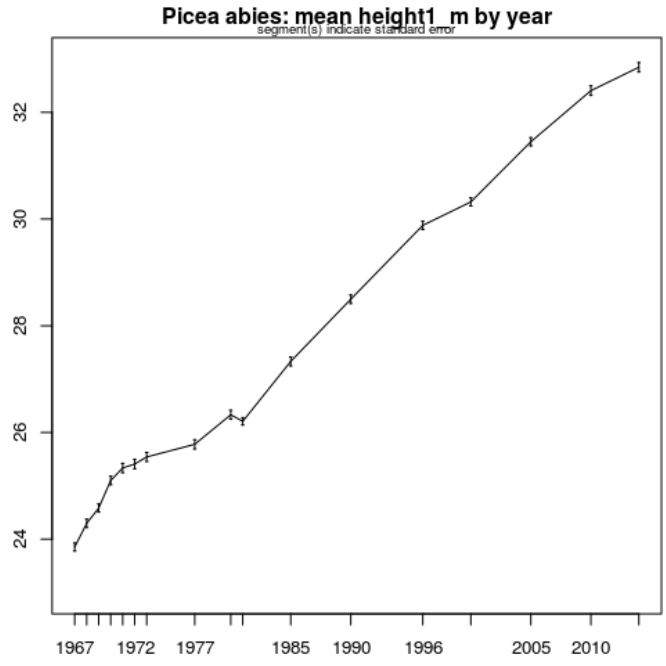
dataset	availability
SITES	1
TREE	1
STAND	1
SOIL	1
CLIMATE_LOCAL	1
CLIMATE_ISIMIP2B	1
CLIMATE_ISIMIP2BLBC	1
CLIMATE_ISIMIP2A	1
CLIMATE_ISIMIPFT	1
METEOROLOGICAL	0
FLUX	0
ATMOSPHERICHEATCONDUCTION	0
SOILTS	0
NDEPOSITION_EMEP	1
NDEPOSITION_ISIMIP2B	1
CO2_ISIMIP	1
MODIS_MOD09A1	1
MODIS_MOD15A2	1
MODIS_MOD11A2	1
MODIS_MOD13Q1	1
MODIS_MOD17A2	1
MODIS	1

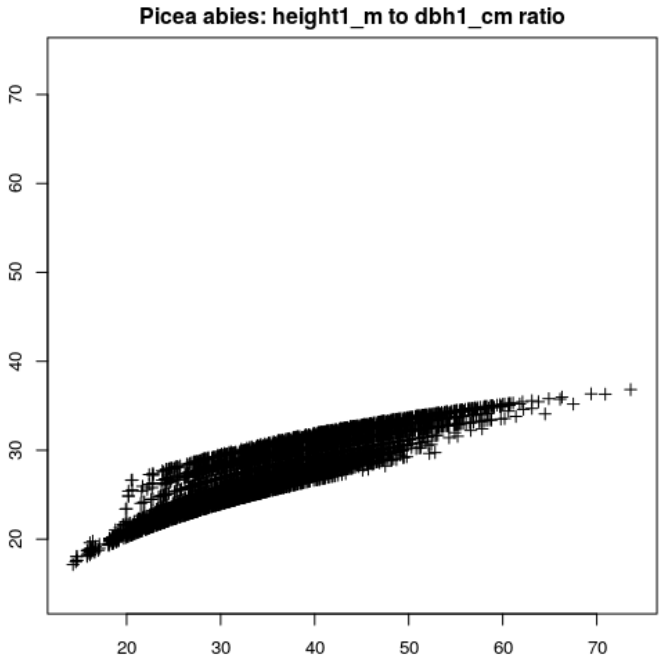
Data

TREE

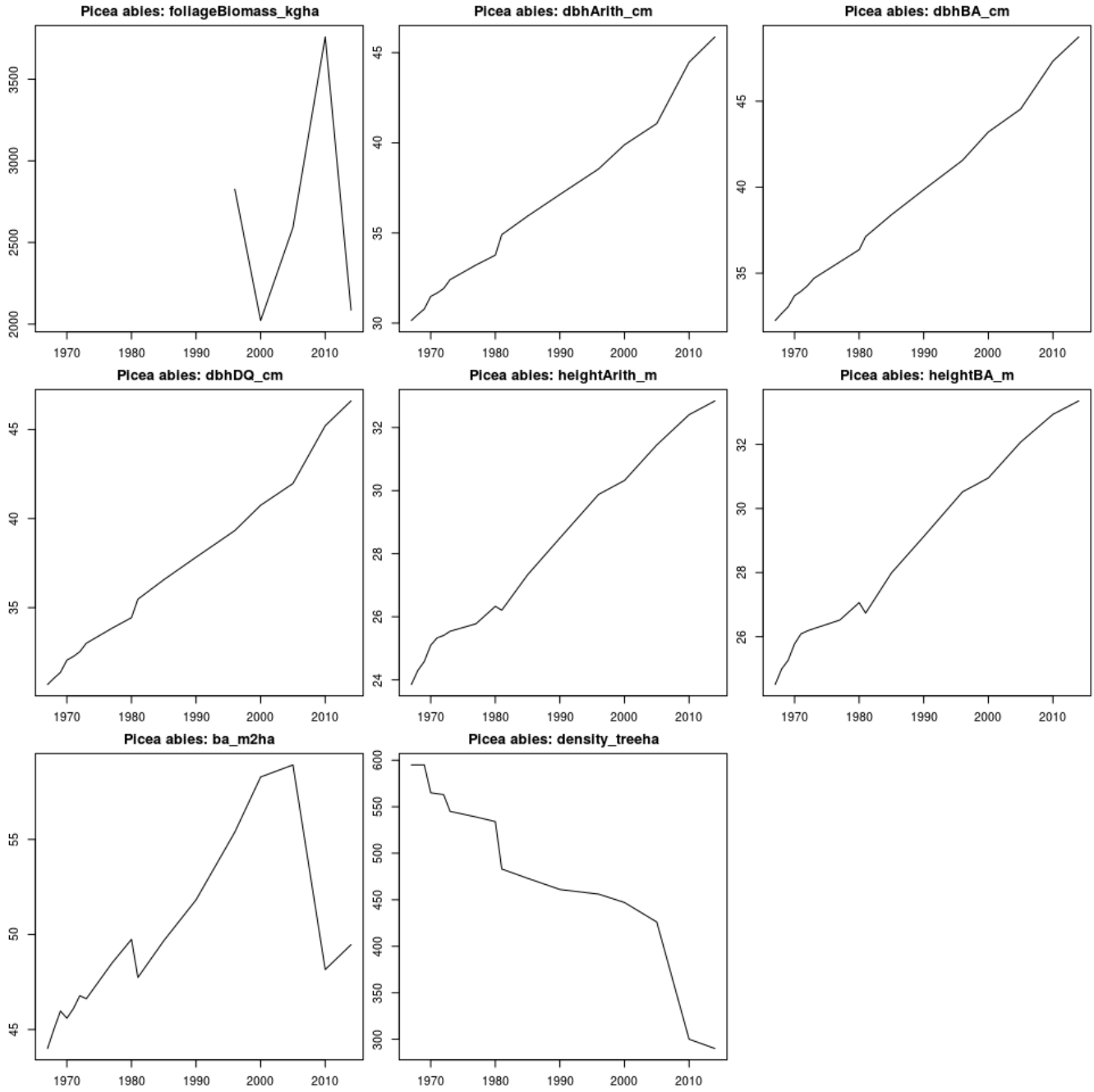

Picea abies: Trees by inventory
0
100
200
300
400
500
1967
1969
1971
1973
1980
1985
1996
2005
2014


