

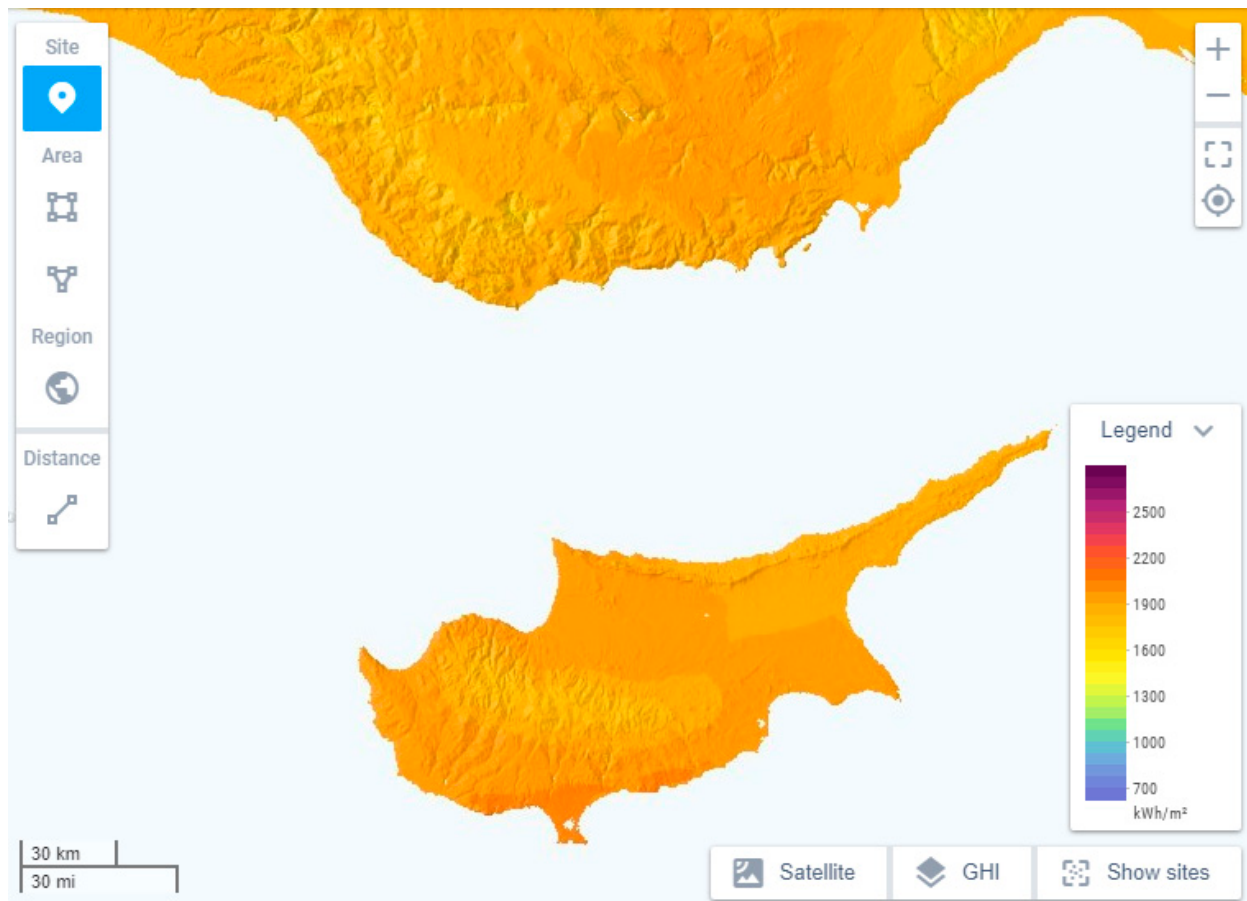


Figure S1. Long-term averages of global horizontal irradiation of Cyprus.

