

## SUPPLEMENTARY MATERIAL

Table S1. Specifications of the devices used on the UAV for this work.




	Sensor name	Specifications	
    	DJI Zenmuse L1	LiDAR	<ul style="list-style-type: none"> <li>Ranging Accuracy: 3 cm @ 100 m</li> <li>Maximum Returns Supported: 3</li> <li>Scan Modes: Non-repetitive scanning pattern, Repetitive scanning pattern</li> <li>FOV: Non-repetitive scanning pattern: 70.4° (horizontal) × 77.2° (vertical); Repetitive scanning pattern: 70.4° (horizontal) × 4.5° (vertical)</li> </ul>
		RGB camera	<ul style="list-style-type: none"> <li>Sensor Size: 1 inch</li> <li>Effective Pixels: 20 MP</li> <li>Photo Size: 5472×3078 (16:9); 4864×3648 (4:3); 5472×3648 (3:2)</li> <li>Focal Length: 24 mm</li> <li>Shutter Speed: Mechanical Shutter Speed: 1/2000 – 8 s; Electronic Shutter Speed: 1/8000 - 8 s</li> <li>Aperture Range: f/2.8 - f/11</li> </ul>
	DJI Zenmuse P1		<ul style="list-style-type: none"> <li>Sensor: Sensor size (Still): 35.9×24 mm (Full-frame)</li> <li>Effective Pixels: 45MP</li> <li>Pixel size: 4.4 μm</li> <li>Lens: 35mm</li> <li>FOV: 63.5°</li> <li>Photo Size: 3:2 (8192×5460)</li> <li>Minimum photo interval: 0.7 s</li> <li>Shutter Speed: Mechanical Shutter Speed: 1/2000-1 s; Electronic Shutter Speed: 1/8000-1 s.</li> <li>Aperture Range: f/2.8-f/16</li> </ul>
	Micasense RedEdge MxDual		<ul style="list-style-type: none"> <li>Spectral bands: Coastal blue 444(28), blue 475(32), green 531(14), green 560(27), red 650(16), red 668(14), red edge 705(10), red edge 717(12), red edge 740(18), NIR 842(57)</li> <li>RGB output: 3.6 MP (global shutter, aligned with all bands)</li> <li>Sensor resolution: 1280 x 960 (1.2 MP per EO band)</li> <li>Ground sample distance: 8 cm per pixel (per band) at 120 m AGL</li> <li>Capture rate: 1 capture per second (all bands), 12-bit RAW</li> <li>FOV: 47.2°</li> </ul>

Table S2. Errors in the three coordinates for deliverables from the photogrammetric processing of images from the photogrammetric (P1) and LiDAR (L1) sensors.

mission	product	Mean RMSE (m)	Error X (m)	Error Y (m)	Error Z (m)
P1	Orthomosaic	0.044	0.012	0.009	0.111
100m-L1	Orthomosaic	0.006	0.004	0.005	0.011
60m-L1	Orthomosaic	0.010	0.007	0.009	0.014

Table S3. Coordinates values for ground control points (GCPs) collected on the field (northing, easting, elevation), elevation values of the corresponding point picked from the DEM generated from P1 survey (DEM\_P1\_elev column), and root mean square error (RMSE) for the measurements at each point. Elevation values are expressed in ellipsoidal height.

Point Id	Northing	Easting	Elevation (m)	DEM_P1_elev (m)	RMSE (m)
FIJO1	4044956.27	753409.887	47.457	47.313	0.144
FIJO2	4044977.14	753406.24	47.431	46.073	1.357
FIJO3	4044998.51	753402.33	47.413	46.014	1.400
FIJO4	4045015.14	753397.715	47.505	47.341	0.165
FIJO5	4044917.42	753417.253	47.242	46.015	1.227
FIJO6	4044893.1	753420.756	47.371	46.545	0.825

P1	4044900.66	753413.59	46.239	46.165	0.075
P10	4044893.73	753395.959	46.087	46.093	0.006
P11	4044892.84	753393.566	46.213	46.273	0.060
P12	4044891.74	753390.925	46.194	46.246	0.052
P13	4044890.49	753387.564	46.184	46.221	0.037
P14	4044889.1	753384.177	46.127	46.108	0.019
P15	4044888.81	753383.532	45.774	45.671	0.103
P16	4044888.03	753381.221	45.759	45.661	0.099
P17	4044887.89	753380.349	46.019	46.063	0.043
P18	4044887.01	753378.683	46.096	46.148	0.053
P19	4044885.69	753375.17	46.078	46.076	0.001
P2	4044899.99	753411.886	46.069	46.047	0.023
P20	4044884.55	753372.071	46.090	46.087	0.003
P21	4044883.27	753368.996	46.089	46.034	0.055
P22	4044882.41	753366.848	45.952	45.945	0.006
P23	4044881.82	753365.448	45.735	45.735	0.000
P24	4044881.51	753364.637	46.039	46.011	0.028
P25	4044880.8	753362.708	45.970	45.924	0.047
P26	4044879.92	753360.621	45.950	45.902	0.048
P27	4044879.53	753359.506	45.681	45.679	0.002
P28	4044879.16	753358.179	45.863	45.779	0.085
P29	4044878.18	753356.207	45.723	45.737	0.014
P3	4044899.12	753409.33	45.960	45.929	0.030
P30	4044877.59	753354.545	45.513	45.543	0.030
P31	4044876.49	753351.732	45.768	45.648	0.120
P32	4044875.71	753349.429	45.712	45.625	0.087
P33	4044874.59	753346.784	45.687	45.611	0.077
P34	4044873.95	753345.122	45.663	45.593	0.070
P35	4044873.25	753343.332	45.583	45.603	0.021
P4	4044898.36	753407.472	45.686	45.756	0.070
P5	4044898.01	753406.763	45.717	45.673	0.044
P6	4044897.38	753405.045	45.917	45.868	0.048
P7	4044896.59	753403.175	46.017	45.953	0.064
P8	4044895.76	753401.04	46.135	46.143	0.008
P9	4044894.81	753398.4	46.147	46.166	0.018
T10	4044911.8	753378.145	46.175	46.275	0.100
T14	4044888.31	753353.756	45.990	45.976	0.014
T15	4044889.69	753350.151	45.944	45.852	0.092
T17	4044914.63	753378.203	46.181	46.236	0.055
T20	4044881.88	753351.38	45.951	45.886	0.065
T21	4044875.79	753336.584	45.612	45.487	0.125
T22	4044876.39	753335.734	45.697	45.525	0.172
T23	4044877.88	753334.523	45.691	45.563	0.128
T24	4044878.61	753333.455	45.731	45.590	0.141
T25	4044878.85	753332.58	45.689	45.576	0.113
T30	4044888.44	753347.223	45.966	45.875	0.091
T35	4044886.2	753344.858	45.878	45.770	0.107
T46	4044912.31	753369.553	46.119	46.141	0.022
T56	4044910.58	753380.401	46.164	46.159	0.006
T68	4044912.79	753372.335	46.159	46.203	0.044
average RMSE					0.335
average RMSE, just marsh surface					0.070

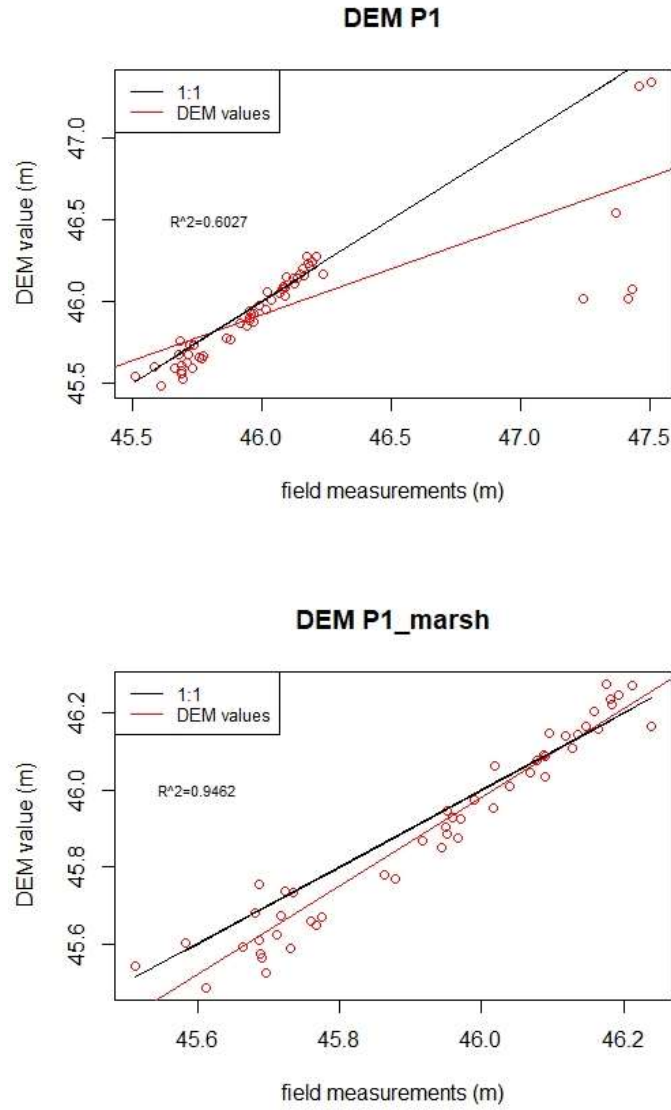


Figure S1. Linear regression and  $R^2$  value for DEM generated from data collected through P1 sensor by using all points (DEM P1) and focusing on marsh surface points (DEM P1 marsh). The red line is the regression line for the compared datasets (DEM extracted values vs. GCPs values), the black line represents the 1:1 pattern for reference.

Table S4. Statistics for classification of 100 m-L1 data by setting 0.03 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (ng_003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	78,632,212	88.64	43.61	47.49
2 - Ground	9,949,536	11.22	43.55	47.49
7 - Low Point (Noise)	89,669	0.10	43.54	47.44
18 - High Point (Noise)	36,054	0.04	43.87	47.49

Table S5. Statistics for classification of 100 m-L1 data by setting 0.10 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (ng_010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	19,091,871	21.52	43.62	47.49
2 - Ground	69,489,877	78.34	43.55	47.49
7 - Low Point (Noise)	89,669	0.10	43.54	47.44
18 - High Point (Noise)	36,054	0.04	43.87	47.49

Table S6. Resolutions and minimum and maximum elevation values for the four DEMs generated for the 100m L1 mission. Ng-threshold: value used for the classification. grid ps: value of grid point spacing for the generation of the DEM.

DEM file	ng-threshold	Grid ps	Resolution (m/pixel)	Min elevation (m)	Max elevation (m)
DEM_5ps-ng_003	0.03	5	0.27	43.68	47.49
DEM_5ps-ng_010	0.10	5	0.27	43.76	47.49
DEM_10ps-ng_003	0.03	10	0.55	43.68	47.49
DEM_10ps-ng_010	0.10	10	0.55	43.72	47.49

Table S7. Elevation values for GCPs, elevation values of the corresponding point from the LiDAR point cloud of 100 m- L1 survey, and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	Point elevation (m)	LIDAR elevation (m)	RMSE (m)
P11	46.213	46.438	0.225
P12	46.194	46.394	0.2
P27	45.681	45.876	0.195
T17	46.181	46.372	0.191
T10	46.175	46.361	0.186
P18	46.096	46.272	0.176
T56	46.164	46.335	0.171
P13	46.184	46.353	0.169
P22	45.951	46.107	0.156
P35	45.583	45.737	0.154
P23	45.735	45.889	0.154
P10	46.087	46.239	0.152
P29	45.723	45.872	0.149
P14	46.127	46.275	0.148
P9	46.147	46.295	0.148
P4	45.686	45.83	0.144
P8	46.135	46.277	0.142
T46	46.119	46.258	0.139
T14	45.99	46.127	0.137
P20	46.09	46.225	0.135
T68	46.159	46.29	0.131
P19	46.078	46.207	0.129
P17	46.019	46.148	0.129
P33	45.687	45.799	0.112
P25	45.97	46.08	0.11
P21	46.089	46.194	0.105
P28	45.863	45.968	0.105
P26	45.95	46.048	0.098
P24	46.039	46.133	0.094
T20	45.951	45.857	0.094
P6	45.917	46.008	0.091
P7	46.017	46.104	0.087
P15	45.774	45.859	0.085
P16	45.759	45.84	0.081
P1	46.239	46.311	0.072
P2	46.069	46.121	0.052
T35	45.878	45.926	0.048
P32	45.712	45.757	0.045
P30	45.513	45.557	0.044
T25	45.689	45.732	0.043
T30	45.966	45.999	0.033
P3	45.96	45.993	0.033
T22	45.697	45.72	0.023
T24	45.731	45.709	0.022
FIJO4	47.505	47.485	0.02
P34	45.663	45.682	0.019
T23	45.691	45.708	0.017
FIJO6	47.371	47.355	0.016

P5	45.717	45.703	0.014
FIJO3	47.413	47.4	0.013
T21	45.612	45.62	0.008026
P31	45.768	45.776	0.007607
T15	45.944	45.937	0.006802
FIJO2	47.431	47.427	0.003841
FIJO5	47.242	47.245	0.002522
<b>Average RMSE</b>			<b>0.115</b>

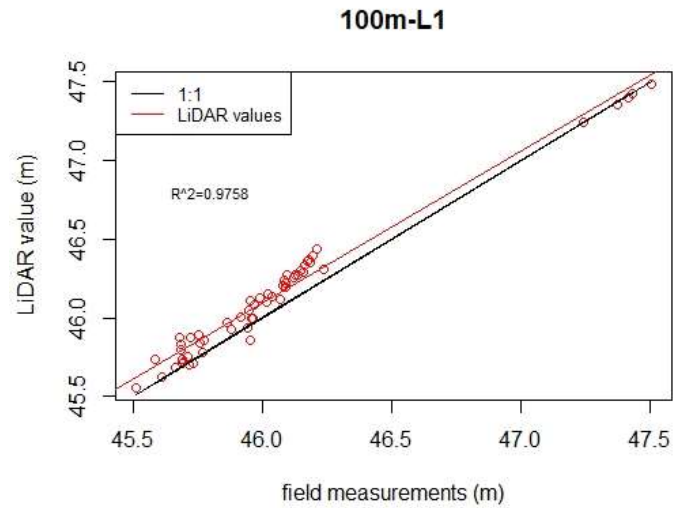


Figure S2. Linear regression and  $R^2$  value for point cloud values obtained from the L1 flight operated at 100m compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S8. Elevation values for GCPs, and the corresponding point from DEMs derived from the 100 m- L1 survey. 'Elevation' column represents the GCP elevation value, the following columns show the corresponding values of elevation sampled from each DEM. DEMs are identified by point spacing (10 or 05) and non-ground threshold (0.03 and 0.10) used for their generation. In the last four columns, the RMSE value associated to each point. Elevation values are expressed in ellipsoidal height.

Point Id	Elevation (m)	DEM-10_003	DEM-10_010	DEM-05_003	DEM-05_010	RMSE_ DEM-10-003	RMSE_ DEM-10-010	RMSE_ DEM-5-003	RMSE_ DEM-05-010
FIJO1	47.457	47.441	47.456	47.437	47.455	0.016	0.001	0.020	0.002
FIJO2	47.431	47.389	47.418	47.395	47.430	0.042	0.013	0.036	0.001
FIJO3	47.413	47.375	47.421	47.364	47.405	0.038	0.008	0.049	0.008
FIJO4	47.505	47.468	47.474	47.476	47.479	0.037	0.031	0.029	0.026
FIJO5	47.242	47.226	47.243	47.229	47.248	0.016	0.001	0.013	0.006
FIJO6	47.371	47.334	47.360	47.320	47.357	0.037	0.011	0.051	0.014
P1	46.239	46.251	46.311	46.266	46.305	0.012	0.072	0.027	0.066
P10	46.087	46.221	46.244	46.224	46.247	0.134	0.157	0.137	0.160
P11	46.213	46.317	46.405	46.311	46.418	0.105	0.193	0.099	0.206
P12	46.194	46.291	46.347	46.297	46.364	0.097	0.153	0.103	0.170
P13	46.184	46.294	46.333	46.288	46.348	0.110	0.149	0.104	0.164
P14	46.127	46.151	46.275	45.966	46.137	0.024	0.148	0.161	0.010
P15	45.774	45.807	45.829	45.813	45.852	0.033	0.055	0.039	0.078
P16	45.759	45.835	45.874	45.827	45.837	0.076	0.115	0.068	0.078
P17	46.019	45.842	45.979	45.935	46.153	0.177	0.040	0.084	0.134
P18	46.096	46.218	46.275	46.209	46.281	0.123	0.179	0.114	0.185
P19	46.078	46.180	46.219	46.182	46.227	0.102	0.141	0.104	0.149
P2	46.069	46.119	46.149	46.116	46.142	0.050	0.080	0.047	0.073
P20	46.090	46.186	46.223	46.180	46.216	0.096	0.133	0.090	0.126
P21	46.089	46.152	46.194	46.157	46.190	0.063	0.105	0.068	0.101
P22	45.952	45.807	46.042	45.805	46.028	0.145	0.090	0.147	0.076
P23	45.735	45.723	45.915	45.708	45.837	0.012	0.180	0.027	0.102
P24	46.039	45.800	46.145	45.729	46.149	0.239	0.106	0.310	0.110
P25	45.970	45.987	46.078	46.026	46.094	0.017	0.108	0.056	0.124
P26	45.950	45.941	46.052	45.983	46.031	0.009	0.102	0.033	0.081
P27	45.681	45.823	45.936	45.773	45.822	0.142	0.255	0.092	0.141
P28	45.863	45.816	45.978	45.779	45.927	0.047	0.115	0.084	0.064
P29	45.723	45.795	45.925	45.784	45.868	0.072	0.202	0.061	0.145
P3	45.960	45.986	46.023	45.987	46.026	0.026	0.063	0.027	0.066
P30	45.513	45.651	45.726	45.616	45.730	0.138	0.213	0.103	0.217
P31	45.768	45.742	45.838	45.716	45.844	0.026	0.070	0.052	0.076
P32	45.712	45.763	45.812	45.763	45.811	0.051	0.100	0.051	0.099
P33	45.687	45.705	45.775	45.729	45.799	0.018	0.088	0.042	0.112
P34	45.663	45.706	45.775	45.704	45.771	0.043	0.112	0.041	0.108
P35	45.583	45.712	45.769	45.705	45.764	0.129	0.186	0.122	0.181
P4	45.686	45.753	45.876	45.769	45.851	0.067	0.190	0.083	0.165
P5	45.717	45.692	45.736	45.696	45.719	0.025	0.019	0.021	0.002
P6	45.917	45.899	45.960	45.946	45.987	0.018	0.043	0.029	0.070
P7	46.017	46.080	46.124	46.024	46.077	0.063	0.107	0.007	0.060
P8	46.135	46.211	46.261	46.190	46.266	0.076	0.126	0.055	0.131
P9	46.147	46.250	46.302	46.267	46.295	0.103	0.155	0.120	0.148
T10	46.175	46.305	46.339	46.279	46.397	0.130	0.164	0.104	0.222
T14	45.990	46.073	46.112	46.078	46.118	0.083	0.122	0.088	0.128
T15	45.944	45.974	46.034	45.986	46.028	0.030	0.090	0.042	0.084
T17	46.181	46.313	46.363	46.306	46.360	0.132	0.182	0.125	0.179
T20	45.951	45.990	46.040	46.003	46.037	0.039	0.089	0.052	0.086
T21	45.612	45.545	45.633	45.550	45.633	0.067	0.021	0.062	0.021

T22	45.697	45.611	45.690	45.597	45.685	0.086	0.007	0.100	0.012
T23	45.691	45.638	45.712	45.636	45.727	0.053	0.021	0.055	0.036
T24	45.731	45.637	45.713	45.641	45.710	0.094	0.018	0.090	0.021
T25	45.689	45.647	45.703	45.637	45.699	0.042	0.014	0.052	0.010
T30	45.966	45.985	46.039	45.993	46.036	0.019	0.073	0.027	0.070
T35	45.878	45.876	45.946	45.903	45.952	0.002	0.068	0.025	0.074
T46	46.119	46.220	46.258	46.222	46.270	0.101	0.139	0.103	0.151
T56	46.164	46.266	46.310	46.275	46.321	0.102	0.146	0.111	0.157
T68	46.159	46.257	46.313	46.253	46.306	0.098	0.154	0.094	0.147
<b>Average RMSE</b>						<b>0.086</b>	<b>0.120</b>	<b>0.088</b>	<b>0.115</b>

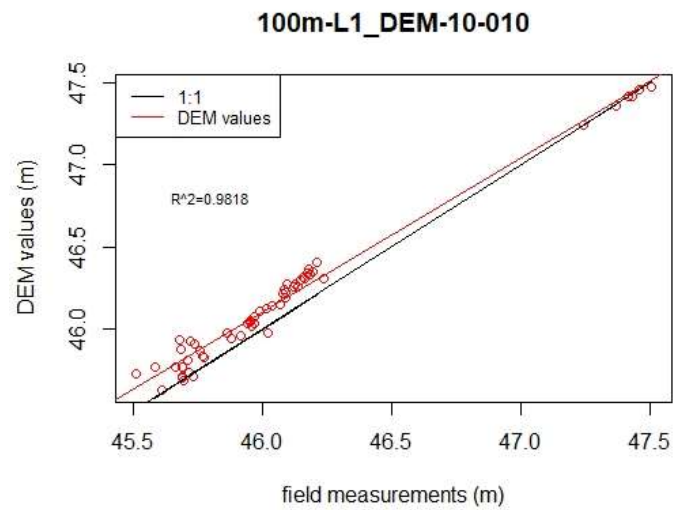
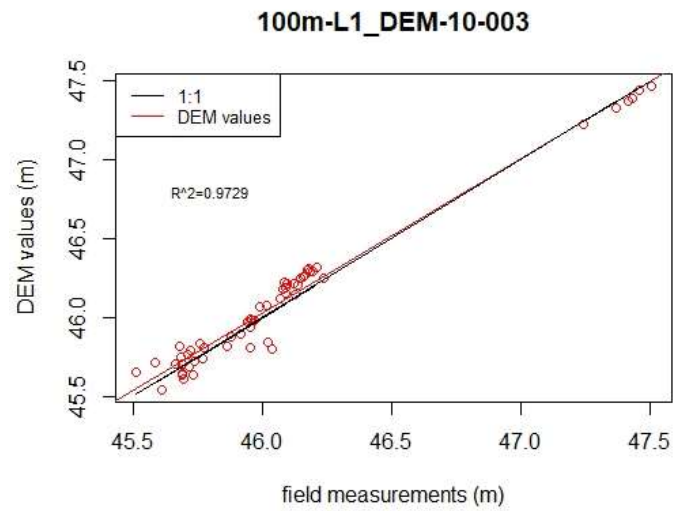


Figure S3. (Continue)

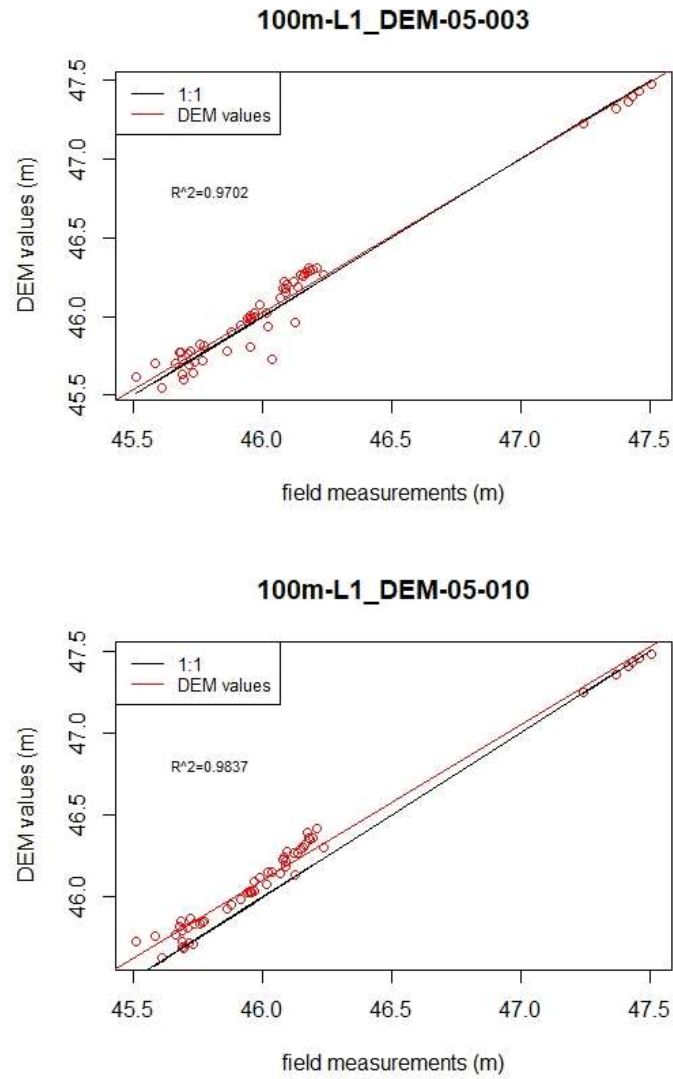


Figure S3. Linear regressions and  $R^2$  values for the four DEMs generated from the L1 flight at 100m compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S9. Resume of accuracy assessment for DEMs obtained from 100m-L1 mission.

DEM file	RMSE	$R^2$
DEM_10ps-ng_003	0.086	0.9729
DEM_10ps-ng_010	0.120	0.9818
DEM_5ps-ng_003	0.088	0.9702
DEM_5ps-ng_010	0.115	0.9837

Table S10. Statistics for classification of 60 m-L1 data by setting 0.03 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (ng_003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	103,862,442	71.24	43.50	47.39
2 - Ground	41,639,385	28.56	43.37	47.39
7 - Low Point (Noise)	220,031	0.15	43.36	47.37
18 - High Point (Noise)	68,858	0.05	43.77	47.39

Table S11. Statistics for classification of 60 m-L1 data by setting 0.10 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (ng_010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	9,067,115	6.22	43.50	47.39
2 - Ground	136,434,712	93.58	43.37	47.39
7 - Low Point (Noise)	220,031	0.15	43.36	47.37
18 - High Point (Noise)	68,858	0.05	43.77	47.39

Table S12. Resolutions and minimum and maximum elevation values for the four DEMs generated for the 60m L1 mission. Ng-threshold: value used for the classification. grid ps: value of grid point spacing for the generation of the DEM.

DEM file	ng-threshold	Grid point spacing	resolution	Min elevation	Max elevation
DEM_5ps-ng_003	0.03	5	0.13	43.45	47.39
DEM_5ps-ng_010	0.10	5	0.13	43.49	47.39
DEM_10ps-ng_003	0.03	10	0.26	43.46	47.39
DEM_10ps-ng_010	0.10	10	0.26	43.55	47.39

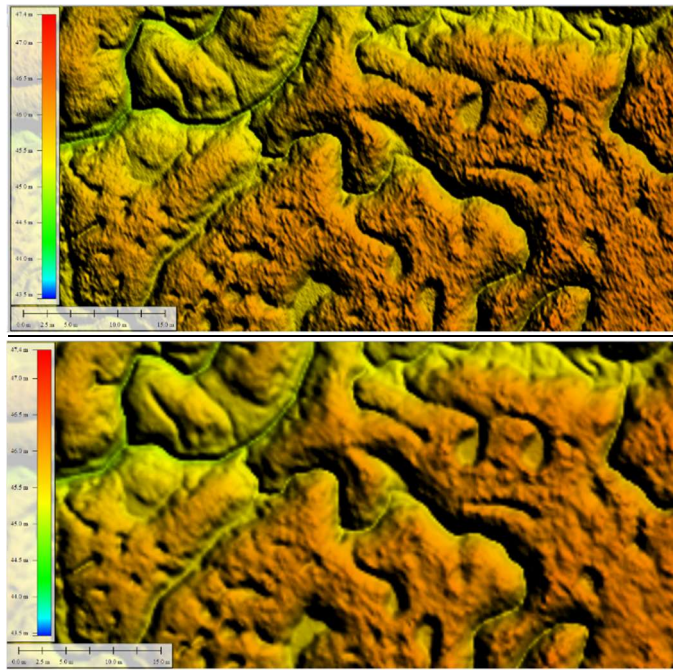


Figure S4. Detail of DEM\_5ps-ng\_010 (0.13 m of resolution) and DEM\_10ps-ng\_010 (0.27 m of resolution).

Table S13. Elevation values for GCPs, elevation values of the corresponding point from the LiDAR point cloud of 60 m- L1 survey, and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	Point elevation (m)	LIDAR elevation (m)	RMSE (m)
P17	46.019	46.212	0.193
P30	45.513	45.697	0.184
P4	45.686	45.84	0.154
P23	45.735	45.889	0.154
P35	45.583	45.727	0.144
P11	46.213	46.356	0.143
T10	46.175	46.317	0.142
P12	46.194	46.335	0.141
P8	46.135	46.273	0.138
T17	46.181	46.319	0.138
P18	46.096	46.209	0.113
P13	46.184	46.296	0.112
T68	46.159	46.271	0.112
P10	46.087	46.195	0.108
P9	46.147	46.254	0.107
P29	45.723	45.826	0.103
T56	46.164	46.267	0.103
P27	45.681	45.784	0.103
P22	45.951	46.052	0.101
P34	45.663	45.758	0.095
P2	46.069	46.152	0.083
P14	46.127	46.207	0.08
P24	46.039	46.116	0.077
P33	45.687	45.761	0.074
P32	45.712	45.785	0.073
P20	46.09	46.161	0.071
T14	45.99	46.059	0.069
T20	45.951	46.014	0.063
P7	46.017	46.077	0.06
P6	45.917	45.976	0.059
P16	45.759	45.817	0.058
P28	45.863	45.919	0.056
P3	45.96	46.015	0.055
P21	46.089	46.143	0.054
P5	45.717	45.77	0.053
T46	46.119	46.171	0.052
P25	45.97	46.016	0.046
T35	45.878	45.924	0.046
T23	45.691	45.732	0.041
P26	45.95	45.99	0.04
P1	46.239	46.278	0.039
T21	45.612	45.647	0.035
P19	46.078	46.11	0.032
T15	45.944	45.976	0.032
T25	45.689	45.718	0.029
P15	45.774	45.793	0.019

FIJO2	47.431	47.449	0.018
T30	45.966	45.952	0.014
FIJO6	47.371	47.383	0.012
FIJO4	47.505	47.517	0.012
T22	45.697	45.687	0.01
FIJO5	47.242	47.25	0.008213
FIJO3	47.413	47.42	0.006935
P31	45.768	45.774	0.005882
T24	45.731	45.727	0.003712
<b>Average RMSE</b>			<b>0.089</b>

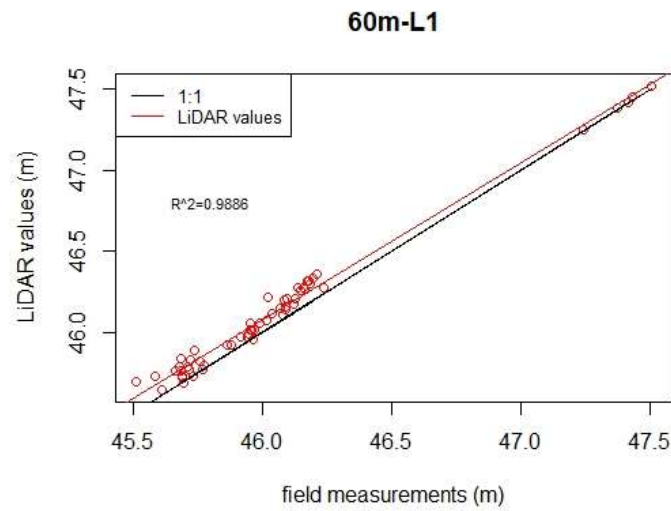


Figure S5. Linear regression and  $R^2$  value for point cloud values obtained from the L1 flight operated at 60m compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S14. Elevation values for GCPs, and the corresponding point from DEMs derived from the 60 m- L1 survey. 'Elevation' column represents the GCP elevation value, the following columns show the corresponding values of elevation sampled from each DEM. DEMs are identified by point spacing (10 or 05) and non-ground threshold (0.03 and 0.10) used for their generation. In the last four columns, the RMSE value associated to each point. Elevation values are expressed in ellipsoidal height.