Picea abies: mean dbh1_cm by year
segment(s) indicate standard error
30
35
40
45
1967
1972
1977
1985
1990
1996
2005
2010


Picea abies: mean height1_m by year
segment(s) indicate standard error
24
26
28
30
32
1967
1972
1977
1985
1990
1996
2005
2010


Picea abies: height1_m to dbh1_cm ratio
20
30
40
50
60
70
20
30
40
50
60
70

STAND


Picea abies: foliageBiomass_kgha
Picea abies: dbhArith_cm
Picea abies: dbhBA_cm
Picea abies: dbhDQ_cm
Picea abies: heightArith_m
Picea abies: heightBA_m
Picea abies: ba_m2ha
Picea abies: density_treeha

CLIMATE_LOCAL

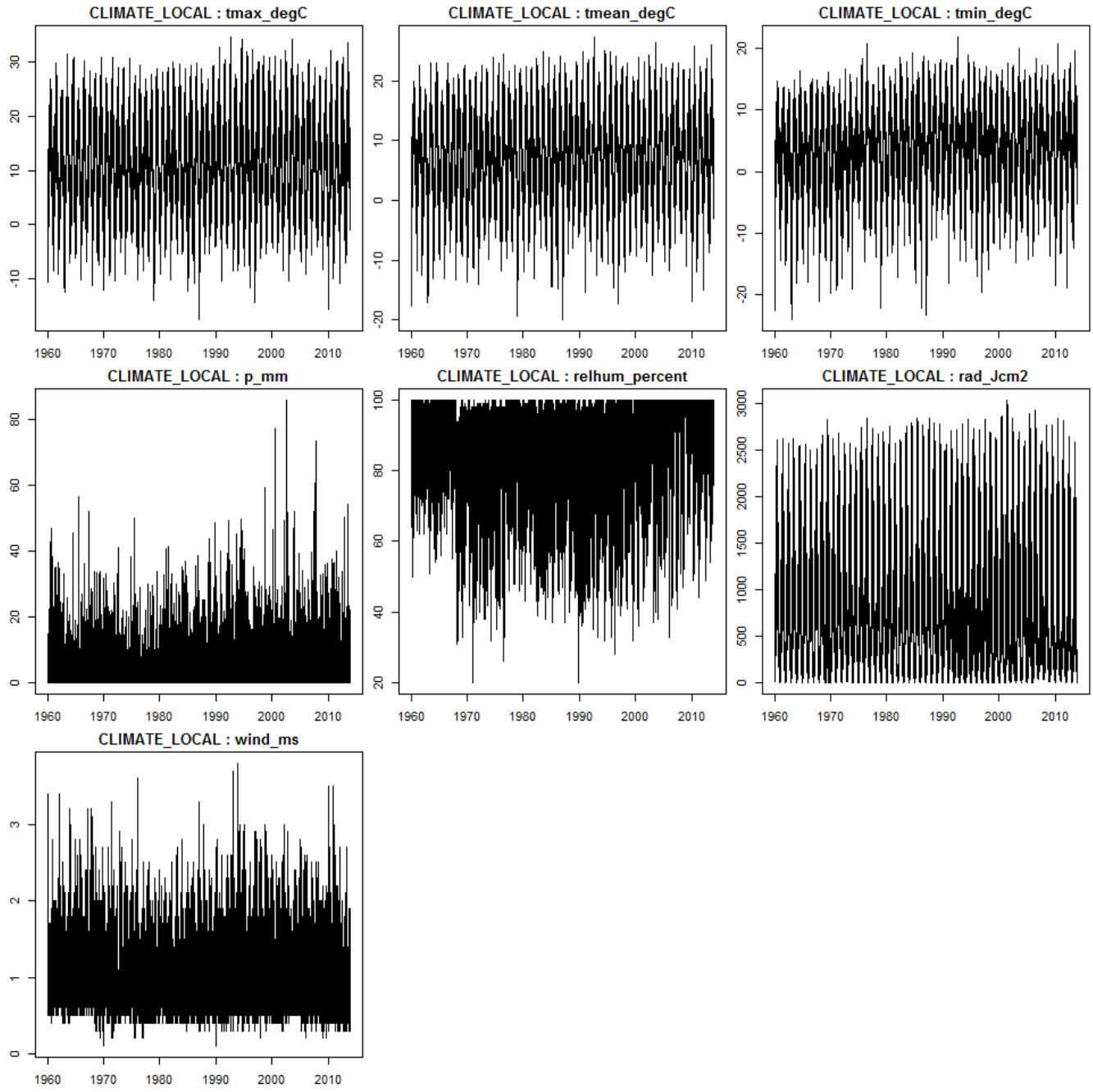


Table 52: Summary of CLIMATE_LOCAL for solling_spruce. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

site	site_id	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
solling_spruce	25	1960	10.4	6.61	2.89	1257	86.7	–	276096	0.934
solling_spruce	25	1961	11.1	7.12	3.36	1354	88.1	–	268859	0.959
solling_spruce	25	1962	9	5.16	1.5	1150	87.7	–	267883	1.03
solling_spruce	25	1963	9.54	5.21	0.889	831	85.8	–	292618	0.926
solling_spruce	25	1964	10.6	6.34	2.23	794	85.2	–	306326	0.983
solling_spruce	25	1965	9.57	5.65	2.03	1405	88.3	–	266717	1.02
solling_spruce	25	1966	10.6	6.71	3.17	1231	88.2	–	270855	0.975
solling_spruce	25	1967	11.2	7.08	3.27	1195	88	–	290665	1.05
solling_spruce	25	1968	10.3	6.15	2.51	1078	81.6	–	282668	0.988
solling_spruce	25	1969	10	6.18	2.11	999	83.8	–	297545	1.07
solling_spruce	25	1970	9.49	5.67	2.17	1438	85	–	276604	0.961
solling_spruce	25	1971	10.8	6.57	2.38	771	80.5	–	302844	0.797
solling_spruce	25	1972	9.91	5.86	2.04	880	83.5	–	274764	0.904
solling_spruce	25	1973	10.5	6.32	2.64	958	82.5	–	295866	0.961
solling_spruce	25	1974	10.5	6.7	3.53	1078	83.1	–	269149	1.02
solling_spruce	25	1975	9.85	7.07	4.55	866	82.2	–	297833	0.997
solling_spruce	25	1976	9.38	6.47	3.78	685	82.3	–	313807	0.939
solling_spruce	25	1977	10.3	6.93	3.97	908	87	–	253898	0.966
solling_spruce	25	1978	9.64	6.25	3.35	967	87.4	–	253917	0.919
solling_spruce	25	1979	9.45	5.85	2.71	832	86.3	–	263678	0.944
solling_spruce	25	1980	9.55	5.91	2.7	1060	85.1	–	277682	0.969
solling_spruce	25	1981	9.95	6.26	3.11	1528	86.9	–	243098	0.912
solling_spruce	25	1982	11.4	7.33	4.04	877	80.7	–	281095	0.879
solling_spruce	25	1983	11.1	7.38	3.99	1073	79.9	–	287931	0.962
solling_spruce	25	1984	9.48	6.22	3.46	1220	85.7	–	264659	0.943

