

PROPOSAL FOR FLUXNET SYNTHESIS PUBLICATION FOR OPENED FLUXNET-LA-THUILE DATA SET



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Collaborators needing access to data:

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Affiliations:

TITLE OF PAPER AND OUTLINE

Title: Improving estimation of global needle-leaved evergreen forest regions based on RF algorithm

Description:

Most effective methods of estimation of carbon flux now use the remote sensing data. But because of the inaccuracy of remote sensing data, the estimation may have large error compared to the true condition. In most of the previous studies of flux estimation with machine learning method, the estimation is generally limited in one station or small region. This is probably because when people used the method in larger region, the accuracy decline rapidly.

In our study, we improve present machine learning algorithm to estimate the carbon flux of global needle-leaved evergreen forest regions. Our method use only the station flux data and this can increase the accuracy to a great extent.

Proposed SITES to be INVOLVED

We will use FLUXNET data from 2000 to the present. The list of the station is following:

Site_id	Latitude	Elevation	Climate_Koepfen	Mean Annual Temp	Mean Annual Precip	url
US-NMj	46.6465	394	Dfb (Warm Summer Continental: significant	4.73	854	http://www.1NMj

			precipitation in all seasons) Dfb (Warm Summer				
US-Vcm	35.8884	3003	Continental: significant precipitation in all seasons)	6.4	646	http://www.1 Vcm	
SE-Kno	60.9833		Dfc (Subarctic: severe winter; no dry season; cool summer)	3.55	602	http://www.1 Kno	
JP-Fuj	35.4514	1030	Cfa (Humid Subtropical: mild with no dry season; hot summer)	9.68	1607	http://www.1 Fuj	
IT-Bon	39.4778	1170	Csa (Mediterranean: mild with dry; hot summer)	9.73	1029	http://www.1 Bon	
US-Blk	44.158	1718	Dfb (Warm Summer Continental: significant precipitation in all seasons)	6.23	574	http://www.1 Blk	
US-CPk	41.068	2750	Dfc (Subarctic: severe winter; no dry season; cool summer)	6.1	545	http://www.1 CPk	
UK-Har	55.2164	200	Cfb (Marine West Coast: mild with no dry season; warm summer)	7.5	1075	http://www.1 Har	
US-Me1	44.5794	896	Csb (Mediterranean: mild with dry; warm summer)	7.88	705	http://www.1 Me1	
CA-Na1	46.4722	341	Dfb (Warm Summer Continental: significant precipitation in all seasons)	7.09	1103	http://www.1 Na1	
US-Ha2	42.5393	360	Dfb (Warm Summer Continental: significant precipitation in all seasons)	6.56	1071	http://www.1 Ha2	
US-NR2	40.0325	3030	Dfc (Subarctic: severe winter; no dry season; cool summer)	0.43	595	http://www.1 NR2	
US-GLE	41.3644	3190	Dfc (Subarctic: severe winter; no dry season; cool summer)	0.8	525	http://www.1 GLE	
US-Fuf	35.089	2180	Csb (Mediterranean: mild with dry; warm summer)	8.7	562	http://www.1 Fuf	
CA-TP2	42.7744	212	Dfb (Warm Summer Continental: significant precipitation in all seasons)	8	1036	http://www.1 TP2	
CA-SJ2	53.945	580	Dfc (Subarctic: severe winter; no dry season; cool	0.11	430	http://www.1 SJ2	

			summer)					
			Dfb (Warm Summer					
US-Vcp	35.8624	2542	Continental: significant precipitation in all seasons)	9.8	550	http://www.1	Vcp	
US-Me3	44.3154	1005	Csb (Mediterranean: mild with dry; warm summer)	7.07	719	http://www.1	Me3	
CA-SJ1	53.908	580	Dfc (Subarctic: severe winter; no dry season; cool summer)	0.13	430	http://www.1	SJ1	
CA-SJ3	53.8758		Dfc (Subarctic: severe winter; no dry season; cool summer)	0.13	433	http://www.1	SJ3	
CA-Ca2	49.8705	300	Cfb (Marine West Coast: mild with no dry season; warm summer)	9.86	1474	http://www.1	Ca2	
DE-Bay	50.1419	775	Cfb (Marine West Coast: mild with no dry season; warm summer)	5.15	1159	http://www.1	Bay	
US-Me6	44.3233	998	Csb (Mediterranean: mild with dry; warm summer)	7.59	494	http://www.1	Me6	
CA-TP1	42.6609	265	Dfb (Warm Summer Continental: significant precipitation in all seasons)	8	1036	http://www.1	TP1	
CA-Ca1	49.8673	300	Cfb (Marine West Coast: mild with no dry season; warm summer)	9.93	1369	http://www.1	Ca1	
US-NR1	40.0329	3050	Dfc (Subarctic: severe winter; no dry season; cool summer)	1.5	800	http://www.1	NR1	
US-Ho3	45.2072	61	Dfb (Warm Summer Continental: significant precipitation in all seasons)	5.31	1072	http://www.1	Ho3	
CA-Obs	53.9872	628.94	Dfc (Subarctic: severe winter; no dry season; cool summer)	0.79	406	http://www.1	Obs	
US-Fmf	35.1426	2160	Csb (Mediterranean: mild with dry; warm summer)	9.5	546	http://www.1	Fmf	
US-NC3	35.799	5	Cfa (Humid Subtropical: mild with no dry season; hot summer)	16.6	1320	http://www.1	NC3	
US-MRf	44.6465	263	Csb (Mediterranean: mild with dry; warm summer)	10.24	1820	http://www.1	MRf	
US-NC1	35.8118	5	Cfa (Humid Subtropical: mild with no dry season; hot summer)	16.6	1320	http://www.1	NC1	

US-Cst	33.0442	50	Cfa (Humid Subtropical: mild with no dry season; hot summer)	17.4	1410	http://www.1 Cst
US-NC2	35.803	5	Cfa (Humid Subtropical: mild with no dry season; hot summer)	16.6	1320	http://www.1 NC2
US-SP4	29.8028	47	Cfa (Humid Subtropical: mild with no dry season; hot summer)	20	1320	http://www.1 SP4
US-KS1	28.4583	1	Cfa (Humid Subtropical: mild with no dry season; hot summer)	21.9	1266	http://www.1 KS1
US-Dk3	35.9782	163	Cfa (Humid Subtropical: mild with no dry season; hot summer)	14.36	1170	http://www.1 Dk3
FI-Nuo	67.8		Dfc (Subarctic: severe winter; no dry season; cool summer)	-2.03	564	http://www.1 Nuo
RU-Ypn	62.2414	220	Dfd (Subarctic: severe; very cold winter; no dry season; cool summer)	-10.35	239	http://www.1 Ypn
CA-NS8	55.8981	274	Dfc (Subarctic: severe winter; no dry season; cool summer)	-2.71	507	http://www.1 NS8
US-Prr	65.1237	210	Dwc (Subarctic: severe; dry winter; cool summer)	-2	275	http://www.1 Prr

PROPOSED RULES FOR CO-AUTHORSHIP

All data contributors and providers making an intellectual contribution will be invited as coauthors. Data contributors and providers not making an intellectual contribution will be identified by name in the acknowledgements.