Supplementary Information

Namib Desert primary productivity is driven by cryptic microbial community N-fixation

Jean-Baptiste Ramond^{1,*}, Stephan Woodborne^{2,3}, Grant Hall², Mary Seely^{4,5}, Don A Cowan¹

- ¹ Centre for Microbial Ecology and Genomics (CMEG), Genomics Research Institute (GRI), Department of Genetics, University of Pretoria, South Africa
- ² Mammal Research Institute, University of Pretoria, South Africa
- ³ iThemba Laboratories, South Africa
- ⁴ Gobabeb Research and Training Centre, Walvis Bay, Namibia.
- ⁵ Desert Research Foundation of Namibia, Windhoek, Namibia

Supplementary Table 1. Metadata of the sample set studied. The dominant moisture source (fog vs rain, Supplementary Table 1) of each sample was based on extensive climatological data records (Lancaster et al., 1984; Eckardt et al., 2013). The CRU TS v. 3.24 high resolution climate data set, spanning 1901-2015, was used to determine Mean Annual Precipitation (MAP, mm) in half degree grids (25 km2) of the Namib Desert (Supplementary Table 1; Harris et al, 2014; https://crudata.uea.ac.uk/cru/data/hrg/).

Environment	Year of	Origin	Moisture	•	Distance to the	Altitude	Mean Annual	δ 15N	δ 13C	%N	%С	C/N
	sampling		Source	Name C14-3	coast (km) 29	(m) 233	Precipitation (mm) 0,46	(‰) 3.05	(‰) -24.99	0.035	0.198	8.88
			Fog	C14-5	48	415	0,46	2.15	-24.33	0.033	0.193	12.22
				C14-7	68	570	2,41	2.2	-24.88	0.034	0.257	11.45
		Gravel		C14-9	85	686	2,41	3.9	-24.18	0.086	0.795	13.28
		Plain		C14-11	104	830	2,41		-23.22	0.103		12.76
	2016		Rain	C14-13	123	932	6,54		-25.22	0.068	0.573	12.2
				C14-15	138	880	6,54		-21.03	0.073	0.589	11.69
				C14-17 C14-19	152 166	1035 1083	6,54 15,47	4.03	-24.34 -23.01	0.105 0.086	0.486	11.54 12.38
				Dune a	50	392	0,13		-24.96	0.119	0.568	10.42
		Dune	Fog	Dune ß	50	406	0,13		-18.62	0.021	0.15	10.91
			J	Dune y	50	406	0,13		-19.03	0.008	0.052	7.73
•			Fog	C14-6.5	62	573	2,41	1.75	-25.26	0.043	0.576	14.78
				C14-7	68	570	2,41	1.6	-25.04	0.069	0.474	10.8
				C14-7.5	72	579	2,41		-26.44	0.083		11.09
			Rain	C14-8	76	615	2,41		-24.76	0.052		12.21
				C14-9	85	686	2,41		-21.79	0.077	0.885	12.71
		Gravel		C14-10	94	751	2,41		-22.43	0.076	0.69	11.34
		Plain		C14-11 C28-1	104 7	830 55	2,41 1,83	1.77	-21.23 -27.83	0.108	0.506	10.44
	2015		Fog	C28-1	25	211	1,83		-27.63	0.001		13.97
			105	C28-2	44	355	1,83		-22.65	0.061		11.84
				C28-4	64	467	2,41	4.68	-24.46	0.012	0.125	14.37
				C28-5	84	704	2,41		-21.45	0.183		11.35
			Rain	C28-6	103	938	11,28	5.41	-20.69	0.075	0.621	11.54
Hypolith			Naiii	Dune 1	136	928	4,75	2.62	-25.34	0.022	0.112	9.54
(n=52)		Dune		Dune 2	136	928	4,75	2.47	-25.53	0.021	0.135	12.08
				Dune 3	139	935	4,75		-21.09	0.087		13.74
				C14-1	9	22	1,83	6.4	-27.37	0.01	0.15	14.11