solling_spruce	25	1985	9.21	5.63	2.76	1021	84.4	–	280525	0.935
solling_spruce	25	1986	9.74	6.12	2.97	1195	84.6	–	284680	0.997
solling_spruce	25	1987	8.92	5.43	2.4	1229	85.9	–	261393	0.938
solling_spruce	25	1988	10.4	7.29	4.45	1223	84.2	–	275044	1.11
solling_spruce	25	1989	11.8	8.23	5.03	942	78.7	–	317569	0.982
solling_spruce	25	1990	11.6	7.88	4.77	1022	80.3	–	298969	1.07
solling_spruce	25	1991	10.7	6.78	3.48	861	80.9	–	293693	1.01
solling_spruce	25	1992	11.6	7.76	4.43	1211	82.6	–	3e+05	1.15
solling_spruce	25	1993	10.9	6.78	3.44	1274	82.8	–	290524	1.19
solling_spruce	25	1994	12.1	7.97	4.55	1420	85	–	295065	1.23
solling_spruce	25	1995	11.5	7.27	3.76	1247	84.5	–	298485	1.15
solling_spruce	25	1996	9.68	5.46	2.11	938	85.6	–	279598	1.06
solling_spruce	25	1997	11.8	7.29	3.73	994	83.4	–	314371	1.1
solling_spruce	25	1998	11.2	7.21	3.96	1572	86	–	251600	1.19
solling_spruce	25	1999	11.9	7.67	4.12	1120	85	–	276943	1.07
solling_spruce	25	2000	11.5	7.7	4.47	1134	87.5	–	277166	1.06
solling_spruce	25	2001	10.7	6.96	3.73	1299	86.6	–	293253	1.1
solling_spruce	25	2002	10.9	7.35	4.21	1483	88.3	–	274009	1.11
solling_spruce	25	2003	12.2	7.57	3.82	887	83.2	–	344930	1.02
solling_spruce	25	2004	10.9	6.92	3.65	1207	88.7	–	287077	1.12
solling_spruce	25	2005	10.4	6.79	3.55	1137	90.4	–	307362	1.06
solling_spruce	25	2006	11.1	7.46	4.29	1121	90.1	–	309979	1.01
solling_spruce	25	2007	11.1	7.71	4.62	1648	91.7	–	286557	1.07
solling_spruce	25	2008	10.7	7.32	4.32	1078	91.6	–	298102	0.992
solling_spruce	25	2009	10.6	7.14	3.92	1196	91.4	–	288789	0.876
solling_spruce	25	2010	9.12	5.73	2.54	1147	88.5	–	290963	0.939
solling_spruce	25	2011	11.9	7.88	4.41	1000	88	–	294815	1.01
solling_spruce	25	2012	10.5	6.91	3.78	1027	89.9	–	278029	0.911

solling_spruce	25	2013	11.1	7.04	3.53	1036	89.2	–	264990	0.926
solling_spruce	25	1960-2013	10.5	6.75	3.39	1113	85.6	–	285027	1.01

CLIMATE_ISIMIP2B

Table 53: Summary of CLIMATE_ISIMIP2B for solling_spruce. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	12.02	8.291	4.63	965.5	78.4	986	351220	3.417
GFDLESM2M	piControl	1661-2099	11.91	8.18	4.535	1020	80.61	985.8	350355	2.769
GFDLESM2M	rcp2p6	2006-2099	13.02	9.348	5.668	1026	78.29	986.6	353728	3.827
GFDLESM2M	rcp4p5	2006-2099	13.41	9.677	5.958	1031	78.23	986.9	355083	3.809
GFDLESM2M	rcp6p0	2006-2099	13.52	9.726	5.961	1012	78.09	987	359177	3.725
GFDLESM2M	rcp8p5	2006-2099	13.9	10.06	6.267	1023	78.27	987.1	351752	3.579
HadGEM2ES	historical	1861-2005	11.58	7.856	4.173	913.7	77.89	986.5	357000	3.782
HadGEM2ES	piControl	1661-2299	12	8.187	4.411	921.1	77.23	986.2	377726	3.8
HadGEM2ES	rcp2p6	2006-2299	13.97	10.15	6.42	1003	77.54	986	389972	3.632
HadGEM2ES	rcp4p5	2006-2099	14.9	11.01	7.185	957.8	75.18	986.3	394493	3.64
HadGEM2ES	rcp6p0	2006-2099	14.86	10.97	7.16	924.9	75.06	986.4	394561	3.69
HadGEM2ES	rcp8p5	2006-2099	15.92	11.93	8.069	959.9	74.25	986.6	404870	3.609
IPSLCM5ALR	historical	1861-2005	11.41	7.663	3.951	923.2	78.91	985.9	360181	3.76
IPSLCM5ALR	piControl	1661-2299	10.86	7.039	3.209	914.5	78.98	985.9	380260	3.712
IPSLCM5ALR	rcp2p6	2006-2299	13.63	10.02	6.474	1021	77.67	985.8	383126	3.671
IPSLCM5ALR	rcp4p5	2006-2299	14.96	11.32	7.772	1011	76.55	986.2	386531	3.585
IPSLCM5ALR	rcp6p0	2006-2099	14.11	10.52	7	1004	76.72	985.9	380464	3.731
IPSLCM5ALR	rcp8p5	2006-2299	20.08	16.37	12.77	1049	72.23	985.7	397025	3.511
MIROC5	historical	1861-2005	11.8	8.118	4.483	923.5	78.22	986.3	354907	3.505
MIROC5	piControl	1661-2299	12.8	8.766	4.875	979.5	76.81	985.8	404118	3.158
MIROC5	rcp2p6	2006-2299	13.99	10	6.031	1012	75.42	986.6	420823	4.025
MIROC5	rcp4p5	2006-2099	14.36	10.38	6.472	1038	76.48	986.6	410190	3.706

MIROC5	rcp6p0	2006-2099	14.14	10.17	6.252	1015	76.06	986.5	410564	3.77
MIROC5	rcp8p5	2006-2099	15.33	11.26	7.271	1051	76.07	986.9	417759	3.546