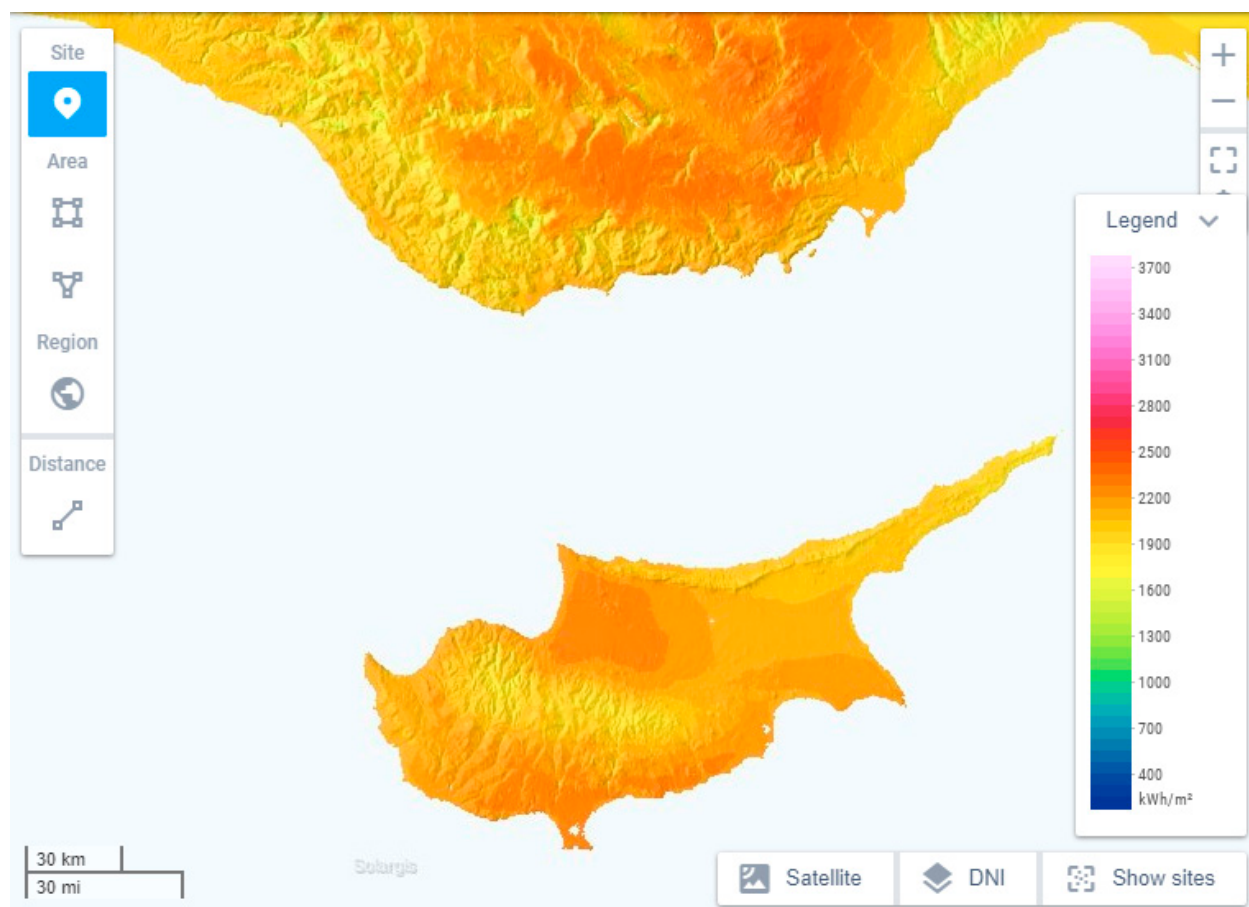


Figure S2. Long-term averages of direct normal irradiation of Cyprus.



Figure S3. Long-term averages of global tilted irradiation of Cyprus at optimum angle.