				C14-2	19	118	1,83		-27.94	0.11	0.1	1.55
			Fog	C14-3 C14-4	29 38	233 312	0,46	-1.88	-28.1 -26.88	0.06 0.16	0.86 0.35	25.66 6.15
				C14-4 C14-5	48	415	0,46 0,46	1.72	-26.3	0.16		15.09
				C14-5	58	535	2,41		-25.39	0.04		12.97
				C14-7	68	570	2,41		-21.73	0.05	0.8	40.01
				C14-8	76	615	2,41	4.19	-26.65	0.11	0.3	3.54
				C14-9	85	686	2,41	4.3	-24.8	0.04	0.36	17.49
		Gravel		C14-10	94	751	2,41	5.34	-26.04	0.07	0.3	5.88
		Plain		C14-11	104	830	2,41	6.49	-19.71	0.04	1.27	35.44
	2014			C14-12	113	936	6,54		-24.05	0.13	0.27	4.04
			Rain	C14-13	123	932	6,54		-18.94	0.16	2.05	13.66
				C14-14	132	881	6,54		-22.07	0.13		11.47
				C14-15 C14-16	138 146	880 960	6,54 6,54		-23.22 -22.66	0.14		13.04 12.53
				C14-16 C14-17	152	1035	6,54		-23.43	0.16 0.04		14.56
				C14-17 C14-18	161	1035	15,47		-23.43	0.04		12.32
				C14-19	166	1083	15,47		-21.81	0.07		14.94
				C14-20	172	1255	15,47		-22.02	0.13	1.25	13.2
				CB1	10	9	0,13		-21.83	0.018	0.019	5.28
		Dune	Fog	CB2	10	10	0,13	6	-28.75	0.02	0.103	9.87
		Dulle	, об	CB3	10	9	0,13		-17.41		0.061	
				Dune A	54	490	0,89		-18.88	0.011	0.055	6.62
			F	C14-1	9	22	1,83		-19.42	0.012		6.68
			Fog	C14-3	29	233	0,46		-19.39		0.133	
				C14-5 C14-7	48 68	415 570	2,41	-53.33 4.66	-18.76 -17.76	0.006	0.034	10.43 8.79
		Gravel		C14-7 C14-9	85	686	2,41 2,41		-17.76	0.006		6.14
		Plain		C14-9 C14-11	104	830	2,41		-15.75	0.011		6.79
	2016		Rain	C14-13	123	932	6,54		-18.19	0.022	0.1	8.3
				C14-15	138	880	6,54		-19.77		0.307	
							6,54		-17.32	0.024		9.09
				C14-17	152	1035	0,54	0.07	-17.52	0.024	0.151	
				C14-17 C14-19	152 166	1035 1083	15,47		-15.86	0.024	0.131	12.08
				C14-19 Dune a	166 50	1083 392		8.1 1.83	-15.86 -18.62	0.022	0.17 0.016	5.25
		Dune	Fog	C14-19 Dune a Dune ß	166 50 50	1083 392 406	15,47 0,13 0,13	8.1 1.83 2.31	-15.86 -18.62 -19.23	0.022 0.005 0.004	0.17 0.016 0.014	5.25 4.25
		Dune	Fog	C14-19 Dune a	166 50	1083 392	15,47 0,13	8.1 1.83	-15.86 -18.62	0.022	0.17 0.016 0.014 0.007	5.25

		_		C14-7	68	570	2,41	4 96	-15.53	0.018	0.12	9.9
				C14-7.5	72	579	2,41		-19.65	0.018	0.062	8.6
				C14-7.5	76	615			-20.09	0.009	0.054	10.3
			Rain				2,41					
				C14-9	85	686	2,41		-16.66	0.017	0.128	6.9
		Gravel		C14-10	94	751	2,41		-13.77	0.039	0.24	8.3
		Plain -		C14-11	104	830	2,41		-16.93	0.023	0.14	7.8
	2015		_	C28-1	7	55	1,83		-23.87	0.011	0.058	7.3
			Fog	C28-2	25	211	1,83		-18.68	0.005	0.04	9.2
		_		C28-3	44	355	1,83		-20.11	0.004	0.028	
				C28-4	64	467	2,41	7.48	-19	0.008	0.03	10.4
				C28-5	84	704	2,41	10.45	-19.02	0.012	0.081	10.0
urface Soil			Rain	C28-6	103	938	11,28	9.17	-17.1	0.028	0.206	9.
(n=53)			rum	Dune 1	136	928	4,75	6.73	-18.31	0.005	0.024	7.
(11-33)		Dune		Dune 2	136	928	4,75	5.3	-19.18	0.004	0.024	7.