CLIMATE_ISIMIP2BLBC

Table 54: Summary of CLIMATE_ISIMIP2BLBC for solling_spruce. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1861-2005	10.47	6.63	3.261	1107	85.66	–	288257	0.945
GFDLESM2M	piControl	1661-2099	10.38	6.52	3.164	1170	87.22	–	286477	0.766
GFDLESM2M	rcp2p6	2006-2099	11.46	7.687	4.302	1177	85.49	–	289601	1.057
GFDLESM2M	rcp4p5	2006-2099	11.85	8.017	4.594	1183	85.43	–	291224	1.053
GFDLESM2M	rcp6p0	2006-2099	11.96	8.066	4.6	1161	85.24	–	295942	1.029
GFDLESM2M	rcp8p5	2006-2099	12.35	8.395	4.908	1174	85.45	–	287892	0.989
HadGEM2ES	historical	1861-2005	10.28	6.417	3.001	1055	84.32	–	300259	1.027
HadGEM2ES	piControl	1661-2299	10.7	6.748	3.246	1064	83.67	–	323548	1.032
HadGEM2ES	rcp2p6	2006-2299	12.67	8.714	5.254	1159	84	–	336700	0.986
HadGEM2ES	rcp4p5	2006-2099	13.62	9.565	6.023	1107	81.47	–	340986	0.988
HadGEM2ES	rcp6p0	2006-2099	13.57	9.53	5.999	1070	81.3	–	341408	1.002
HadGEM2ES	rcp8p5	2006-2099	14.63	10.49	6.91	1111	80.44	–	352407	0.98
IPSLCM5ALR	historical	1861-2005	10.09	6.254	2.848	1091	85.38	–	300351	1.024
IPSLCM5ALR	piControl	1661-2299	9.544	5.63	2.115	1081	85.36	–	320787	1.01
IPSLCM5ALR	rcp2p6	2006-2299	12.32	8.613	5.358	1208	84.26	–	324713	1
IPSLCM5ALR	rcp4p5	2006-2299	13.65	9.914	6.657	1196	83.12	–	329105	0.976
IPSLCM5ALR	rcp6p0	2006-2099	12.8	9.112	5.882	1188	83.29	–	322919	1.016
IPSLCM5ALR	rcp8p5	2006-2299	18.76	14.96	11.66	1244	78.32	–	342016	0.956
MIROC5	historical	1861-2005	10.53	6.666	3.273	1111	84.85	–	301185	0.96
MIROC5	piControl	1661-2299	11.54	7.314	3.684	1179	83.41	–	354557	0.865
MIROC5	rcp2p6	2006-2299	12.71	8.549	4.845	1217	81.92	–	373206	1.104
MIROC5	rcp4p5	2006-2099	13.08	8.924	5.283	1252	83.08	–	361628	1.016

MIROC5	rcp6p0	2006-2099	12.86	8.714	5.062	1223	82.63	–	362358	1.034
MIROC5	rcp8p5	2006-2099	14.05	9.803	6.087	1265	82.65	–	370140	0.972

CLIMATE_ISIMIP2A

Table 55: Summary of CLIMATE_ISIMIP2A for solling_spruce. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GSWP3	1901-2010	11.75	7.91	4.438	908.9	80.45	988.6	354952	3.937
PRINCETON	1901-2012	11.49	7.941	4.175	720.6	86.61	994.7	365007	3.693
WATCH	1901-2001	11.69	7.791	4.357	937.7	79.3	986	307616	2.739
WFDEI	1901-2010	11.79	7.954	4.455	940.6	79.22	986	331452	3.026

CLIMATE_ISIMIPFT

Table 56: Summary of CLIMATE_ISIMIPFT for solling_spruce. Note: Average of the annual sum of the variables p_mm and rad_Jcm2. Rest of variables, average of the annual mean values.

forcingDataset	forcingCondition	year	tmax_degC	tmean_degC	tmin_degC	p_mm	relhum_percent	airpress_hPa	rad_Jcm2	wind_ms
GFDLESM2M	historical	1950-2005	11.71	7.843	4.433	972.1	83.16	985.8	299367	2.703
GFDLESM2M	rcp2p6	2006-2099	12.64	8.812	5.381	1037	83.35	986.2	301939	2.928
GFDLESM2M	rcp4p5	2006-2099	13.05	9.158	5.695	1045	83.21	986.5	302757	2.887
GFDLESM2M	rcp6p0	2006-2099	13.13	9.202	5.722	1026	82.99	986.6	304269	2.821
GFDLESM2M	rcp8p5	2006-2099	13.52	9.535	6.02	1036	83.18	986.7	300243	2.765
HadGEM2ES	historical	1950-2004	11.55	7.681	4.258	970.7	76.56	985.9	299026	2.711
HadGEM2ES	rcp2p6	2005-2099	14.05	9.878	6.247	992.4	74.29	985.9	323108	2.6
HadGEM2ES	rcp4p5	2005-2099	14.83	10.62	6.95	987	73.25	986	323433	2.623
HadGEM2ES	rcp6p0	2005-2099	14.8	10.59	6.929	951.5	73.02	986.2	324949	2.662
HadGEM2ES	rcp8p5	2005-2099	15.86	11.55	7.837	993.5	72.38	986.3	328351	2.609
IPSLCM5ALR	historical	1950-2005	11.72	7.852	4.443	968.1	78.21	985.9	298085	2.733
IPSLCM5ALR	rcp2p6	2006-2099	13.65	9.858	6.522	1042	76.62	985.7	313461	2.706
IPSLCM5ALR	rcp4p5	2006-2099	14.02	10.23	6.914	1034	76.45	986.2	311196	2.673
IPSLCM5ALR	rcp6p0	2006-2099	14.04	10.28	6.991	1033	76.21	985.8	309603	2.744
IPSLCM5ALR	rcp8p5	2006-2099	15.07	11.24	7.876	1027	75.32	986	314994	2.661
MIROCESMCHEM	historical	1950-2005	11.65	7.796	4.39	983.6	91.49	985.6	305806	2.73
MIROCESMCHEM	rcp2p6	2006-2099	14.37	10.32	6.78	1124	91.05	985.9	363820	2.528
MIROCESMCHEM	rcp4p5	2006-2099	14.27	10.45	7.079	1110	91.75	986.4	357358	2.365
MIROCESMCHEM	rcp6p0	2006-2099	14.6	10.55	7.032	1122	90.97	986.1	361982	2.635
MIROCESMCHEM	rcp8p5	2006-2099	15.4	11.49	8.079	1154	91.42	986.5	366684	2.329
NorESM1M	historical	1950-2005	11.63	7.733	4.291	960.1	80.17	985.9	299444	2.7
NorESM1M	rcp2p6	2006-2099	13.18	9.272	5.774	988.2	77.63	986.2	323535	2.79

NorESM1M	rcp4p5	2006-2099	13.64	9.577	5.937	979	77.31	986.4	327072	2.745
NorESM1M	rcp6p0	2006-2099	13.69	9.587	5.933	989.3	77.71	986.5	324772	2.73
NorESM1M	rcp8p5	2006-2099	14.37	10.1	6.332	1024	77.31	986.8	327935	2.659