Point Id	Elevation (m)	DEM-10_003	DEM-10_010	DEM-05_003	DEM-05_010	RMSE_DEM-10-003	RMSE_DEM-10-010	RMSE_DEM-05_003	RMSE_DEM-05_010
FIJO1	47.457	47.027	47.335	47.001	47.326	0.430	0.122	0.456	0.131
FIJO2	47.431	47.384	47.383	47.385	47.385	0.047	0.048	0.046	0.046
FIJO3	47.413	47.390	47.390	47.386	47.386	0.023	0.023	0.027	0.027
FIJO4	47.505	46.701	47.229	-	-	0.804	0.276	-	-
FIJO5	47.242	47.237	47.245	47.237	47.245	0.005	0.003	0.005	0.003
FIJO6	47.371	47.368	47.375	47.374	47.378	0.003	0.004	0.003	0.007
P1	46.239	46.283	46.297	46.294	46.304	0.044	0.058	0.055	0.065
P10	46.087	46.204	46.214	46.212	46.218	0.117	0.127	0.125	0.131
P11	46.213	46.347	46.387	46.339	46.388	0.135	0.175	0.127	0.176
P12	46.194	46.339	46.364	46.334	46.361	0.145	0.170	0.140	0.167
P13	46.184	46.299	46.312	46.304	46.327	0.115	0.128	0.120	0.143
P14	46.127	46.134	46.226	46.187	46.202	0.007	0.099	0.060	0.075
P15	45.774	45.784	45.797	45.785	45.799	0.010	0.023	0.011	0.025
P16	45.759	45.795	45.827	45.782	45.804	0.036	0.068	0.023	0.045
P17	46.019	46.074	46.153	46.109	46.173	0.055	0.134	0.090	0.154
P18	46.096	46.219	46.238	46.217	46.232	0.124	0.142	0.121	0.136
P19	46.078	46.164	46.181	46.167	46.189	0.086	0.103	0.089	0.111
P2	46.069	46.142	46.153	46.150	46.160	0.073	0.084	0.081	0.091
P20	46.090	46.157	46.189	46.159	46.181	0.067	0.099	0.069	0.091
P21	46.089	46.107	46.150	46.113	46.154	0.018	0.061	0.024	0.065
P22	45.952	45.936	46.026	46.007	46.056	0.016	0.075	0.055	0.104
P23	45.735	45.772	45.827	45.836	45.910	0.037	0.092	0.101	0.175
P24	46.039	46.102	46.127	46.111	46.136	0.063	0.088	0.072	0.097
P25	45.970	46.054	46.077	46.046	46.073	0.084	0.107	0.076	0.103
P26	45.950	45.983	46.012	45.982	46.008	0.033	0.062	0.032	0.058
P27	45.681	45.734	45.772	45.733	45.760	0.053	0.091	0.052	0.079
P28	45.863	45.874	45.934	45.875	45.929	0.011	0.071	0.012	0.066
P29	45.723	45.758	45.808	45.819	45.849	0.035	0.085	0.096	0.126
P3	45.960	46.014	46.028	46.012	46.021	0.054	0.068	0.052	0.061
P30	45.513	45.557	45.591	45.593	45.621	0.044	0.078	0.080	0.108
P31	45.768	45.786	45.813	45.781	45.813	0.018	0.045	0.013	0.045
P32	45.712	45.765	45.784	45.767	45.793	0.053	0.072	0.055	0.081
P33	45.687	45.753	45.777	45.748	45.767	0.066	0.090	0.061	0.080
P34	45.663	45.724	45.752	45.727	45.754	0.061	0.089	0.064	0.091
P35	45.583	45.742	45.757	45.733	45.745	0.159	0.174	0.150	0.162
P4	45.686	45.713	45.779	45.752	45.792	0.027	0.093	0.066	0.106
P5	45.717	45.732	45.754	45.762	45.784	0.015	0.037	0.045	0.067
P6	45.917	45.978	45.992	45.962	45.980	0.061	0.075	0.045	0.063
P7	46.017	46.064	46.083	46.069	46.085	0.047	0.066	0.052	0.068
P8	46.135	46.227	46.250	46.214	46.263	0.092	0.115	0.079	0.128
P9	46.147	46.267	46.286	46.261	46.267	0.120	0.139	0.114	0.120
T10	46.175	46.310	46.331	46.335	46.371	0.135	0.156	0.160	0.196
T14	45.990	46.050	46.082	46.046	46.076	0.060	0.092	0.056	0.086
T15	45.944	45.963	45.995	45.967	45.988	0.019	0.051	0.023	0.044
T17	46.181	46.305	46.340	46.295	46.333	0.124	0.159	0.114	0.152
T20	45.951	45.989	46.016	45.988	46.013	0.038	0.065	0.037	0.062
T21	45.612	45.622	45.651	45.632	45.666	0.010	0.039	0.020	0.054
T22	45.697	45.668	45.706	45.675	45.711	0.029	0.009	0.022	0.014
T23	45.691	45.707	45.739	45.708	45.740	0.016	0.048	0.017	0.049

T24	45.731	45.732	45.758	45.733	45.753	0.001	0.027	0.002	0.022
T25	45.689	45.705	45.742	45.706	45.734	0.016	0.053	0.017	0.045
T30	45.966	45.991	46.010	45.995	46.017	0.025	0.044	0.029	0.051
T35	45.878	45.880	45.905	45.880	45.912	0.002	0.027	0.002	0.034
T46	46.119	46.219	46.250	46.220	46.237	0.100	0.131	0.101	0.118
T56	46.1643	46.258	46.266	46.266	46.279	0.094	0.102	0.102	0.115
T68	46.1587	46.271	46.288	46.26	46.273	0.112	0.129	0.101	0.114
<b>Average RMSE</b>						<b>0.140</b>	<b>0.101</b>	<b>0.097</b>	<b>0.099</b>

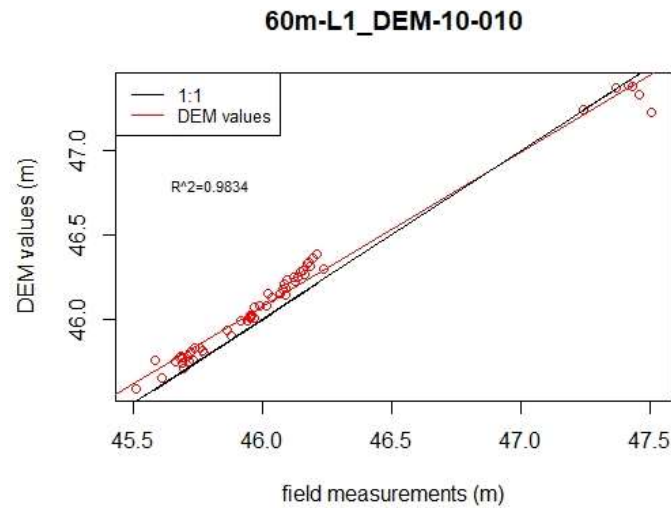
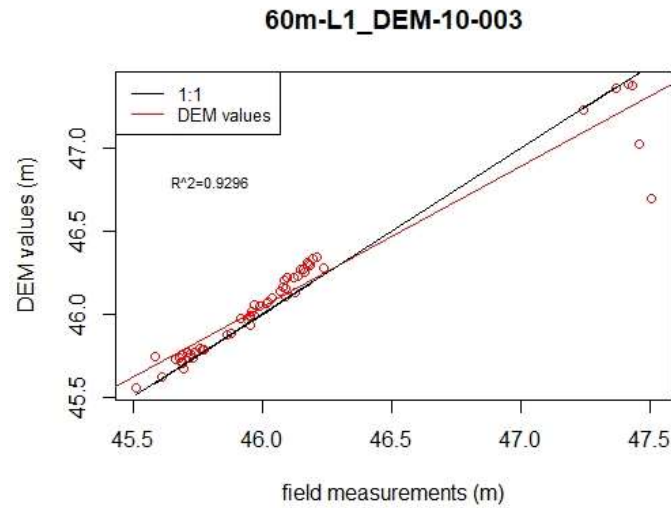


Figure S6. (Continue)

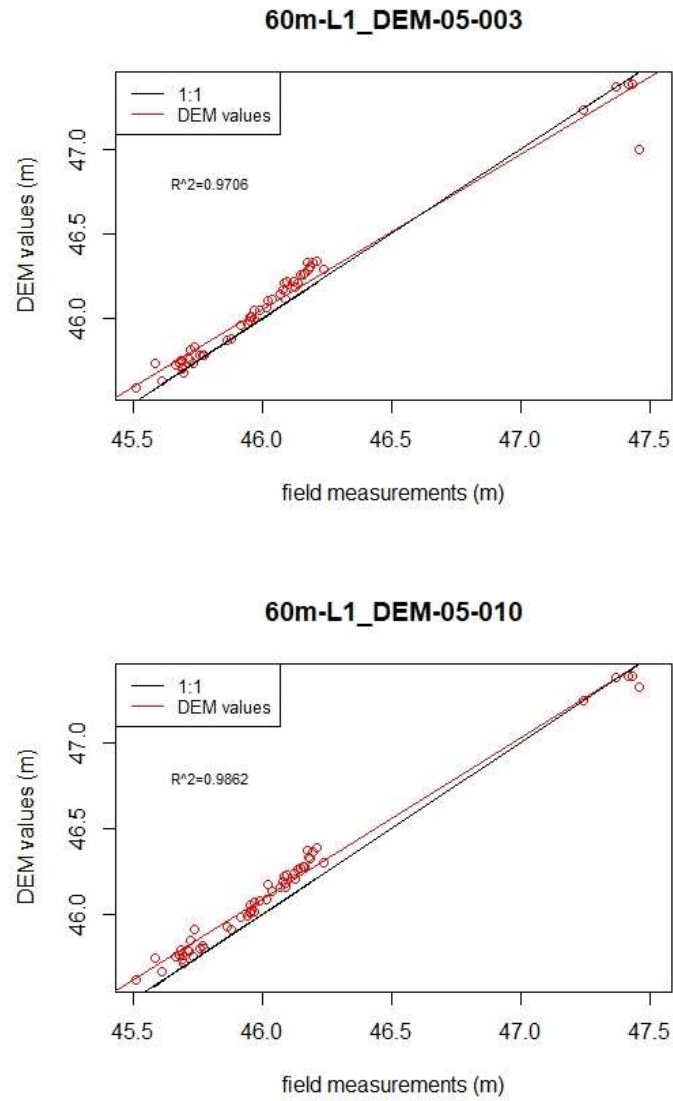


Figure S6. Linear regressions and  $R^2$  values for the four DEMs generated from the L1 flight at 60m compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S15. Resume of accuracy assessment for DEMs obtained from 60m-L1 mission.

DEM file	RMSE	$R^2$
DEM_10ps-ng_003	0.140	0.9296
DEM_10ps-ng_010	0.101	0.9834
DEM_5ps-ng_003	0.097	0.9706
DEM_5ps-ng_010	0.099	0.9862

*Table S16. The table resumes technical data for each L1 flight mission, specifying the scan mode employed and the type of flight performed (nadir or oblique); ‘pre\_or\_post’ refers to the flight have been executed previously or posteriorly the operation of vegetation removal for the calibration trial. Size of the LiDAR raw data, the corresponding size of DJI Terra processed point cloud, the number of the images captured by the RGB sensor, and the size of images data are also shown.*

mission nº	Scan mode	flight	Pre or post	Flight time (min:sec)	Raw data size_KB	DJI_Terra_processed size_KB	captured images	Image dataset size_KB	notes
1	non-rep	nadir	pre	2:48	266,240	414,523	28	230,000	
2	rep	nadir	pre	2:48	266,240	429,513	28	231,000	
3	non-rep	oblique	pre	18:30	1,996,800	3,529,385	139	1,120,000	ppk_processed
4	rep	oblique	pre	18:30	1,986,560	2,567,779	139	1,110,000	
5	non-rep	nadir	post	2:48	266,240	408,339	28	234,000	
6	rep	nadir	post	2:48	266,240	429,863	29	242,000	
7	non-rep	oblique	post	18:30	1,996,800	3,136,757	139	1,130,000	
8	rep	oblique	post	18:30	1,996,800	2,410,236	139	1,120,000	

*Table S17. Resume of Pix4Dmapper processing of L1 datasets.*

mission nº	GSD (cm/pixel)	covered area (ha)	Time for Initial Processing (min:sec)	Time for DSM Generation (h:min:sec)	Time for Orthomosaic Generation (min:sec)	Total Time for Processing (h:min:sec)	Min DSM elevation	Max DSM elevation
1	1.67	3.47	01:18	00:16:26	03:16s	00:21:00	43.67	49.10
2	1.67	2.9	01:32	00:28:11	03:20	00:33:03	43.48	49.22
3	1.93	6.55	12:11	13:56:21	11:58	14:20:30	43.59	49.22
4	1.94	6.71	15:16	13:05:38	15:27	13:36:21	43.50	49.28
5	1.67	3.47	01:11	00:18:52	04:00	00:24:03	44.31	49.11
6	1.67	2.9	01:12	00:29:56	03:18	00:34:26	44.43	49.22
7	1.93	5.75	08:07	10:58:31	10:57	11:17:35	44.41	49.08
8	2	4.37	06:59	17:17:46	10:17	17:35:02	44.82	49.08

*Table S18. Technical information about all LiDAR point clouds before and after LiDAR processing filtration and edition operations.*

mission	Raw LiDAR data size	DJI Terra-processed data size	Pre-filtering LiDAR point count	Post-filtering LiDAR point count	Counts decrease (%)	Filtered point cloud density (p/m <sup>2</sup> )	Filtered point cloud point spacing	Filtered point cloud area (m <sup>2</sup> )
100m-L1	2.5 GB	4.53 GB	143,362,487	88,707,471	38.1	332.89	0.06	-
60m-L1	3.7 GB	7.65 GB	241,640,221	145,790,716	39.7	1,448.5	0.03	-
1	270 MB	415 MB	12,484,405	10,344,830	17.1	341.73	0.05	30,272
2	270 MB	430 MB	12,935,432	7,417,902	42.7	320.73	0.06	23,128
3	1.99 GB	3.5 GB	106,296,732	89,522,151	15.8	1,140.18	0.03	78,516
4	1.99 GB	2.6 GB	77,334,335	46,694,706	39.6	1,414.65	0.03	33,008
5	270 MB	410 MB	12,298,171	10,209,588	17.0	341.41	0.05	29,904
6	270 MB	430 MB	12,946,413	7,516,053	41.9	322.13	0.06	23,332
7	1.99 GB	3.2 GB	94,471,681	80,659,719	14.6	1,207.41	0.03	66,804
8	1.99 GB	2.4 GB	72,590,587	46,017,456	36.6	1,497.38	0.03	30,732

Table S19. Coverage area values for vegetation and bare ground for each mission based on the NDVI masks (excluding water surfaces).

mission	Vegetation (%)	Bare ground (%)
1	50.50	49.50
2	44.24	55.76
3	30.37	69.63
4	32.79	67.21
5	39.49	60.51
6	45.85	54.15
7	30.37	69.63
8	32.33	67.67

Table S20. Statistics for classification of mission 1 data by setting 0.10 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 1_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	3,267,185	31.92	43.65	49.42
2 - Ground	6,947,664	67.89	43.54	47.81
7 - Low Point (Noise)	18,116	0.18	43.51	47.33
18 - High Point (Noise)	976	0.01	44.35	97.86

Table S21. Statistics for classification of mission 1 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 1_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	9,644,274	94.24	43.65	49.42
2 - Ground	570,575	5.58	43.54	47.81
7 - Low Point (Noise)	18,116	0.18	43.51	47.33
18 - High Point (Noise)	976	0.01	44.35	97.86

Table S22. Statistics for classification of mission 2 data by setting 0.10 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 2_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	951,092	12.96	43.73	49.48
2 - Ground	6,372,931	86.86	43.60	47.82
7 - Low Point (Noise)	9,709	0.13	43.59	47.35
18 - High Point (Noise)	3,580	0.05	44.23	49.05

Table S23. Statistics for classification of mission 2 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 2_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	5,584,088	76.11	43.73	49.48
2 - Ground	1,739,935	23.71	43.60	47.82
7 - Low Point (Noise)	9,709	0.13	43.59	47.35
18 - High Point (Noise)	3,580	0.05	44.23	49.05

Table S24. Statistics for classification of mission 3 data by setting 0.10 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 3_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	32,782,051	39.63	43.48	49.50
2 - Ground	48,845,326	59.02	43.38	47.76
7 - Low Point (Noise)	698,984	0.85	43.16	47.45
18 - High Point (Noise)	8,498	0.01	43.87	49.50

Table S25. Statistics for classification of mission 3 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 3_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	77,696,357	93.94	43.48	49.50
2 - Ground	3,931,020	4.75	43.38	47.76
7 - Low Point (Noise)	698,984	0.85	43.16	47.45
18 - High Point (Noise)	8,498	0.01	43.87	49.50

Table S26. Statistics for classification of mission 4 data by setting 0.10 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 4_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	3,560,467	7.66	43.68	49.53
2 - Ground	4,2760,231	92.04	43.56	47.86
7 - Low Point (Noise)	104,768	0.23	43.47	47.25
18 - High Point (Noise)	31,197	0.07	43.92	49.35

Table S27. Statistics for classification of mission 4 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 4_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	3,7405,142	80.52	43.68	49.53
2 - Ground	8,915,556	19.19	43.56	47.86
7 - Low Point (Noise)	104,768	0.23	43.47	47.25
18 - High Point (Noise)	31,197	0.07	43.92	49.35

Table S28. Statistics for classification of mission 5 data by setting 0.010 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 5_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	4,207,460	41.69	44.20	49.39
2 - Ground	5,855,469	58.03	44.16	47.70
7 - Low Point (Noise)	27.150	0.27	26.11	47.35
18 - High Point (Noise)	1,196	0.01	44.55	49.56

Table S29. Statistics for classification of mission 5 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 5_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	9,557,012	94.71	44.20	49.39
2 - Ground	505,917	5.01	44.16	47.70
7 - Low Point (Noise)	27,150	0.27	26.11	47.35
18 - High Point (Noise)	1,196	0.01	44.55	49.56

Table S30. Statistics for classification of mission 6 data by setting 0.010 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 6_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	1,038,020	14.20	44.37	49.47
2 - Ground	6,260,660	85.65	44.25	47.83
7 - Low Point (Noise)	7,859	0.11	44.20	47.34
18 - High Point (Noise)	3,285	0.04	44.74	49.42

Table S31. Statistics for classification of mission 6 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 6_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	5,678,434	77.68	44.37	49.47
2 - Ground	1,620,246	22.17	44.25	47.83
7 - Low Point (Noise)	7,859	0.11	44.20	47.34
18 - High Point (Noise)	3,285	0.04	44.74	49.42

Table S32. Statistics for classification of mission 7 data by setting 0.010 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 7_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	29,667,005	39.37	44.30	49.45
2 - Ground	45,120,656	59.88	44.26	47.78
7 - Low Point (Noise)	538,885	0.72	44.15	47.49
18 - High Point (Noise)	27,388	0.04	44.65	49.47

Table S33. Statistics for classification of mission 7 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 7_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	70,978,799	94.19	44.30	49.45
2 - Ground	3,808,862	5.05	44.26	47.78
7 - Low Point (Noise)	538,885	0.72	44.15	47.49
18 - High Point (Noise)	27,388	0.04	44.65	49.47

Table S34. Statistics for classification of mission 8 data by setting 0.010 m (ng\_010) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 8_ng010)	Point Count	%	Z Min	Z Max
0 - Created, never classified	7,971,774	17.48	44.73	49.48
2 - Ground	37,475,999	82.20	44.49	47.81
7 - Low Point (Noise)	98,799	0.22	44.48	47.68
18 - High Point (Noise)	45,601	0.10	44.98	94.81

Table S35. Statistics for classification of mission 8 data by setting 0.003 m (ng\_003) as threshold for non-ground points in the auto- classification algorithm.

Classification (mission 8_ng003)	Point Count	%	Z Min	Z Max
0 - Created, never classified	39,970,300	87.67	44.73	49.48
2 - Ground	5,477,473	12.01	44.49	47.81
7 - Low Point (Noise)	98,799	0.22	44.48	47.68
18 - High Point (Noise)	45,601	0.10	44.98	94.81

Table S36. Classification statistic for mission 1 after the application multispectral masks.

Classification (mission 1)	Point Count	%	Z Min	Z Max
0 - Created, never classified	5,441,058	53.17	43.65	49.42
2 - Ground	4,773,791	46.65	43.54	47.81
7 - Low Point (Noise)	18,116	0.18	43.51	47.33
18 - High Point (Noise)	976	0.01	44.35	97.86

Table S37. Classification statistic for mission 2 after the application multispectral masks.

Classification (mission 2)	Point Count	%	Z Min	Z Max
0 - Created, never classified	3,352,901	45.70	43.73	49.48
2 - Ground	3,971,122	54.12	43.60	47.82
7 - Low Point (Noise)	9,709	0.13	43.59	47.35
18 - High Point (Noise)	3,580	0.05	44.23	49.05

Table S38. Classification statistic for mission 3 after the application multispectral masks.

Classification (mission 3)	Point Count	%	Z Min	Z Max
0 - Created, never classified	25,643,315	31.00	43.48	49.50
2 - Ground	56,361,692	68.14	43.38	47.76
7 - Low Point (Noise)	698,984	0.85	43.16	47.45
18 - High Point (Noise)	8,498	0.01	43.87	49.50

Table S39. Classification statistic for mission 4 after the application multispectral masks.

Classification (mission 4)	Point Count	%	Z Min	Z Max
0 - Created, never classified	14,845,864	31.96	43.68	49.53

2 - Ground	31,474,834	67.75	43.56	47.86
7 - Low Point (Noise)	104,768	0.23	43.47	47.25
18 - High Point (Noise)	31,197	0.07	43.92	49.35

*Table S40. Classification statistic for mission 5 after the application multispectral masks.*

Classification (mission 5)	Point Count	%	Z Min	Z Max
0 - Created, never classified	5,597,932	55.47	44.20	49.39
2 - Ground	4,464,997	44.25	44.16	47.70
7 - Low Point (Noise)	27,150	0.27	26.11	47.35
18 - High Point (Noise)	1,196	0.01	44.55	49.56

*Table S41. Classification statistic for mission 6 after the application multispectral masks.*

Classification (mission 6)	Point Count	%	Z Min	Z Max
0 - Created, never classified	3,422,898	46.83	44.37	49.47
2 - Ground	3,875,782	53.02	44.25	47.83
7 - Low Point (Noise)	7,859	0.11	44.20	47.34
18 - High Point (Noise)	3,285	0.04	44.74	49.42

*Table S42. Classification statistic for mission 7 after the application multispectral masks.*

Classification (mission 7)	Point Count	%	Z Min	Z Max
0 - Created, never classified	24,738,268	32.83	44.30	49.45
2 - Ground	50,049,393	66.42	44.26	47.78
7 - Low Point (Noise)	538,885	0.72	44.15	47.49
18 - High Point (Noise)	27,388	0.04	44.65	49.47

*Table S43. Classification statistic for mission 8 after the application multispectral masks.*

Classification (mission 8)	Point Count	%	Z Min	Z Max
0 - Created, never classified	21,673,148	47.54	44.73	49.48
2 - Ground	23,774,614	52.15	44.49	47.81
7 - Low Point (Noise)	98,799	0.22	44.48	47.68
18 - High Point (Noise)	45,601	0.10	44.98	49.81

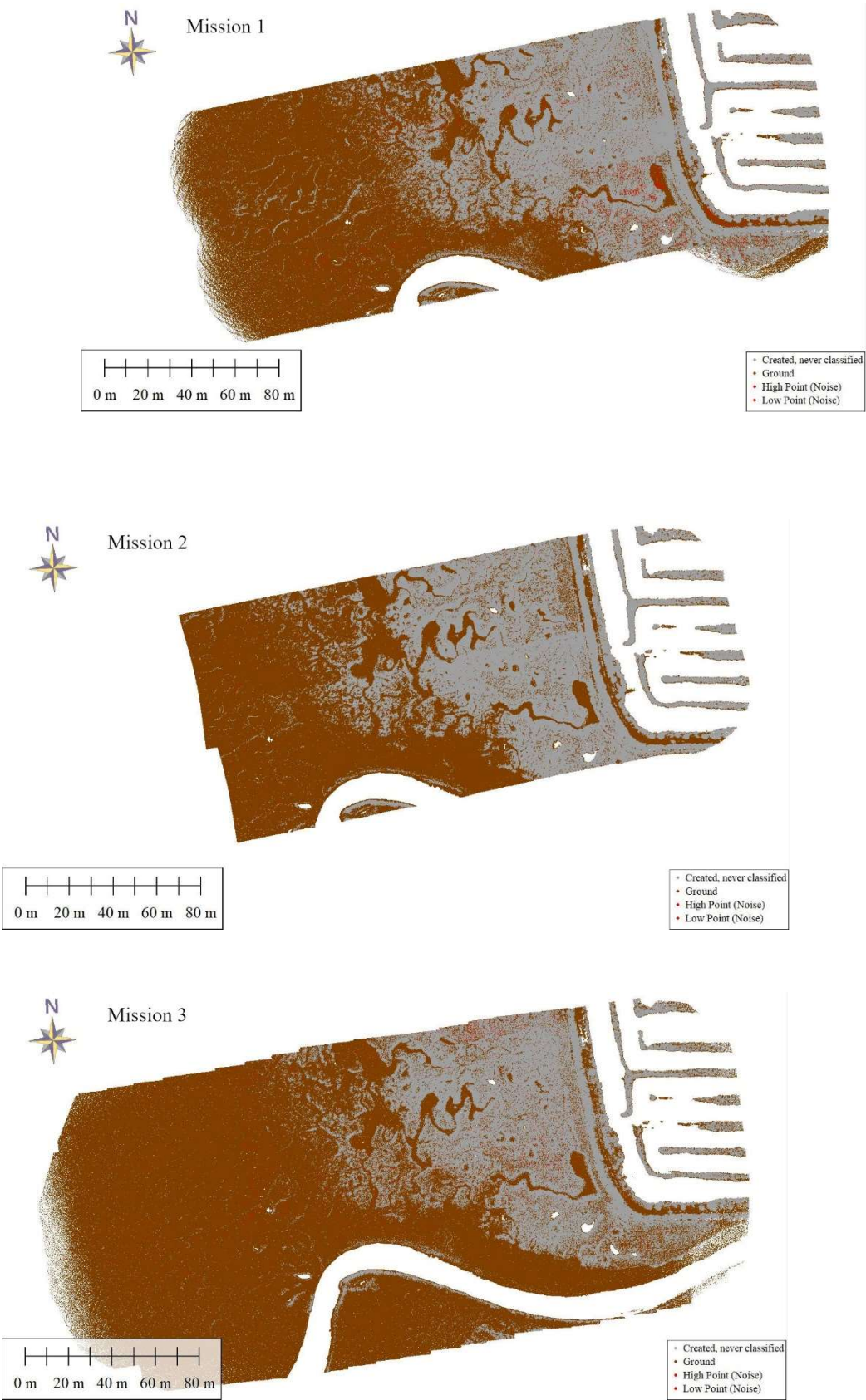


Figure S7. (Continue)

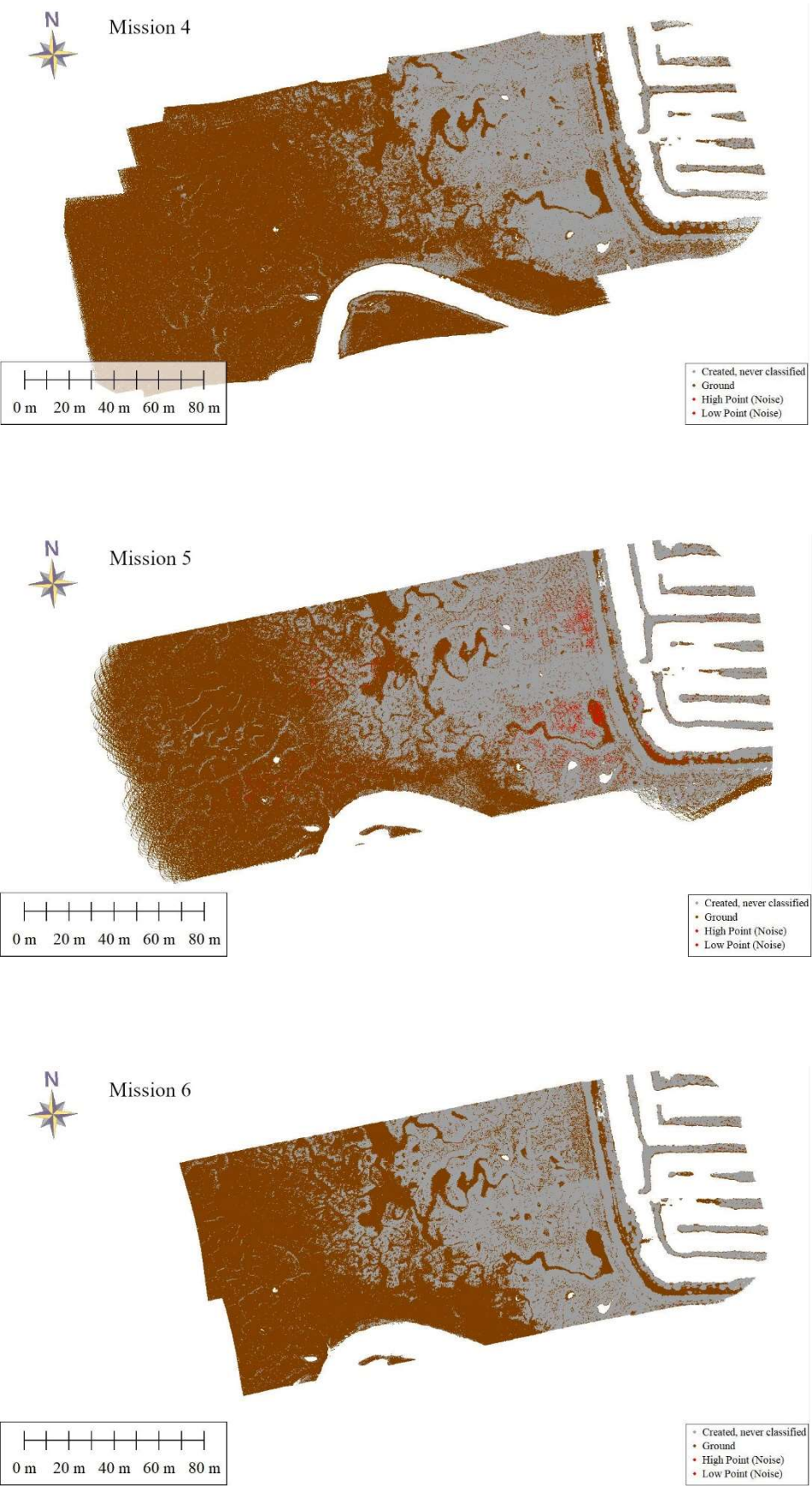


Figure S7. (Continue)

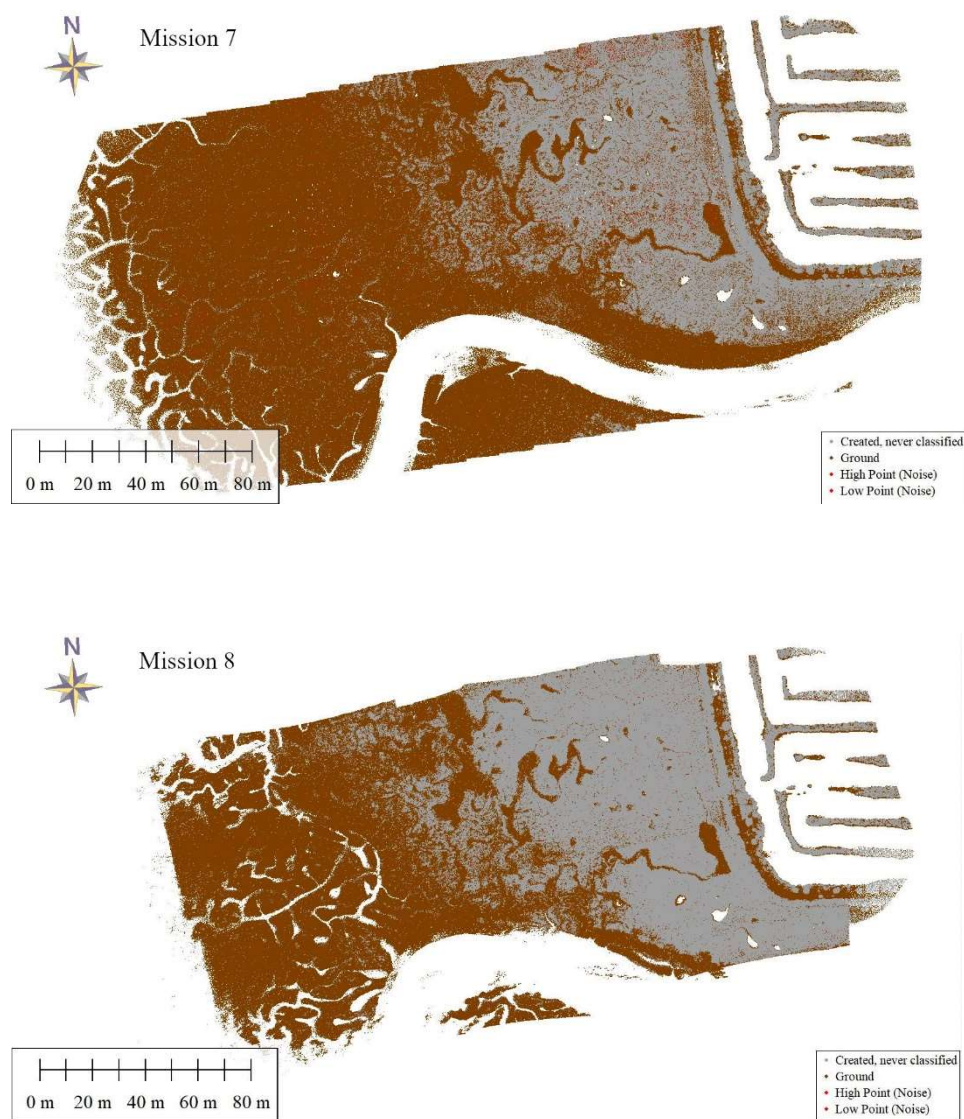


Figure S7. Classification results for the distinct missions after the application multispectral masks.

Table S44. Characteristics of the digital models obtained through LiDAR processing are resumed in the following table:

**DSMs**

Mission nº	File name	Point spacing	Resolution (m)	Z Min (m)	Z Max (m)	Elevation range (m)
1	01_DSM_1ps	1	0.05	43.68	49.26	5.58
	01_DSM_3ps	3	0.14	43.64	49.19	5.55
	01_DSM_5ps	5	0.24	43.68	49.19	5.51
2	02_DSM_1ps	1	0.05	43.71	49.12	5.41
	02_DSM_3ps	3	0.15	43.69	49.18	5.49
	02_DSM_5ps	5	0.25	43.73	49.43	5.7
3	03_DSM_1ps	1	0.02	43.53	49.37	5.84
	03_DSM_3ps	3	0.06	43.60	49.12	5.52
	03_DSM_5ps	5	0.09	43.60	49.23	5.63
4	04_DSM_1ps	1	0.02	43.65	49.08	5.43
	04_DSM_3ps	3	0.07	43.69	49.41	5.72
	04_DSM_5ps	5	0.12	43.73	49.39	5.66
5	05_DSM_1ps	1	0.05	44.13	49.18	5.05
	05_DSM_3ps	3	0.14	44.30	49.22	4.92
	05_DSM_5ps	5	0.24	44.25	49.19	4.94
6	06_DSM_1ps	1	0.05	44.36	49.14	4.78
	06_DSM_3ps	3	0.15	44.31	49.15	4.84
	06_DSM_5ps	5	0.26	44.47	49.32	4.85
7	07_DSM_1ps	1	0.02	44.33	49.12	4.79
	07_DSM_3ps	3	0.06	44.32	49.20	4.88
	07_DSM_5ps	5	0.09	44.33	49.10	4.77
8	08_DSM_1ps	1	0.02	44.69	49.32	4.63
	08_DSM_3ps	3	0.07	44.75	49.44	4.69
	08_DSM_5ps	5	0.12	44.77	49.21	4.44

**DEMs**

Mission nº	File name	Point spacing	Resolution (m)	Z Min (m)	Z Max (m)	Elevation range (m)
1	01_DEM_5ps	5	0.24	43.67	47.56	3.89
	01_DEM_10ps	10	0.47	43.60	47.59	3.99
	01_DEM_15ps	15	0.70	43.58	48.97	5.39
2	02_DEM_5ps	5	0.25	43.72	47.67	3.95
	02_DEM_10ps	10	0.51	43.71	47.70	3.99
	02_DEM_15ps	15	0.76	43.61	48.62	5.01
3	03_DEM_5ps	5	0.09	43.60	47.71	4.11
	03_DEM_10ps	10	0.18	43.63	47.68	4.05
	03_DEM_15ps	15	0.28	43.42	48.42	5
4	04_DEM_5ps	5	0.12	43.73	47.68	3.95
	04_DEM_10ps	10	0.24	43.70	47.75	4.05
	04_DEM_15ps	15	0.37	43.58	48.99	5.41
5	05_DEM_5ps	5	0.24	44.25	47.59	3.34
	05_DEM_10ps	10	0.47	44.27	47.58	3.31
	05_DEM_15ps	15	0.71	44.17	48.75	4.58
6	06_DEM_5ps	5	0.26	44.39	47.74	3.35
	06_DEM_10ps	10	0.51	44.35	47.80	3.45
	06_DEM_15ps	15	0.77	44.29	49.04	4.75
7	07_DEM_5ps	5	0.09	44.33	47.73	3.4
	07_DEM_10ps	10	0.19	44.43	47.71	3.28
	07_DEM_15ps	15	0.28	44.33	48.48	4.15

8	08_DEM_5ps	5	0.12	44.76	47.77	3.01
	08_DEM_10ps	10	0.24	44.56	47.72	3.16
	08_DEM_15ps	15	0.37	44.53	49.03	4.5

Table S45 – Resume of resolution of digital models from LiDAR processing. ps: point spacing. Data expressed in m/pixel.