_				Dune 3	139	935	4,75	9.71	-17.11	0.036	0.288	13
				C14-1	9	22	1,83	10.55	-19.23	0.02	0.07	e
				C14-2	19	118	1,83	8.63	-22.11	0.02	0.19	9
			Γο.σ.	C14-3	29	233	0,46	7.34	-21.79	0.02	0.1	7.
			Fog	C14-4	38	312	0,46	6.46	-19.22	0.01	0.05	8.
				C14-5	48	415	0,46		-14.95	0.01	0.05	12
				C14-6	58	535	•	-18.31		0.003	0.02	
		-		C14-7	68	570	2,41		-16.67	0.014	0.07	7.
				C14-8	76	615	2,41		-17.53	0.012	0.06	7.
				C14-9	85	686	2,41		-15.16	0.012	0.12	- /-
		Gravel		C14-10	94	751	2,41		-13.76	0.03	0.12	8
		Plain		C14-10 C14-11	104	830	2,41 2,41		-15.76	0.03	0.19	10
		Fidili										
	2014			C14-12	113	936	6,54		-14.74	0.06	0.3	7
			Rain	C14-13	123	932	6,54		-16.25	0.04	0.22	8
				C14-14	132	881	6,54		-18.42	0.05	0.37	
				C14-15	138	880	6,54		-20.44	0.05	0.32	
				C14-16	146	960	6,54		-17.38	0.03	0.23	1
				C14-17	152	1035	6,54		-17.08	0.02	0.12	10
				C14-18	161	1085	15,47		-17.24	0.03		12
				C14-19	166	1083	15,47	5.87	-15.67	0.04	0.41	
		_		C14-20	172	1255	15,47	5.61	-18.08	0.04	0.3	10.
				CB1	10	9	0,13	7.86	-20.75	0.011	0.017	4.
		Dune	Fog	CB2	10	10	0,13	5.8	-22.71	0.006	0.012	3.
		Dulle	TOB	CB3	10	9	0,13	7.48	-21.31	0.01	0.014	4.
				Dune A	54	490	0,89	0.63	-20.95	0.003	0.015	4.
			Fog	C14-1	9	22	1,83	6.73	-19.46	0.01	0.023	5.
		_	Fog	C14-5	48	415	0,46	-0.74	-21.75	0.004	0.034	10.
		_		C14-7	68	570	2,41	5.16	-17.43	0.007	0.035	6.
		C1		C14-9	85	686	2,41	11.61	-16 21	0.000	0.07	7.
		Gravel							-10.21	0.009		,
		DI-1		C14-11	104	830	2,41		-15.74	0.009	0.054	
	2046	Plain	Rain					4.91	-15.74	0.011		7.
	2016	Plain	Rain	C14-13	123	932	6,54	4.91 9.94	-15.74 -18.46	0.011 0.031	0.195	7. 8.
	2016	Plain	Rain	C14-13 C14-15	123 138	932 880	6,54 6,54	4.91 9.94 6.51	-15.74 -18.46 -18.66	0.011 0.031 0.041	0.195 0.245	7. 8. 9.
	2016	Plain	Rain	C14-13 C14-15 C14-17	123 138 152	932 880 1035	6,54 6,54 6,54	4.91 9.94 6.51 6.17	-15.74 -18.46 -18.66 -15.72	0.011 0.031 0.041 0.017	0.195 0.245 0.096	7. 8. 9. 9.
	2016	Plain -	Rain	C14-13 C14-15 C14-17 C14-19	123 138 152 166	932 880 1035 1083	6,54 6,54 6,54 15,47	4.91 9.94 6.51 6.17 8.33	-15.74 -18.46 -18.66 -15.72 -15.88	0.011 0.031 0.041 0.017 0.021	0.195 0.245 0.096 0.15	7 8 9 9
	2016	-		C14-13 C14-15 C14-17 C14-19 Dune a	123 138 152 166 50	932 880 1035 1083 392	6,54 6,54 6,54 15,47 0,13	4.91 9.94 6.51 6.17 8.33 4.11	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03	0.011 0.031 0.041 0.017 0.021	0.195 0.245 0.096 0.15 0.033	7. 8. 9. 9. 11.