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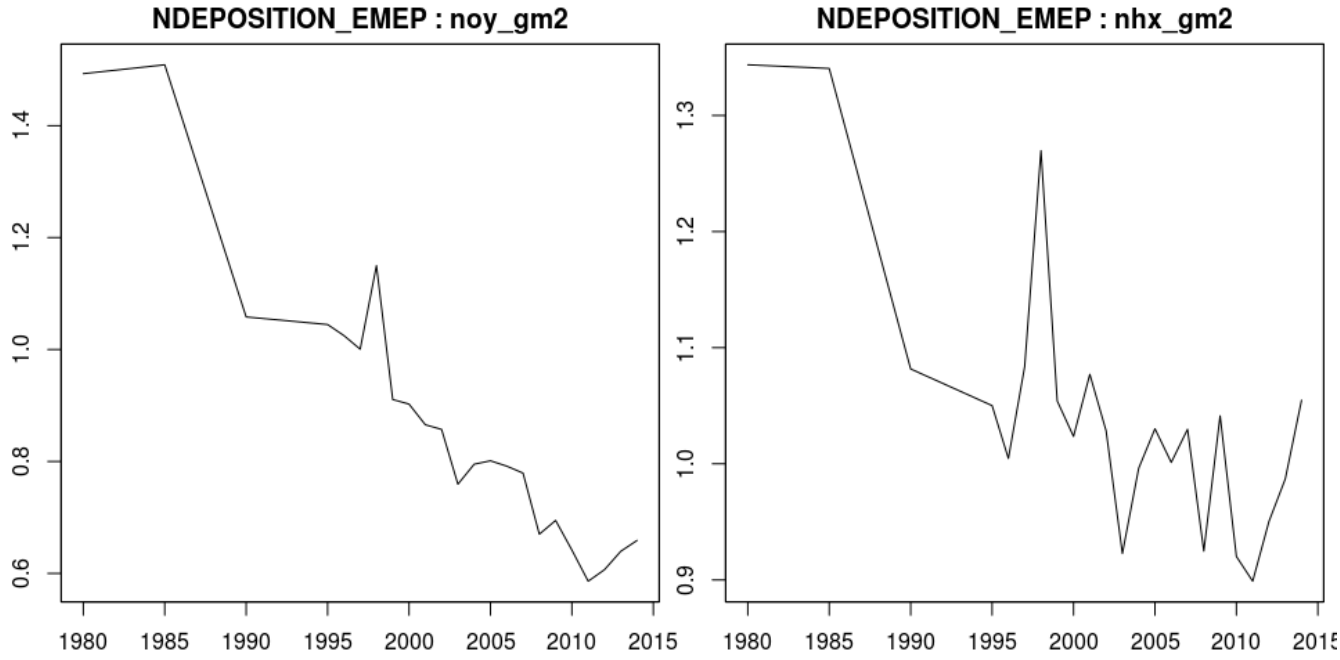

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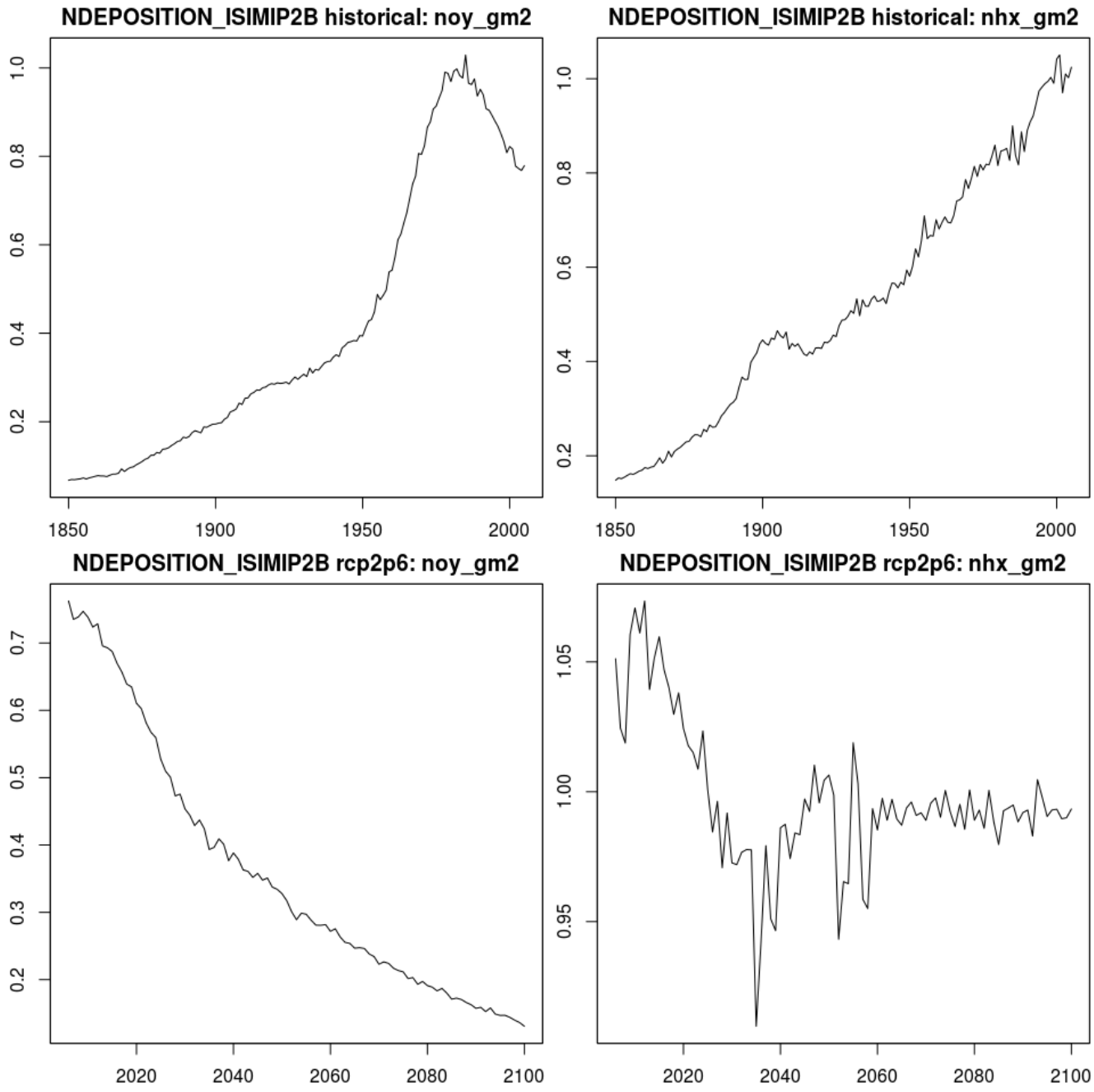