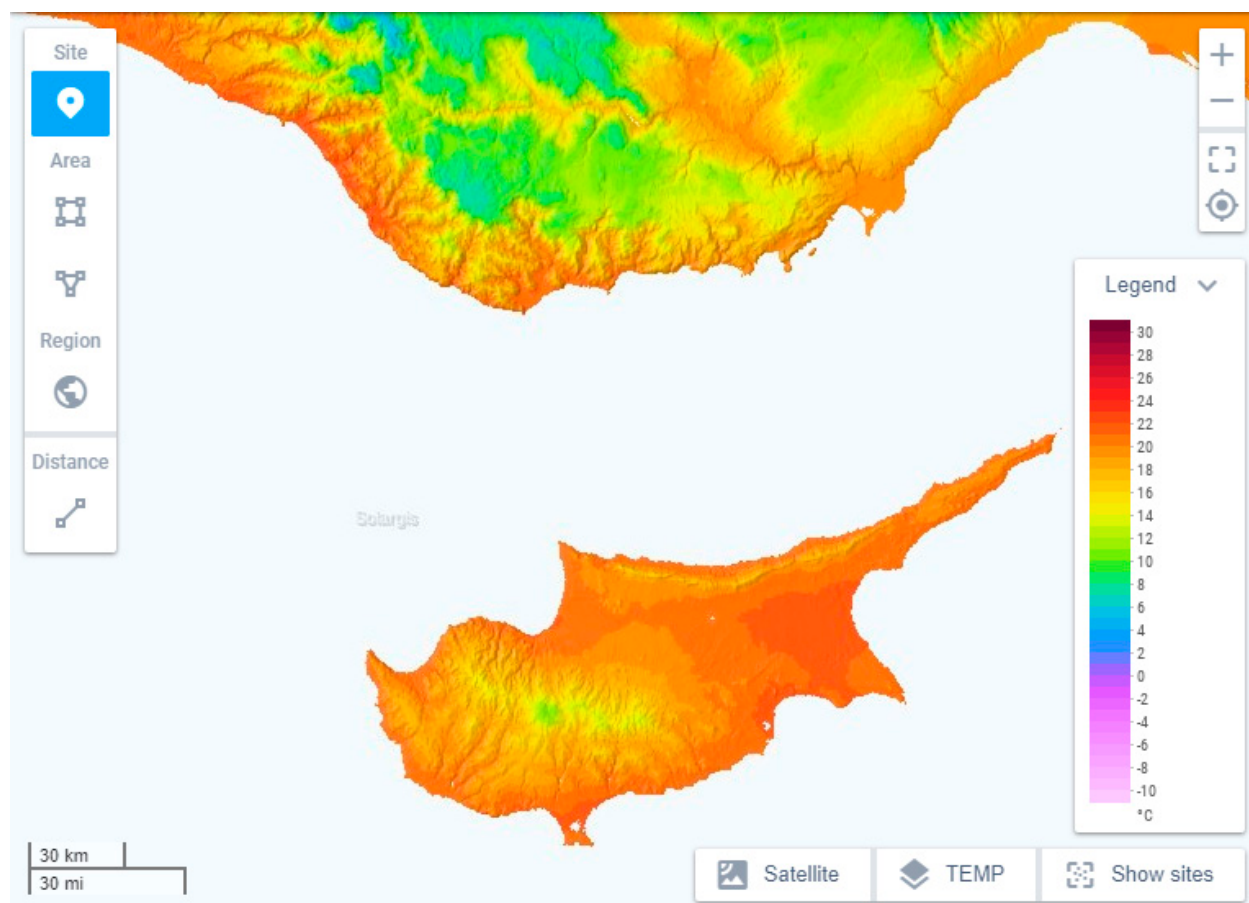


Figure S4. Long-term averages of air temperature of Cyprus.



Figure S5. Optimum tilt angle of PV module in Cyprus.



Figure S6. Long-term averages of specific PV power output of Cyprus.