	2016	Plain - Dune	Rain	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß	123 138 152 166 50 50	932 880 1035 1083 392 406	6,54 6,54 6,54 15,47 0,13 0,13	4.91 9.94 6.51 6.17 8.33 4.11 2.66	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2	0.011 0.031 0.041 0.017 0.021 0.006 0.005	0.195 0.245 0.096 0.15 0.033 0.018	7 8 9 9 11 6 5
-	2016	-	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y	123 138 152 166 50 50	932 880 1035 1083 392 406 406	6,54 6,54 6,54 15,47 0,13 0,13	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53	0.011 0.031 0.041 0.017 0.021 0.006 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021	7 8 9 9 11 6 5 4
-	2016	-		C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5	123 138 152 166 50 50 50	932 880 1035 1083 392 406 406 573	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046	7 8 9 11 6 5 4
	2016	-	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7	123 138 152 166 50 50 50 62	932 880 1035 1083 392 406 406 573 570	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046	7 8 9 11 6 5 4
	2016	-	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5	123 138 152 166 50 50 50 62 68 72	932 880 1035 1083 392 406 406 573 570 579	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048	77 8 9 9 111 6 5 4 8
-	2016	-	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8	123 138 152 166 50 50 50 62 68 72 76	932 880 1035 1083 392 406 406 573 570 579 615	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062	77 89 99 111 66 55 4 8
	2016	-	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9	123 138 152 166 50 50 50 62 68 72 76 85	932 880 1035 1083 392 406 406 573 570 579 615 686	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095	77 89 99 111 65 4 8 100 7
	2016	-	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10	123 138 152 166 50 50 50 62 68 72 76 85 94	932 880 1035 1083 392 406 406 573 570 579 615 686 751	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.86 -18.87 -18.8 -16.74 -15.41	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012 0.009 0.009	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17	77 89 99 111 66 55 4 8 100 77 8
-	2016	Dune -	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11	123 138 152 166 50 50 50 62 68 72 76 85 94 104	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74 -15.41 -16.37	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.009 0.029	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13	7 8 9 9 11 6 5 4 8 10 7 8 9
		- Dune -	Fog Fog Rain	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1	123 138 152 166 50 50 50 62 68 72 76 85 94 104	932 880 1035 1083 392 406 406 573 570 579 615 686 751	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.86 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13	7. 8. 9. 9. 111 6. 5. 4. 8. 100 7. 8. 9.
	2016	Dune -	Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2	123 138 152 166 50 50 50 62 68 72 76 85 94 104	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.86 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.009 0.029	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13	7, 8, 9, 111, 6, 5, 4, 100, 7, 8, 9, 8, 8, 8, 8, 8, 100, 100, 100, 100, 100
		Dune -	Fog Fog Rain	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96	0.011 0.031 0.041 0.017 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13	7. 8. 9. 9. 11. 6. 5. 4. 8. 10. 7. 8. 9. 8. 8. 8. 8. 8. 8. 8. 8. 8.
		Dune -	Fog Fog Rain	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2	123 138 152 166 50 50 50 62 68 72 76 85 94 104	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 1,83 1,83	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6	-15.74 -18.46 -18.66 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.86 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.029 0.022 0.015 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13	7, 8, 9, 111 6, 5, 4, 8, 10, 10, 7, 8, 9, 8, 8, 13,
Subsurface		Dune -	Fog Fog Rain	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96	0.011 0.031 0.041 0.017 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13 0.071 0.004 0.028	7 8 9 9 111 6 5 4 8 100 7 8 8 9 8 8 8 13 8
		Dune -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91 7.78 10.71	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.86 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.029 0.022 0.015 0.005 0.003	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13 0.071 0.044 0.028	7 8 9 111 6 5 4 8 10 10 7 8 9 8 8 8 8 13
		Dune -	Fog Fog Rain	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91 7.78 10.71 9.25	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6	0.011 0.031 0.041 0.017 0.005 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.029 0.022 0.015 0.005 0.003	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13 0.071 0.044 0.028	7 8 9 111 6 5 4 8 100 7 8 9 8 8 8 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10
Subsurface Soil (n=47)		Dune -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005 0.005 0.015 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.064 0.088 0.167	7, 8, 9, 111 6, 5, 4, 8, 8, 8, 8, 13, 8, 9, 10, 6, 6, 6, 6, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10