Mission dataset	DSM grid spacing			DEM grid spacing		
	1-ps	3-ps	5-ps	5-ps	10-ps	15-ps
100m-LI	0.05	-	-	0.27	0.55	-
60m-LI	0.03	-	-	0.13	0.26	-
1 and 5	0.05	0.14	0.24	0.24	0.47	0.70
2 and 6	0.05	0.15	0.25	0.25	0.51	0.76
3 and 7	0.02	0.06	0.09	0.09	0.18	0.28
4 and 8	0.02	0.07	0.12	0.12	0.24	0.37

Table S46. Quality check for point cloud from mission 1 (nadir flight, non-repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R51	Salicornia	46.001	46.277	0.276
R15	Sarcocornia+Sporobolus	46.175	46.365	0.19
R13	Sarcocornia	46.059	46.227	0.168
R20	Sarcocornia	46.152	46.318	0.166
B3	Sarcocornia	46.17	46.325	0.155
R22	Sarcocornia	46.121	46.276	0.155
R30	Sarcocornia	46.142	46.296	0.154
R38	Sarcocornia	45.952	46.1	0.148
R54	Sarcocornia	45.918	46.064	0.146
R35	Sarcocornia	45.995	46.139	0.144
R45	Sarcocornia	46.082	46.223	0.141
R42	Sarcocornia	46.151	46.289	0.138
R3	Salicornia	46.118	46.255	0.137
R31	Sarcocornia	46.189	46.325	0.136
R36	Sarcocornia	46.1	46.236	0.136
R25	Sarcocornia	46.159	46.285	0.126
R34	Sarcocornia	46.171	46.296	0.125
R16	Sarcocornia	46.205	46.327	0.122
R43	Sarcocornia+Sporobolus	46.136	46.257	0.121
R11	Salicornia	46.064	46.183	0.119
R29	Sarcocornia	46.176	46.294	0.118
R18	Sarcocornia	46.213	46.33	0.117
R39	Sarcocornia	46.115	46.226	0.111
R53	Sarcocornia	46.071	46.181	0.11
R19	Sarcocornia	46.135	46.244	0.109
C2	peeling	46.208	46.314	0.106
R27	Sarcocornia	46.131	46.237	0.106
C4	peeling	46.049	46.154	0.105
R14	Sarcocornia	46.172	46.277	0.105
R21	Sarcocornia	46.161	46.266	0.105
R41	Sarcocornia	46.116	46.221	0.105
R28	Sarcocornia	46.145	46.249	0.104
R44	Sarcocornia	46.078	46.182	0.104
R46	Salicornia	46.091	46.194	0.103
R24	Sarcocornia	46.052	46.153	0.101

R47	Salicornia	46.013	46.111	0.098
R23	Sarcocornia	46.093	46.189	0.096
R12	Salicornia	46.128	46.223	0.095
R26	Sarcocornia	46.145	46.24	0.095
R55	Sarcocornia	45.98	46.073	0.093
R7	Salicornia	46.089	46.182	0.093
R52	Salicornia	45.958	46.05	0.092
R6	Salicornia	46.114	46.203	0.089
C1	peeling	46.211	46.297	0.086
R32	Sarcocornia	46.193	46.278	0.085
R10	Salicornia	46.115	46.199	0.084
R56	Sarcocornia	45.848	45.931	0.083
R17	Sarcocornia	46.191	46.273	0.082
R50	Salicornia	46.037	46.115	0.078
R40	Sarcocornia	46.111	46.185	0.074
R37	Sarcocornia	45.994	46.066	0.072
R8	Salicornia	46.09	46.157	0.067
R33	Sarcocornia	46.148	46.213	0.065
R9	Salicornia	46.054	46.118	0.064
C3	peeling	46.109	46.17	0.061
R48	Salicornia	45.937	45.993	0.056
R4	Salicornia	46.136	46.19	0.054
R5	Salicornia	46.114	46.168	0.054
R2	Salicornia	46.18	46.221	0.041
R49	Salicornia	45.917	45.947	0.03
R1	base	47.452	47.439	0.013
<b>Mean RMSE</b>				<b>0.114</b>

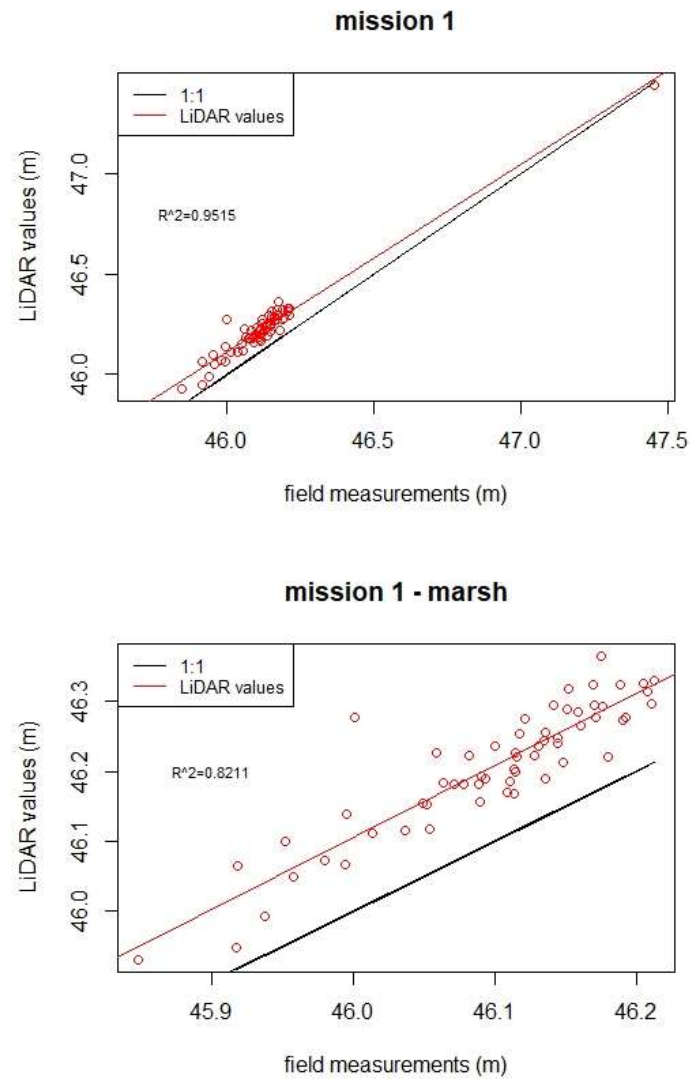


Figure S8. Linear regression and  $R^2$  value for point cloud values from mission 1 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S47. Quality check of point cloud for mission 2 (nadir flight, repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R15	Sarcocornia+Sporobolus	46.175	46.358	0.183
R38	Sarcocornia	45.952	46.133	0.181
R22	Sarcocornia	46.121	46.299	0.178
R20	Sarcocornia	46.152	46.326	0.174
R30	Sarcocornia	46.142	46.316	0.174
R36	Sarcocornia	46.1	46.272	0.172
R13	Sarcocornia	46.059	46.23	0.171
B3	Sarcocornia	46.17	46.335	0.165
R42	Sarcocornia	46.151	46.316	0.165
R31	Sarcocornia	46.189	46.348	0.159
R35	Sarcocornia	45.995	46.154	0.159
R24	Sarcocornia	46.052	46.21	0.158
R54	Sarcocornia	45.918	46.071	0.153
R45	Sarcocornia	46.082	46.234	0.152
R27	Sarcocornia	46.131	46.281	0.15
R3	Salicornia	46.118	46.268	0.15
R25	Sarcocornia	46.159	46.306	0.147
R26	Sarcocornia	46.145	46.292	0.147
R55	Sarcocornia	45.98	46.122	0.142
R18	Sarcocornia	46.213	46.353	0.14
R14	Sarcocornia	46.172	46.31	0.138
R44	Sarcocornia	46.078	46.212	0.134
R11	Salicornia	46.064	46.195	0.131
R47	Salicornia	46.013	46.144	0.131
R53	Sarcocornia	46.071	46.202	0.131
R40	Sarcocornia	46.111	46.241	0.13
C4	peeling	46.049	46.178	0.129
R23	Sarcocornia	46.093	46.222	0.129
R16	Sarcocornia	46.205	46.332	0.127
R39	Sarcocornia	46.115	46.242	0.127
R12	Salicornia	46.128	46.254	0.126
R17	Sarcocornia	46.191	46.317	0.126
R29	Sarcocornia	46.176	46.301	0.125
R32	Sarcocornia	46.193	46.318	0.125
R19	Sarcocornia	46.135	46.256	0.121
R43	Sarcocornia+Sporobolus	46.136	46.257	0.121
R10	Salicornia	46.115	46.231	0.116
R28	Sarcocornia	46.145	46.261	0.116
R34	Sarcocornia	46.171	46.287	0.116
C2	peeling	46.208	46.317	0.109
R41	Sarcocornia	46.116	46.221	0.105
R6	Salicornia	46.114	46.219	0.105
R21	Sarcocornia	46.161	46.264	0.103
R33	Sarcocornia	46.148	46.247	0.099
R7	Salicornia	46.089	46.188	0.099
R9	Salicornia	46.054	46.152	0.098
C3	peeling	46.109	46.206	0.097
R50	Salicornia	46.037	46.134	0.097
R52	Salicornia	45.958	46.054	0.096
R37	Sarcocornia	45.994	46.088	0.094

C1	peeling	46.211	46.301	0.09
R56	Sarcocornia	45.848	45.937	0.089
R46	Salicornia	46.091	46.178	0.087
R5	Salicornia	46.114	46.2	0.086
R8	Salicornia	46.09	46.172	0.082
R51	Salicornia	46.001	46.076	0.075
R4	Salicornia	46.136	46.202	0.066
R2	Salicornia	46.18	46.243	0.063
R48	Salicornia	45.937	46	0.063
R49	Salicornia	45.917	45.974	0.057
R1	base	47.452	47.468	0.016
<b>Mean RMSE</b>				<b>0.128</b>

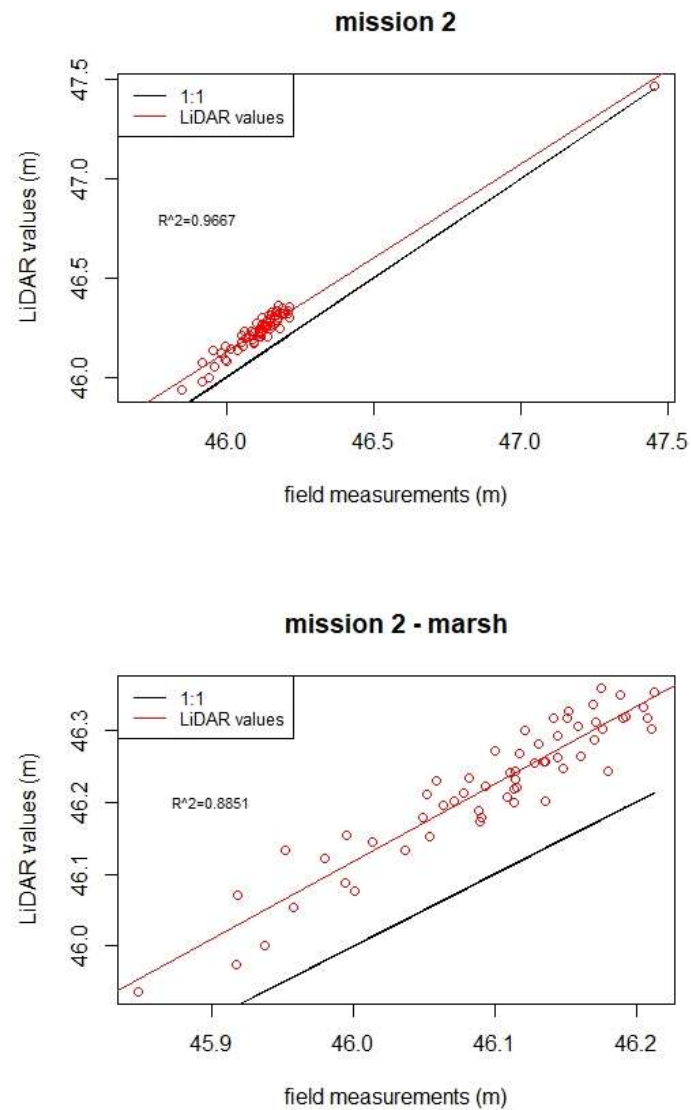


Figure S9. Linear regression and  $R^2$  value for point cloud values from mission 2 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S48. Quality check of point cloud for mission 3 (oblique flight, non-repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R20	Sarcocornia	46.152	46.347	0.195
R15	Sarcocornia+Sporobolus	46.175	46.356	0.181
R38	Sarcocornia	45.952	46.109	0.157
R36	Sarcocornia	46.1	46.253	0.153
R55	Sarcocornia	45.98	46.133	0.153
R42	Sarcocornia	46.151	46.296	0.145
R30	Sarcocornia	46.142	46.286	0.144
R24	Sarcocornia	46.052	46.195	0.143
R45	Sarcocornia	46.082	46.218	0.136
R35	Sarcocornia	45.995	46.127	0.132
R3	Salicornia	46.118	46.247	0.129
R22	Sarcocornia	46.121	46.244	0.123
R53	Sarcocornia	46.071	46.193	0.122
R29	Sarcocornia	46.176	46.296	0.12
R11	Salicornia	46.064	46.182	0.118
R39	Sarcocornia	46.115	46.233	0.118
R23	Sarcocornia	46.093	46.209	0.116
R18	Sarcocornia	46.213	46.328	0.115
R26	Sarcocornia	46.145	46.26	0.115
C3	peeling	46.109	46.221	0.112
R27	Sarcocornia	46.131	46.242	0.111
C2	peeling	46.208	46.315	0.107
R14	Sarcocornia	46.172	46.279	0.107
R34	Sarcocornia	46.171	46.277	0.106
R25	Sarcocornia	46.159	46.264	0.105
R43	Sarcocornia+Sporobolus	46.136	46.239	0.103
R54	Sarcocornia	45.918	46.021	0.103
R12	Salicornia	46.128	46.23	0.102
R31	Sarcocornia	46.189	46.291	0.102
R41	Sarcocornia	46.116	46.216	0.1
B3	Sarcocornia	46.17	46.267	0.097
R47	Salicornia	46.013	46.11	0.097
R32	Sarcocornia	46.193	46.289	0.096
R21	Sarcocornia	46.161	46.254	0.093
R52	Salicornia	45.958	46.049	0.091
R44	Sarcocornia	46.078	46.168	0.09
R13	Sarcocornia	46.059	46.148	0.089
R40	Sarcocornia	46.111	46.2	0.089
R17	Sarcocornia	46.191	46.279	0.088
R10	Salicornia	46.115	46.2	0.085
R6	Salicornia	46.114	46.196	0.082
R19	Sarcocornia	46.135	46.212	0.077
R8	Salicornia	46.09	46.167	0.077
R9	Salicornia	46.054	46.126	0.072
R16	Sarcocornia	46.205	46.276	0.071
R56	Sarcocornia	45.848	45.919	0.071
C4	peeling	46.049	46.118	0.069
C1	peeling	46.211	46.273	0.062
R5	Salicornia	46.114	46.176	0.062
R46	Salicornia	46.091	46.148	0.057
R2	Salicornia	46.18	46.229	0.049
R4	Salicornia	46.136	46.184	0.048

R37	Sarcocornia	45.994	46.041	0.047
B1	Sporobolus	45.7	45.744	0.044
R7	Salicornia	46.089	46.129	0.04
R1	base	47.452	47.422	0.03
R33	Sarcocornia	46.148	46.175	0.027
R51	Salicornia	46.001	46.022	0.021
R50	Salicornia	46.037	46.054	0.017
R48	Salicornia	45.937	45.953	0.016
R49	Salicornia	45.917	45.926	0.0088615417
R28	Sarcocornia	46.145	46.137	0.0081558228
B2	Transition	45.904	45.897	0.0072669983
<b>Mean RMSE</b>				<b>0.101</b>

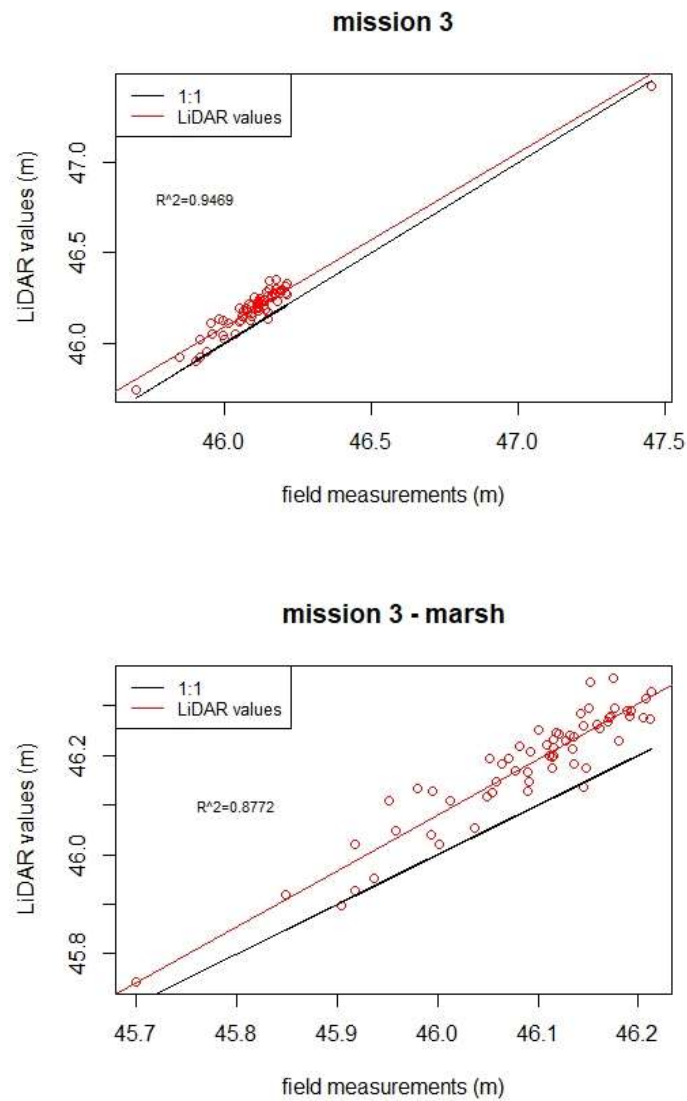


Figure S10. Linear regression and  $R^2$  value for point cloud values from mission 3 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S49. Quality check of point cloud for mission 4 (oblique flight, repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R15	Sarcocornia+Sporobolus	46.175	46.378	0.203
B3	Sarcocornia	46.17	46.368	0.198
R20	Sarcocornia	46.152	46.332	0.18
R35	Sarcocornia	45.995	46.169	0.174
R38	Sarcocornia	45.952	46.115	0.163
R36	Sarcocornia	46.1	46.259	0.159
R14	Sarcocornia	46.172	46.327	0.155
R3	Salicornia	46.118	46.269	0.151
R42	Sarcocornia	46.151	46.298	0.147
R13	Sarcocornia	46.059	46.203	0.144
R25	Sarcocornia	46.159	46.303	0.144
R22	Sarcocornia	46.121	46.26	0.139
R26	Sarcocornia	46.145	46.279	0.134
R54	Sarcocornia	45.918	46.052	0.134
R30	Sarcocornia	46.142	46.275	0.133
R11	Salicornia	46.064	46.196	0.132
R34	Sarcocornia	46.171	46.302	0.131
R12	Salicornia	46.128	46.255	0.127
R45	Sarcocornia	46.082	46.206	0.124
R18	Sarcocornia	46.213	46.333	0.12
R19	Sarcocornia	46.135	46.254	0.119
R24	Sarcocornia	46.052	46.169	0.117
R16	Sarcocornia	46.205	46.319	0.114
R23	Sarcocornia	46.093	46.207	0.114
R27	Sarcocornia	46.131	46.245	0.114
C4	peeling	46.049	46.161	0.112
R21	Sarcocornia	46.161	46.268	0.107
R39	Sarcocornia	46.115	46.222	0.107
R37	Sarcocornia	45.994	46.099	0.105
R41	Sarcocornia	46.116	46.221	0.105
R47	Salicornia	46.013	46.118	0.105
R28	Sarcocornia	46.145	46.249	0.104
C3	peeling	46.109	46.212	0.103
R17	Sarcocornia	46.191	46.293	0.102
R53	Sarcocornia	46.071	46.173	0.102
R40	Sarcocornia	46.111	46.211	0.1
R55	Sarcocornia	45.98	46.079	0.099
C2	peeling	46.208	46.306	0.098
R29	Sarcocornia	46.176	46.274	0.098
R10	Salicornia	46.115	46.211	0.096
R31	Sarcocornia	46.189	46.285	0.096
R32	Sarcocornia	46.193	46.287	0.094
R9	Salicornia	46.054	46.145	0.091
R7	Salicornia	46.089	46.178	0.089
R8	Salicornia	46.09	46.178	0.088
R44	Sarcocornia	46.078	46.164	0.086
R33	Sarcocornia	46.148	46.233	0.085
R6	Salicornia	46.114	46.198	0.084
R5	Salicornia	46.114	46.193	0.079
R43	Sarcocornia+Sporobolus	46.136	46.213	0.077
C1	peeling	46.211	46.285	0.074
R52	Salicornia	45.958	46.03	0.072
R4	Salicornia	46.136	46.203	0.067

R46	Salicornia	46.091	46.157	0.066
R56	Sarcocornia	45.848	45.913	0.065
R48	Salicornia	45.937	45.996	0.059
R50	Salicornia	46.037	46.096	0.059
R2	Salicornia	46.18	46.232	0.052
R51	Salicornia	46.001	46.025	0.024
R49	Salicornia	45.917	45.934	0.017
R1	base	47.452	47.467	0.015
<b>Mean RMSE</b>				<b>0.114</b>

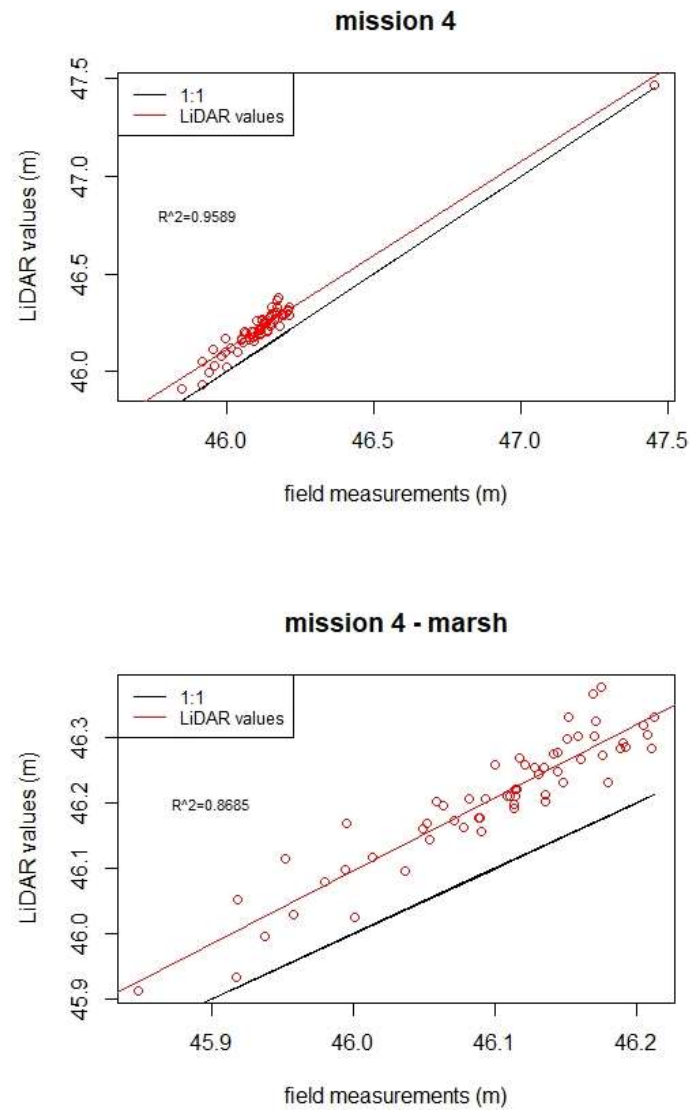


Figure S11. Linear regression and  $R^2$  value for point cloud values from mission 4 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S50. Quality check of point cloud for mission 5 (nadir flight, non-repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Field_elevation (m)	LiDAR_elevation (m)	RMSE (m)
R38	Sarcocornia	45.952	46.118	0.166
R15	Sarcocornia+Sporobolus	46.175	46.337	0.162
R35	Sarcocornia	45.995	46.149	0.154
R30	Sarcocornia	46.142	46.289	0.147
R54	Sarcocornia	45.918	46.063	0.145
R13	Sarcocornia	46.059	46.203	0.144
R3	Salicornia	46.118	46.26	0.142
R42	Sarcocornia	46.151	46.289	0.138
R27	Sarcocornia	46.131	46.267	0.136
R22	Sarcocornia	46.121	46.255	0.134
R36	Sarcocornia	46.1	46.233	0.133
R31	Sarcocornia	46.189	46.319	0.13
R20	Sarcocornia	46.152	46.281	0.129
R14	Sarcocornia	46.172	46.299	0.127
R24	Sarcocornia	46.052	46.179	0.127
R11	Salicornia	46.064	46.187	0.123
R34	Sarcocornia	46.171	46.292	0.121
R41	Sarcocornia	46.116	46.237	0.121
R53	Sarcocornia	46.071	46.191	0.12
R16	Sarcocornia	46.205	46.324	0.119
R17	Sarcocornia	46.191	46.31	0.119
R18	Sarcocornia	46.213	46.33	0.117
R12	Salicornia	46.128	46.243	0.115
R40	Sarcocornia	46.111	46.222	0.111
R45	Sarcocornia	46.082	46.193	0.111
R26	Sarcocornia	46.145	46.255	0.11
R29	Sarcocornia	46.176	46.281	0.105
R39	Sarcocornia	46.115	46.219	0.104
R25	Sarcocornia	46.159	46.262	0.103
R32	Sarcocornia	46.193	46.296	0.103
R44	Sarcocornia	46.078	46.181	0.103
R7	Salicornia	46.089	46.188	0.099
R43	Sarcocornia+Sporobolus	46.136	46.23	0.094
R55	Sarcocornia	45.98	46.071	0.091
R6	Salicornia	46.114	46.202	0.088
R19	Sarcocornia	46.135	46.222	0.087
R28	Sarcocornia	46.145	46.232	0.087
R5	Salicornia	46.114	46.201	0.087
R33	Sarcocornia	46.148	46.23	0.082
R37	Sarcocornia	45.994	46.075	0.081
R47	Salicornia	46.013	46.09	0.077
R8	Salicornia	46.09	46.162	0.072
R52	Salicornia	45.958	46.029	0.071
R23	Sarcocornia	46.093	46.163	0.07
R21	Sarcocornia	46.161	46.23	0.069
R10	Salicornia	46.115	46.182	0.067
R46	Salicornia	46.091	46.158	0.067
R48	Salicornia	45.937	46.004	0.067
R9	Salicornia	46.054	46.118	0.064
B3		46.17	46.229	0.059
R2	Salicornia	46.18	46.239	0.059
R4	Salicornia	46.136	46.194	0.058
R51	Salicornia	46.001	46.057	0.056

C3	peeling	46.109	46.058	0.051
R50	Salicornia	46.037	46.078	0.041
R56	Sarcocornia	45.848	45.889	0.041
C4	peeling	46.049	46.083	0.034
R49	Salicornia	45.917	45.933	0.016
C1	peeling	46.211	46.223	0.012
R1	base	47.452	47.445	0.0072212219
C2	peeling	46.208	46.211	0.0033836365
<b>Mean RMSE</b>				<b>0.102</b>

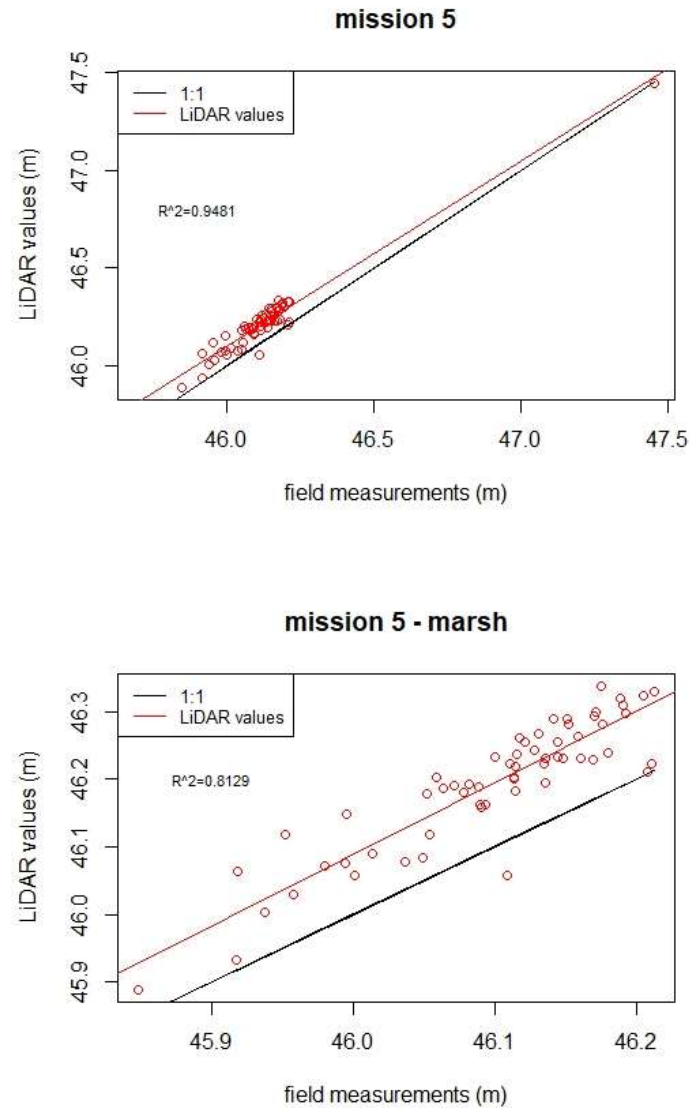


Figure S12. Linear regression and  $R^2$  value for point cloud values from mission 5 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S51. Quality check of point cloud for mission 6 (nadir flight, repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R20	Sarcocornia	46.152	46.344	0.192
R15	Sarcocornia+Sporobolus	46.175	46.365	0.19
R42	Sarcocornia	46.151	46.329	0.178
R38	Sarcocornia	45.952	46.124	0.172
R22	Sarcocornia	46.121	46.29	0.169
R3	Salicornia	46.118	46.286	0.168
R13	Sarcocornia	46.059	46.221	0.162
R30	Sarcocornia	46.142	46.304	0.162
R36	Sarcocornia	46.1	46.26	0.16
R14	Sarcocornia	46.172	46.329	0.157
R31	Sarcocornia	46.189	46.346	0.157
R26	Sarcocornia	46.145	46.296	0.151
R18	Sarcocornia	46.213	46.363	0.15
R35	Sarcocornia	45.995	46.145	0.15
R16	Sarcocornia	46.205	46.354	0.149
R29	Sarcocornia	46.176	46.325	0.149
R25	Sarcocornia	46.159	46.306	0.147
R24	Sarcocornia	46.052	46.197	0.145
R53	Sarcocornia	46.071	46.216	0.145
R17	Sarcocornia	46.191	46.334	0.143
R27	Sarcocornia	46.131	46.274	0.143
R44	Sarcocornia	46.078	46.221	0.143
R54	Sarcocornia	45.918	46.06	0.142
R11	Salicornia	46.064	46.204	0.14
R19	Sarcocornia	46.135	46.275	0.14
R47	Salicornia	46.013	46.151	0.138
R45	Sarcocornia	46.082	46.218	0.136
R40	Sarcocornia	46.111	46.245	0.134
R39	Sarcocornia	46.115	46.244	0.129
R12	Salicornia	46.128	46.256	0.128
R23	Sarcocornia	46.093	46.221	0.128
R28	Sarcocornia	46.145	46.269	0.124
R32	Sarcocornia	46.193	46.317	0.124
R34	Sarcocornia	46.171	46.288	0.117
R55	Sarcocornia	45.98	46.095	0.115
R7	Salicornia	46.089	46.201	0.112
R9	Salicornia	46.054	46.166	0.112
R10	Salicornia	46.115	46.226	0.111
R41	Sarcocornia	46.116	46.223	0.107
R43	Sarcocornia+Sporobolus	46.136	46.243	0.107
R21	Sarcocornia	46.161	46.266	0.105
R33	Sarcocornia	46.148	46.253	0.105
R37	Sarcocornia	45.994	46.099	0.105
R52	Salicornia	45.958	46.062	0.104
R6	Salicornia	46.114	46.216	0.102
B3	Sarcocornia	46.17	46.267	0.097
R8	Salicornia	46.09	46.187	0.097
R46	Salicornia	46.091	46.184	0.093
R56	Sarcocornia	45.848	45.934	0.086
R5	Salicornia	46.114	46.199	0.085
R50	Salicornia	46.037	46.119	0.082
R2	Salicornia	46.18	46.258	0.078
R4	Salicornia	46.136	46.213	0.077

R49	Salicornia	45.917	45.985	0.068
R48	Salicornia	45.937	45.996	0.059
R51	Salicornia	46.001	46.059	0.058
R1	base	47.452	47.495	0.043
C3	peeling	46.109	46.072	0.037
C2	peeling	46.208	46.243	0.035
C4	peeling	46.049	46.078	0.029
C1	peeling	46.211	46.233	0.022
Mean RMSE				<b>0.126</b>

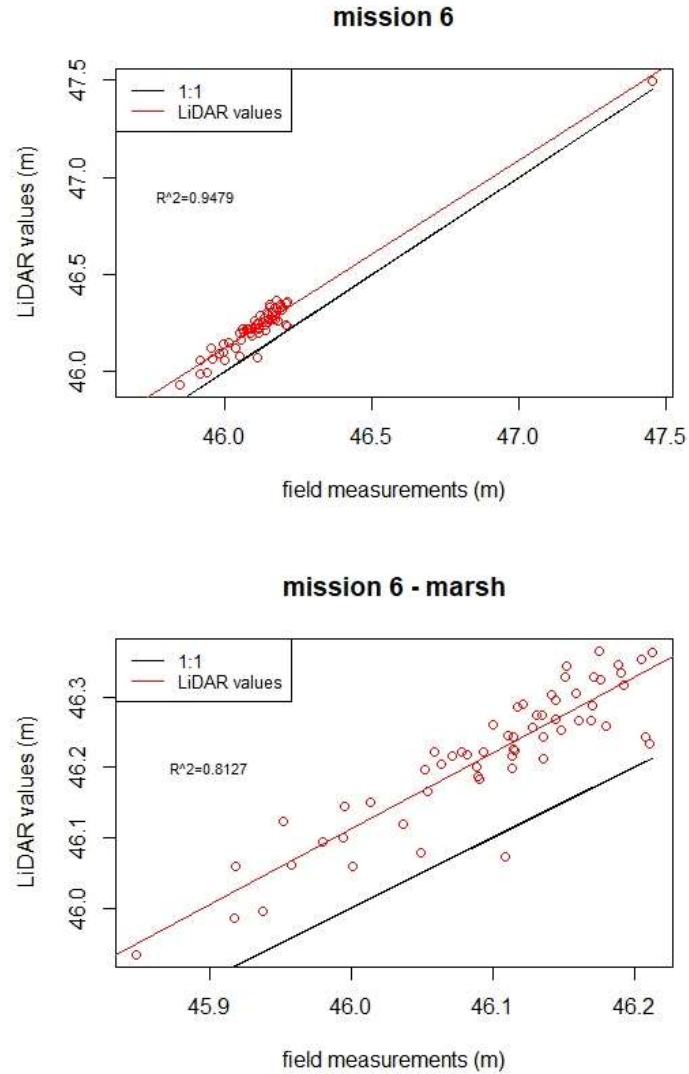


Figure S13. Linear regression and  $R^2$  value for point cloud values from mission 6 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S52. Quality check of point cloud for mission 7 (oblique flight, non-repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R20	Sarcocornia	46.152	46.318	0.166
R42	Sarcocornia	46.151	46.313	0.162
R15	Sarcocornia+Sporobolus	46.175	46.336	0.161
R35	Sarcocornia	45.995	46.146	0.151
R38	Sarcocornia	45.952	46.095	0.143
R36	Sarcocornia	46.1	46.242	0.142
R1	base	47.452	47.592	0.14
R19	Sarcocornia	46.135	46.272	0.137
R22	Sarcocornia	46.121	46.255	0.134
R45	Sarcocornia	46.082	46.214	0.132
R25	Sarcocornia	46.159	46.287	0.128
R30	Sarcocornia	46.142	46.268	0.126
R54	Sarcocornia	45.918	46.044	0.126
R13	Sarcocornia	46.059	46.184	0.125
R34	Sarcocornia	46.171	46.293	0.122
R28	Sarcocornia	46.145	46.266	0.121
R3	Salicornia	46.118	46.238	0.12
R11	Salicornia	46.064	46.181	0.117
R27	Sarcocornia	46.131	46.247	0.116
R24	Sarcocornia	46.052	46.166	0.114
R31	Sarcocornia	46.189	46.298	0.109
R23	Sarcocornia	46.093	46.2	0.107
R16	Sarcocornia	46.205	46.31	0.105
R39	Sarcocornia	46.115	46.22	0.105
R10	Salicornia	46.115	46.215	0.1
R21	Sarcocornia	46.161	46.261	0.1
R44	Sarcocornia	46.078	46.178	0.1
R14	Sarcocornia	46.172	46.27	0.098
R26	Sarcocornia	46.145	46.242	0.097
R55	Sarcocornia	45.98	46.076	0.096
R18	Sarcocornia	46.213	46.305	0.092
R41	Sarcocornia	46.116	46.208	0.092
R43	Sarcocornia+Sporobolus	46.136	46.225	0.089
R17	Sarcocornia	46.191	46.278	0.087
R6	Salicornia	46.114	46.201	0.087
R7	Salicornia	46.089	46.174	0.085
R32	Sarcocornia	46.193	46.276	0.083
R46	Salicornia	46.091	46.174	0.083
R9	Salicornia	46.054	46.136	0.082
R33	Sarcocornia	46.148	46.229	0.081
R5	Salicornia	46.114	46.194	0.08
R53	Sarcocornia	46.071	46.151	0.08
R56	Sarcocornia	45.848	45.928	0.08
R47	Salicornia	46.013	46.09	0.077
R29	Sarcocornia	46.176	46.248	0.072
R37	Sarcocornia	45.994	46.066	0.072
R40	Sarcocornia	46.111	46.183	0.072
R52	Salicornia	45.958	46.03	0.072
R4	Salicornia	46.136	46.201	0.065
B3	Sarcocornia	46.17	46.233	0.063
R8	Salicornia	46.09	46.138	0.048
C4	peeling	46.049	46.087	0.038
R12	Salicornia	46.128	46.161	0.033

C2	peeling	46.208	46.238	0.03
R48	Salicornia	45.937	45.966	0.029
R51	Salicornia	46.001	46.027	0.026
R2	Salicornia	46.18	46.202	0.022
R50	Salicornia	46.037	46.052	0.015
B2	Transition	45.904	45.912	0.0075721741
B1	Sporobolus	45.7	45.702	0.0016479492
C1	peeling	46.211	46.21	0.0013275146
C3	peeling	46.109	46.109	0.0002288818
R49	Salicornia	45.917	45.917	0.0000190735
<b>Mean RMSE</b>				<b>0.098</b>

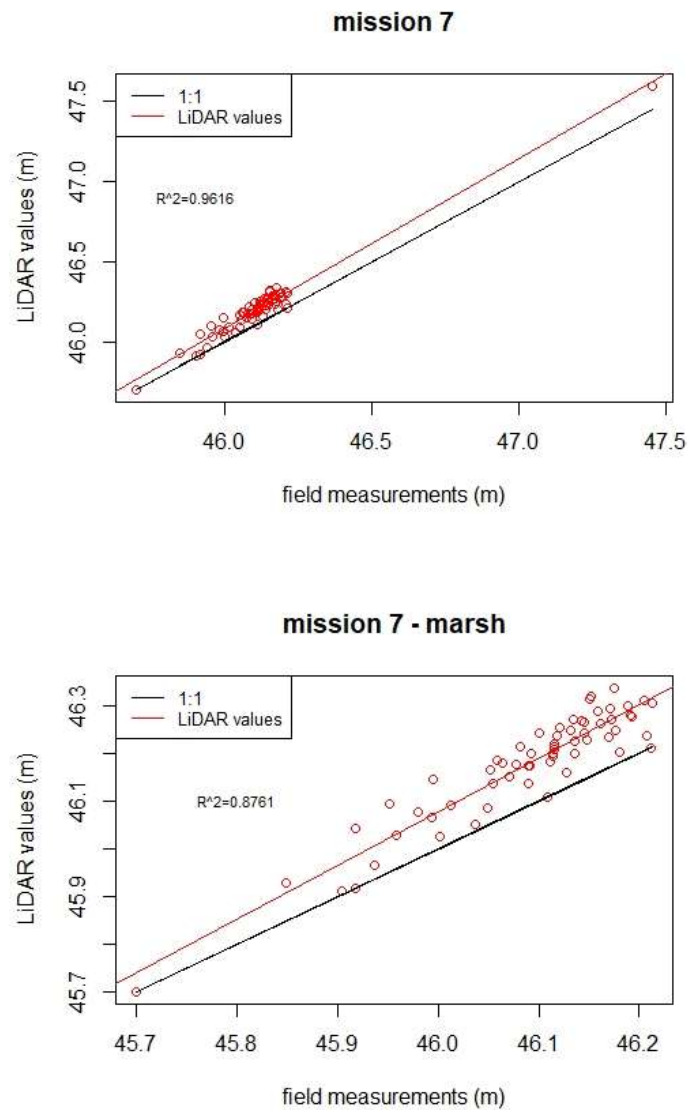


Figure S14. Linear regression and  $R^2$  value for point cloud values from mission 7 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S53. Quality check of point cloud for mission 8 (oblique flight, repetitive scan mode). Elevation values for GCPs (Point elevation), species of vegetation identified at each point, elevation values of the corresponding point from the LiDAR point cloud (LiDAR elevation), and RMSE value at each point. Elevation values are expressed in ellipsoidal height.