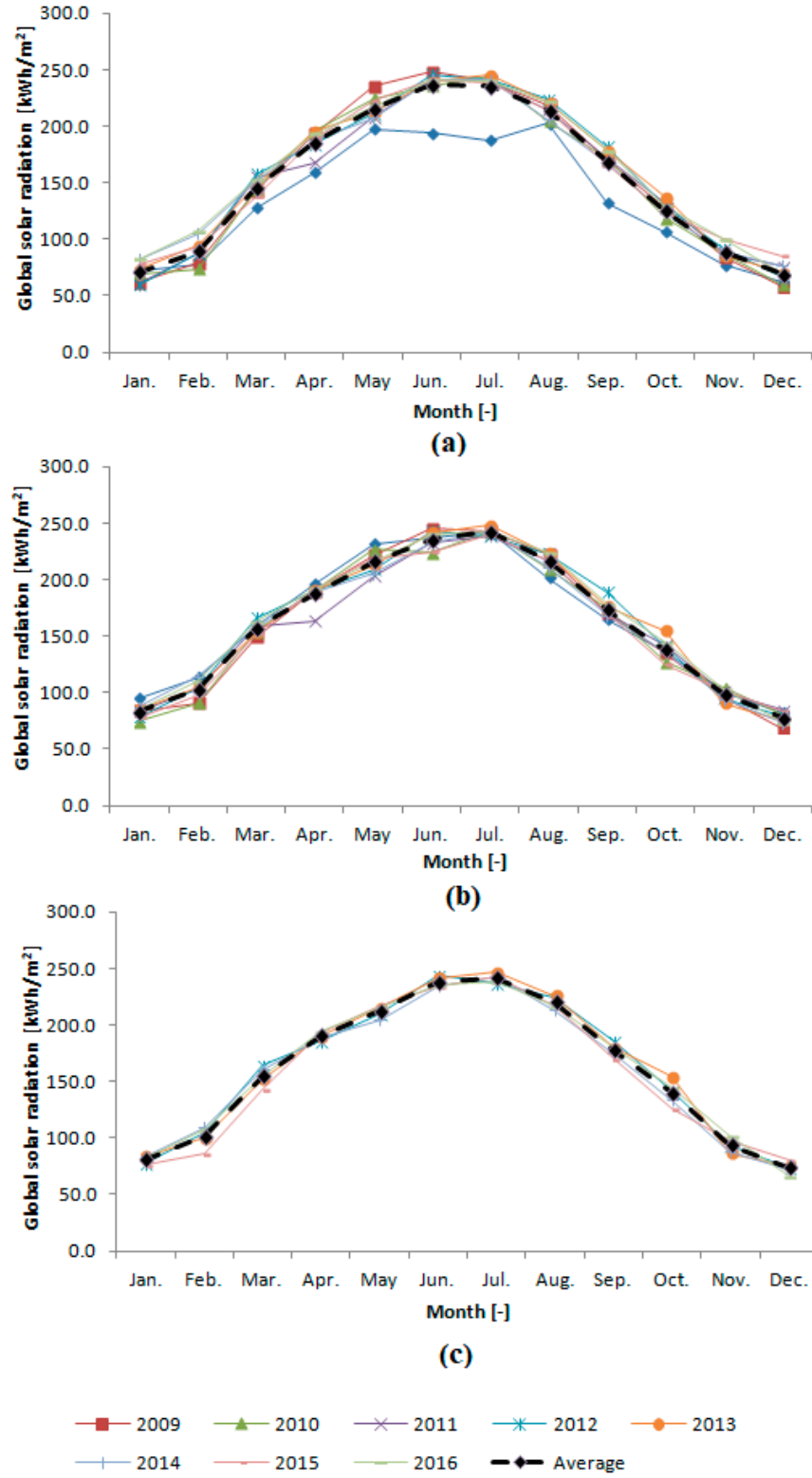


Figure S7. Mean monthly global solar radiation during the investigation period for (a) Girne, (b) Lefkoşa, (c) Yeni Boğaziçi, (d) Salamis and (e) Güzelyurt.