		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.86 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71 -17.23	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005 0.003 0.035 0.012 0.005 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.064 0.088 0.167 0.035 0.025	7 8 9 9 11 6 5 4 8 10 7 8 8 8 8 13 8 9 10 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2 Dune 3	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136 136	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928 935	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 18.67 8.08 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54 9.47	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71 -17.23 -16.15	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005 0.003 0.035 0.012 0.009	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.064 0.088 0.167 0.035 0.025 0.154	7 8 9 9 111 6 5 4 4 8 10 7 8 8 8 9 10 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2 Dune 3 C14-1	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136 136 139	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928 935 22	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54 9.47	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -16.37 -20.08 -21.42 -21.42 -14.91 -18.6 -14.75 -17.71 -17.23 -16.15 -19.06	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005 0.003 0.035 0.012 0.007 0.007 0.007 0.026	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.064 0.088 0.167 0.035 0.025 0.154	7 8 9 9 11 6 5 4 8 10 7 8 8 9 10 6 6 6 6 6 10 10 10 10 10 10 10 10 10 10 10 10 10
		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2 Dune 3 C14-1 C14-2	123 138 152 166 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136 136 139 9	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928 935 22 118	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 2,41 2,41	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54 9.47 7.24	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71 -17.23 -16.15 -19.06 -20.17	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.009 0.029 0.029 0.020 0.005 0.005	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.064 0.088 0.167 0.035 0.025 0.154	7 8 9 9 11 6 5 4 8 10 7 8 8 8 13 8 9 10 6 6 6 10 10 10 10 10 10 10 10 10 10 10 10 10
		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2 Dune 3 C14-1 C14-2 C14-3	123 138 152 166 50 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136 136 139 9 19 29	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928 935 22 118 233	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 1,83 1,83 1,83 1,83 1,83 1,83 1,83 1,8	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54 9.47 5.71 7.24 7.16	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71 -17.23 -16.15 -19.06 -20.17 -14.19	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.003 0.035 0.003 0.035 0.012 0.019 0.007 0.007 0.026 0.01	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.068 0.167 0.035 0.025 0.154 0.03 0.05 0.11	7, 8, 9, 11, 6, 5, 4, 10, 7, 8, 9, 10, 6, 6, 10, 11, 11, 11, 11, 17,
Subsurface Soil (n=47)		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2 Dune 3 C14-1 C14-2 C14-3 C14-4	123 138 152 166 50 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136 136 139 9 19 29 38	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928 935 22 118 233 312	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 1,83 1,83 1,83 2,41 11,28 4,75 4,75 4,75 1,83 1,83 0,46 0,46	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54 9.47 5.71 7.24 7.16 -0.7	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -18.8 -16.74 -15.41 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71 -17.23 -16.15 -19.06 -20.17 -14.19 -12.11	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.005 0.003 0.005 0.012 0.007 0.007 0.026 0.011 0.011	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.068 0.167 0.035 0.025 0.154 0.03 0.05 0.11 0.07	7. 8. 9. 9. 11. 6. 5. 4. 8. 10. 10. 7. 8. 9. 13. 6. 6. 10. 11. 17. 16.
		Dune Gravel Plain -	Fog Rain Fog	C14-13 C14-15 C14-17 C14-19 Dune a Dune ß Dune y C14-6.5 C14-7 C14-7.5 C14-8 C14-9 C14-10 C14-11 C28-1 C28-2 C28-3 C28-4 C28-5 C28-6 Dune 1 Dune 2 Dune 3 C14-1 C14-2 C14-3	123 138 152 166 50 50 50 50 62 68 72 76 85 94 104 7 25 44 64 84 103 136 136 139 9 19 29	932 880 1035 1083 392 406 406 573 570 579 615 686 751 830 55 211 355 467 704 938 928 928 935 22 118 233	6,54 6,54 6,54 15,47 0,13 0,13 0,13 2,41 2,41 2,41 2,41 2,41 2,41 1,83 1,83 1,83 1,83 1,83 1,83 1,83 1,8	4.91 9.94 6.51 6.17 8.33 4.11 2.66 4.01 6.87 5.33 2.73 18.69 11.6 9 2.47 7.91 7.78 10.71 9.25 5.93 5.54 9.47 5.71 7.24 7.16 -0.7 5.98	-15.74 -18.46 -15.72 -15.88 -19.03 -17.2 -17.53 -19.44 -18.46 -18.87 -16.37 -20.08 -21.42 -20.96 -14.91 -18.6 -14.75 -17.71 -17.23 -16.15 -19.06 -20.17 -14.19	0.011 0.031 0.041 0.017 0.021 0.006 0.005 0.013 0.006 0.012 0.009 0.029 0.022 0.015 0.003 0.035 0.003 0.035 0.012 0.019 0.007 0.007 0.026 0.01	0.195 0.245 0.096 0.15 0.033 0.018 0.021 0.046 0.048 0.04 0.062 0.095 0.17 0.13 0.071 0.04 0.028 0.068 0.167 0.035 0.025 0.154 0.03 0.05 0.11	7. 8. 9. 9. 11. 6. 5. 4. 8. 8. 10. 10. 7. 8. 8. 9. 10. 6. 6. 10. 11. 17. 16.