Point ID	species	Point elevation (m)	LiDAR elevation (m)	RMSE (m)
R1	base	47.452	47.701	0.249
R35	Sarcocornia	45.995	46.166	0.171
R15	Sarcocornia+Sporobolus	46.175	46.336	0.161
R38	Sarcocornia	45.952	46.106	0.154
R20	Sarcocornia	46.152	46.298	0.146
R24	Sarcocornia	46.052	46.191	0.139
R53	Sarcocornia	46.071	46.209	0.138
R13	Sarcocornia	46.059	46.196	0.137
R25	Sarcocornia	46.159	46.295	0.136
R36	Sarcocornia	46.1	46.236	0.136
R39	Sarcocornia	46.115	46.241	0.126
R54	Sarcocornia	45.918	46.036	0.118
R19	Sarcocornia	46.135	46.252	0.117
R26	Sarcocornia	46.145	46.262	0.117
R55	Sarcocornia	45.98	46.095	0.115
R22	Sarcocornia	46.121	46.234	0.113
R18	Sarcocornia	46.213	46.325	0.112
R31	Sarcocornia	46.189	46.297	0.108
R27	Sarcocornia	46.131	46.238	0.107
R23	Sarcocornia	46.093	46.195	0.102
R33	Sarcocornia	46.148	46.25	0.102
R11	Salicornia	46.064	46.163	0.099
R3	Salicornia	46.118	46.217	0.099
R42	Sarcocornia	46.151	46.25	0.099
R14	Sarcocornia	46.172	46.269	0.097
R30	Sarcocornia	46.142	46.237	0.095
R46	Salicornia	46.091	46.186	0.095
R12	Salicornia	46.128	46.22	0.092
R17	Sarcocornia	46.191	46.282	0.091
R28	Sarcocornia	46.145	46.227	0.082
R8	Salicornia	46.09	46.168	0.078
R16	Sarcocornia	46.205	46.282	0.077
R21	Sarcocornia	46.161	46.238	0.077
R43	Sarcocornia+Sporobolus	46.136	46.213	0.077
R52	Salicornia	45.958	46.035	0.077
R40	Sarcocornia	46.111	46.187	0.076
R32	Sarcocornia	46.193	46.266	0.073
R37	Sarcocornia	45.994	46.067	0.073
R45	Sarcocornia	46.082	46.152	0.07
R6	Salicornia	46.114	46.183	0.069
R34	Sarcocornia	46.171	46.237	0.066
R29	Sarcocornia	46.176	46.241	0.065
R10	Salicornia	46.115	46.179	0.064
R7	Salicornia	46.089	46.153	0.063
R50	Salicornia	46.037	46.098	0.061
R51	Salicornia	46.001	46.058	0.057
R56	Sarcocornia	45.848	45.903	0.055
R48	Salicornia	45.937	45.99	0.053
R47	Salicornia	46.013	46.059	0.046
R5	Salicornia	46.114	46.159	0.045
R9	Salicornia	46.054	46.096	0.042

C2	peeling	46.208	46.243	0.035
R49	Salicornia	45.917	45.952	0.035
R44	Sarcocornia	46.078	46.112	0.034
B3	Sarcocornia	46.17	46.203	0.033
R2	Salicornia	46.18	46.213	0.033
R4	Salicornia	46.136	46.158	0.022
C4	peeling	46.049	46.07	0.021
R41	Sarcocornia	46.116	46.135	0.019
C3	peeling	46.109	46.091	0.018
C1	peeling	46.211	46.21	0.0009346008
<b>Mean RMSE</b>				<b>0.097</b>

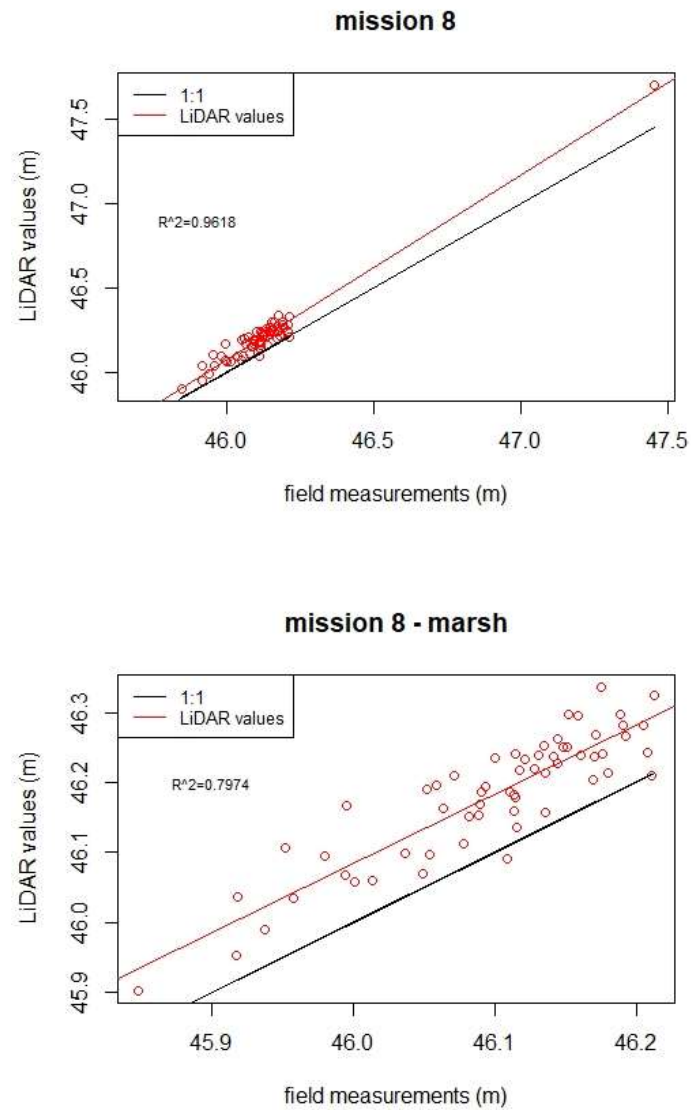


Figure S15. Linear regression and  $R^2$  value for point cloud values from mission 8 compared to GCPs. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

*Table S54. Resume of point clouds accuracy assessment for the eight missions.*

Point cloud mission nº	Max RMSE	Min RMSE	Average RMSE	R <sup>2</sup> value (all points)	R <sup>2</sup> value (marsh points)
1	0.276	0.013	0.11	0.9515	0.8211
2	0.183	0.016	0.13	0.9667	0.8851
3	0.195	0.007	0.10	0.9469	0.8772
4	0.203	0.015	0.11	0.9589	0.8685
5	0.166	0.003	0.10	0.9481	0.8129
6	0.192	0.022	0.13	0.9479	0.8127
7	0.166	0.000	0.10	0.9616	0.8761
8	0.249	0.001	0.10	0.9618	0.7974

Table S55. Elevation from GCPs (Elevation column) and elevation values extracted at each corresponding point from 5-point-spacing-DEMs for the eight missions; each DEM is identified by the number of its mission in the column header (01\_5ps means 5-point-spacing-DEM from mission 1). Elevation values are expressed in ellipsoidal height.

Point Id	species	Elevation (m)	01_5ps	02_5ps	03_5ps	04_5ps	05_5ps	06_5ps	07_5ps	08_5ps
B3	Sarcocornia	46.17	46.25	46.29	46.21	46.34	46.19	46.26	46.14	46.20
C1	peeled area	46.21	46.17	46.30	46.26	46.25	46.15	46.24	46.17	46.19
C2	peeled area	46.21	46.18	46.31	46.25	46.26	46.16	46.24	46.20	46.19
C3	peeled area	46.11	46.07	46.13	46.14	46.16	45.95	46.04	46.06	46.03
C4	peeled area	46.05	46.06	46.12	46.13	46.14	45.95	46.05	46.06	46.01
R1	base	47.45	47.45	47.48	47.44	47.47	47.44	47.51	47.54	47.49
R10	Salicornia	46.11	46.09	46.21	46.17	46.18	46.12	46.22	46.18	46.19
R11	Salicornia	46.06	45.88	45.96	45.97	45.97	45.89	45.92	46.10	46.10
R12	Salicornia	46.13	46.08	46.22	46.15	46.18	46.12	46.22	46.18	46.15
R13	Sarcocornia	46.06	46.11	46.22	46.10	46.16	46.13	46.21	46.12	46.14
R14	Sarcocornia	46.17	46.18	46.26	46.16	46.27	46.18	46.26	46.18	46.19
R15	Sarcocornia+Sporobolus	46.17	46.25	46.32	46.15	46.28	46.25	46.32	46.20	46.27
R16	Sarcocornia	46.20	46.16	46.24	46.27	46.26	46.19	46.34	46.25	46.25
R17	Sarcocornia	46.19	46.03	46.02	46.10	46.26	46.10	46.09	46.13	46.27
R18	Sarcocornia	46.21	46.24	46.33	46.24	46.31	46.22	46.36	46.23	46.29
R19	Sarcocornia	46.14	46.13	46.25	46.15	46.19	46.15	46.23	46.22	46.16
R2	Salicornia	46.18	46.15	46.24	46.14	46.18	46.15	46.25	46.18	46.20
R20	Sarcocornia	46.15	46.10	46.18	46.21	46.25	46.13	46.27	46.24	46.22
R21	Sarcocornia	46.16	46.16	46.26	46.22	46.24	46.13	46.27	46.19	46.21
R22	Sarcocornia	46.12	46.13	46.25	46.15	46.21	46.13	46.25	46.13	46.18
R23	Sarcocornia	46.09	46.08	46.21	46.13	46.15	46.08	46.21	46.10	46.13
R24	Sarcocornia	46.05	45.96	46.14	46.02	46.10	45.95	46.05	45.96	46.10
R25	Sarcocornia	46.16	46.16	46.27	46.25	46.23	46.16	46.27	46.18	46.21
R26	Sarcocornia	46.14	45.88	45.87	46.14	46.23	46.06	45.92	46.11	46.18
R27	Sarcocornia	46.13	46.16	46.24	46.14	46.19	46.17	46.22	46.13	46.17
R28	Sarcocornia	46.14	45.99	46.07	45.96	46.10	46.07	45.97	46.04	46.17
R29	Sarcocornia	46.18	46.18	46.29	46.19	46.24	46.19	46.28	46.19	46.23
R3	Salicornia	46.12	46.13	46.23	46.10	46.24	46.14	46.24	46.19	46.22
R30	Sarcocornia	46.14	46.18	46.25	46.16	46.22	46.17	46.28	46.17	46.21
R31	Sarcocornia	46.19	46.20	46.27	46.20	46.22	46.22	46.31	46.17	46.20
R32	Sarcocornia	46.19	46.26	46.30	46.26	46.29	46.21	46.29	46.24	46.24
R33	Sarcocornia	46.15	46.13	46.24	46.19	46.16	46.14	46.24	46.17	46.15
R34	Sarcocornia	46.17	46.18	46.26	46.17	46.20	46.19	46.26	46.20	46.19
R35	Sarcocornia	46.00	45.99	46.13	46.05	46.06	45.99	46.07	46.07	46.05
R36	Sarcocornia	46.10	46.06	46.22	46.21	46.18	46.09	46.23	46.17	46.19
R37	Sarcocornia	45.99	45.97	46.08	46.00	46.05	45.98	46.04	45.96	46.02
R38	Sarcocornia	45.95	45.93	46.05	46.02	46.02	45.71	46.04	45.97	46.02
R39	Sarcocornia	46.11	46.11	46.19	46.14	46.15	46.11	46.19	46.12	46.15
R4	Salicornia	46.14	46.10	46.20	46.13	46.19	46.14	46.22	46.16	46.18
R40	Sarcocornia	46.11	46.13	46.18	46.10	46.11	46.12	46.17	46.09	46.12
R41	Sarcocornia	46.12	46.14	46.20	46.18	46.19	46.13	46.20	46.16	46.18
R42	Sarcocornia	46.15	46.19	46.25	46.24	46.23	46.17	46.25	46.26	46.21
R43	Sarcocornia+Sporobolus	46.14	46.17	46.23	46.21	46.17	46.15	46.25	46.20	46.18
R44	Sarcocornia	46.08	46.10	46.16	46.15	46.08	46.09	46.17	46.13	46.08
R45	Sarcocornia	46.08	46.12	46.17	46.15	46.17	46.12	46.18	46.15	46.19
R46	Salicornia	46.09	46.10	46.17	46.08	46.14	46.10	46.17	46.07	46.12
R47	Salicornia	46.01	46.04	46.12	46.03	46.03	46.03	46.11	46.00	46.03
R48	Salicornia	45.94	45.86	45.98	45.91	45.94	45.89	45.98	45.89	45.94
R49	Salicornia	45.92	45.89	45.95	45.90	45.89	45.84	45.96	45.90	45.89
R5	Salicornia	46.11	46.09	46.19	46.01	46.16	46.12	46.19	46.14	46.13
R50	Salicornia	46.04	46.00	46.10	45.97	46.04	46.01	46.09	45.99	46.02
R51	Salicornia	46.00	45.82	46.01	45.89	45.99	45.90	45.96	45.95	45.99
R52	Salicornia	45.96	45.87	46.02	45.98	45.95	45.87	45.99	45.95	45.97
R53	Sarcocornia	46.07	46.08	46.15	46.01	46.10	46.07	46.15	46.07	46.08
R54	Sarcocornia	45.92	45.93	45.88	45.95	45.97	45.78	45.76	45.98	45.98

R55	Sarcocornia	45.98	45.90	46.03	45.96	46.02	45.92	46.01	46.02	45.98
R56	Sarcocornia	45.85	45.69	45.89	45.70	45.85	45.72	45.94	45.81	45.85
R6	Salicornia	46.11	46.07	46.20	46.12	46.17	46.13	46.20	46.15	46.13
R7	Salicornia	46.09	46.09	46.19	46.14	46.15	46.10	46.18	46.14	46.12
R8	Salicornia	46.09	46.04	46.17	46.11	46.15	46.06	46.17	46.13	46.13
R9	Salicornia	46.05	46.04	46.15	46.07	46.12	46.05	46.15	46.08	46.11

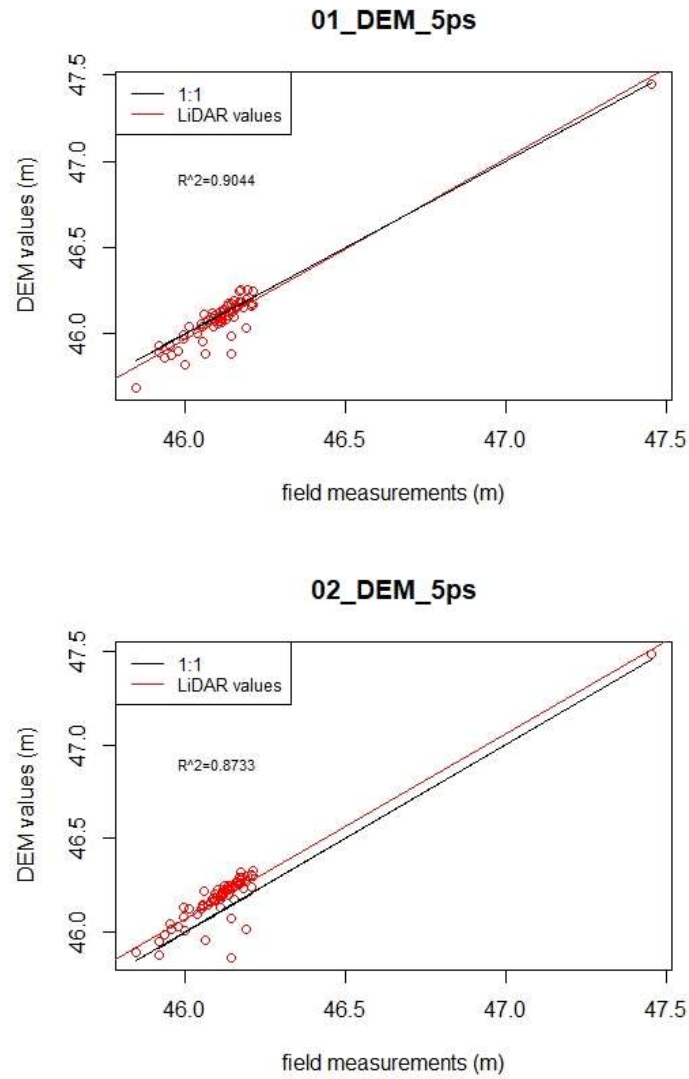


Figure S16. (Continue)

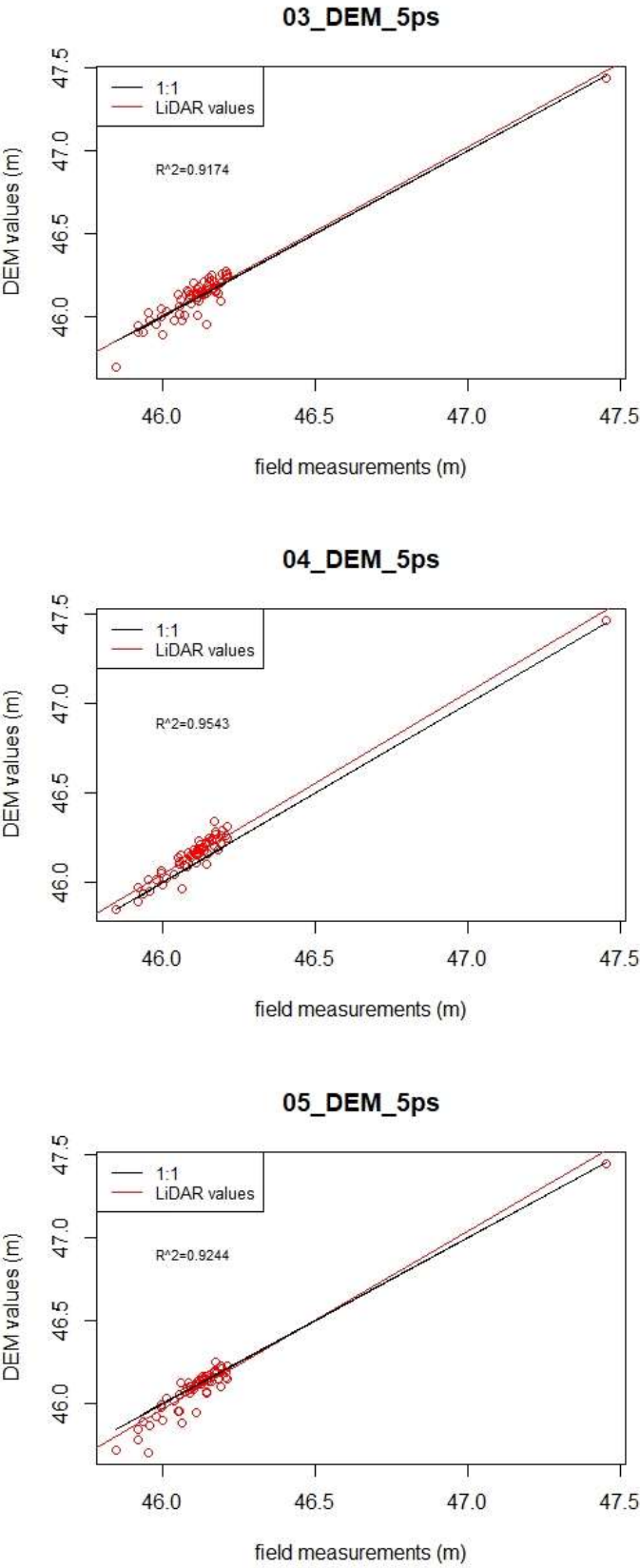


Figure S16. (Continue)

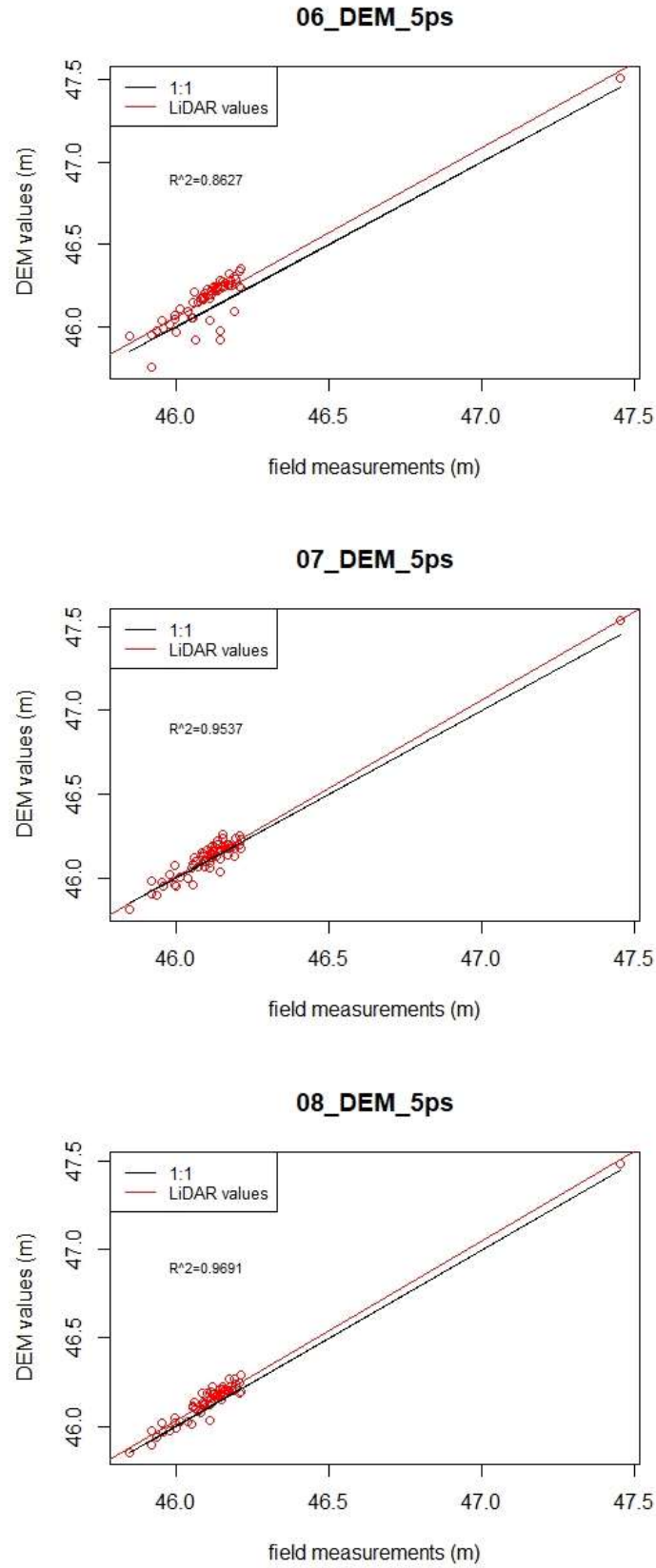


Figure S16. Linear regression and  $R^2$  value for 5-point-spacing-DEMs values from the eight missions compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

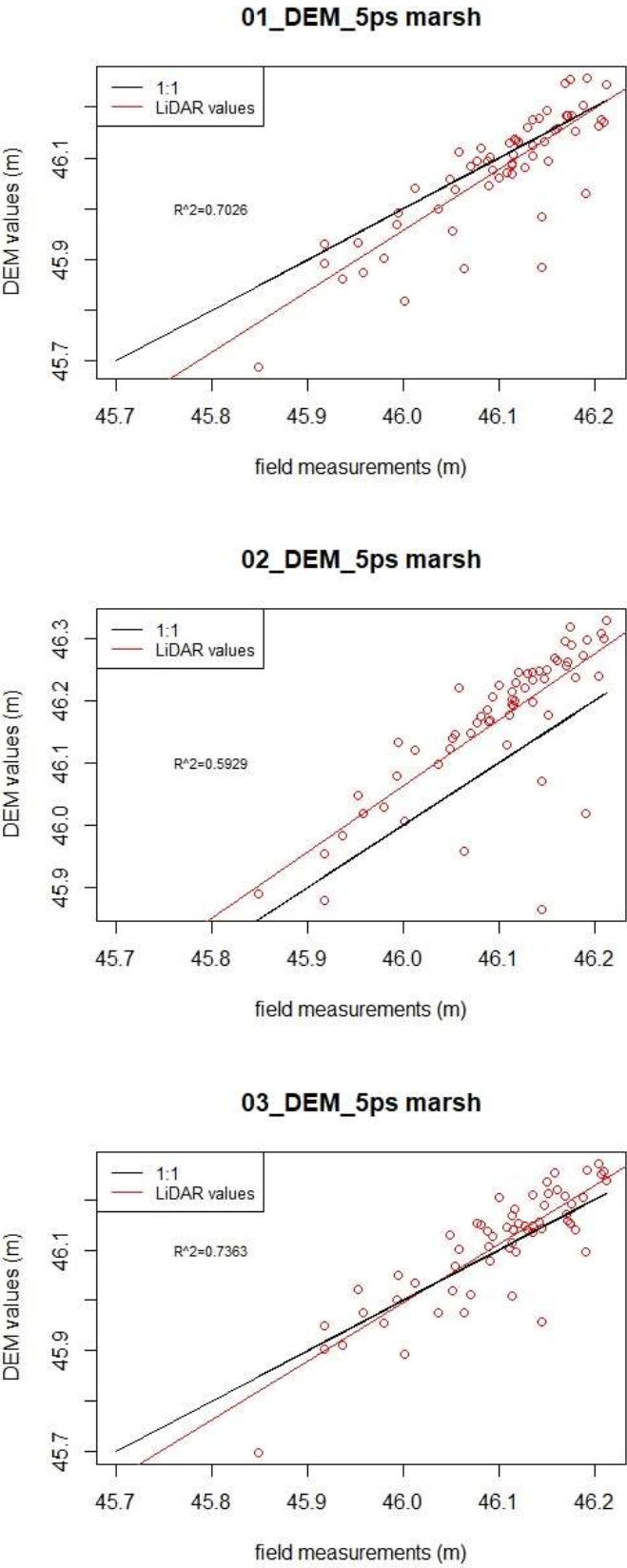


Figure S17. (Continue)

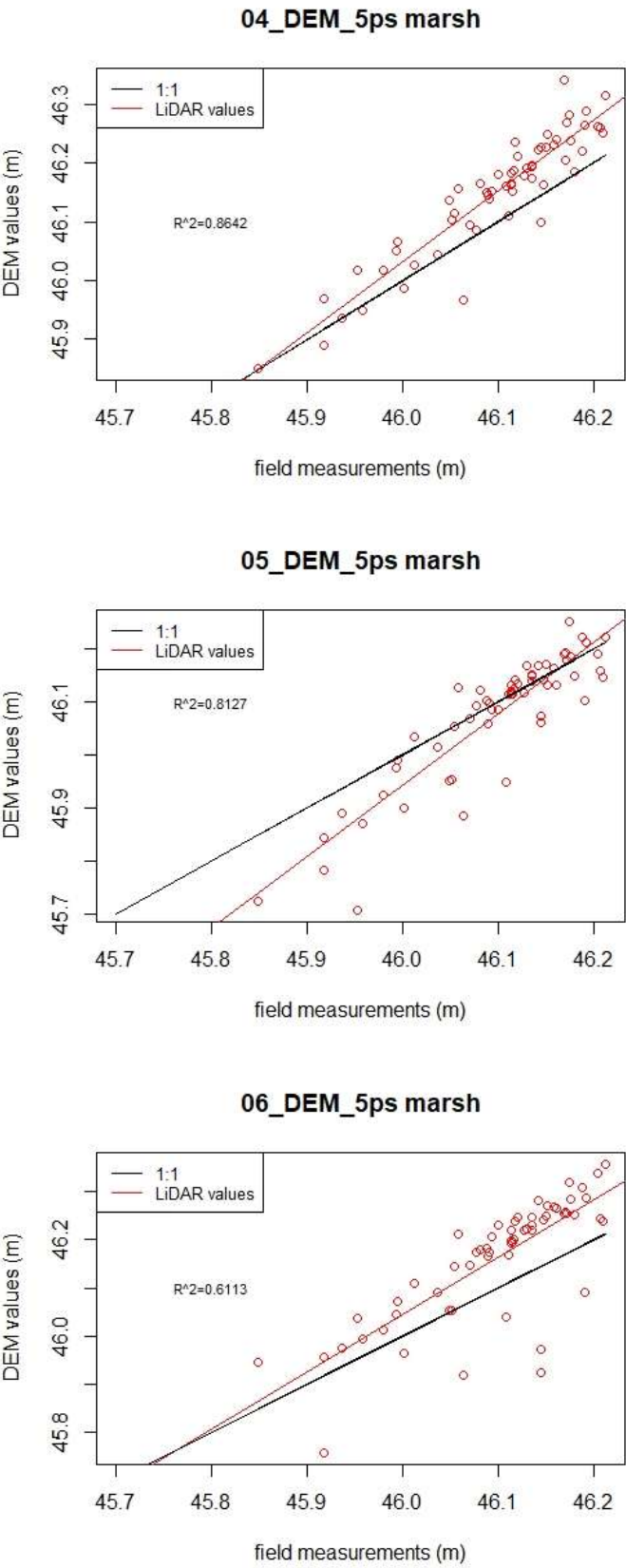


Figure S17. (Continue)

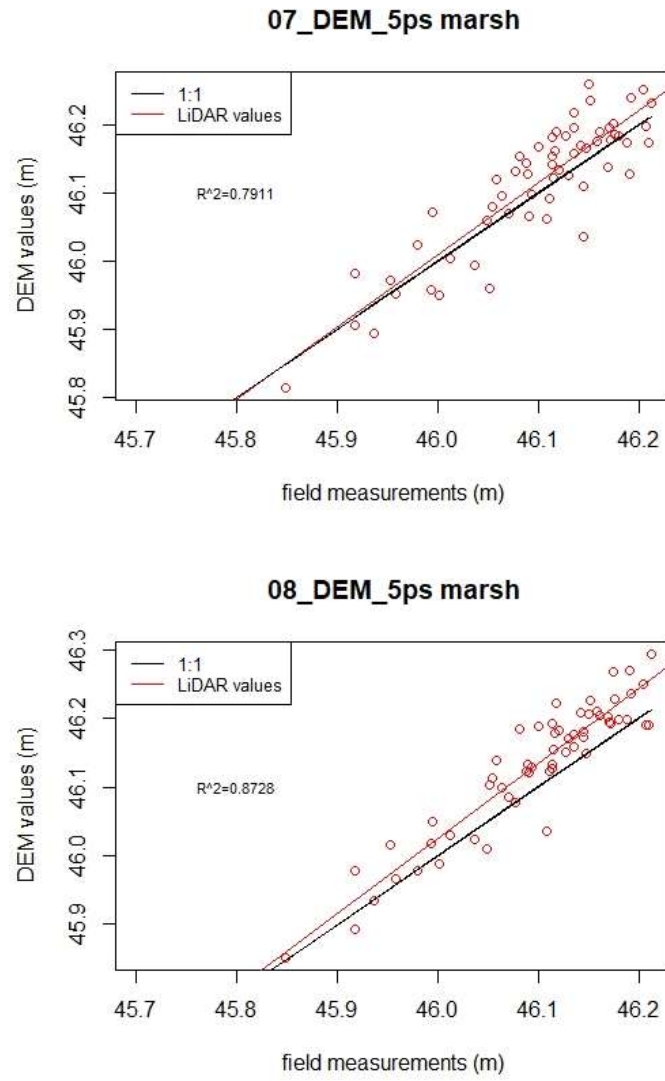


Figure S17. Linear regression and  $R^2$  values for 5-point-spacing-DEMs values from the eight missions compared to GCPs using only points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S56. Difference in elevation at each point between 5-point-spacing-DEMs value and GCP value for DEMs derived from the eight missions.