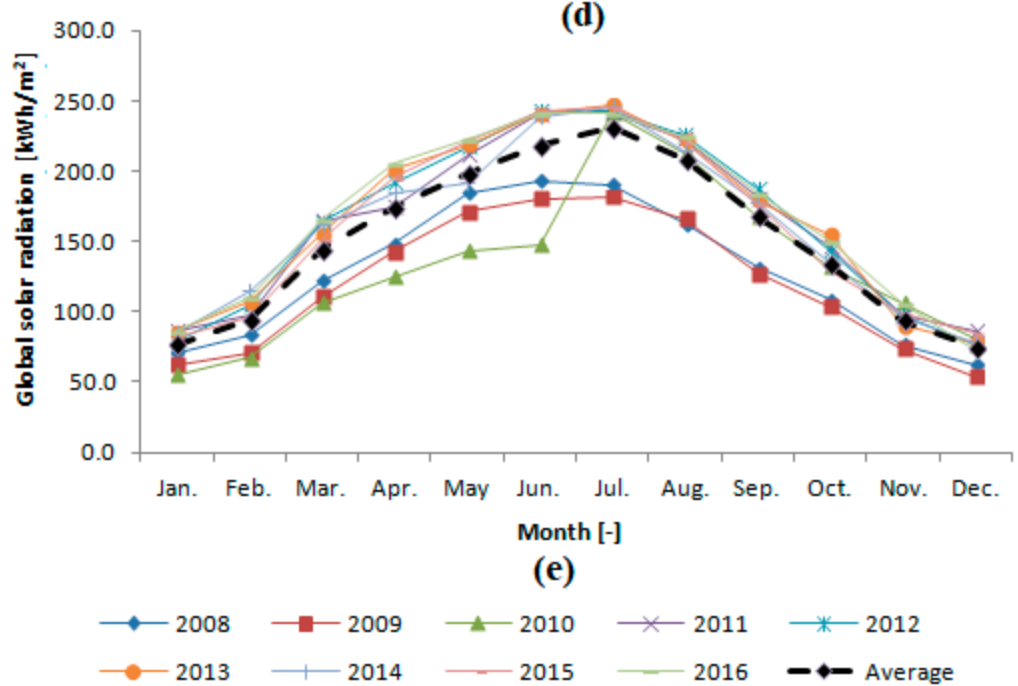
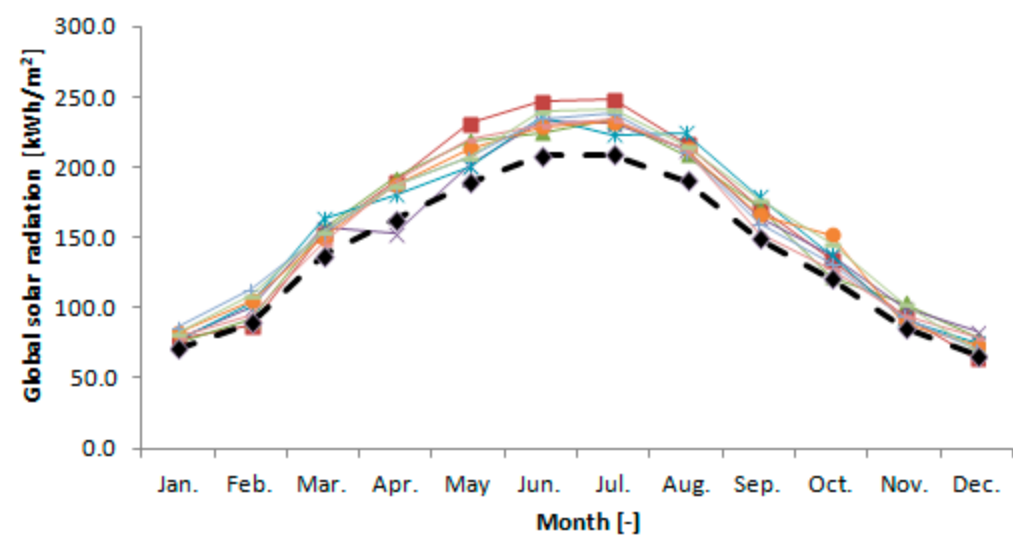


Figure S7. Continued.