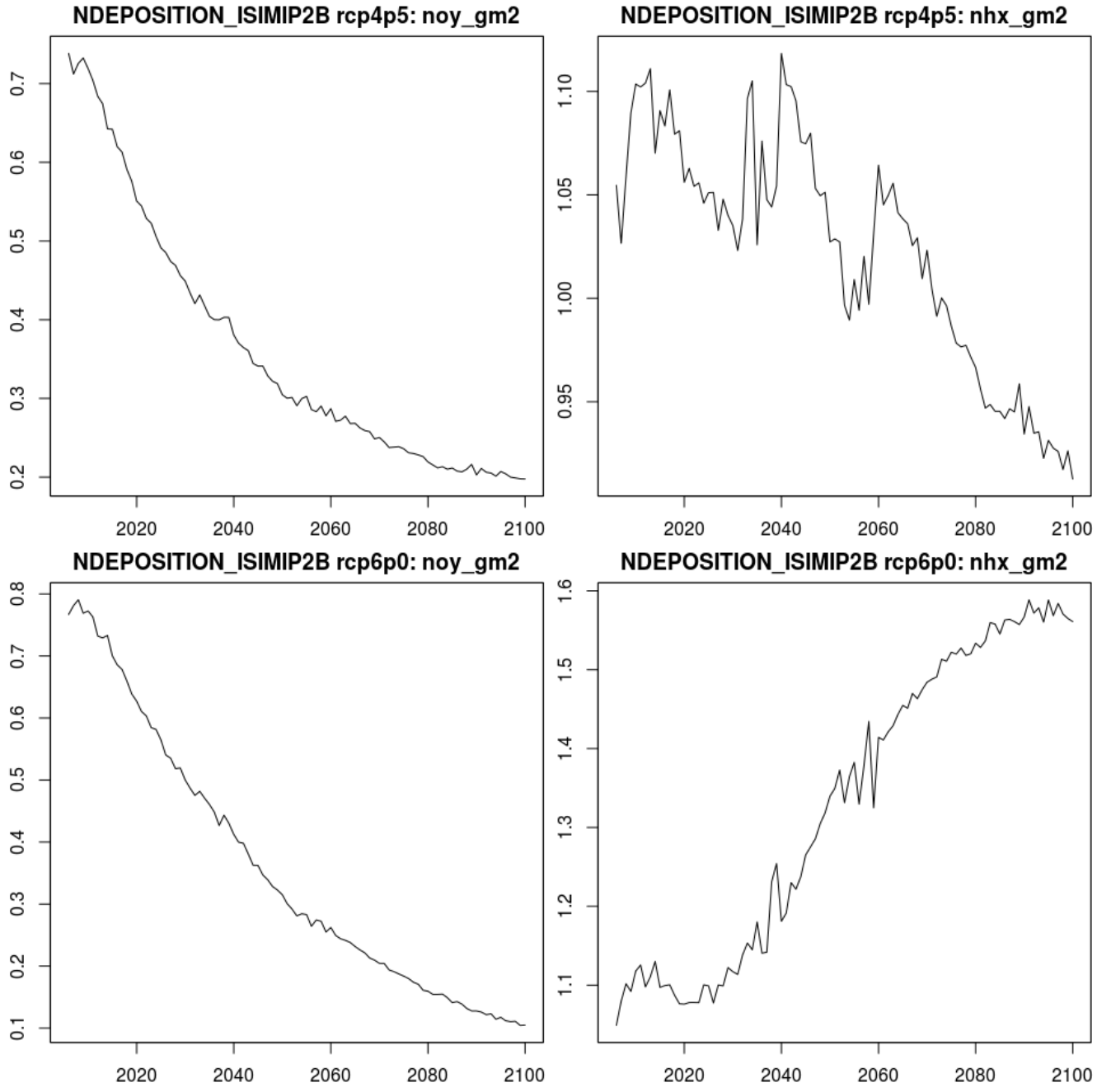
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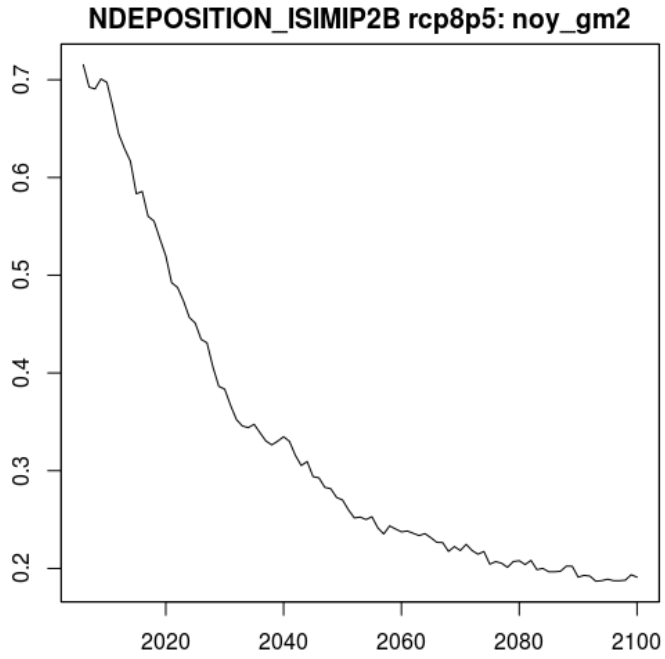
2060
2080
2100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2080
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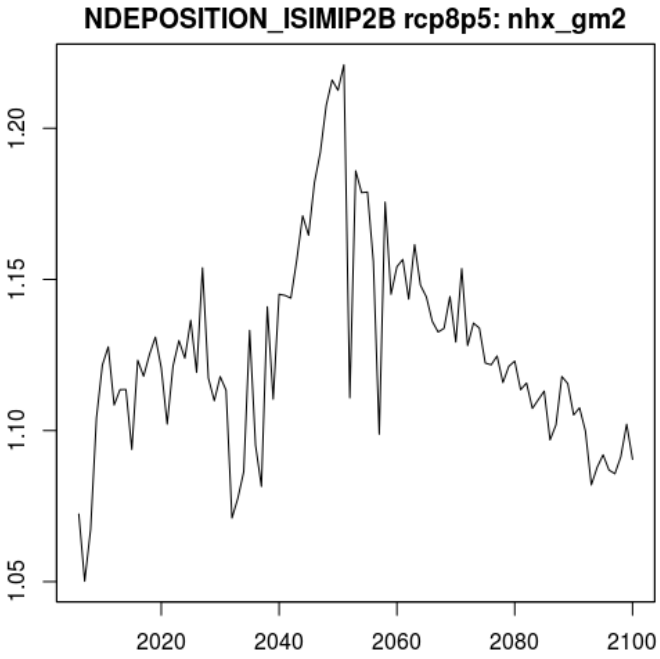
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2020
2040
2060
2080
2100