Point Id	01_DEM_ 5ps	02_DEM_ 5ps	03_DEM_ 5ps	04_DEM_ 5ps	05_DEM_ 5ps	06_DEM_ 5ps	07_DEM_ 5ps	08_DEM_ 5ps
B3	0.078	0.125	0.038	0.171	0.021	0.086	-0.032	0.032
C1	-0.040	0.090	0.046	0.039	-0.065	0.028	-0.037	-0.020
C2	-0.032	0.100	0.043	0.052	-0.048	0.037	-0.009	-0.018
C3	-0.038	0.020	0.035	0.052	-0.160	-0.069	-0.047	-0.074
C4	0.008	0.073	0.081	0.088	-0.099	0.003	0.010	-0.040
R1	-0.006	0.032	-0.013	0.013	-0.011	0.057	0.085	0.033
R10	-0.026	0.099	0.053	0.068	0.005	0.104	0.067	0.077
R11	-0.181	-0.105	-0.090	-0.097	-0.178	-0.145	0.032	0.035
R12	-0.046	0.093	0.021	0.051	-0.010	0.093	0.056	0.023
R13	0.054	0.162	0.042	0.097	0.068	0.153	0.061	0.079
R14	0.012	0.090	-0.013	0.097	0.006	0.083	0.007	0.020
R15	0.079	0.144	-0.023	0.106	0.077	0.145	0.027	0.092
R16	-0.043	0.035	0.066	0.056	-0.014	0.133	0.048	0.044
R17	-0.161	-0.172	-0.094	0.073	-0.087	-0.099	-0.064	0.079
R18	0.031	0.116	0.024	0.102	0.011	0.144	0.019	0.080
R19	-0.010	0.111	0.014	0.060	0.018	0.097	0.084	0.024
R2	-0.027	0.057	-0.040	0.004	-0.031	0.073	0.004	0.019
R20	-0.057	0.025	0.061	0.096	-0.020	0.119	0.085	0.073
R21	-0.002	0.103	0.059	0.080	-0.029	0.106	0.029	0.044
R22	0.012	0.125	0.032	0.091	0.014	0.125	0.013	0.062
R23	-0.017	0.113	0.032	0.059	-0.009	0.113	0.004	0.034
R24	-0.095	0.088	-0.033	0.051	-0.098	0.001	-0.092	0.052
R25	-0.003	0.109	0.094	0.072	0.004	0.110	0.017	0.051
R26	-0.261	-0.280	-0.003	0.082	-0.083	-0.221	-0.035	0.035
R27	0.029	0.112	0.009	0.060	0.037	0.093	-0.005	0.039
R28	-0.160	-0.074	-0.188	-0.045	-0.071	-0.172	-0.109	0.028
R29	0.008	0.113	0.015	0.062	0.010	0.109	0.011	0.051
R3	0.015	0.111	-0.023	0.117	0.025	0.119	0.071	0.103
R30	0.035	0.106	0.014	0.080	0.026	0.139	0.029	0.067
R31	0.014	0.083	0.015	0.031	0.035	0.120	-0.015	0.010
R32	0.064	0.104	0.065	0.095	0.020	0.094	0.048	0.043
R33	-0.017	0.088	0.041	0.014	-0.005	0.093	0.018	0.000
R34	0.012	0.085	0.000	0.033	0.022	0.087	0.026	0.023
R35	-0.004	0.138	0.055	0.070	-0.004	0.076	0.076	0.054
R36	-0.039	0.125	0.105	0.080	-0.014	0.130	0.069	0.088
R37	-0.024	0.085	0.006	0.056	-0.018	0.050	-0.036	0.024
R38	-0.019	0.096	0.069	0.066	-0.245	0.085	0.020	0.063
R39	-0.009	0.076	0.026	0.037	-0.001	0.080	0.006	0.040
R4	-0.033	0.061	-0.002	0.058	0.004	0.084	0.023	0.040
R40	0.019	0.066	-0.008	-0.001	0.004	0.059	-0.020	0.011
R41	0.021	0.083	0.065	0.071	0.010	0.084	0.046	0.063
R42	0.044	0.099	0.085	0.077	0.022	0.099	0.109	0.057
R43	0.039	0.098	0.073	0.037	0.013	0.111	0.061	0.041
R44	0.017	0.086	0.076	0.007	0.015	0.097	0.053	0.000
R45	0.037	0.092	0.068	0.084	0.041	0.099	0.073	0.103
R46	0.010	0.077	-0.014	0.048	0.007	0.083	-0.025	0.029
R47	0.028	0.108	0.021	0.013	0.021	0.098	-0.009	0.016
R48	-0.075	0.047	-0.027	0.000	-0.048	0.039	-0.043	-0.002
R49	-0.025	0.036	-0.013	-0.026	-0.073	0.038	-0.012	-0.025
R5	-0.027	0.080	-0.106	0.050	0.002	0.079	0.028	0.012
R50	-0.037	0.061	-0.063	0.006	-0.023	0.054	-0.043	-0.013
R51	-0.183	0.006	-0.108	-0.015	-0.101	-0.037	-0.052	-0.013
R52	-0.084	0.061	0.018	-0.009	-0.087	0.037	-0.006	0.008

R53	0.012	0.077	-0.061	0.024	-0.003	0.077	-0.001	0.014
R54	0.012	-0.039	0.031	0.052	-0.135	-0.160	0.063	0.060
R55	-0.078	0.048	-0.025	0.038	-0.056	0.032	0.044	-0.002
R56	-0.159	0.042	-0.150	0.003	-0.125	0.097	-0.034	0.004
R6	-0.045	0.089	0.001	0.051	0.019	0.084	0.041	0.018
R7	0.004	0.097	0.049	0.060	0.015	0.093	0.056	0.034
R8	-0.045	0.077	0.017	0.055	-0.030	0.075	0.038	0.043
R9	-0.016	0.091	0.013	0.061	0.000	0.092	0.026	0.058
<b>average RMSE</b>	<b>0.069</b>	<b>0.099</b>	<b>0.059</b>	<b>0.066</b>	<b>0.064</b>	<b>0.100</b>	<b>0.048</b>	<b>0.048</b>

Table S57. Elevation from GCPs (Elevation column) and elevation values extracted at each corresponding point from 10-point-spacing-DEMs for the eight missions; each DEM is identified by the number of its mission in the column header (01\_10ps means 10-point-spacing-DEM from mission 1). Elevation values are expressed in ellipsoidal height.

Point Id	species	Elevation (m)	01_10p s	02_10p s	03_10p s	04_10p s	05_10p s	06_10p s	07_10p s	08_10p s
B3	Sarcocornia	46.17	46.27	46.29	46.27	46.35	46.18	46.26	46.21	46.18
C1	peeled area	46.21	46.17	46.30	46.24	46.26	46.15	46.24	46.19	46.19
C2	peeled area	46.21	46.17	46.31	46.26	46.26	46.16	46.25	46.19	46.19
C3	peeled area	46.11	46.07	46.15	46.15	46.17	45.95	46.06	46.06	46.03
C4	peeled area	46.05	46.07	46.13	46.12	46.15	45.94	46.04	46.06	46.03
R1	base	47.45	47.44	47.46	47.45	47.47	47.42	47.51	47.50	47.49
R10	Salicornia	46.11	46.09	46.22	46.17	46.19	46.13	46.22	46.17	46.17
R11	Salicornia	46.06	46.03	46.17	45.97	46.08	45.97	46.10	46.10	46.09
R12	Salicornia	46.13	46.08	46.22	46.14	46.19	46.11	46.22	46.16	46.14
R13	Sarcocornia	46.06	46.11	46.21	46.15	46.17	46.12	46.22	46.13	46.15
R14	Sarcocornia	46.17	46.17	46.25	46.15	46.26	46.17	46.26	46.21	46.18
R15	Sarcocornia+Sp orobolus	46.17	46.25	46.31	46.16	46.28	46.26	46.32	46.20	46.27
R16	Sarcocornia	46.20	46.18	46.30	46.25	46.26	46.22	46.27	46.22	46.25
R17	Sarcocornia	46.19	46.15	46.12	46.03	46.27	46.21	46.22	46.09	46.26
R18	Sarcocornia	46.21	46.25	46.33	46.25	46.31	46.23	46.33	46.29	46.28
R19	Sarcocornia	46.13	46.13	46.24	46.15	46.20	46.14	46.25	46.21	46.16
R2	Salicornia	46.18	46.14	46.24	46.15	46.21	46.14	46.25	46.17	46.21
R20	Sarcocornia	46.15	46.17	46.22	46.20	46.25	46.13	46.27	46.22	46.21
R21	Sarcocornia	46.16	46.17	46.26	46.21	46.23	46.12	46.26	46.19	46.20
R22	Sarcocornia	46.12	46.14	46.23	46.15	46.20	46.13	46.25	46.14	46.18
R23	Sarcocornia	46.09	46.08	46.21	46.12	46.15	46.09	46.20	46.10	46.13
R24	Sarcocornia	46.05	46.05	46.09	46.04	46.07	45.96	46.01	46.02	46.08
R25	Sarcocornia	46.16	46.15	46.27	46.21	46.22	46.17	46.27	46.22	46.20
R26	Sarcocornia	46.14	45.92	45.86	46.06	46.23	45.93	45.90	46.15	46.18
R27	Sarcocornia	46.13	46.16	46.25	46.13	46.19	46.15	46.23	46.13	46.17
R28	Sarcocornia	46.14	46.10	46.14	45.98	46.19	46.10	46.04	46.15	46.13
R29	Sarcocornia	46.18	46.19	46.29	46.20	46.25	46.19	46.29	46.20	46.23
R3	Salicornia	46.12	46.15	46.24	46.14	46.23	46.14	46.24	46.15	46.22
R30	Sarcocornia	46.14	46.16	46.27	46.22	46.22	46.17	46.27	46.19	46.21
R31	Sarcocornia	46.19	46.20	46.29	46.20	46.22	46.21	46.29	46.18	46.20
R32	Sarcocornia	46.19	46.25	46.29	46.25	46.27	46.22	46.30	46.28	46.23
R33	Sarcocornia	46.15	46.15	46.25	46.19	46.17	46.15	46.25	46.17	46.16
R34	Sarcocornia	46.17	46.19	46.26	46.17	46.21	46.19	46.25	46.20	46.19
R35	Sarcocornia	45.99	45.99	46.09	46.04	46.03	45.99	46.03	46.07	46.06
R36	Sarcocornia	46.10	46.01	46.18	46.19	46.18	46.08	46.22	46.18	46.17
R37	Sarcocornia	45.99	45.99	46.07	46.00	46.05	45.95	46.05	45.98	46.04
R38	Sarcocornia	45.95	45.96	46.04	45.93	46.00	45.69	45.97	45.92	46.03
R39	Sarcocornia	46.11	46.12	46.19	46.11	46.16	46.11	46.18	46.14	46.15
R4	Salicornia	46.14	46.12	46.21	46.11	46.19	46.15	46.22	46.16	46.17
R40	Sarcocornia	46.11	46.12	46.19	46.09	46.13	46.10	46.17	46.07	46.12
R41	Sarcocornia	46.12	46.14	46.20	46.15	46.17	46.13	46.20	46.17	46.18
R42	Sarcocornia	46.15	46.20	46.24	46.24	46.22	46.17	46.24	46.25	46.20
R43	Sarcocornia+Sp orobolus	46.14	46.21	46.25	46.19	46.18	46.17	46.23	46.15	46.18
R44	Sarcocornia	46.08	46.10	46.16	46.14	46.09	46.08	46.17	46.13	46.08
R45	Sarcocornia	46.08	46.11	46.15	46.16	46.17	46.11	46.17	46.14	46.18
R46	Salicornia	46.09	46.09	46.17	46.06	46.15	46.09	46.17	46.08	46.12
R47	Salicornia	46.01	46.04	46.12	46.03	46.04	46.05	46.10	46.00	46.04
R48	Salicornia	45.94	45.87	45.99	45.88	45.93	45.89	45.99	45.91	45.92
R49	Salicornia	45.92	45.84	45.94	45.88	45.88	45.84	45.95	45.89	45.87
R5	Salicornia	46.11	46.08	46.19	46.07	46.16	46.11	46.20	46.16	46.13
R50	Salicornia	46.04	46.00	46.08	45.97	46.04	46.01	46.09	46.01	46.04
R51	Salicornia	46.00	45.80	45.99	45.93	45.99	45.90	45.96	45.96	45.98
R52	Salicornia	45.96	45.89	46.00	45.96	45.95	45.88	46.00	45.94	45.95

R53	Sarcocornia	46.07	46.09	46.14	45.99	46.11	46.09	46.13	46.08	46.09
R54	Sarcocornia	45.92	45.94	45.91	45.93	45.97	45.77	45.83	45.97	45.95
R55	Sarcocornia	45.98	45.90	46.04	45.97	46.02	45.95	46.04	45.99	45.98
R56	Sarcocornia	45.85	45.75	45.96	45.73	45.86	45.70	45.86	45.78	45.84
R6	Salicornia	46.11	46.08	46.19	46.11	46.17	46.13	46.20	46.15	46.14
R7	Salicornia	46.09	46.09	46.18	46.13	46.15	46.11	46.19	46.14	46.13
R8	Salicornia	46.09	46.05	46.16	46.11	46.14	46.07	46.16	46.14	46.13
R9	Salicornia	46.05	46.03	46.14	46.05	46.12	46.05	46.14	46.09	46.11

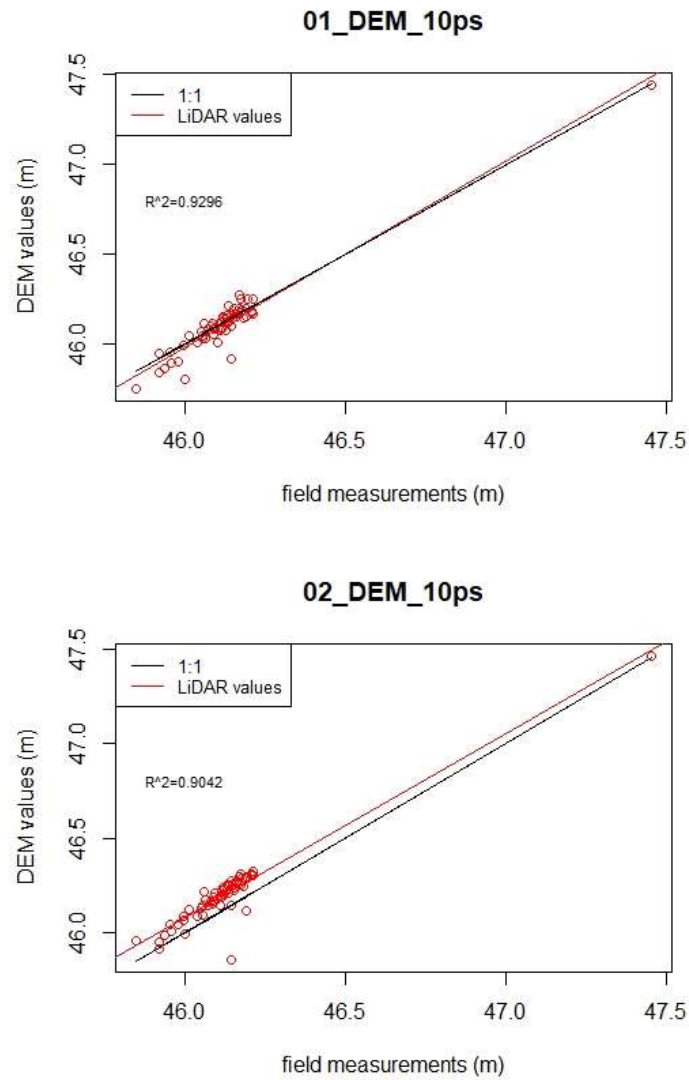


Figure S18. (Continue)

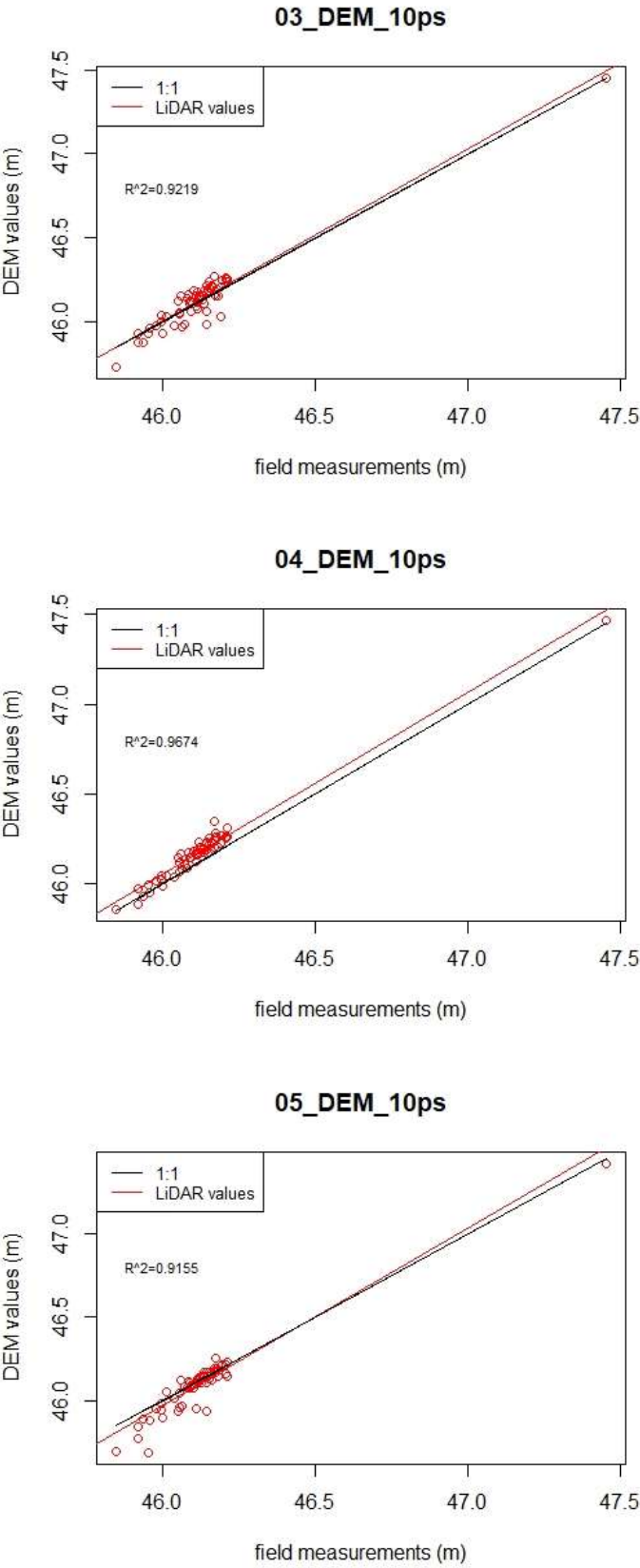


Figure S18. (Continue)

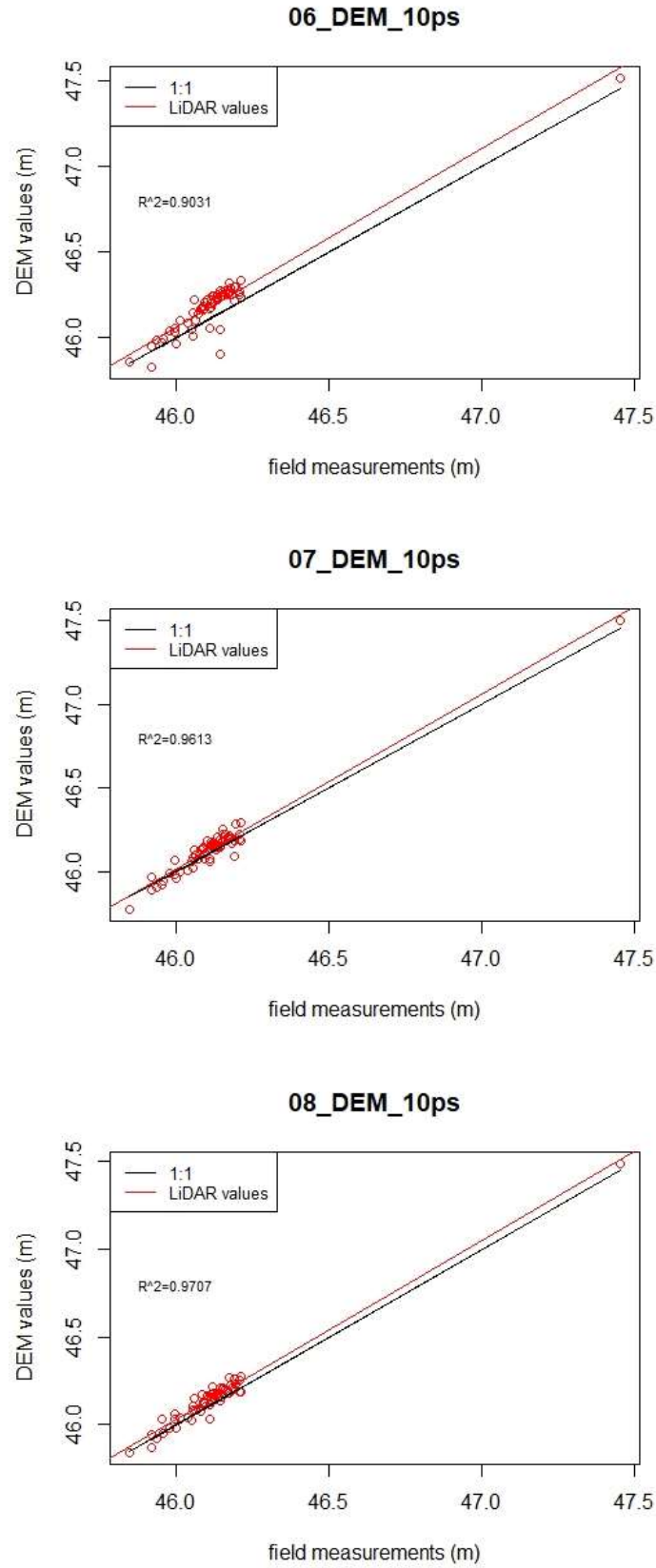


Figure S18. Linear regression and  $R^2$  value for 10-point-spacing-DEMs values from the eight missions compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

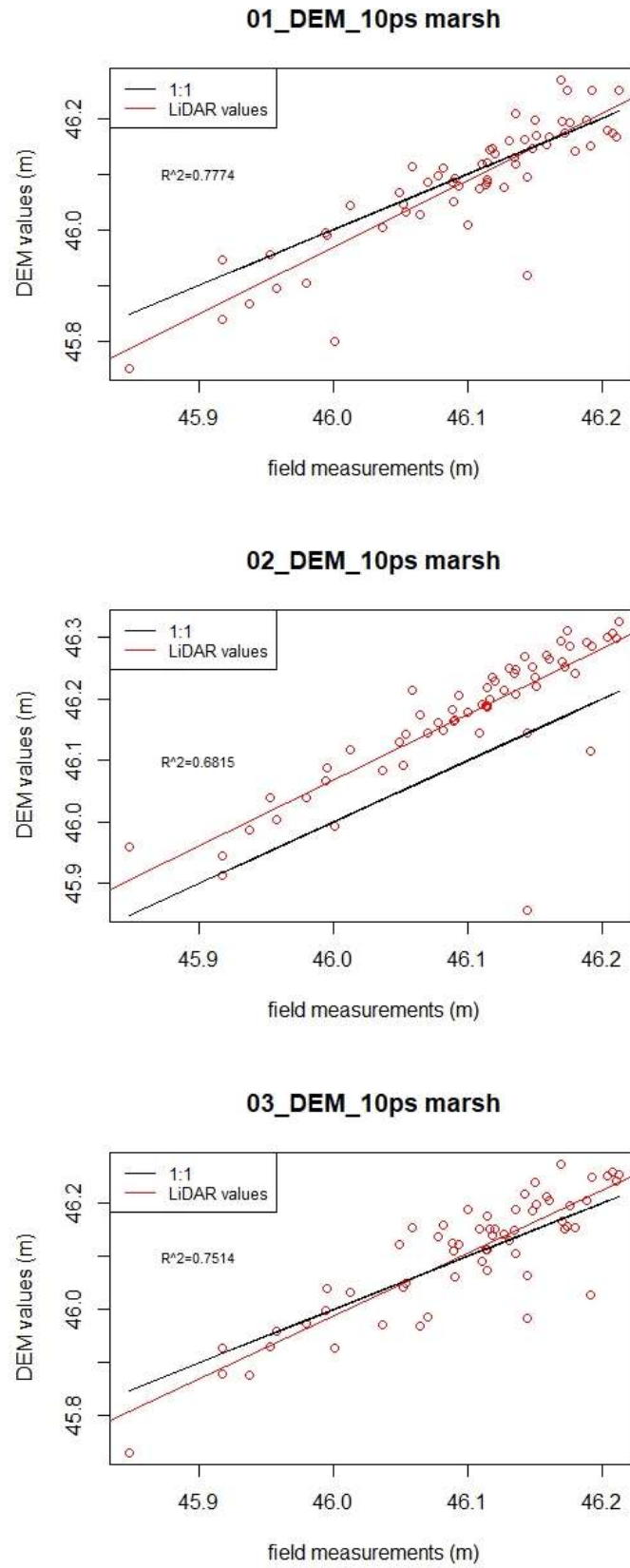


Figure S19. (Continue)

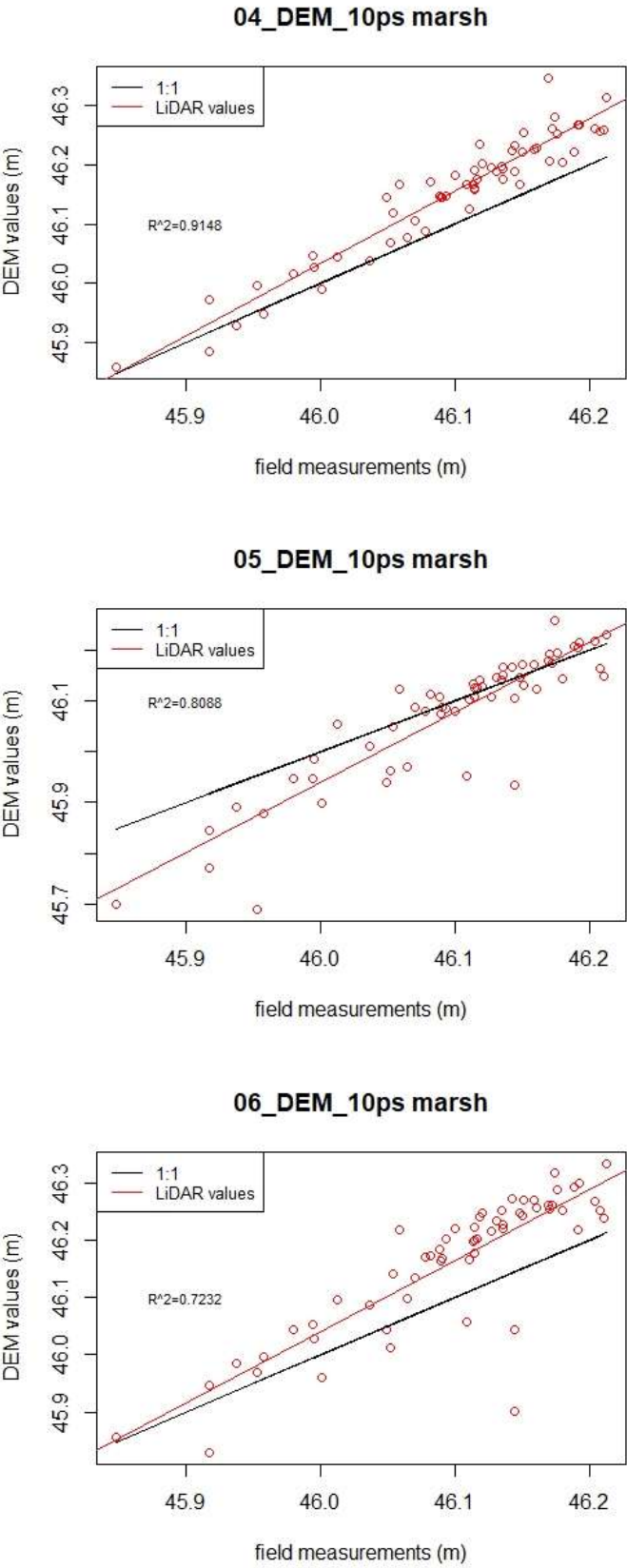


Figure S19. (Continue)

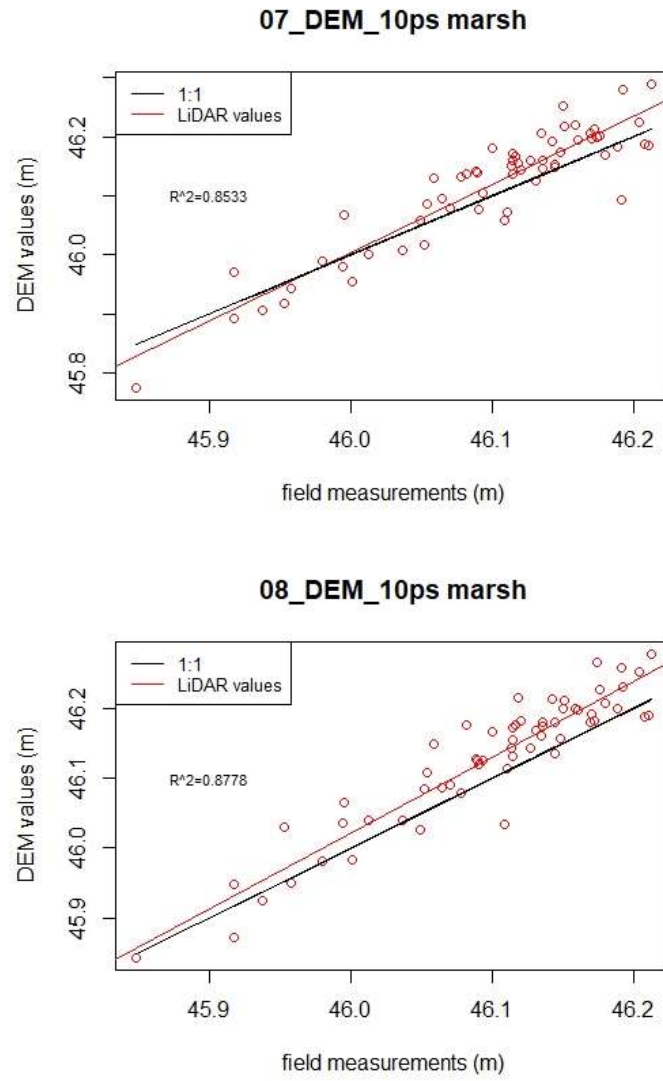


Figure S19. Linear regression and  $R^2$  values for 10-point-spacing-DEMs values from the eight missions compared to GCPs using only points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S58. Difference in elevation at each point between 10-point-spacing-DEMs value and GCP value for DEMs derived from the eight missions.

Point Id	01_DEM_ 10ps	02_DEM_ 10ps	03_DEM_ 10ps	04_DEM_ 10ps	05_DEM_ 10ps	06_DEM_ 10ps	07_DEM_ 10ps	08_DEM_ 10ps
B3	0.099	0.124	0.103	0.176	0.010	0.091	0.035	0.011
C1	-0.043	0.088	0.031	0.047	-0.063	0.028	-0.026	-0.020
C2	-0.033	0.099	0.051	0.048	-0.045	0.045	-0.020	-0.020
C3	-0.036	0.036	0.043	0.057	-0.157	-0.052	-0.050	-0.075
C4	0.017	0.082	0.074	0.096	-0.110	-0.005	0.010	-0.023
R1	-0.012	0.010	-0.001	0.014	-0.032	0.061	0.047	0.034
R2	-0.038	0.062	-0.025	0.025	-0.036	0.073	-0.011	0.027
R3	0.028	0.117	0.020	0.116	0.022	0.123	0.036	0.097
R4	-0.018	0.073	-0.030	0.058	0.014	0.084	0.025	0.038
R5	-0.029	0.076	-0.040	0.047	-0.005	0.087	0.047	0.017
R6	-0.034	0.076	-0.002	0.053	0.018	0.083	0.037	0.029
R7	-0.003	0.095	0.036	0.058	0.018	0.097	0.053	0.038
R8	-0.039	0.073	0.019	0.054	-0.016	0.074	0.049	0.035
R9	-0.023	0.088	-0.004	0.065	-0.006	0.088	0.032	0.054
R10	-0.026	0.104	0.060	0.075	0.011	0.108	0.057	0.057
R11	-0.036	0.110	-0.094	0.014	-0.094	0.034	0.031	0.022
R12	-0.053	0.087	0.015	0.067	-0.021	0.087	0.032	0.016
R13	0.055	0.155	0.095	0.108	0.065	0.160	0.072	0.091
R14	0.002	0.080	-0.020	0.089	0.001	0.090	0.040	0.010
R15	0.076	0.136	-0.019	0.106	0.083	0.143	0.025	0.091
R16	-0.027	0.097	0.046	0.056	0.013	0.063	0.020	0.048
R17	-0.041	-0.076	-0.163	0.076	0.014	0.026	-0.098	0.067
R18	0.037	0.113	0.041	0.101	0.018	0.120	0.076	0.065
R19	-0.005	0.106	0.015	0.062	0.006	0.116	0.072	0.026
R20	0.017	0.069	0.046	0.102	-0.022	0.117	0.066	0.059
R21	0.006	0.104	0.044	0.068	-0.039	0.096	0.033	0.038
R22	0.015	0.108	0.030	0.080	0.006	0.126	0.023	0.061
R23	-0.015	0.113	0.029	0.053	-0.008	0.108	0.011	0.032
R24	-0.006	0.041	-0.010	0.017	-0.091	-0.040	-0.035	0.032
R25	-0.006	0.112	0.054	0.066	0.013	0.112	0.060	0.041
R26	-0.227	-0.288	-0.082	0.087	-0.211	-0.243	0.007	0.035
R27	0.028	0.119	-0.001	0.058	0.014	0.102	-0.005	0.037
R28	-0.050	-0.001	-0.162	0.044	-0.040	-0.100	0.003	-0.010
R29	0.016	0.111	0.020	0.076	0.018	0.113	0.025	0.051
R30	0.020	0.128	0.075	0.082	0.025	0.130	0.050	0.071
R31	0.007	0.103	0.015	0.033	0.018	0.104	-0.005	0.011
R32	0.058	0.094	0.055	0.074	0.023	0.106	0.087	0.038
R33	-0.003	0.104	0.037	0.018	-0.001	0.099	0.025	0.010
R34	0.024	0.089	-0.006	0.035	0.021	0.083	0.026	0.021
R35	-0.005	0.093	0.045	0.031	-0.010	0.033	0.072	0.070
R36	-0.091	0.078	0.088	0.082	-0.021	0.121	0.080	0.066
R37	0.001	0.072	0.003	0.053	-0.048	0.059	-0.014	0.042

R38	0.003	0.088	-0.023	0.043	-0.263	0.017	-0.035	0.077
R39	0.005	0.072	-0.003	0.043	-0.008	0.063	0.022	0.040
R40	0.007	0.081	-0.021	0.014	-0.008	0.056	-0.039	0.004
R41	0.028	0.084	0.035	0.059	0.009	0.086	0.050	0.060
R42	0.046	0.086	0.090	0.071	0.021	0.093	0.101	0.050
R43	0.073	0.113	0.052	0.039	0.030	0.091	0.009	0.044
R44	0.020	0.084	0.060	0.010	0.001	0.093	0.054	0.000
R45	0.029	0.067	0.077	0.090	0.031	0.091	0.056	0.094
R46	0.001	0.076	-0.029	0.055	-0.003	0.077	-0.014	0.028
R47	0.030	0.105	0.020	0.031	0.040	0.084	-0.012	0.027
R48	-0.071	0.050	-0.060	-0.008	-0.046	0.049	-0.030	-0.012
R49	-0.078	0.028	-0.039	-0.032	-0.073	0.030	-0.025	-0.045
R50	-0.034	0.047	-0.065	0.000	-0.025	0.049	-0.029	0.002
R51	-0.202	-0.007	-0.074	-0.011	-0.102	-0.041	-0.046	-0.018
R52	-0.064	0.046	0.000	-0.010	-0.079	0.038	-0.014	-0.008
R53	0.015	0.073	-0.086	0.035	0.016	0.063	0.007	0.019
R54	0.027	-0.004	0.010	0.055	-0.147	-0.088	0.052	0.029
R55	-0.077	0.059	-0.007	0.036	-0.032	0.063	0.008	0.001
R56	-0.097	0.111	-0.117	0.011	-0.149	0.008	-0.073	-0.005
<b>average RMSE</b>	<b>0.056</b>	<b>0.096</b>	<b>0.058</b>	<b>0.064</b>	<b>0.067</b>	<b>0.091</b>	<b>0.045</b>	<b>0.045</b>

Table S59. Elevation from GCPs (Elevation column) and elevation values extracted at each corresponding point from 15-point-spacing-DEMs for the eight missions; each DEM is identified by the number of its mission in the column header (01\_15ps means 15-point-spacing-DEM from mission 1). Elevation values are expressed in ellipsoidal height.