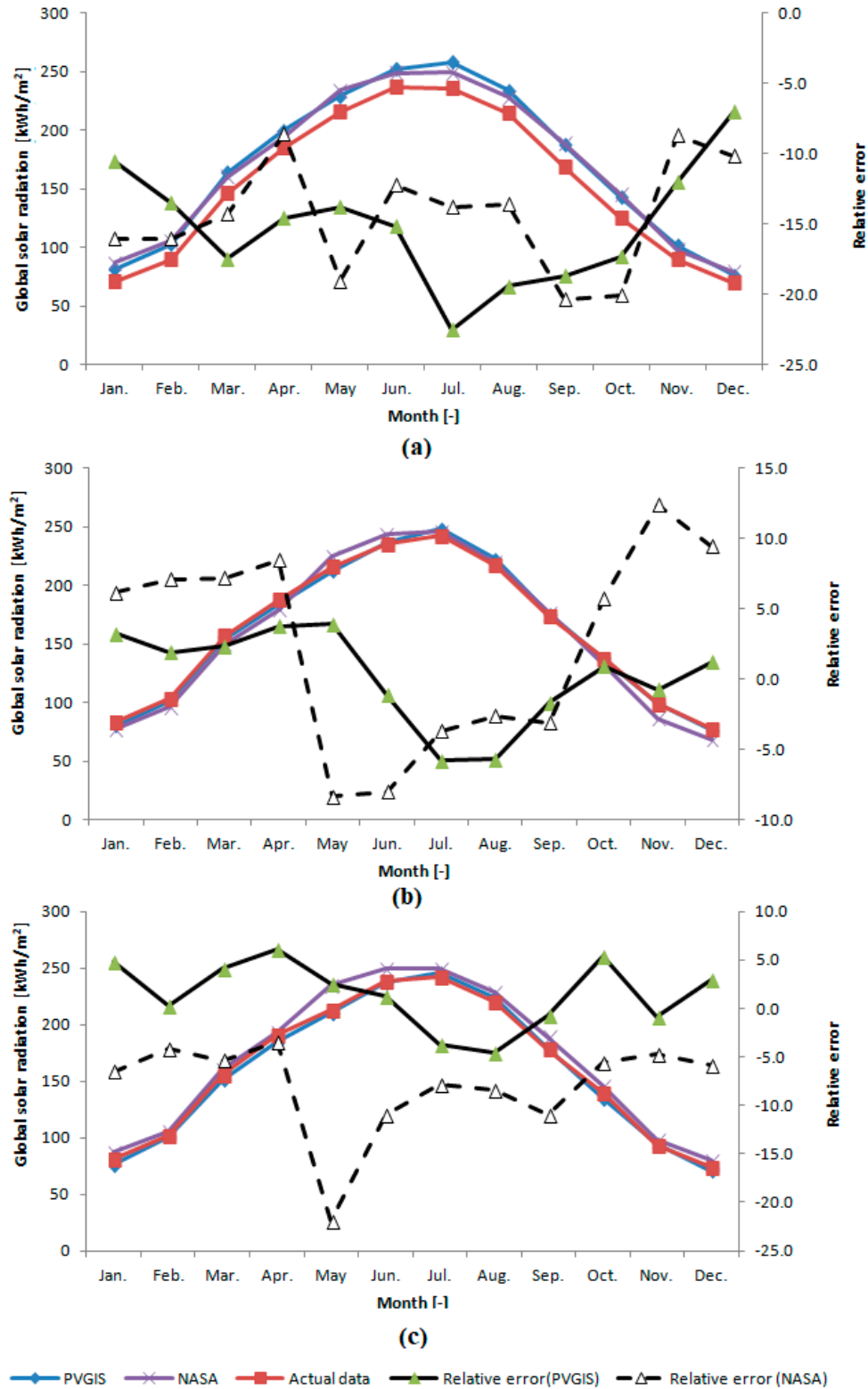


Figure S8. Values of global solar radiation for (a) Girne, (b) Lefkoşa, (c) Yeni Boğaziçi, (d) Salamis, and (e) Güzelyurt.