			C14-7	68	570	2,41	4.54	-28.24	0.01	0.06	7.99
			C14-8	76	615	2,41	3.73	-19.7	0.01	0.04	7.6
			C14-9	85	686	2,41	6.58	-12.44	0.02	0.1	11.22
2014	Gravel		C14-10	94	751	2,41	5.08	-12.27	0.02	0.1	8.63
2014	Plain		C14-11	104	830	2,41	8.37	-15.07	0.02	0.12	8.67
			C14-12	113	936	6,54	9.22	-14.24	0.03	0.17	8.59
		Rain	C14-13	123	932	6,54	14.04	-15.8	0.05	0.24	9.58
		Naiii	C14-14	132	881	6,54	9.1	-17.13	0.04	0.26	10.8
			C14-15	138	880	6,54	6.29	-18.94	0.03	0.25	10.6
			C14-16	146	960	6,54	7.04	-17.1	0.03	0.25	11.43
			C14-17	152	1035	6,54	5.1	-15.15	0.02	0.09	11.71
			C14-18	161	1085	15,47	6.65	-17.3	0.01	0.1	11.68
			C14-19	166	1083	15,47	6.41	-15.52	0.02	0.24	14.78
			C14-20	172	1255	15,47	5.62	-17.89	0.02	0.2	12.45

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Supplementary Table 2. Monthly precipitation measurements of 13 relevant SASSCAL weather stations of the central Namib Desert (Kaspar et al., 2015) for March and April 2014, 2015 and 2015. Numbers in brackets indicate the total number of days when the recorded monthly precipiations exceeded 5mm precipiation. *: day with recorded precipitations over 20mm.

									Precipit	Precipitation (mm	_			
	C1 20:+0+0 20:4+00/V1	() 		Distance to	(cc) c c c c c c c c c	2	2014			2015			2016	
	wedther Station ID	ratitude	rongitude	coast (km)	Airitude (III)	March	April T	Total	March	April	Total	March	April	Total
	coastal MET	-23,0563	14,6295	20	94		NA		0.7	1.0	1.7	9.0	0.7	1.3
	Kleinberg FN	-22,9893	14,7279	30	184		NA		1.1	0.2	1.3	1.2	0.2	1.4
	Kleinberg	-22,9895	14,7282	30	185	0	1.8	1.8	8.0	8.0	1.6	0.2	0	0.2
Fact/Most Gravel	Sophies Hoogte	-23,0068	14,8929	20	334		NA		6.5 (2)	0	6.5	9.0	0.4	1.0
Dain transect	Marble Koppie	-22,9695	14,9897	20	421		NA		ĸ	0.2	3.2	0.7	1.9	5.6
נומווו נומוואברו	Vogelfederberg	-23,098	15,029	09	501		NA		9.0	0	9.0	0.1	0.1	0.2
	Garnet Koppie	-23,1154	15,305	90	733		NA		1.2	0	1.2	11.7 (1)	0	11.7
	Ganab	-23,1218	15,5383	110	1002	22.3 (3*) 6.1 (3)	6.1(3)	28.4	1.0	0	1.0	0	0	0
	Rooisand	-23,2945	16,1147	170	1176		NA	1	.6.6 (10)	15.2 (3)	31.8	19.2 (4)	2.6	21.8
North/South	Station 8	-23,2653	15,0563	09	487		NA		0.4	0	0.4	9.0	9.0	1.2
Gravel Plain	Aussinanis	-23,4435	15,0459	09	405		NA		0	0	0	0.1	1.5	1.6
transect	Gobabeb MET	-23,5604	15,041	9	406		NA		6.0	0	6.0	0	0	0
Extreme West		11106	15 00 17	150	1056	(**1) 0 69	1)	t 63	00	C UC (*c) = 0C	20.2	۲ ر	(6) 0 0	10.7
Dune	Dieprivier	-24,1290	13,0347	130	OCOT	02.0 (4 .)	7.7	77.50	0.0	(c) c.o2	53.5	7.7	0.0 (5) 0.0	10.7

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