Point Id	species	Elevation (m)	01_15 ps	02_15 ps	03_15 ps	04_15 ps	05_15 ps	06_15 ps	07_15 ps	08_15 ps
B3	Sarcocornia	46.17	46.18	46.27	46.12	46.31	46.18	46.24	46.12	46.17
C1	peeled area	46.21	46.13	46.28	46.00	46.23	46.13	46.21	46.10	46.17
C2	peeled area	46.21	46.15	46.28	46.06	46.24	46.13	46.21	46.13	46.17
C3	peeled area	46.11	46.06	46.12	45.94	46.13	45.92	46.03	45.99	46.02
C4	peeled area	46.05	46.06	46.12	45.88	46.12	45.94	46.03	45.98	46.01
R1	base	47.45	47.15	47.43	47.28	47.40	47.23	47.46	47.24	47.45
R10	Salicornia	46.11	46.09	46.19	45.95	46.16	46.10	46.19	46.07	46.14
R11	Salicornia	46.06	45.74	46.13	45.97	45.92	45.97	46.03	46.02	46.08
R12	Salicornia	46.13	46.07	46.19	45.89	46.15	46.09	46.18	46.09	46.13
R13	Sarcocornia	46.06	46.10	46.19	45.96	46.16	46.10	46.20	46.06	46.11
R14	Sarcocornia	46.17	46.18	46.24	46.00	46.24	46.15	46.26	46.14	46.17
R15	Sarcocornia+Sporobolus	46.17	46.24	46.30	46.12	46.29	46.23	46.30	46.17	46.30
R16	Sarcocornia	46.20	46.23	46.24	45.94	46.25	46.18	46.24	46.13	46.23
R17	Sarcocornia	46.19	46.14	46.22	46.00	46.23	46.20	46.20	46.10	46.20
R18	Sarcocornia	46.21	46.21	46.30	46.12	46.28	46.22	46.30	46.19	46.23
R19	Sarcocornia	46.14	46.11	46.22	46.05	46.19	46.13	46.20	46.10	46.12
R2	Salicornia	46.18	46.12	46.22	45.92	46.18	46.12	46.23	46.09	46.16
R20	Sarcocornia	46.15	46.13	46.18	46.06	46.19	46.04	46.27	46.15	46.20
R21	Sarcocornia	46.16	46.09	46.20	46.03	46.21	46.12	46.23	46.11	46.17
R22	Sarcocornia	46.12	46.11	46.21	45.95	46.21	46.12	46.19	46.13	46.19
R23	Sarcocornia	46.09	46.06	46.19	46.04	46.14	46.05	46.17	46.08	46.12
R24	Sarcocornia	46.05	46.02	46.12	45.91	46.04	45.93	46.11	45.93	46.05
R25	Sarcocornia	46.16	46.15	46.24	45.85	46.22	46.14	46.24	46.13	46.19
R26	Sarcocornia	46.14	46.10	46.22	46.05	46.17	46.07	46.14	46.06	46.17
R27	Sarcocornia	46.13	46.16	46.22	45.91	46.18	46.13	46.19	46.07	46.15
R28	Sarcocornia	46.14	46.08	46.12	45.96	46.17	46.08	46.24	46.02	46.14
R29	Sarcocornia	46.18	46.16	46.24	46.07	46.21	46.16	46.26	46.12	46.18
R3	Salicornia	46.12	46.10	46.20	46.00	46.20	46.12	46.20	46.06	46.19
R30	Sarcocornia	46.14	46.14	46.24	46.03	46.20	46.17	46.27	46.15	46.21
R31	Sarcocornia	46.19	46.17	46.27	46.17	46.20	46.19	46.26	46.18	46.19
R32	Sarcocornia	46.19	46.14	46.26	46.05	46.21	46.18	46.26	46.14	46.17
R33	Sarcocornia	46.15	46.11	46.21	45.96	46.14	46.11	46.21	46.10	46.13
R34	Sarcocornia	46.17	46.14	46.23	46.13	46.19	46.16	46.24	46.15	46.19
R35	Sarcocornia	46.00	45.88	46.09	45.80	46.07	45.92	45.92	45.98	46.04
R36	Sarcocornia	46.10	46.05	46.17	46.09	46.16	46.00	46.21	46.09	46.15
R37	Sarcocornia	45.99	45.99	45.99	45.90	45.96	45.86	45.99	45.88	46.01
R38	Sarcocornia	45.95	45.86	46.02	45.93	45.96	45.83	46.05	45.91	45.96
R39	Sarcocornia	46.11	46.08	46.16	45.99	46.15	46.12	46.16	46.08	46.14
R4	Salicornia	46.14	46.07	46.18	45.91	46.17	46.12	46.19	46.08	46.16
R40	Sarcocornia	46.11	46.08	46.16	46.02	46.12	46.09	46.18	46.03	46.11
R41	Sarcocornia	46.12	46.08	46.16	46.00	46.15	46.09	46.18	46.08	46.14
R42	Sarcocornia	46.15	46.19	46.19	46.08	46.22	46.16	46.23	46.14	46.18
R43	Sarcocornia+Sporobolus	46.14	46.13	46.19	45.92	46.14	46.16	46.20	46.13	46.15
R44	Sarcocornia	46.08	46.06	46.14	46.01	46.08	46.08	46.15	46.07	46.06
R45	Sarcocornia	46.08	46.11	46.13	45.99	46.16	46.10	46.14	46.04	46.14
R46	Salicornia	46.09	46.06	46.14	45.99	46.12	46.07	46.14	45.98	46.09
R47	Salicornia	46.01	46.02	46.08	45.84	46.01	46.02	46.04	45.94	46.01
R48	Salicornia	45.94	45.90	45.97	45.74	45.90	45.85	45.96	45.79	45.92
R49	Salicornia	45.92	45.81	45.89	45.70	45.84	45.83	45.91	45.79	45.82

R5	Salicornia	46.11	46.04	46.17	45.90	46.15	46.10	46.18	46.08	46.11
R50	Salicornia	46.04	45.99	46.07	45.89	46.01	45.99	46.05	45.89	46.02
R51	Salicornia	46.00	45.94	46.01	45.72	45.96	45.89	45.99	45.89	45.97
R52	Salicornia	45.96	45.90	45.99	45.83	45.94	45.89	45.98	45.89	45.93
R53	Sarcocornia	46.07	46.06	46.10	45.98	46.08	46.06	46.11	46.02	46.07
R54	Sarcocornia	45.92	45.96	45.94	45.82	45.96	45.91	45.91	45.86	45.96
R55	Sarcocornia	45.98	45.92	46.00	45.85	45.99	45.91	45.97	45.92	45.96
R56	Sarcocornia	45.85	45.72	45.83	45.65	45.83	45.69	45.83	45.77	45.79
R6	Salicornia	46.11	46.04	46.16	45.89	46.14	46.11	46.17	46.07	46.11
R7	Salicornia	46.09	46.04	46.16	45.82	46.13	46.09	46.16	46.06	46.10
R8	Salicornia	46.09	46.03	46.14	45.96	46.12	46.05	46.12	46.01	46.11
R9	Salicornia	46.05	45.99	46.11	45.81	46.09	46.02	46.11	46.01	46.08

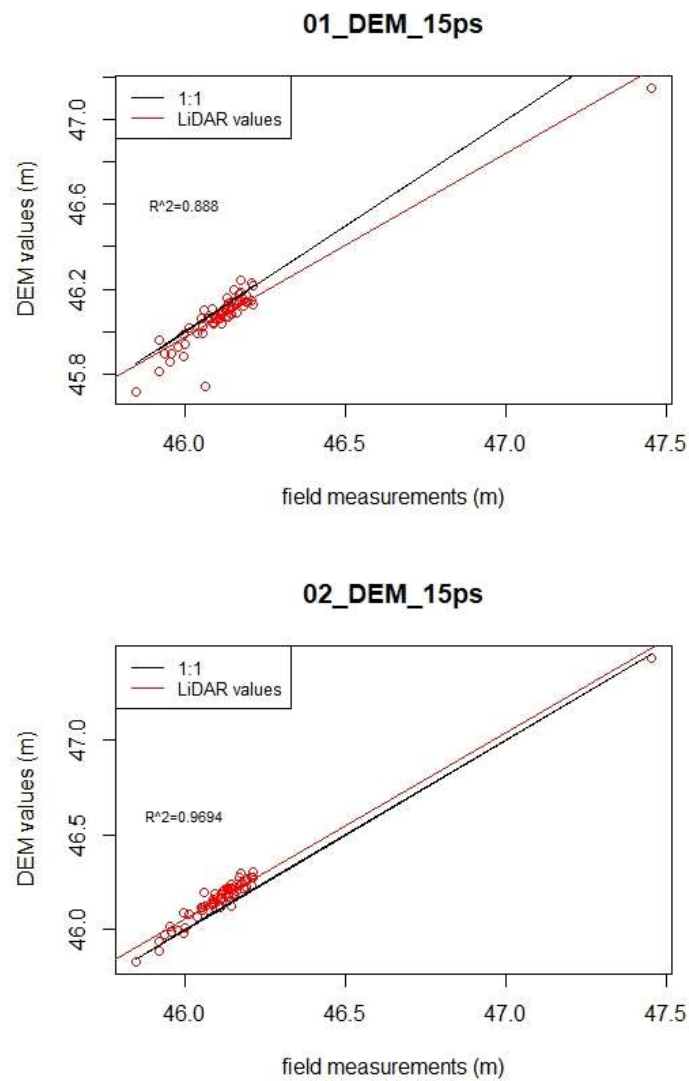


Figure S20. (Continue)

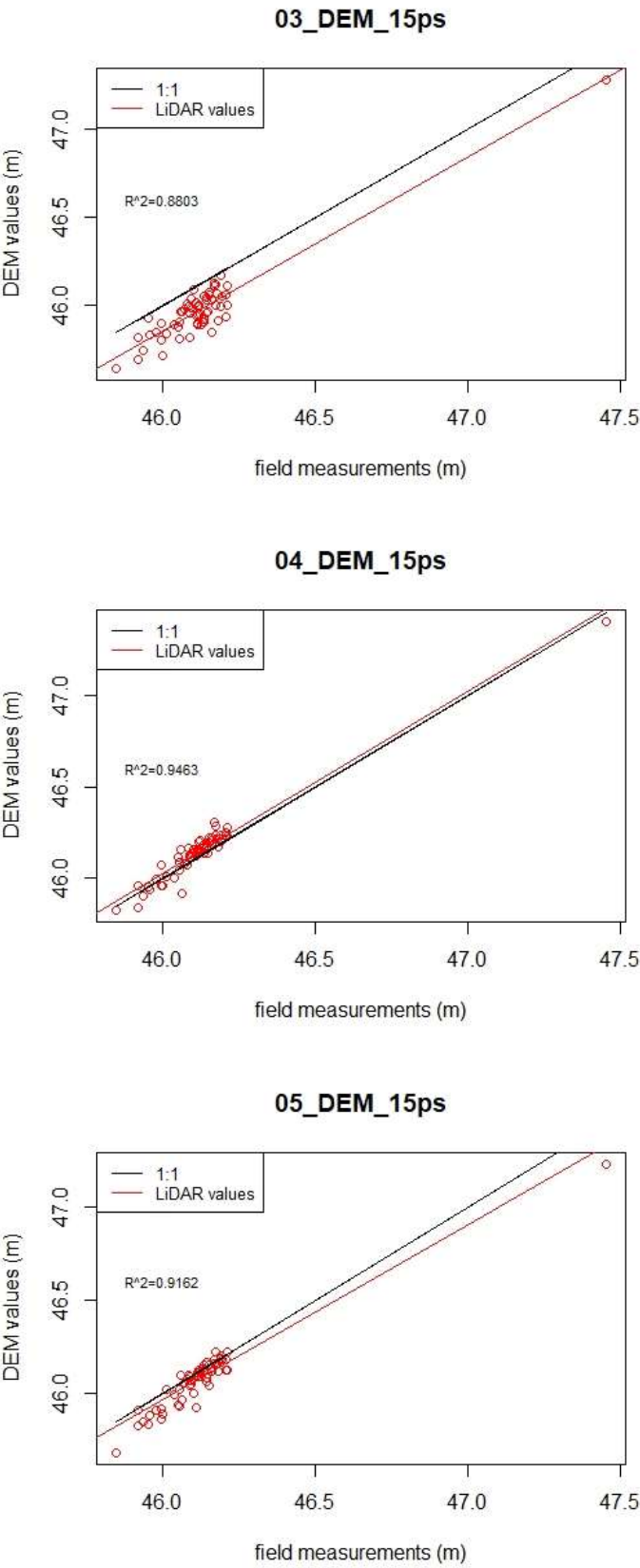


Figure S20. (Continue)

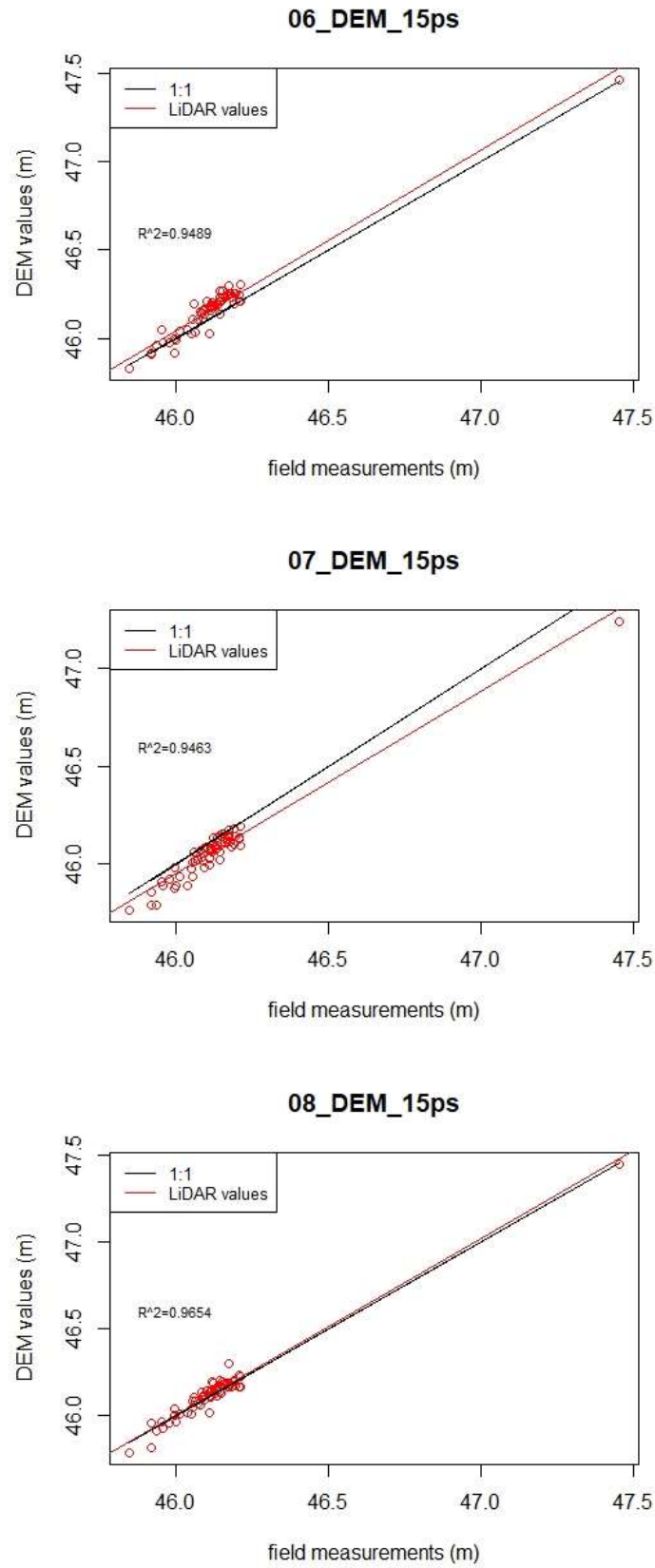


Figure S20. Linear regression and  $R^2$  value for 15-point-spacing-DEMs values from the eight missions compared to GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

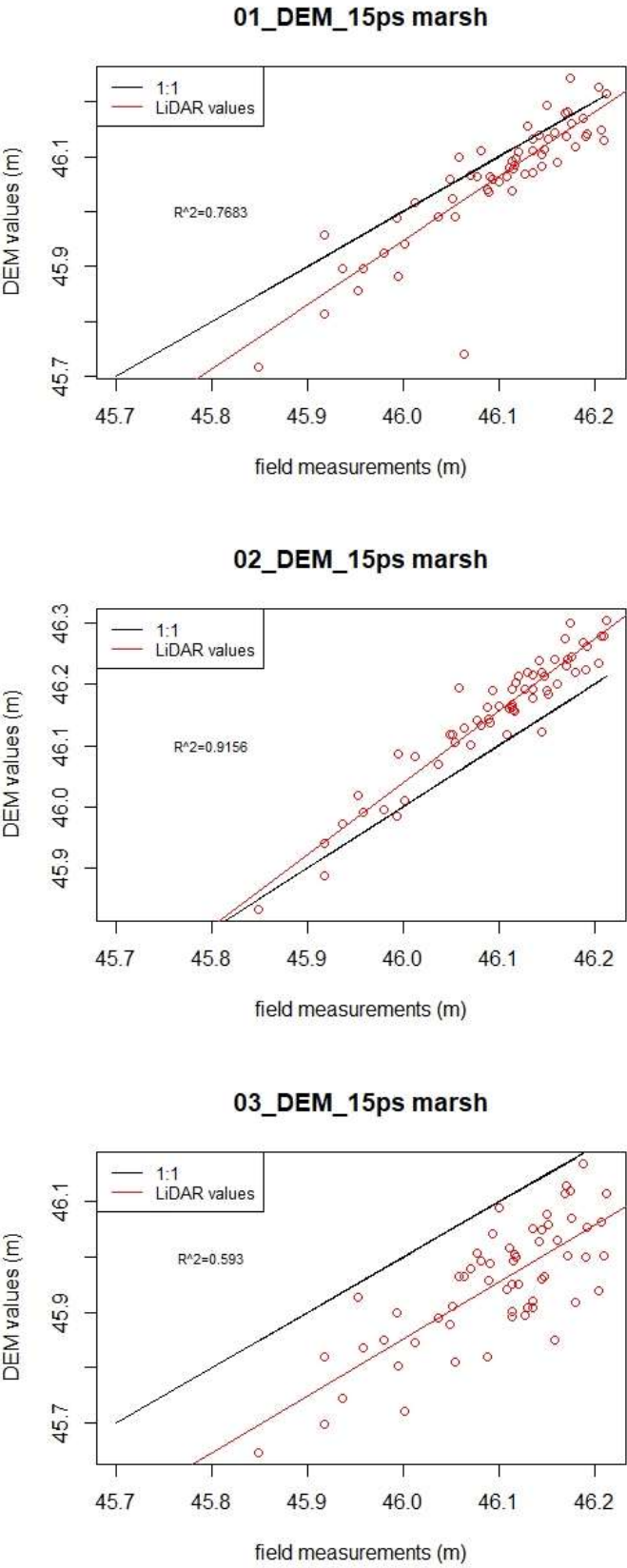


Figure S21. (Continue)

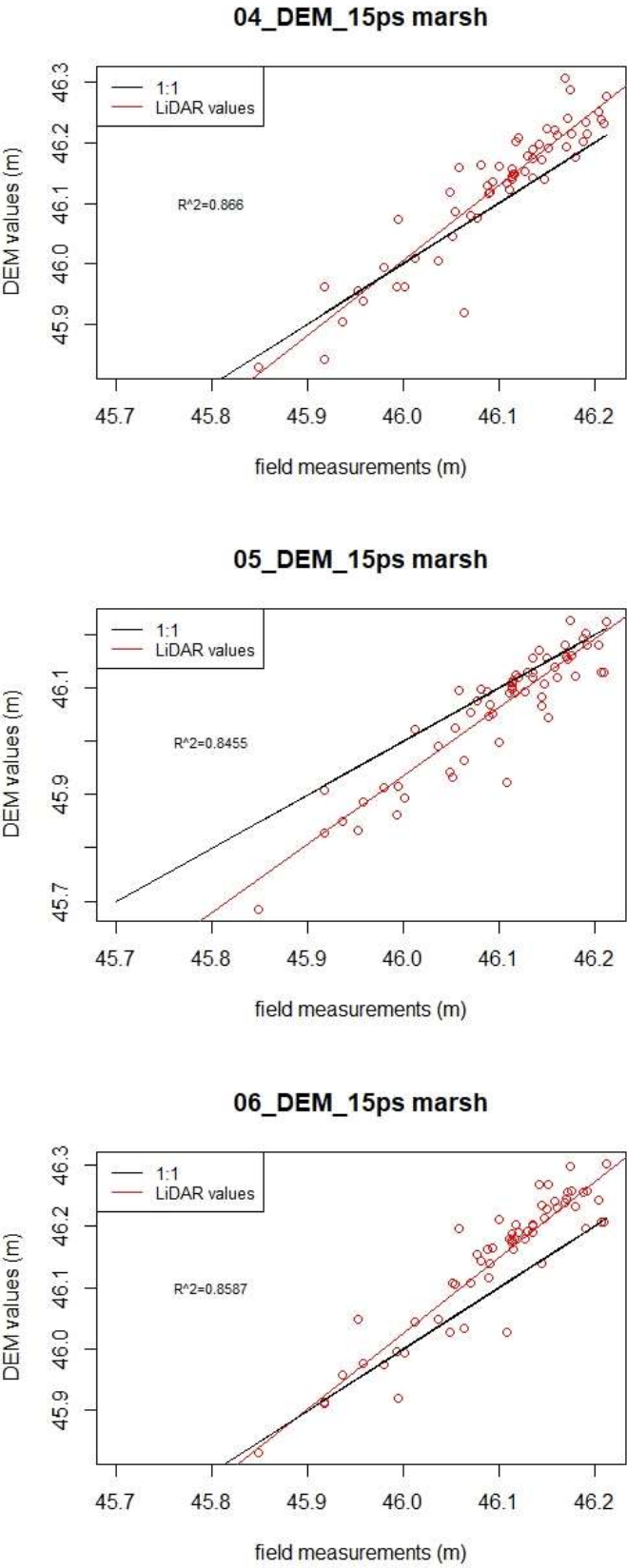


Figure S21. (Continue)

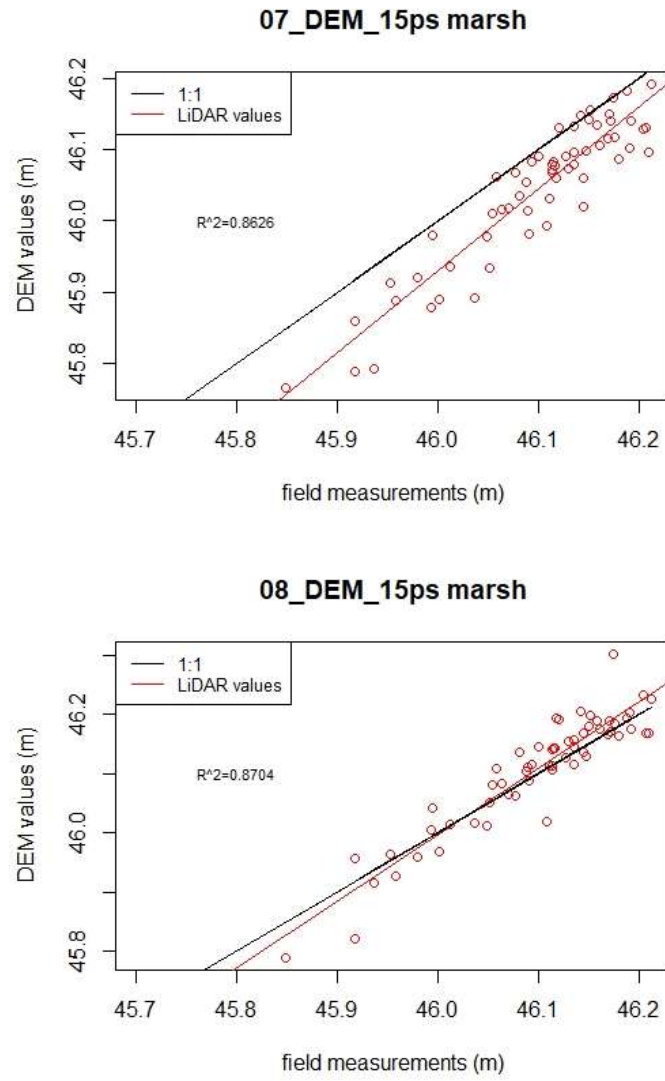


Figure S21. Linear regression and  $R^2$  values for 15-point-spacing-DEMs values from the eight missions compared to GCPs using only points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S60. Difference in elevation at each point between 15-point-spacing-DEMs value and GCP value for DEMs derived from the eight missions.

Point Id	01_DEM_ 15ps	02_DEM_ 15ps	03_DEM_ 15ps	04_DEM_ 15ps	05_DEM_ 15ps	06_DEM_ 15ps	07_DEM_ 15ps	08_DEM_ 15ps
B3	0.010	0.104	-0.055	0.137	0.011	0.068	-0.055	-0.004
C1	-0.082	0.067	-0.209	0.022	-0.082	-0.003	-0.114	-0.042
C2	-0.060	0.070	-0.145	0.030	-0.079	0.000	-0.077	-0.039
C3	-0.045	0.010	-0.167	0.024	-0.185	-0.081	-0.116	-0.091
C4	0.010	0.070	-0.170	0.069	-0.106	-0.021	-0.072	-0.037
R1	-0.305	-0.020	-0.174	-0.049	-0.222	0.008	-0.215	-0.005
R10	-0.024	0.077	-0.164	0.042	-0.013	0.073	-0.043	0.025
R11	-0.323	0.064	-0.099	-0.146	-0.099	-0.031	-0.048	0.019
R12	-0.059	0.065	-0.234	0.025	-0.035	0.051	-0.038	-0.001
R13	0.041	0.136	-0.095	0.099	0.037	0.137	0.003	0.049
R14	0.011	0.069	-0.170	0.068	-0.017	0.083	-0.032	-0.002
R15	0.068	0.126	-0.056	0.113	0.052	0.123	-0.002	0.127
R16	0.022	0.030	-0.266	0.047	-0.023	0.039	-0.075	0.027
R17	-0.054	0.033	-0.192	0.043	0.011	0.005	-0.089	0.013
R18	0.001	0.091	-0.097	0.064	0.011	0.089	-0.021	0.014
R19	-0.023	0.080	-0.084	0.055	-0.006	0.068	-0.039	-0.019
R2	-0.062	0.040	-0.262	-0.004	-0.057	0.053	-0.093	-0.016
R20	-0.020	0.032	-0.094	0.039	-0.108	0.117	0.003	0.046
R21	-0.071	0.040	-0.131	0.051	-0.042	0.070	-0.054	0.014
R22	-0.012	0.092	-0.170	0.087	-0.001	0.070	0.010	0.070
R23	-0.035	0.095	-0.051	0.043	-0.040	0.072	-0.010	0.022
R24	-0.029	0.067	-0.142	-0.007	-0.119	0.056	-0.118	-0.001
R25	-0.014	0.082	-0.309	0.062	-0.019	0.081	-0.024	0.031
R26	-0.041	0.074	-0.095	0.028	-0.079	-0.005	-0.085	0.024
R27	0.026	0.088	-0.222	0.048	0.000	0.062	-0.058	0.023
R28	-0.062	-0.022	-0.184	0.026	-0.062	0.090	-0.125	-0.008
R29	-0.015	0.069	-0.105	0.038	-0.014	0.081	-0.059	0.008
R3	-0.022	0.083	-0.119	0.084	0.006	0.084	-0.058	0.076
R30	-0.002	0.096	-0.113	0.055	0.029	0.127	0.006	0.064
R31	-0.018	0.080	-0.020	0.014	0.004	0.067	-0.007	0.004
R32	-0.051	0.068	-0.140	0.021	-0.012	0.064	-0.053	-0.018
R33	-0.034	0.065	-0.184	-0.009	-0.041	0.065	-0.050	-0.018
R34	-0.034	0.060	-0.041	0.023	-0.012	0.074	-0.021	0.019
R35	-0.114	0.091	-0.192	0.078	-0.079	-0.076	-0.015	0.047
R36	-0.046	0.065	-0.010	0.062	-0.101	0.111	-0.010	0.045
R37	-0.007	-0.009	-0.094	-0.032	-0.133	0.001	-0.115	0.011
R38	-0.097	0.067	-0.024	0.003	-0.119	0.096	-0.041	0.011
R39	-0.036	0.044	-0.122	0.034	0.001	0.047	-0.031	0.029
R4	-0.066	0.042	-0.227	0.038	-0.016	0.054	-0.057	0.021
R40	-0.030	0.049	-0.095	0.011	-0.021	0.068	-0.080	0.003

R41	-0.031	0.041	-0.112	0.032	-0.025	0.064	-0.039	0.027
R42	0.044	0.039	-0.073	0.072	0.005	0.079	-0.009	0.030
R43	-0.003	0.056	-0.215	0.005	0.021	0.064	-0.004	0.010
R44	-0.014	0.064	-0.070	-0.003	-0.002	0.077	-0.011	-0.015
R45	0.028	0.050	-0.090	0.082	0.017	0.062	-0.046	0.055
R46	-0.027	0.047	-0.103	0.028	-0.021	0.049	-0.109	-0.002
R47	0.003	0.068	-0.169	-0.004	0.009	0.032	-0.078	0.000
R48	-0.040	0.034	-0.194	-0.034	-0.086	0.022	-0.145	-0.021
R49	-0.105	-0.030	-0.220	-0.075	-0.090	-0.006	-0.129	-0.097
R5	-0.077	0.052	-0.212	0.031	-0.016	0.064	-0.034	-0.007
R50	-0.046	0.033	-0.147	-0.032	-0.045	0.011	-0.145	-0.021
R51	-0.061	0.009	-0.281	-0.039	-0.107	-0.007	-0.112	-0.032
R52	-0.062	0.034	-0.123	-0.020	-0.071	0.018	-0.071	-0.032
R53	-0.006	0.031	-0.092	0.008	-0.016	0.037	-0.052	-0.005
R54	0.039	0.022	-0.099	0.043	-0.009	-0.004	-0.059	0.038
R55	-0.055	0.016	-0.131	0.014	-0.067	-0.005	-0.060	-0.021
R56	-0.131	-0.015	-0.202	-0.019	-0.163	-0.016	-0.082	-0.059
R6	-0.077	0.048	-0.221	0.026	-0.003	0.060	-0.047	0.000
R7	-0.047	0.073	-0.269	0.042	0.006	0.073	-0.033	0.016
R8	-0.055	0.054	-0.132	0.027	-0.043	0.026	-0.076	0.021
R9	-0.064	0.052	-0.244	0.033	-0.030	0.052	-0.043	0.027
<b>average RMSE</b>	<b>0.076</b>	<b>0.064</b>	<b>0.162</b>	<b>0.053</b>	<b>0.069</b>	<b>0.065</b>	<b>0.073</b>	<b>0.037</b>

Table S61. Resume of accuracy assessment for DEMs derived from the eight missions.

		01_DEM	02_DEM	03_DEM	04_DEM	05_DEM	06_DEM	07_DEM	08_DEM
average RMSE	5ps	0.069	0.099	0.059	0.066	0.064	0.100	0.048	0.048
	10ps	0.056	0.096	0.058	0.064	0.067	0.091	0.045	0.045
	15ps	0.076	0.064	0.162	0.053	0.069	0.065	0.073	0.037
R <sup>2</sup> value (all points)	5ps	0.9044	0.8733	0.9174	0.9543	0.9244	0.8627	0.9537	0.9691
	10ps	0.9296	0.9042	0.9219	0.9674	0.9155	0.9031	0.9613	0.9707
	15ps	0.888	0.9694	0.8803	0.9463	0.9162	0.9489	0.9463	0.9654
R <sup>2</sup> value (marsh points)	5ps	0.7026	0.5929	0.7363	0.8642	0.8127	0.6113	0.7911	0.8728
	10ps	0.774	0.6815	0.7514	0.9148	0.8088	0.7232	0.8533	0.8778
	15ps	0.7683	0.9156	0.593	0.866	0.8455	0.8587	0.8626	0.8704

Table S62. Output resolution for each DOD. Each DOD is identified by its sub-index, which corresponds to the DSM and DEM used for its generation: DOD<sub>1-5</sub> is obtained from the subtraction of DEM-5ps (5-point-spacing resolution) from DSM-1ps (1-point-spacing resolution).

mission_nº	DOD <sub>1-5</sub>	DOD <sub>1-10</sub>	DOD <sub>1-15</sub>	DOD <sub>3-5</sub>	DOD <sub>3-10</sub>	DOD <sub>3-15</sub>	DOD <sub>5-5</sub>	DOD <sub>5-10</sub>	DOD <sub>5-15</sub>
1	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
2	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
3	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
4	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
5	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
6	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
7	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09
8	0.02	0.02	0.02	0.06	0.06	0.06	0.09	0.09	0.09

Table S63. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>1-5</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>1-5</sub> represents data extracted from DOD<sub>1-5</sub> of mission 1, and so on. Values expressed in meters.