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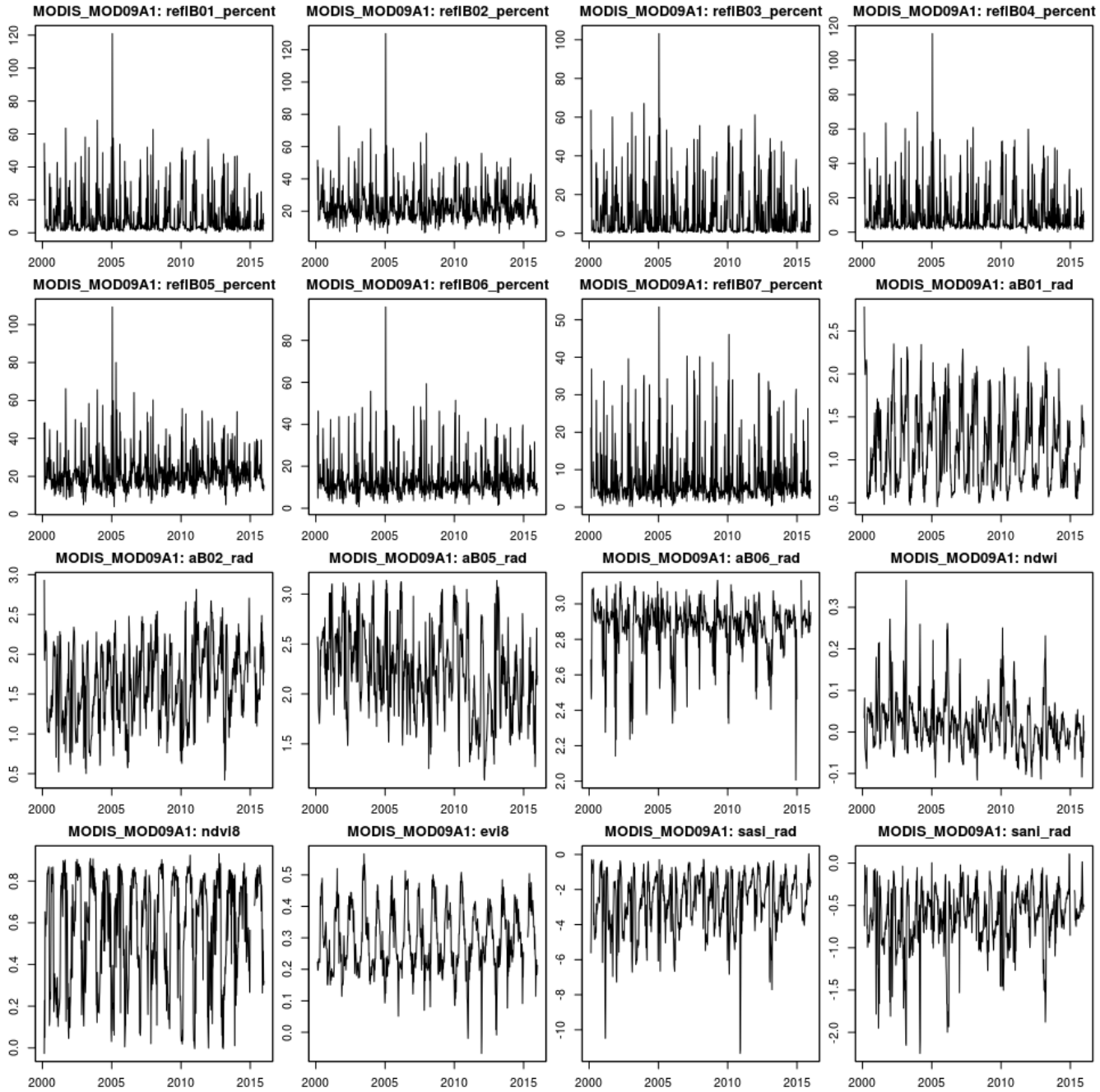

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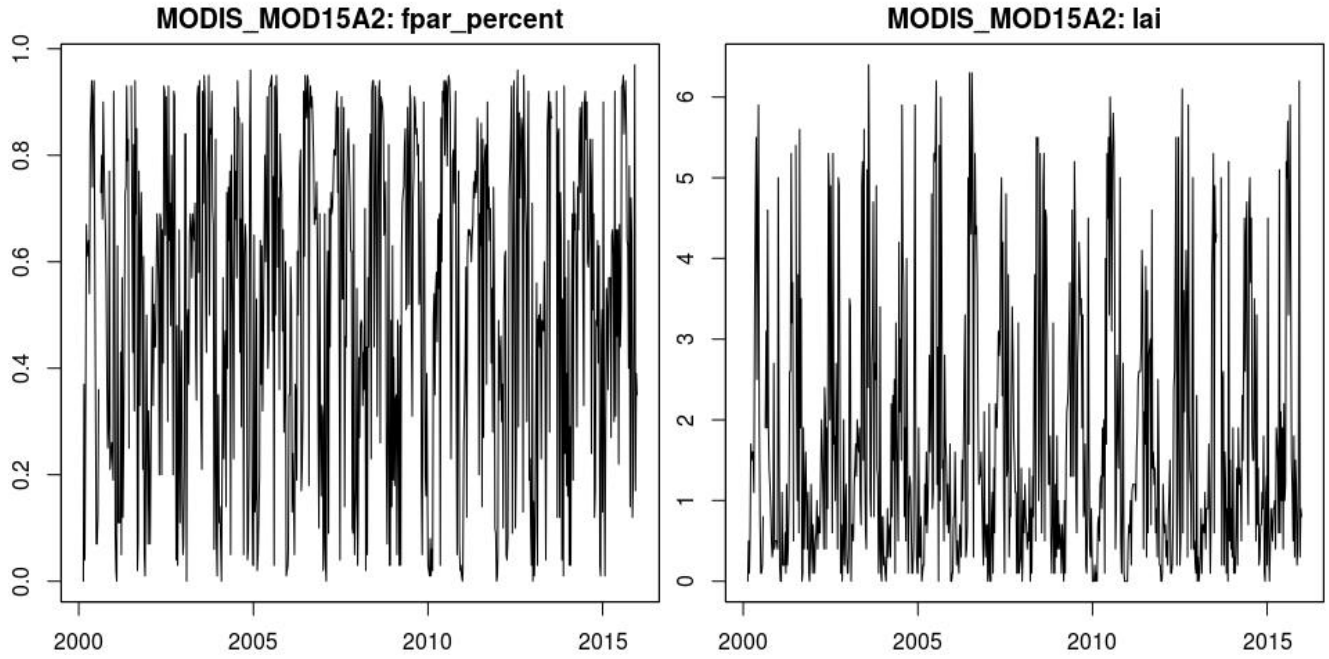

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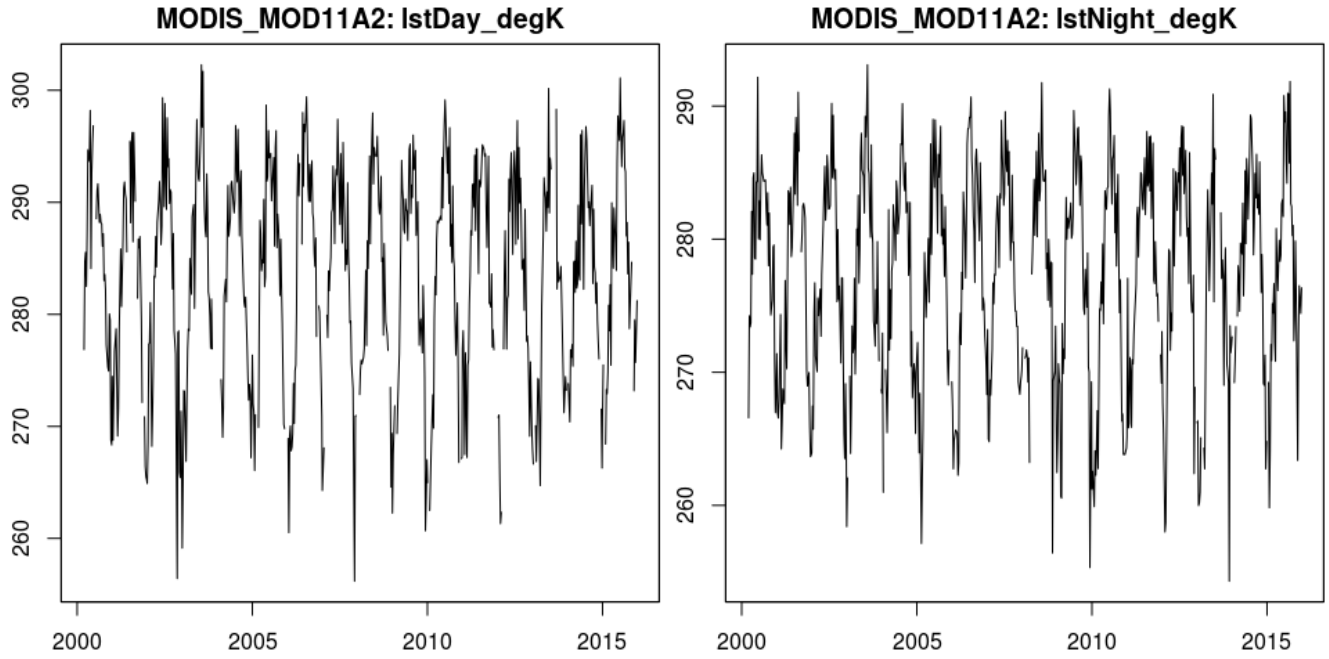