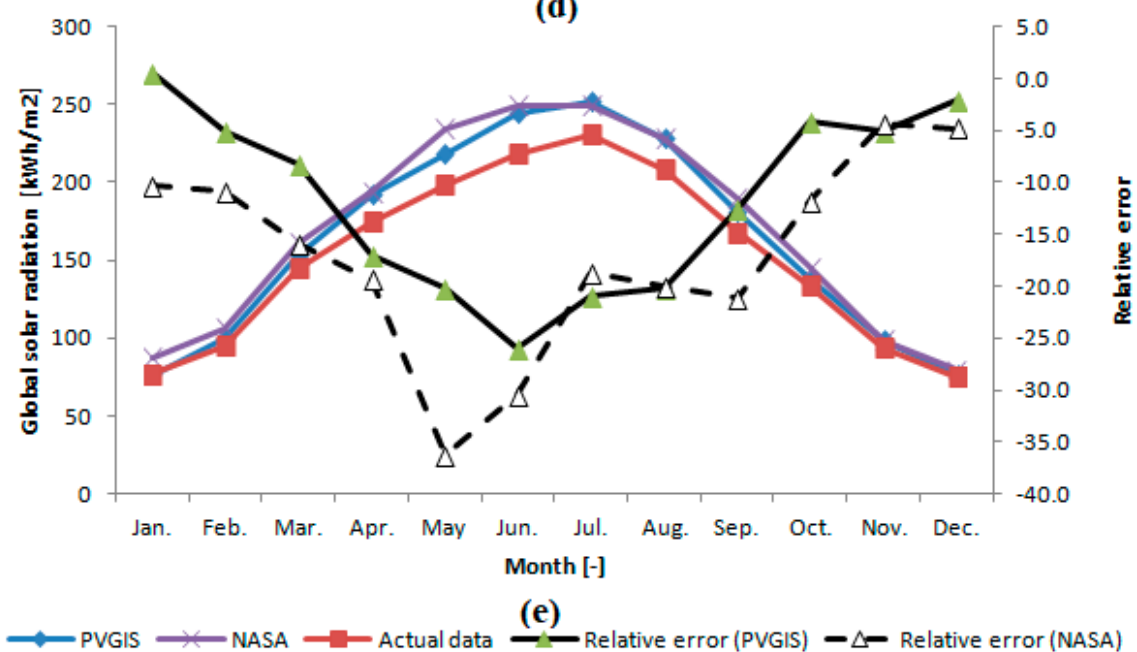
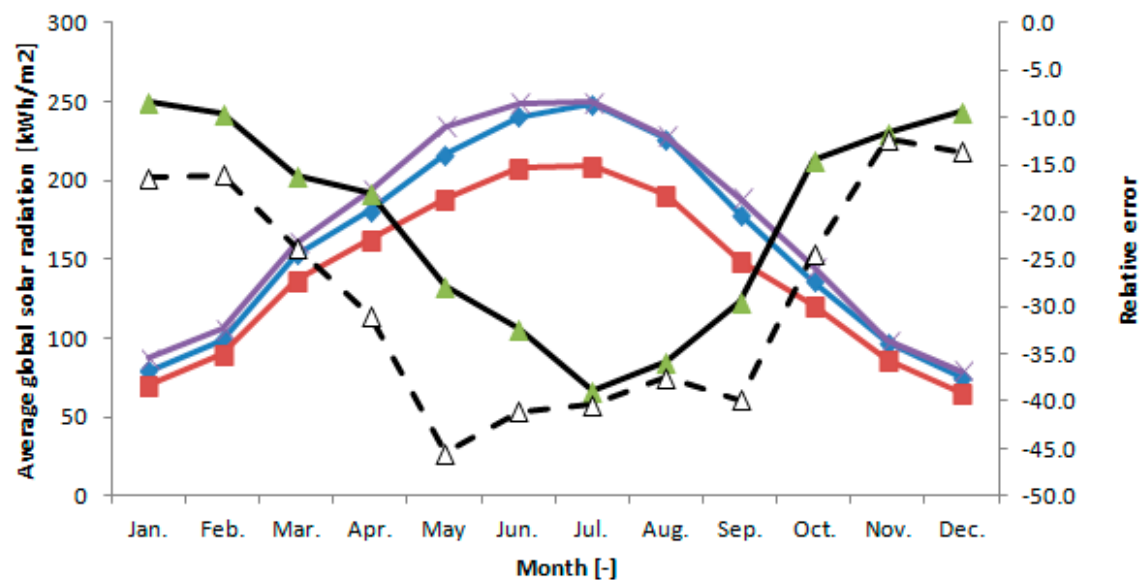


Figure S8. Continued.

Table 1S. Values of global solar radiation for five selected regions.