Point Id	species	field	m01 <sub>1-5</sub>	m02 <sub>1-5</sub>	m03 <sub>1-5</sub>	m04 <sub>1-5</sub>	m05 <sub>1-5</sub>	m06 <sub>1-5</sub>	m07 <sub>1-5</sub>	m08 <sub>1-5</sub>
C1	Salicornia	0.07	0.11	0.00	0.03	0.03	-	-	-	-
C2	Salicornia	0.07	0.12	0.02	0.05	0.08	-	-	-	-
C3	Salicornia	0.13	0.11	0.07	0.07	0.08	-	-	-	-
C4	Salicornia	0.13	0.09	0.06	0.02	0.03	-	-	-	-
R2	Salicornia	0.18	0.07	0.01	0.10	0.05	0.09	0.01	0.02	0.03
R3	Salicornia	0.20	0.13	0.05	0.15	0.04	0.13	0.05	0.07	0.05
R4	Salicornia	0.13	0.09	0.01	0.02	0.00	0.05	0.00	0.03	0.03
R5	Salicornia	0.12	0.10	0.01	0.19	0.03	0.11	0.00	0.06	0.06
R6	Salicornia	0.20	0.15	0.02	0.10	0.03	0.08	0.02	0.05	0.08
R7	Salicornia	0.19	0.10	0.01	0.08	0.04	0.10	0.02	0.03	0.05
R8	Salicornia	0.20	0.12	0.01	0.08	0.04	0.12	0.02	0.04	0.07
R9	Salicornia	0.19	0.10	0.01	0.12	0.03	0.09	0.03	0.08	0.04
R10	Salicornia	0.23	0.10	0.02	0.04	0.04	0.07	0.01	0.05	0.06
R11	Salicornia	0.28	0.32	0.23	0.21	0.20	0.34	0.29	0.13	0.08
R12	Salicornia	0.30	0.14	0.03	0.10	0.08	0.14	0.04	0.01	0.07
R13	Sarcocornia	0.23	0.10	0.02	0.01	0.05	0.08	0.01	0.06	0.06
R14	Sarcocornia	0.24	0.12	0.06	0.12	0.07	0.14	0.07	0.09	0.10
R15	Sarcocornia+Sporobolus	0.35	0.11	0.06	0.22	0.10	0.07	0.05	0.15	0.12
R16	Sarcocornia	0.25	0.15	0.09	0.07	0.07	0.16	0.02	0.09	0.09
R17	Sarcocornia	0.26	0.27	0.32	0.18	0.05	0.23	0.24	0.14	0.05
R18	Sarcocornia	0.27	0.10	0.03	0.10	0.03	0.10	0.02	0.06	0.08
R19	Sarcocornia	0.27	0.12	0.02	0.04	0.04	0.08	0.04	0.09	0.11
R20	Sarcocornia	0.29	0.23	0.14	0.14	0.08	0.19	0.08	0.09	0.09
R21	Sarcocornia	0.23	0.10	0.00	0.01	0.04	0.11	0.01	0.07	0.07
R22	Sarcocornia	0.28	0.14	0.07	0.11	0.09	0.04	0.04	0.13	0.08
R23	Sarcocornia	0.22	0.12	0.01	0.07	0.07	0.10	0.02	0.09	0.09
R24	Sarcocornia	0.27	0.20	0.10	0.18	0.07	0.23	0.14	0.18	0.10
R25	Sarcocornia	0.21	0.13	0.04	0.08	0.08	0.13	0.05	0.11	0.09
R26	Sarcocornia	0.20	0.38	0.43	0.13	0.06	0.29	0.38	0.16	0.13
R27	Sarcocornia	0.20	0.09	0.04	0.10	0.06	0.11	0.05	0.13	0.10
R28	Sarcocornia	0.23	0.23	0.18	0.28	0.10	0.20	0.25	0.21	0.05
R29	Sarcocornia	0.23	0.11	0.01	0.12	0.05	0.08	0.04	0.06	0.04
R30	Sarcocornia	0.26	0.13	0.05	0.08	0.02	0.14	0.03	0.09	0.08
R31	Sarcocornia	0.26	0.14	0.06	0.10	0.07	0.10	0.05	0.12	0.13
R32	Sarcocornia	0.21	0.04	0.03	0.00	0.02	0.07	0.03	0.02	0.09
R33	Sarcocornia	0.21	0.12	0.01	0.07	0.08	0.10	0.01	0.07	0.10
R34	Sarcocornia	0.28	0.11	0.03	0.11	0.10	0.13	0.03	0.09	0.11
R35	Sarcocornia	0.27	0.15	0.02	0.08	0.11	0.18	0.08	0.09	0.13
R36	Sarcocornia	0.28	0.20	0.06	0.08	0.10	0.16	0.04	0.09	0.11
R37	Sarcocornia	0.20	0.08	0.03	0.08	0.09	0.11	0.06	0.11	0.06
R38	Sarcocornia	0.24	0.17	0.10	0.13	0.09	0.42	0.10	0.14	0.12
R39	Sarcocornia	0.29	0.14	0.05	0.11	0.07	0.12	0.04	0.12	0.09
R40	Sarcocornia	0.22	0.10	0.06	0.10	0.10	0.10	0.07	0.09	0.10
R41	Sarcocornia	0.21	0.08	0.04	0.04	0.04	0.13	0.02	0.05	0.05
R42	Sarcocornia	0.20	0.13	0.07	0.12	0.07	0.10	0.08	0.07	0.10
R43	Sarcocornia+Sporobolus	0.34	0.08	0.02	0.04	0.03	0.09	0.01	0.04	0.05
R44	Sarcocornia	0.19	0.08	0.05	0.02	0.11	0.09	0.06	0.05	0.14
R45	Sarcocornia	0.29	0.12	0.06	0.11	0.04	0.08	0.05	0.07	0.01
R46	Salicornia	0.17	0.09	0.01	0.11	0.02	0.07	0.01	0.12	0.08
R47	Salicornia	0.18	0.08	0.03	0.12	0.07	0.05	0.04	0.09	0.07
R48	Salicornia	0.17	0.14	0.01	0.00	0.06	0.11	0.02	0.08	0.05
R49	Salicornia	0.14	0.09	0.02	0.03	0.08	0.11	0.03	0.02	0.08
R50	Salicornia	0.14	0.10	0.04	0.12	0.06	0.08	0.04	0.09	0.10
R51	Salicornia	0.15	0.54	0.07	0.13	0.04	0.16	0.09	0.09	0.08
R52	Salicornia	0.13	0.19	0.03	0.07	0.09	0.16	0.05	0.06	0.10

R53	Sarcocornia	0.25	0.11	0.05	0.21	0.08	0.12	0.08	0.10	0.14
R54	Sarcocornia	0.20	0.14	0.19	0.06	0.08	0.25	0.29	0.07	0.08
R55	Sarcocornia	0.29	0.20	0.10	0.17	0.07	0.15	0.08	0.08	0.13
R56	Sarcocornia	0.13	0.25	0.05	0.22	0.09	0.17	0.02	0.13	0.09

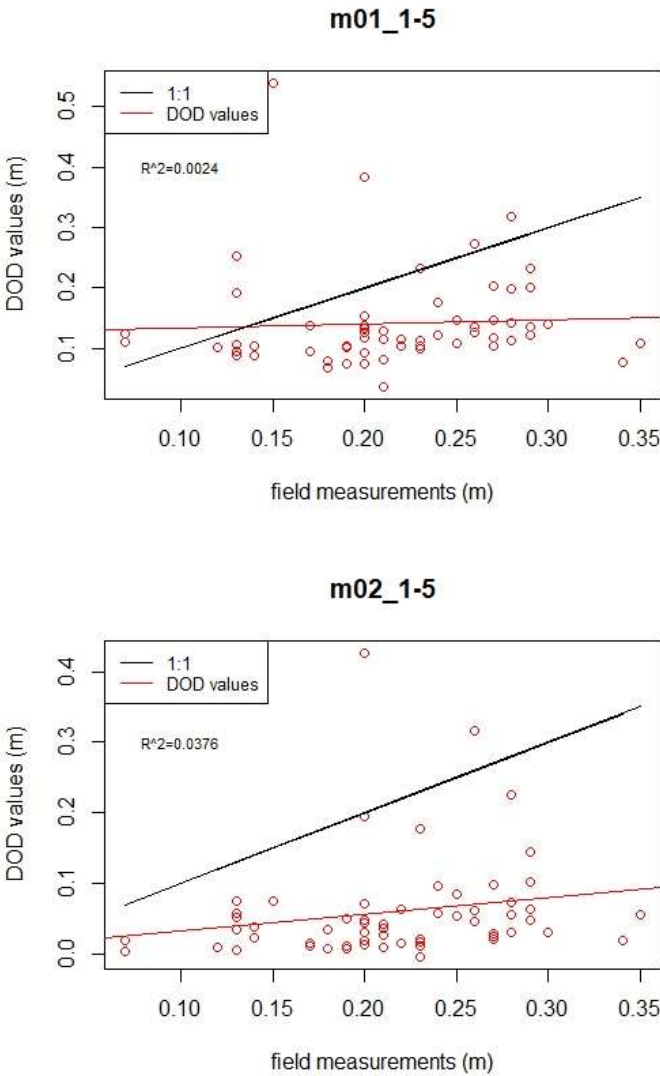


Figure S22. (Continue)

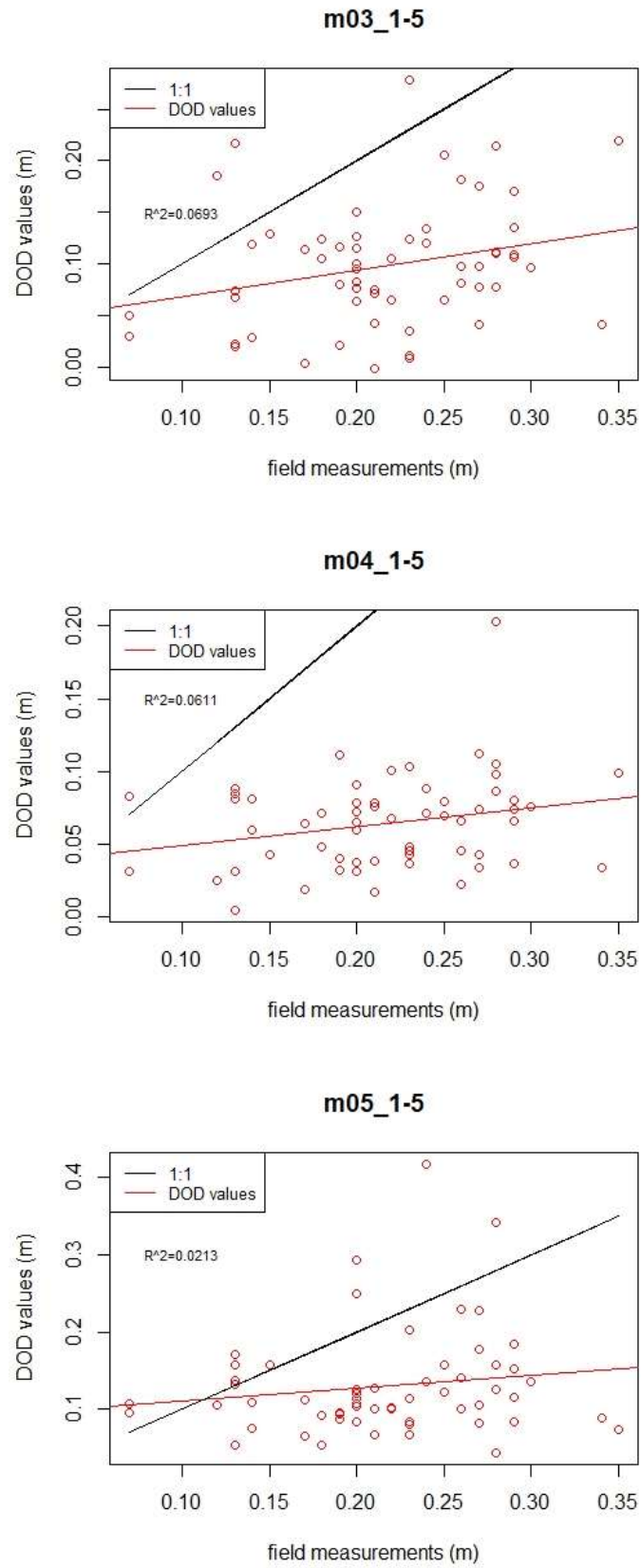


Figure S22. (Continue)

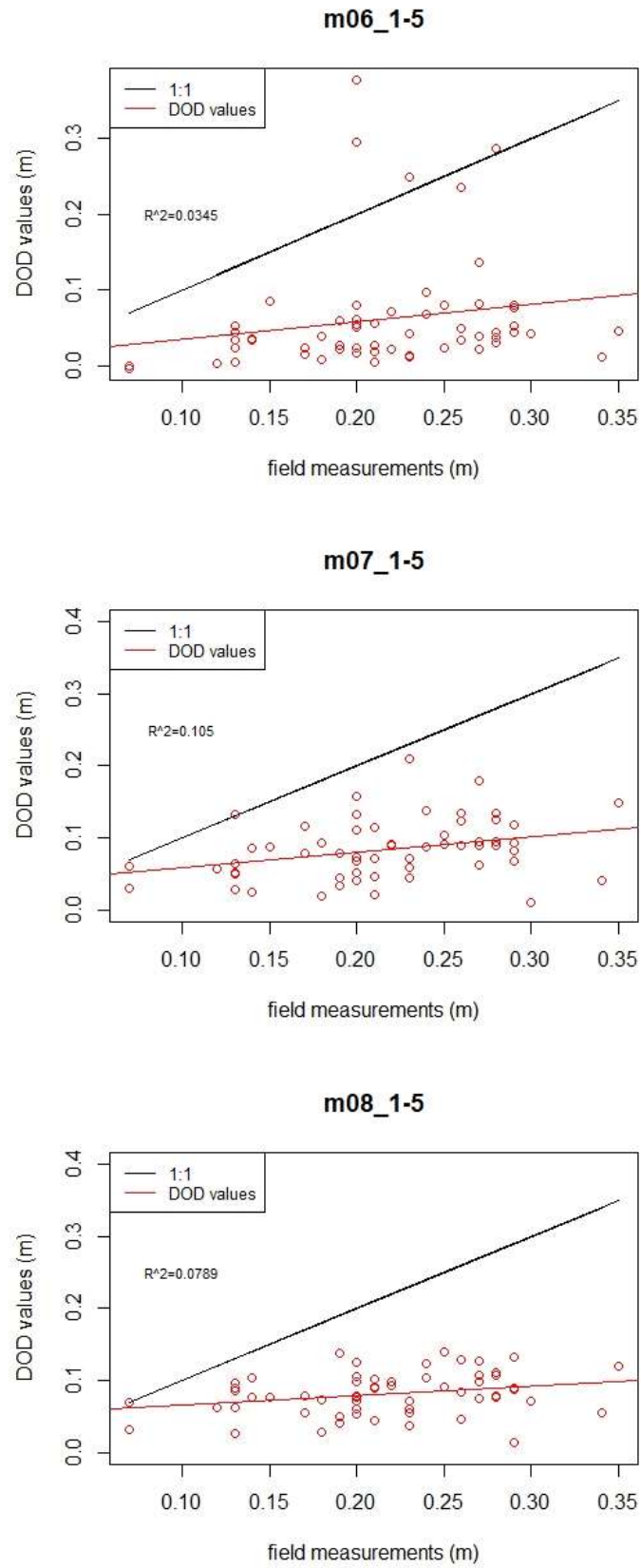


Figure S22. Linear regression and  $R^2$  value for  $DOD_{1-5}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S64. Values of difference from field measurements for  $DOD_{1-5}$  for the eight missions at each point. Each column identifies the mission:  $m01_{1-5}$  represents data extracted from  $DOD_{1-5}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{1-5}$	$m02_{1-5}$	$m03_{1-5}$	$m04_{1-5}$	$m05_{1-5}$	$m06_{1-5}$	$m07_{1-5}$	$m08_{1-5}$
C1	0.04	-0.07	-0.04	-0.04	-	-	-	-
C2	0.05	-0.05	-0.02	0.01	-	-	-	-
C3	-0.02	-0.06	-0.06	-0.05	-	-	-	-
C4	-0.04	-0.07	-0.11	-0.10	-	-	-	-
R2	-0.11	-0.17	-0.08	-0.13	-0.09	-0.17	-0.16	-0.15
R3	-0.07	-0.15	-0.05	-0.16	-0.08	-0.15	-0.13	-0.15
R4	-0.04	-0.12	-0.11	-0.13	-0.08	-0.13	-0.10	-0.10
R5	-0.02	-0.11	0.07	-0.09	-0.01	-0.12	-0.06	-0.06
R6	-0.05	-0.18	-0.10	-0.17	-0.12	-0.18	-0.15	-0.12
R7	-0.09	-0.18	-0.11	-0.15	-0.09	-0.17	-0.16	-0.14
R8	-0.08	-0.19	-0.12	-0.16	-0.08	-0.18	-0.16	-0.13
R9	-0.09	-0.18	-0.07	-0.16	-0.10	-0.16	-0.11	-0.15
R10	-0.13	-0.21	-0.19	-0.19	-0.16	-0.22	-0.18	-0.17
R11	0.04	-0.05	-0.07	-0.08	0.06	0.01	-0.15	-0.20
R12	-0.16	-0.27	-0.20	-0.22	-0.16	-0.26	-0.29	-0.23
R13	-0.13	-0.21	-0.22	-0.18	-0.15	-0.22	-0.17	-0.17
R14	-0.12	-0.18	-0.12	-0.17	-0.10	-0.17	-0.15	-0.14
R15	-0.24	-0.29	-0.13	-0.25	-0.28	-0.30	-0.20	-0.23
R16	-0.10	-0.16	-0.18	-0.18	-0.09	-0.23	-0.16	-0.16
R17	0.01	0.06	-0.08	-0.21	-0.03	-0.02	-0.12	-0.21
R18	-0.17	-0.24	-0.17	-0.24	-0.17	-0.25	-0.21	-0.19
R19	-0.15	-0.25	-0.23	-0.23	-0.19	-0.23	-0.18	-0.16
R20	-0.06	-0.15	-0.15	-0.21	-0.10	-0.21	-0.20	-0.20
R21	-0.13	-0.23	-0.22	-0.19	-0.12	-0.22	-0.16	-0.16
R22	-0.14	-0.21	-0.17	-0.19	-0.24	-0.24	-0.15	-0.20
R23	-0.10	-0.21	-0.15	-0.15	-0.12	-0.20	-0.13	-0.13
R24	-0.07	-0.17	-0.09	-0.20	-0.04	-0.13	-0.09	-0.17
R25	-0.08	-0.17	-0.13	-0.13	-0.08	-0.16	-0.10	-0.12
R26	0.18	0.23	-0.07	-0.14	0.09	0.18	-0.04	-0.08
R27	-0.11	-0.16	-0.10	-0.14	-0.09	-0.15	-0.07	-0.10
R28	0.00	-0.05	0.05	-0.13	-0.03	0.02	-0.02	-0.18
R29	-0.12	-0.22	-0.11	-0.18	-0.15	-0.19	-0.17	-0.19
R30	-0.13	-0.21	-0.18	-0.24	-0.12	-0.23	-0.17	-0.18
R31	-0.12	-0.20	-0.16	-0.19	-0.16	-0.21	-0.14	-0.13
R32	-0.17	-0.18	-0.21	-0.19	-0.14	-0.18	-0.19	-0.12
R33	-0.09	-0.20	-0.14	-0.13	-0.11	-0.20	-0.14	-0.11
R34	-0.17	-0.25	-0.17	-0.18	-0.15	-0.25	-0.19	-0.17
R35	-0.12	-0.25	-0.19	-0.16	-0.09	-0.19	-0.18	-0.14
R36	-0.08	-0.22	-0.20	-0.18	-0.12	-0.24	-0.19	-0.17
R37	-0.12	-0.17	-0.12	-0.11	-0.09	-0.14	-0.09	-0.14
R38	-0.07	-0.14	-0.11	-0.15	0.18	-0.14	-0.10	-0.12
R39	-0.15	-0.24	-0.18	-0.22	-0.17	-0.25	-0.17	-0.20
R40	-0.12	-0.16	-0.12	-0.12	-0.12	-0.15	-0.13	-0.12
R41	-0.13	-0.17	-0.17	-0.17	-0.08	-0.19	-0.16	-0.16
R42	-0.07	-0.13	-0.08	-0.13	-0.10	-0.12	-0.13	-0.10
R43	-0.26	-0.32	-0.30	-0.31	-0.25	-0.33	-0.30	-0.29
R44	-0.11	-0.14	-0.17	-0.08	-0.10	-0.13	-0.14	-0.05
R45	-0.17	-0.23	-0.18	-0.25	-0.21	-0.24	-0.22	-0.28
R46	-0.08	-0.16	-0.06	-0.15	-0.10	-0.16	-0.05	-0.09
R47	-0.10	-0.15	-0.06	-0.11	-0.13	-0.14	-0.09	-0.11

R48	-0.03	-0.16	-0.17	-0.11	-0.06	-0.15	-0.09	-0.12
R49	-0.05	-0.12	-0.11	-0.06	-0.03	-0.11	-0.12	-0.06
R50	-0.04	-0.10	-0.02	-0.08	-0.06	-0.10	-0.05	-0.04
R51	0.39	-0.08	-0.02	-0.11	0.01	-0.06	-0.06	-0.07
R52	0.06	-0.10	-0.06	-0.04	0.03	-0.08	-0.07	-0.03
R53	-0.14	-0.20	-0.04	-0.17	-0.13	-0.17	-0.15	-0.11
R54	-0.06	-0.01	-0.14	-0.12	0.05	0.09	-0.13	-0.12
R55	-0.09	-0.19	-0.12	-0.22	-0.14	-0.21	-0.21	-0.16
R56	0.12	-0.08	0.09	-0.04	0.04	-0.11	0.00	-0.04
PROMEDIO	-0.08	-0.16	-0.12	-0.16	-0.09	-0.16	-0.14	-0.14
MEDIANA	-0.10	-0.17	-0.12	-0.16	-0.10	-0.17	-0.15	-0.14
RMSE	<b>0.123</b>	<b>0.179</b>	<b>0.138</b>	<b>0.164</b>	<b>0.124</b>	<b>0.183</b>	<b>0.151</b>	<b>0.152</b>

Table S65. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>1-10</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>1-10</sub> represents data extracted from DOD<sub>1-10</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>1-10</sub>	m02 <sub>1-10</sub>	m03 <sub>1-10</sub>	m04 <sub>1-10</sub>	m05 <sub>1-10</sub>	m06 <sub>1-10</sub>	m07 <sub>1-10</sub>	m08 <sub>1-10</sub>
C1	Salicornia	0.07	0.12	0.01	0.04	0.03	-	-	-	-
C2	Salicornia	0.07	0.13	0.03	0.04	0.09	-	-	-	-
C3	Salicornia	0.13	0.10	0.07	0.07	0.08	-	-	-	-
C4	Salicornia	0.13	0.09	0.06	0.03	0.04	-	-	-	-
R2	Salicornia	0.18	0.07	0.00	0.11	0.04	0.10	0.01	0.03	0.03
R3	Salicornia	0.2	0.13	0.05	0.12	0.04	0.12	0.05	0.10	0.06
R4	Salicornia	0.13	0.08	0.00	0.05	0.00	0.05	0.00	0.04	0.03
R5	Salicornia	0.12	0.09	0.01	0.15	0.03	0.11	0.00	0.05	0.06
R6	Salicornia	0.2	0.15	0.02	0.11	0.03	0.08	0.02	0.05	0.08
R7	Salicornia	0.19	0.11	0.01	0.07	0.04	0.09	0.02	0.04	0.05
R8	Salicornia	0.2	0.11	0.01	0.08	0.04	0.11	0.03	0.04	0.08
R9	Salicornia	0.19	0.11	0.01	0.12	0.03	0.09	0.03	0.07	0.05
R10	Salicornia	0.23	0.09	0.02	0.03	0.03	0.06	0.02	0.05	0.07
R11	Salicornia	0.28	0.22	0.06	0.19	0.13	0.29	0.17	0.14	0.06
R12	Salicornia	0.3	0.14	0.04	0.10	0.08	0.14	0.05	0.01	0.09
R13	Sarcocornia	0.23	0.10	0.02	-0.01	0.04	0.09	0.01	0.04	0.06
R14	Sarcocornia	0.24	0.13	0.07	0.12	0.08	0.14	0.07	0.08	0.09
R15	Sarcocornia+Sporobolus	0.35	0.11	0.06	0.21	0.10	0.07	0.05	0.15	0.12
R16	Sarcocornia	0.25	0.12	0.05	0.10	0.07	0.14	0.07	0.10	0.09
R17	Sarcocornia	0.26	0.16	0.23	0.21	0.05	0.15	0.11	0.14	0.06
R18	Sarcocornia	0.27	0.10	0.03	0.09	0.03	0.10	0.04	0.04	0.08
R19	Sarcocornia	0.27	0.12	0.03	0.05	0.05	0.09	0.04	0.09	0.11
R20	Sarcocornia	0.29	0.17	0.11	0.15	0.08	0.17	0.09	0.09	0.11
R21	Sarcocornia	0.23	0.11	0.00	0.02	0.05	0.12	0.01	0.07	0.07
R22	Sarcocornia	0.28	0.14	0.06	0.12	0.09	0.04	0.05	0.13	0.08
R23	Sarcocornia	0.22	0.11	0.01	0.07	0.07	0.10	0.02	0.09	0.09
R24	Sarcocornia	0.27	0.16	0.14	0.16	0.10	0.20	0.11	0.17	0.12
R25	Sarcocornia	0.21	0.13	0.04	0.10	0.08	0.12	0.06	0.10	0.09
R26	Sarcocornia	0.2	0.35	0.42	0.17	0.07	0.35	0.35	0.16	0.12
R27	Sarcocornia	0.2	0.09	0.05	0.10	0.06	0.12	0.05	0.14	0.10
R28	Sarcocornia	0.23	0.18	0.08	0.27	0.08	0.15	0.16	0.18	0.10
R29	Sarcocornia	0.23	0.11	0.02	0.10	0.04	0.07	0.04	0.05	0.05
R30	Sarcocornia	0.26	0.13	0.05	0.05	0.01	0.14	0.03	0.06	0.08
R31	Sarcocornia	0.26	0.14	0.05	0.10	0.06	0.11	0.05	0.11	0.13
R32	Sarcocornia	0.21	0.02	0.02	0.00	0.03	0.07	0.01	0.01	0.08
R33	Sarcocornia	0.21	0.10	0.00	0.08	0.08	0.10	0.00	0.07	0.10
R34	Sarcocornia	0.28	0.12	0.03	0.10	0.10	0.13	0.03	0.10	0.11
R35	Sarcocornia	0.27	0.17	0.07	0.09	0.12	0.19	0.08	0.09	0.14
R36	Sarcocornia	0.28	0.22	0.08	0.08	0.10	0.18	0.05	0.09	0.12
R37	Sarcocornia	0.2	0.08	0.03	0.07	0.10	0.12	0.05	0.10	0.06

R38	Sarcocornia	0.24	0.16	0.11	0.24	0.09	0.38	0.14	0.17	0.11
R39	Sarcocornia	0.29	0.13	0.05	0.11	0.07	0.12	0.05	0.10	0.09
R40	Sarcocornia	0.22	0.10	0.06	0.11	0.09	0.11	0.07	0.10	0.10
R41	Sarcocornia	0.21	0.08	0.04	0.06	0.04	0.13	0.02	0.05	0.05
R42	Sarcocornia	0.2	0.13	0.08	0.08	0.07	0.11	0.09	0.08	0.11
R43	Sarcocornia+Sporobolus	0.34	0.09	0.02	0.04	0.03	0.08	0.01	0.04	0.06
R44	Sarcocornia	0.19	0.07	0.05	0.03	0.11	0.09	0.06	0.04	0.13
R45	Sarcocornia	0.29	0.13	0.08	0.10	0.04	0.09	0.05	0.07	0.02
R46	Salicornia	0.17	0.10	0.02	0.13	0.02	0.07	0.02	0.11	0.08
R47	Salicornia	0.18	0.08	0.04	0.13	0.07	0.05	0.05	0.09	0.06
R48	Salicornia	0.17	0.14	0.02	0.02	0.06	0.12	0.03	0.07	0.06
R49	Salicornia	0.14	0.13	0.03	0.04	0.07	0.09	0.04	0.02	0.08
R50	Salicornia	0.14	0.10	0.04	0.12	0.06	0.08	0.04	0.08	0.09
R51	Salicornia	0.15	0.55	0.08	0.10	0.04	0.16	0.09	0.09	0.08
R52	Salicornia	0.13	0.18	0.05	0.09	0.09	0.15	0.06	0.06	0.10
R53	Sarcocornia	0.25	0.10	0.06	0.21	0.08	0.12	0.09	0.10	0.14
R54	Sarcocornia	0.2	0.14	0.16	0.09	0.08	0.25	0.24	0.08	0.09
R55	Sarcocornia	0.29	0.20	0.10	0.15	0.08	0.14	0.06	0.11	0.13
R56	Sarcocornia	0.13	0.22	0.04	0.20	0.08	0.19	0.08	0.12	0.10

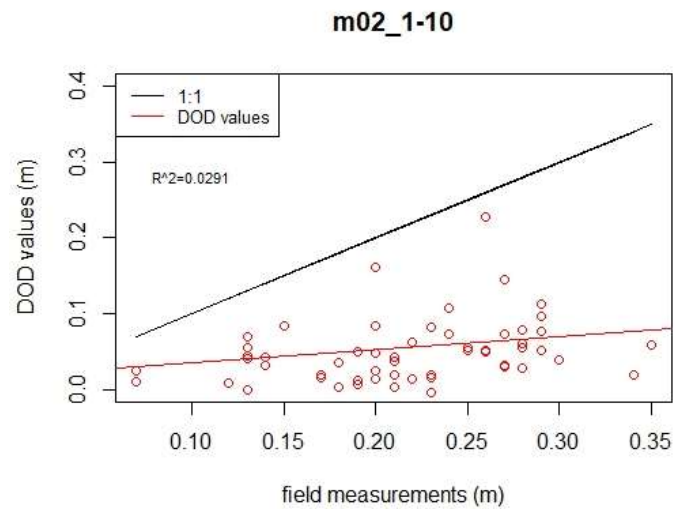
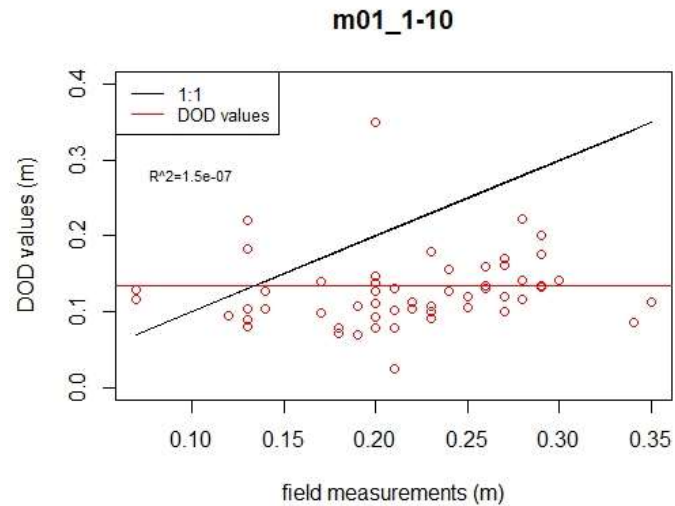


Figure S23. (Continue)

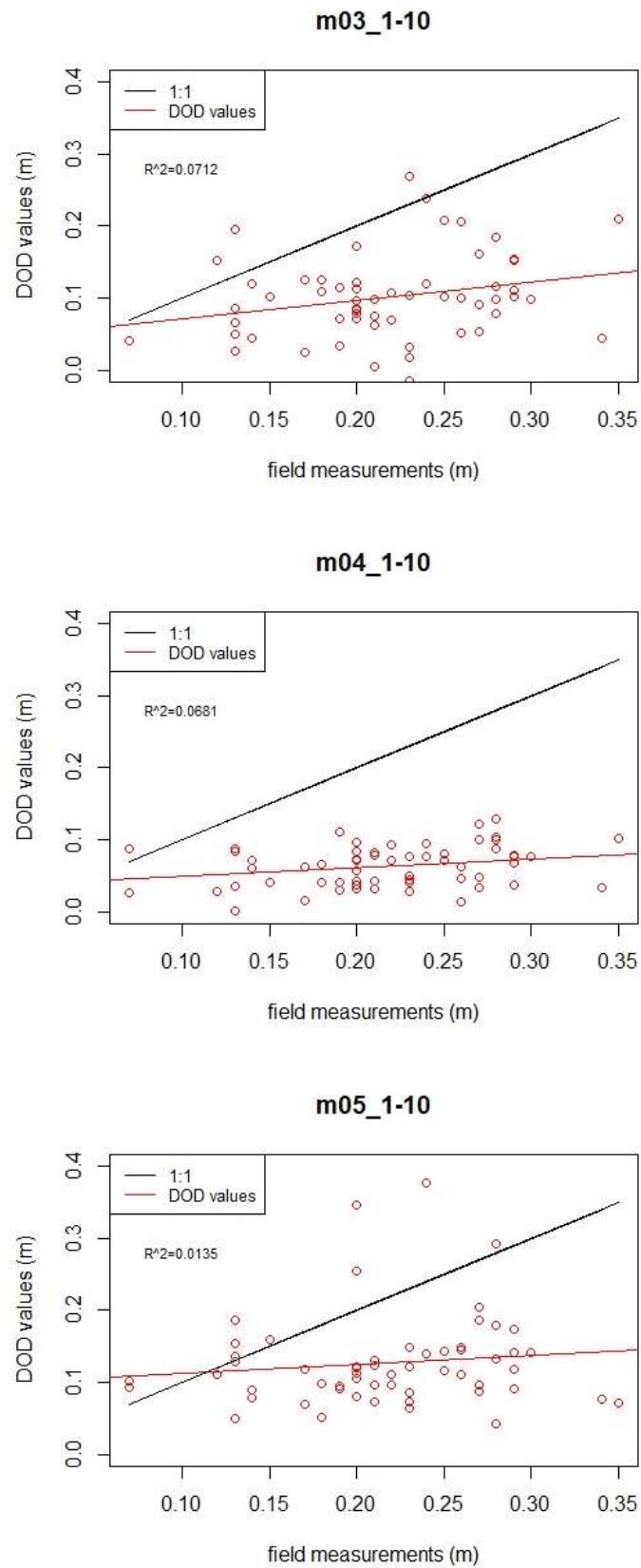


Figure S23. (Continue)