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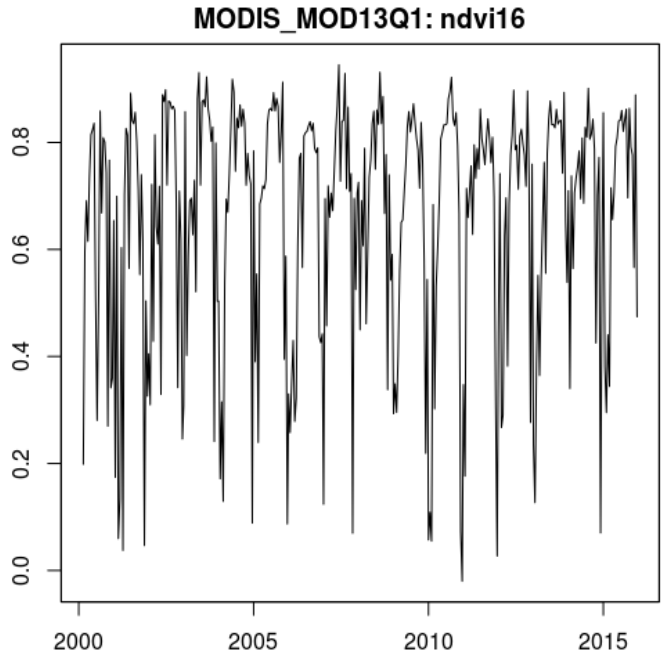

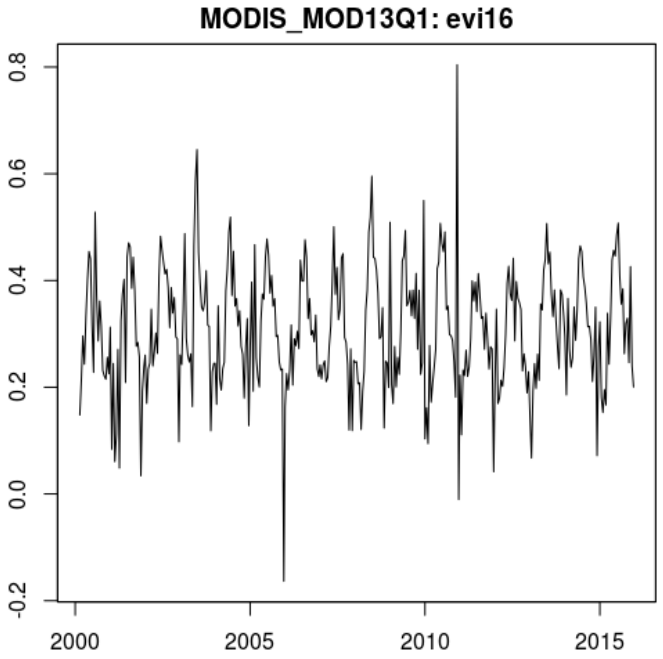

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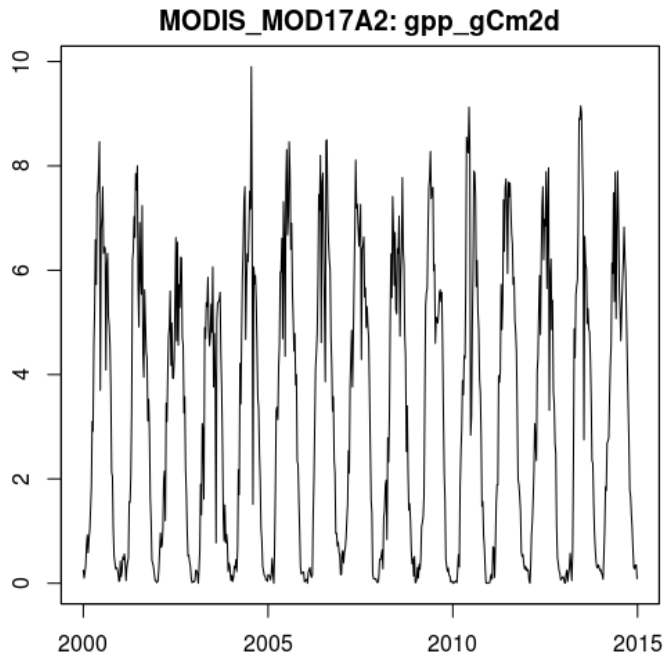

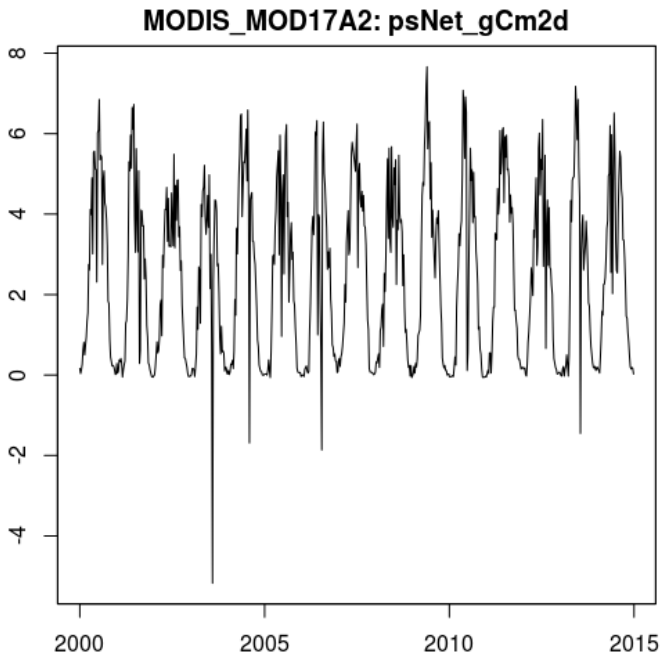

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