Month	Girne					Lefkoşa				
	Measured	PVGIS	NASA	AR 1	AR2	Measured	PVGIS	NASA	AR 1	AR2
Jan.	71.04	81.56556	77.19	14.82	8.66	83.34	80.12667	77.19	3.86	7.38
Feb.	89.49	103.0144	96.32	15.11	7.63	103.39	101.4889	96.32	1.83	6.83
Mar.	146.30	163.7811	149.73	11.95	2.35	156.94	154.6133	149.73	1.49	4.60
Apr.	185.20	199.7511	179.40	7.86	3.13	187.84	184.0744	179.40	2.00	4.49
May	215.30	229.1344	224.44	6.43	4.25	216.06	212.1622	224.44	1.80	3.88
Jun.	236.76	251.9122	243.60	6.40	2.89	235.57	236.7289	243.60	0.49	3.41
Jul.	235.73	258.2711	245.83	9.56	4.29	242.15	247.9333	245.83	2.39	1.52
Aug.	214.51	233.9611	219.48	9.07	2.32	216.83	222.5622	219.48	2.64	1.22
Sep.	168.60	187.3144	176.40	11.10	4.63	173.28	174.9667	176.40	0.97	1.80
Oct.	125.29	142.6178	132.06	13.83	5.40	137.81	136.8956	132.06	0.67	4.17
Nov.	89.38	101.4556	86.10	13.51	3.67	98.49	99.23333	86.10	0.75	12.58
Dec.	69.15	76.17667	68.20	10.17	1.37	77.62	76.38444	68.20	1.59	12.13
R^2		0.9980	0.9950				0.9977	0.9961		

Month	Yeni Boğaziçi					Salamis				
	Measured	PVGIS	NASA	AR 1	AR 2	Measured	PVGIS	NASA	AR 1	AR 2
Jan.	80.58	75.83	87.11	5.90	8.10	70.69	79.04	87.11	11.82	23.23
Feb.	101.38	101.062	105.56	0.31	4.12	89.52	99.05	105.56	10.64	17.91
Mar.	155.21	151.098	160.58	2.65	3.46	136.90	153.0163	160.58	11.77	17.30
Apr.	190.33	184.244	193.80	3.20	1.82	162.85	180.9038	193.80	11.09	19.00
May	212.42	209.944	234.36	1.17	10.33	188.87	216.7213	234.36	14.75	24.09
Jun.	237.96	236.754	249.00	0.51	4.64	207.93	240.295	249.00	15.57	19.75
Jul.	241.71	245.38	249.55	1.52	3.25	209.24	248.17	249.55	18.61	19.27
Aug.	219.72	224.296	228.16	2.08	3.84	190.72	226.5775	228.16	18.80	19.63
Sep.	178.04	178.804	189.00	0.43	6.16	149.18	178.5675	189.00	19.70	26.69
Oct.	139.82	134.404	145.39	3.87	3.99	121.10	135.6175	145.39	11.99	20.06
Nov.	93.35	94.268	98.10	0.98	5.09	85.81	97.46125	98.10	13.58	14.32
Dec.	73.48	70.52	79.36	4.03	8.00	65.76	75.14375	79.36	14.28	20.69
R^2		0.9974	0.9955				0.9957	0.9956		

Table 1S. Continued.

Month	Güzelyurt				
	Measured	PVGIS	NASA	AR 1	AR 2
Jan.	76.87	76.34222	87.11	0.68	13.33
Feb.	94.68	99.69556	105.56	5.30	11.50
Mar.	144.68	152.8989	160.58	5.68	10.99
Apr.	174.45	191.4922	193.8	9.77	11.09
May	198.17	218.2833	234.36	10.15	18.26
Jun.	218.51	244.53	249	11.91	13.96
Jul.	230.79	251.7211	249.55	9.07	8.13
Aug.	208.08	228.1911	228.16	9.67	9.65
Sep.	167.90	180.4833	189	7.50	12.57
Oct.	133.63	137.7089	145.39	3.05	8.80
Nov.	93.78	98.81333	98.1	5.37	4.61
Dec.	74.58	76.58222	79.36	2.69	6.41
R^2		0.9984	0.9926		
Absolute error 1: $AR1 =$	$\frac{\text{Measured value} - \text{estimated value based on PVGIS database}}{\text{Measured value}} \times 100$				
Absolute error 2: $AR2 =$	$\frac{\text{Measured value} - \text{estimated value based on NASA database}}{\text{Measured value}} \times 100$				