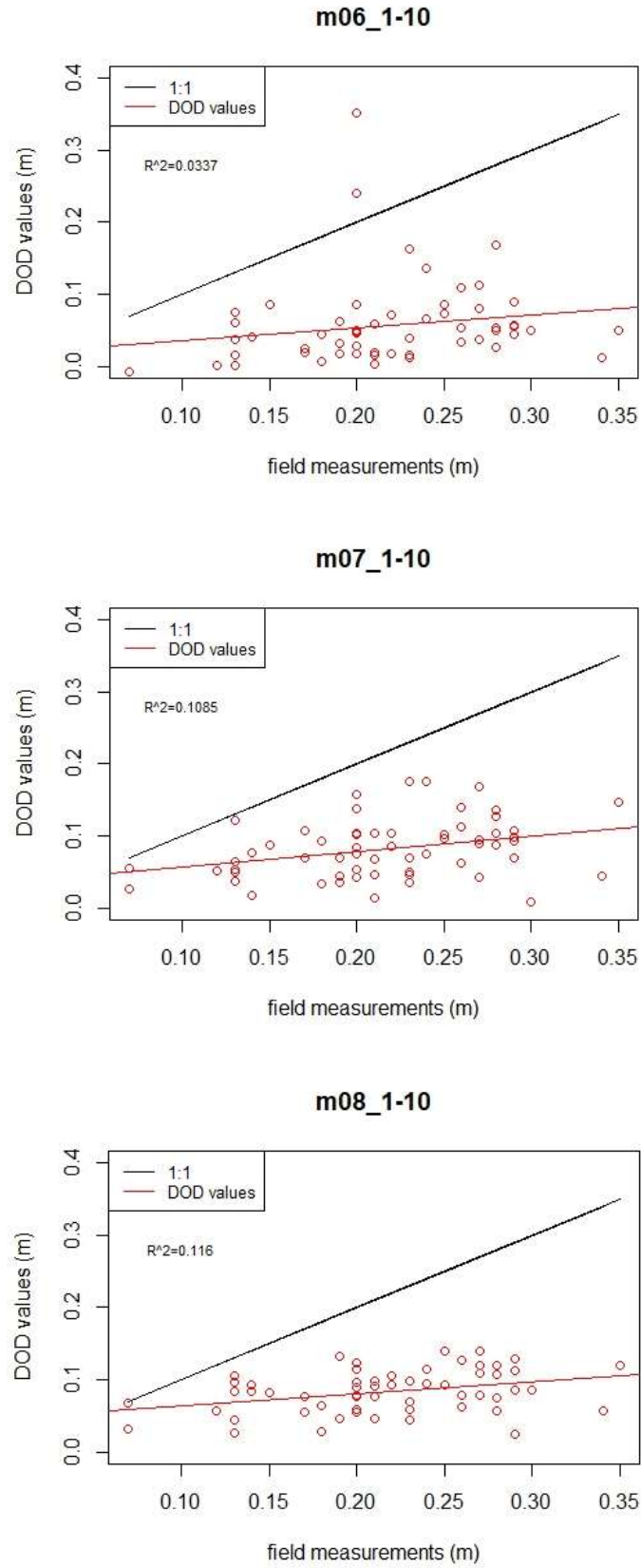


Figure S23. Linear regression and  $R^2$  value for  $DOD_{1-10}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S66. Values of difference from field measurements for  $DOD_{1-10}$  for the eight missions at each point. Each column identifies the mission:  $m01_{1-10}$  represents data extracted from  $DOD_{1-10}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{1-10}$	$m02_{1-10}$	$m03_{1-10}$	$m04_{1-10}$	$m05_{1-10}$	$m06_{1-10}$	$m07_{1-10}$	$m08_{1-10}$
C1	0.05	-0.06	-0.03	-0.04				
C2	0.06	-0.04	-0.03	0.02				
C3	-0.03	-0.06	-0.06	-0.05				
C4	-0.04	-0.07	-0.10	-0.09				
R2	-0.11	-0.18	-0.07	-0.14	-0.08	-0.17	-0.15	-0.15
R3	-0.07	-0.15	-0.08	-0.16	-0.08	-0.15	-0.10	-0.14
R4	-0.05	-0.13	-0.08	-0.13	-0.08	-0.13	-0.09	-0.10
R5	-0.03	-0.11	0.03	-0.09	-0.01	-0.12	-0.07	-0.06
R6	-0.05	-0.18	-0.09	-0.17	-0.12	-0.18	-0.15	-0.12
R7	-0.08	-0.18	-0.12	-0.15	-0.10	-0.17	-0.15	-0.14
R8	-0.09	-0.19	-0.12	-0.16	-0.09	-0.17	-0.16	-0.12
R9	-0.08	-0.18	-0.07	-0.16	-0.10	-0.16	-0.12	-0.14
R10	-0.14	-0.21	-0.20	-0.20	-0.17	-0.21	-0.18	-0.16
R11	-0.06	-0.22	-0.09	-0.15	0.01	-0.11	-0.14	-0.22
R12	-0.16	-0.26	-0.20	-0.22	-0.16	-0.25	-0.29	-0.21
R13	-0.13	-0.21	-0.24	-0.19	-0.14	-0.22	-0.19	-0.17
R14	-0.11	-0.17	-0.12	-0.16	-0.10	-0.17	-0.16	-0.15
R15	-0.24	-0.29	-0.14	-0.25	-0.28	-0.30	-0.20	-0.23
R16	-0.13	-0.20	-0.15	-0.18	-0.11	-0.18	-0.15	-0.16
R17	-0.10	-0.03	-0.05	-0.21	-0.11	-0.15	-0.12	-0.20
R18	-0.17	-0.24	-0.18	-0.24	-0.17	-0.23	-0.23	-0.19
R19	-0.15	-0.24	-0.22	-0.22	-0.18	-0.23	-0.18	-0.16
R20	-0.12	-0.18	-0.14	-0.21	-0.12	-0.20	-0.20	-0.18
R21	-0.12	-0.23	-0.21	-0.18	-0.11	-0.22	-0.16	-0.16
R22	-0.14	-0.22	-0.16	-0.19	-0.24	-0.23	-0.15	-0.20
R23	-0.11	-0.21	-0.15	-0.15	-0.12	-0.20	-0.13	-0.13
R24	-0.11	-0.13	-0.11	-0.17	-0.07	-0.16	-0.10	-0.15
R25	-0.08	-0.17	-0.11	-0.13	-0.09	-0.15	-0.11	-0.12
R26	0.15	0.22	-0.03	-0.13	0.15	0.15	-0.04	-0.08
R27	-0.11	-0.15	-0.10	-0.14	-0.08	-0.15	-0.06	-0.10
R28	-0.05	-0.15	0.04	-0.15	-0.08	-0.07	-0.05	-0.13
R29	-0.12	-0.21	-0.13	-0.19	-0.16	-0.19	-0.18	-0.18
R30	-0.13	-0.21	-0.21	-0.25	-0.12	-0.23	-0.20	-0.18
R31	-0.12	-0.21	-0.16	-0.20	-0.15	-0.21	-0.15	-0.13
R32	-0.19	-0.19	-0.21	-0.18	-0.14	-0.20	-0.20	-0.13
R33	-0.11	-0.21	-0.13	-0.13	-0.11	-0.21	-0.14	-0.11
R34	-0.16	-0.25	-0.18	-0.18	-0.15	-0.25	-0.18	-0.17
R35	-0.10	-0.20	-0.18	-0.15	-0.08	-0.19	-0.18	-0.13
R36	-0.06	-0.20	-0.20	-0.18	-0.10	-0.23	-0.19	-0.16
R37	-0.12	-0.17	-0.13	-0.10	-0.08	-0.15	-0.10	-0.14
R38	-0.08	-0.13	0.00	-0.15	0.14	-0.10	-0.07	-0.13
R39	-0.16	-0.24	-0.18	-0.22	-0.17	-0.24	-0.19	-0.20
R40	-0.12	-0.16	-0.11	-0.13	-0.11	-0.15	-0.12	-0.12
R41	-0.13	-0.17	-0.15	-0.17	-0.08	-0.19	-0.16	-0.16
R42	-0.07	-0.12	-0.12	-0.13	-0.09	-0.11	-0.12	-0.09
R43	-0.25	-0.32	-0.30	-0.31	-0.26	-0.33	-0.30	-0.28
R44	-0.12	-0.14	-0.16	-0.08	-0.10	-0.13	-0.15	-0.06
R45	-0.16	-0.21	-0.19	-0.25	-0.20	-0.24	-0.22	-0.27
R46	-0.07	-0.15	-0.04	-0.15	-0.10	-0.15	-0.06	-0.09
R47	-0.10	-0.14	-0.06	-0.11	-0.13	-0.13	-0.09	-0.12
R48	-0.03	-0.15	-0.15	-0.11	-0.05	-0.14	-0.10	-0.11

R49	-0.01	-0.11	-0.10	-0.07	-0.05	-0.10	-0.12	-0.06
R50	-0.04	-0.10	-0.02	-0.08	-0.06	-0.10	-0.06	-0.05
R51	0.40	-0.07	-0.05	-0.11	0.01	-0.06	-0.06	-0.07
R52	0.05	-0.08	-0.04	-0.04	0.02	-0.07	-0.07	-0.03
R53	-0.15	-0.19	-0.04	-0.17	-0.13	-0.16	-0.15	-0.11
R54	-0.06	-0.04	-0.11	-0.12	0.05	0.04	-0.12	-0.11
R55	-0.09	-0.19	-0.14	-0.21	-0.15	-0.23	-0.18	-0.16
R56	0.09	-0.09	0.07	-0.05	0.06	-0.05	-0.01	-0.03
PROMEDIO	-0.09	-0.17	-0.12	-0.16	-0.10	-0.16	-0.14	-0.14
MEDIANA	-0.11	-0.18	-0.12	-0.16	-0.10	-0.17	-0.15	-0.14
RMSE	0.125	0.179	0.136	0.164	0.125	0.182	0.152	0.150

Table S67. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>1-15</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>1-15</sub> represents data extracted from DOD<sub>1-15</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>1-15</sub>	m02 <sub>1-15</sub>	m03 <sub>1-15</sub>	m04 <sub>1-15</sub>	m05 <sub>1-15</sub>	m06 <sub>1-15</sub>	m07 <sub>1-15</sub>	m08 <sub>1-15</sub>
C1	Salicornia	0.07	0.11	0.01	0.04	0.03	-	-	-	-
C2	Salicornia	0.07	0.12	0.02	0.04	0.09	-	-	-	-
C3	Salicornia	0.13	0.11	0.07	0.07	0.09	-	-	-	-
C4	Salicornia	0.13	0.09	0.05	0.02	0.03	-	-	-	-
R2	Salicornia	0.18	0.07	0.00	0.10	0.04	0.09	0.00	0.03	0.03
R3	Salicornia	0.20	0.13	0.05	0.13	0.05	0.12	0.05	0.11	0.06
R4	Salicornia	0.13	0.08	0.00	0.05	0.00	0.05	0.00	0.03	0.02
R5	Salicornia	0.12	0.10	0.01	0.15	0.03	0.10	0.00	0.05	0.06
R6	Salicornia	0.20	0.14	0.03	0.12	0.03	0.08	0.02	0.05	0.08
R7	Salicornia	0.19	0.11	0.01	0.07	0.04	0.09	0.02	0.04	0.05
R8	Salicornia	0.20	0.10	0.01	0.08	0.04	0.11	0.03	0.04	0.07
R9	Salicornia	0.19	0.10	0.01	0.11	0.03	0.10	0.03	0.07	0.05
R10	Salicornia	0.23	0.09	0.02	0.03	0.03	0.06	0.02	0.05	0.07
R11	Salicornia	0.28	0.29	0.09	0.18	0.16	0.09	0.14	0.16	0.10
R12	Salicornia	0.30	0.14	0.04	0.09	0.08	0.14	0.05	0.00	0.08
R13	Sarcocornia	0.23	0.10	0.01	-0.01	0.04	0.08	0.01	0.02	0.06
R14	Sarcocornia	0.24	0.13	0.07	0.10	0.07	0.14	0.07	0.08	0.08
R15	Sarcocornia+Sporobolus	0.35	0.11	0.05	0.20	0.10	0.08	0.05	0.15	0.12
R16	Sarcocornia	0.25	0.15	0.10	0.12	0.08	0.14	0.06	0.11	0.10
R17	Sarcocornia	0.26	0.16	0.28	0.23	0.05	0.15	0.29	0.19	0.06
R18	Sarcocornia	0.27	0.11	0.03	0.09	0.04	0.09	0.04	0.03	0.08
R19	Sarcocornia	0.27	0.11	0.03	0.06	0.05	0.07	0.03	0.12	0.11
R20	Sarcocornia	0.29	0.20	0.13	0.16	0.09	0.17	0.08	0.09	0.09
R21	Sarcocornia	0.23	0.11	0.00	0.02	0.05	0.10	0.01	0.07	0.07
R22	Sarcocornia	0.28	0.16	0.06	0.11	0.09	0.12	0.06	0.12	0.07
R23	Sarcocornia	0.22	0.10	0.01	0.07	0.07	0.10	0.02	0.09	0.09
R24	Sarcocornia	0.27	0.15	0.07	0.18	0.07	0.20	0.10	0.16	0.11
R25	Sarcocornia	0.21	0.13	0.04	0.10	0.08	0.12	0.05	0.09	0.10
R26	Sarcocornia	0.20	0.35	0.38	0.14	0.11	0.35	0.07	0.20	0.11
R27	Sarcocornia	0.20	0.09	0.04	0.10	0.06	0.12	0.04	0.13	0.10
R28	Sarcocornia	0.23	0.12	0.09	0.26	0.20	0.13	0.17	0.20	0.05
R29	Sarcocornia	0.23	0.13	0.06	0.12	0.05	0.06	0.05	0.03	0.05
R30	Sarcocornia	0.26	0.13	0.04	0.06	0.01	0.14	0.03	0.05	0.08
R31	Sarcocornia	0.26	0.14	0.05	0.08	0.06	0.11	0.05	0.09	0.13
R32	Sarcocornia	0.21	0.02	0.02	-0.01	0.04	0.04	0.02	0.01	0.08
R33	Sarcocornia	0.21	0.10	0.01	0.08	0.08	0.10	0.01	0.07	0.10
R34	Sarcocornia	0.28	0.11	0.03	0.09	0.11	0.13	0.03	0.11	0.10
R35	Sarcocornia	0.27	0.18	0.07	0.09	0.11	0.19	0.09	0.09	0.14
R36	Sarcocornia	0.28	0.20	0.06	0.08	0.10	0.18	0.07	0.09	0.12

R37	Sarcocornia	0.20	0.08	0.04	0.06	0.10	0.13	0.05	0.09	0.05
R38	Sarcocornia	0.24	0.25	0.12	0.14	0.10	0.23	0.14	0.17	0.12
R39	Sarcocornia	0.29	0.14	0.05	0.09	0.07	0.12	0.05	0.09	0.09
R40	Sarcocornia	0.22	0.10	0.05	0.11	0.09	0.11	0.08	0.09	0.10
R41	Sarcocornia	0.21	0.08	0.04	0.06	0.04	0.13	0.02	0.05	0.05
R42	Sarcocornia	0.20	0.12	0.09	0.08	0.07	0.11	0.08	0.09	0.12
R43	Sarcocornia+Sporobolus	0.34	0.09	0.03	0.05	0.03	0.07	0.01	0.04	0.06
R44	Sarcocornia	0.19	0.08	0.05	0.04	0.11	0.08	0.07	0.05	0.13
R45	Sarcocornia	0.29	0.13	0.09	0.11	0.04	0.09	0.06	0.07	0.03
R46	Salicornia	0.17	0.10	0.02	0.13	0.02	0.07	0.03	0.11	0.08
R47	Salicornia	0.18	0.08	0.04	0.14	0.07	0.05	0.05	0.08	0.06
R48	Salicornia	0.17	0.15	0.02	0.04	0.06	0.13	0.02	0.08	0.05
R49	Salicornia	0.14	0.10	0.03	0.04	0.08	0.09	0.04	0.01	0.08
R50	Salicornia	0.14	0.11	0.05	0.12	0.06	0.08	0.04	0.08	0.09
R51	Salicornia	0.15	0.55	0.10	0.10	0.05	0.16	0.07	0.09	0.09
R52	Salicornia	0.13	0.17	0.05	0.09	0.08	0.14	0.06	0.06	0.11
R53	Sarcocornia	0.25	0.11	0.06	0.19	0.08	0.12	0.09	0.10	0.14
R54	Sarcocornia	0.20	0.15	0.16	0.09	0.08	0.28	0.17	0.09	0.09
R55	Sarcocornia	0.29	0.21	0.11	0.16	0.08	0.16	0.07	0.10	0.14
R56	Sarcocornia	0.13	0.22	-0.01	0.17	0.07	0.18	0.09	0.13	0.09

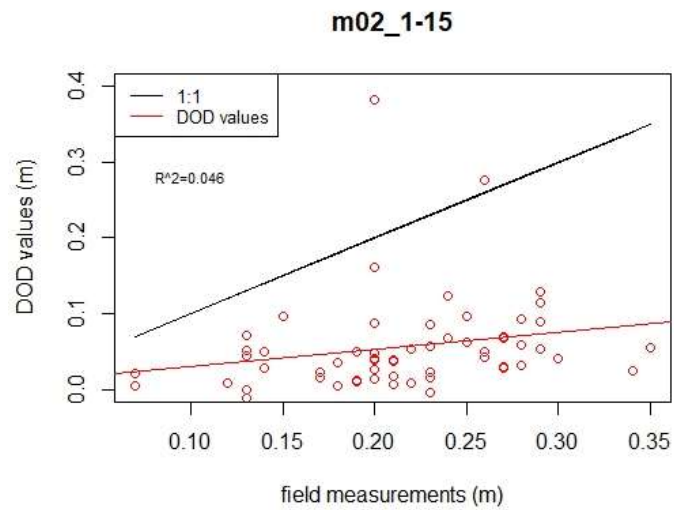
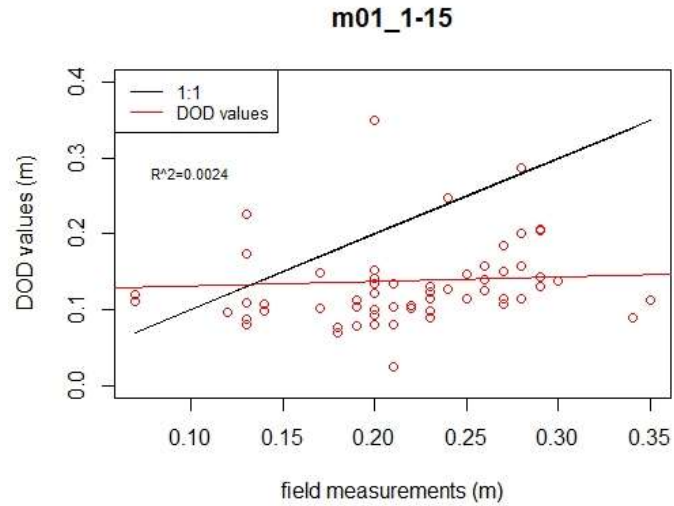


Figure S24. (Continue)

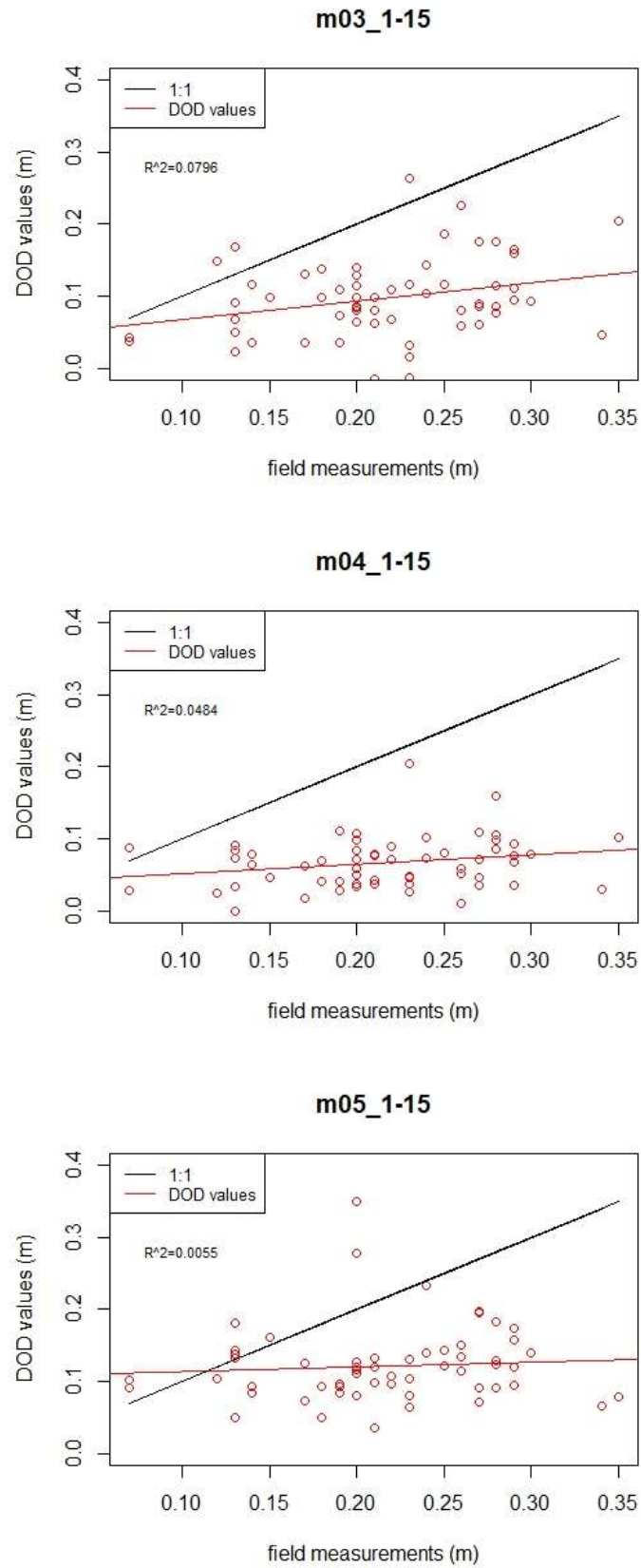


Figure S24. (Continue)

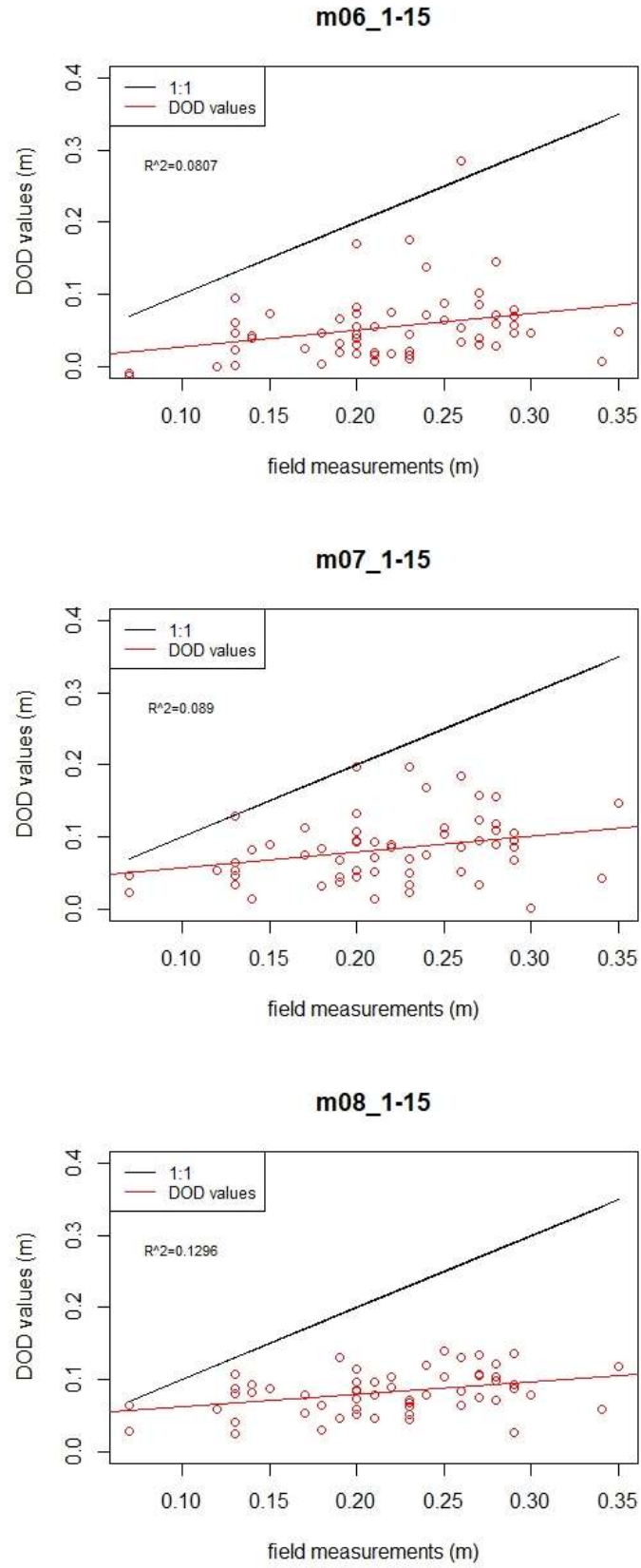


Figure S24. Linear regression and  $R^2$  value for  $DOD_{1-15}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S68. Values of difference from field measurements for  $DOD_{1-15}$  for the eight missions at each point. Each column identifies the mission:  $m01_{1-15}$  represents data extracted from  $DOD_{1-15}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{1-15}$	$m02_{1-15}$	$m03_{1-15}$	$m04_{1-15}$	$m05_{1-15}$	$m06_{1-15}$	$m07_{1-15}$	$m08_{1-15}$
C1	0.04	-0.06	-0.03	-0.04	-	-	-	-
C2	0.05	-0.05	-0.03	0.02	-	-	-	-
C3	-0.02	-0.06	-0.06	-0.04	-	-	-	-
C4	-0.04	-0.08	-0.11	-0.10	-	-	-	-
R2	-0.11	-0.18	-0.08	-0.14	-0.09	-0.18	-0.15	-0.15
R3	-0.07	-0.15	-0.07	-0.15	-0.08	-0.15	-0.09	-0.14
R4	-0.05	-0.13	-0.08	-0.13	-0.08	-0.13	-0.10	-0.11
R5	-0.02	-0.11	0.03	-0.09	-0.02	-0.12	-0.07	-0.06
R6	-0.06	-0.17	-0.08	-0.17	-0.12	-0.18	-0.15	-0.12
R7	-0.08	-0.18	-0.12	-0.15	-0.10	-0.17	-0.15	-0.14
R8	-0.10	-0.19	-0.12	-0.16	-0.09	-0.17	-0.16	-0.13
R9	-0.09	-0.18	-0.08	-0.16	-0.09	-0.16	-0.12	-0.14
R10	-0.14	-0.21	-0.20	-0.20	-0.17	-0.21	-0.18	-0.16
R11	0.01	-0.19	-0.10	-0.12	-0.19	-0.14	-0.12	-0.18
R12	-0.16	-0.26	-0.21	-0.22	-0.16	-0.25	-0.30	-0.22
R13	-0.13	-0.22	-0.24	-0.19	-0.15	-0.22	-0.21	-0.17
R14	-0.11	-0.17	-0.14	-0.17	-0.10	-0.17	-0.16	-0.16
R15	-0.24	-0.30	-0.15	-0.25	-0.27	-0.30	-0.20	-0.23
R16	-0.10	-0.15	-0.13	-0.17	-0.11	-0.19	-0.14	-0.15
R17	-0.10	0.02	-0.03	-0.21	-0.11	0.03	-0.07	-0.20
R18	-0.16	-0.24	-0.18	-0.23	-0.18	-0.23	-0.24	-0.19
R19	-0.16	-0.24	-0.21	-0.22	-0.20	-0.24	-0.15	-0.16
R20	-0.09	-0.16	-0.13	-0.20	-0.12	-0.21	-0.20	-0.20
R21	-0.12	-0.23	-0.21	-0.18	-0.13	-0.22	-0.16	-0.16
R22	-0.12	-0.22	-0.17	-0.19	-0.16	-0.22	-0.16	-0.21
R23	-0.12	-0.21	-0.15	-0.15	-0.12	-0.20	-0.13	-0.13
R24	-0.12	-0.20	-0.09	-0.20	-0.07	-0.17	-0.11	-0.16
R25	-0.08	-0.17	-0.11	-0.13	-0.09	-0.16	-0.12	-0.11
R26	0.15	0.18	-0.06	-0.09	0.15	-0.13	0.00	-0.09
R27	-0.11	-0.16	-0.10	-0.14	-0.08	-0.16	-0.07	-0.10
R28	-0.11	-0.14	0.03	-0.03	-0.10	-0.06	-0.03	-0.18
R29	-0.10	-0.17	-0.11	-0.18	-0.17	-0.18	-0.20	-0.18
R30	-0.14	-0.22	-0.20	-0.25	-0.12	-0.23	-0.21	-0.18
R31	-0.12	-0.21	-0.18	-0.20	-0.15	-0.21	-0.17	-0.13
R32	-0.19	-0.19	-0.22	-0.17	-0.17	-0.19	-0.20	-0.13
R33	-0.11	-0.20	-0.13	-0.13	-0.11	-0.20	-0.14	-0.11
R34	-0.17	-0.25	-0.19	-0.17	-0.15	-0.25	-0.17	-0.18
R35	-0.09	-0.20	-0.18	-0.16	-0.08	-0.18	-0.18	-0.13
R36	-0.08	-0.22	-0.20	-0.18	-0.10	-0.21	-0.19	-0.16
R37	-0.12	-0.16	-0.14	-0.10	-0.07	-0.15	-0.11	-0.15
R38	0.01	-0.12	-0.10	-0.14	-0.01	-0.10	-0.07	-0.12
R39	-0.15	-0.24	-0.20	-0.22	-0.17	-0.24	-0.20	-0.20
R40	-0.12	-0.17	-0.11	-0.13	-0.11	-0.14	-0.13	-0.12
R41	-0.13	-0.17	-0.15	-0.17	-0.08	-0.19	-0.16	-0.16
R42	-0.08	-0.11	-0.12	-0.13	-0.09	-0.12	-0.11	-0.08
R43	-0.25	-0.31	-0.29	-0.31	-0.27	-0.33	-0.30	-0.28
R44	-0.11	-0.14	-0.15	-0.08	-0.11	-0.12	-0.14	-0.06
R45	-0.16	-0.20	-0.18	-0.25	-0.20	-0.23	-0.22	-0.26
R46	-0.07	-0.15	-0.04	-0.15	-0.10	-0.14	-0.06	-0.09
R47	-0.10	-0.14	-0.04	-0.11	-0.13	-0.13	-0.10	-0.12
R48	-0.02	-0.15	-0.13	-0.11	-0.04	-0.15	-0.09	-0.12
R49	-0.04	-0.11	-0.10	-0.06	-0.05	-0.10	-0.13	-0.06
R50	-0.03	-0.09	-0.02	-0.08	-0.06	-0.10	-0.06	-0.05
R51	0.40	-0.05	-0.05	-0.10	0.01	-0.08	-0.06	-0.06

R52	0.04	-0.08	-0.04	-0.05	0.01	-0.07	-0.07	-0.02
R53	-0.14	-0.19	-0.06	-0.17	-0.13	-0.16	-0.15	-0.11
R54	-0.05	-0.04	-0.11	-0.12	0.08	-0.03	-0.11	-0.11
R55	-0.08	-0.18	-0.13	-0.21	-0.13	-0.22	-0.19	-0.15
R56	0.09	-0.14	0.04	-0.06	0.05	-0.04	0.00	-0.04
PROMEDIO	-0.08	-0.17	-0.12	-0.16	-0.10	-0.17	-0.14	-0.14
MEDIANA	-0.10	-0.17	-0.12	-0.16	-0.11	-0.17	-0.14	-0.14
RMSE	0.123	0.178	0.137	0.162	0.127	0.180	0.152	0.150

Table S69. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>3-5</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>3-5</sub> represents data extracted from DOD<sub>3-5</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>3-5</sub>	m02 <sub>3-5</sub>	m03 <sub>3-5</sub>	m04 <sub>3-5</sub>	m05 <sub>3-5</sub>	m06 <sub>3-5</sub>	m07 <sub>3-5</sub>	m08 <sub>3-5</sub>
C1	Salicornia	0.07	0.15	0.03	0.06	0.07	-	-	-	-
C2	Salicornia	0.07	0.16	0.03	0.11	0.09	-	-	-	-
C3	Salicornia	0.13	0.16	0.12	0.12	0.09	-	-	-	-
C4	Salicornia	0.13	0.13	0.09	0.09	0.06	-	-	-	-
R2	Salicornia	0.18	0.10	0.02	0.12	0.07	0.13	0.01	0.07	0.09
R3	Salicornia	0.2	0.14	0.05	0.17	0.04	0.15	0.06	0.10	0.08
R4	Salicornia	0.13	0.11	-0.01	0.10	0.03	0.08	0.01	0.05	0.05
R5	Salicornia	0.12	0.14	0.02	0.16	0.04	0.12	0.03	0.06	0.09
R6	Salicornia	0.2	0.17	0.03	0.10	0.07	0.10	0.04	0.08	0.08
R7	Salicornia	0.19	0.12	0.02	0.14	0.08	0.12	0.03	0.07	0.09
R8	Salicornia	0.2	0.14	0.03	0.10	0.07	0.14	0.04	0.09	0.07
R9	Salicornia	0.19	0.13	0.03	0.12	0.06	0.12	0.04	0.10	0.07
R10	Salicornia	0.23	0.14	0.04	0.08	0.08	0.11	0.04	0.08	0.09
R11	Salicornia	0.28	0.36	0.22	0.23	0.22	0.35	0.32	0.14	0.14
R12	Salicornia	0.3	0.16	0.04	0.11	0.09	0.15	0.05	0.10	0.10
R13	Sarcocornia	0.23	0.13	0.02	0.10	0.09	0.12	0.03	0.10	0.09
R14	Sarcocornia	0.24	0.14	0.07	0.15	0.07	0.15	0.09	0.14	0.15
R15	Sarcocornia+Sporobolus	0.35	0.14	0.06	0.23	0.12	0.15	0.07	0.16	0.14
R16	Sarcocornia	0.25	0.18	0.10	0.12	0.09	0.18	0.04	0.14	0.13
R17	Sarcocornia	0.26	0.30	0.33	0.19	0.06	0.24	0.25	0.18	0.08
R18	Sarcocornia	0.27	0.12	0.05	0.13	0.05	0.14	0.05	0.08	0.10
R19	Sarcocornia	0.27	0.14	0.03	0.14	0.11	0.12	0.05	0.08	0.14
R20	Sarcocornia	0.29	0.25	0.17	0.17	0.10	0.25	0.10	0.14	0.15
R21	Sarcocornia	0.23	0.14	0.04	0.07	0.06	0.16	0.03	0.10	0.10
R22	Sarcocornia	0.28	0.17	0.08	0.14	0.11	0.15	0.06	0.17	0.14
R23	Sarcocornia	0.22	0.14	0.03	0.12	0.12	0.14	0.03	0.14	0.12
R24	Sarcocornia	0.27	0.23	0.09	0.19	0.12	0.25	0.15	0.25	0.13
R25	Sarcocornia	0.21	0.16	0.05	0.11	0.09	0.15	0.06	0.13	0.14
R26	Sarcocornia	0.2	0.39	0.44	0.17	0.09	0.34	0.38	0.22	0.15
R27	Sarcocornia	0.2	0.12	0.05	0.16	0.09	0.13	0.07	0.15	0.14
R28	Sarcocornia	0.23	0.26	0.21	0.30	0.12	0.21	0.27	0.27	0.10
R29	Sarcocornia	0.23	0.14	0.03	0.16	0.09	0.14	0.05	0.11	0.09
R30	Sarcocornia	0.26	0.14	0.08	0.17	0.13	0.18	0.04	0.16	0.13
R31	Sarcocornia	0.26	0.15	0.07	0.17	0.11	0.13	0.06	0.15	0.16
R32	Sarcocornia	0.21	0.07	0.03	0.09	0.03	0.09	0.03	0.07	0.11
R33	Sarcocornia	0.21	0.13	0.02	0.09	0.11	0.12	0.03	0.09	0.12
R34	Sarcocornia	0.28	0.13	0.06	0.15	0.15	0.13	0.06	0.12	0.13
R35	Sarcocornia	0.27	0.18	0.05	0.14	0.13	0.19	0.12	0.14	0.14
R36	Sarcocornia	0.28	0.23	0.07	0.11	0.11	0.21	0.07	0.15	0.12
R37	Sarcocornia	0.2	0.12	0.05	0.11	0.10	0.15	0.08	0.18	0.11
R38	Sarcocornia	0.24	0.23	0.09	0.16	0.11	0.43	0.11	0.18	0.14
R39	Sarcocornia	0.29	0.16	0.06	0.14	0.10	0.14	0.07	0.14	0.15
R40	Sarcocornia	0.22	0.11	0.07	0.16	0.12	0.13	0.09	0.13	0.15
R41	Sarcocornia	0.21	0.10	0.05	0.08	0.04	0.13	0.04	0.06	0.06
R42	Sarcocornia	0.2	0.13	0.09	0.12	0.10	0.16	0.11	0.08	0.13

R43	Sarcocornia+Sporobolus	0.34	0.08	0.03	0.06	0.09	0.12	0.03	0.08	0.10
R44	Sarcocornia	0.19	0.13	0.07	0.08	0.13	0.13	0.06	0.13	0.14
R45	Sarcocornia	0.29	0.15	0.08	0.12	0.08	0.11	0.08	0.08	0.08
R46	Salicornia	0.17	0.10	0.03	0.13	0.05	0.10	0.03	0.13	0.09
R47	Salicornia	0.18	0.09	0.04	0.14	0.10	0.08	0.04	0.14	0.13
R48	Salicornia	0.17	0.16	0.05	0.10	0.08	0.12	0.05	0.12	0.08
R49	Salicornia	0.14	0.11	0.03	0.08	0.11	0.14	0.04	0.11	0.11
R50	Salicornia	0.14	0.13	0.05	0.12	0.08	0.11	0.05	0.14	0.12
R51	Salicornia	0.15	1.09	0.08	0.20	0.11	0.19	0.11	0.13	0.12
R52	Salicornia	0.13	0.21	0.07	0.11	0.12	0.20	0.06	0.13	0.11
R53	Sarcocornia	0.25	0.16	0.07	0.24	0.12	0.14	0.07	0.13	0.15
R54	Sarcocornia	0.2	0.16	0.22	0.17	0.10	0.27	0.32	0.09	0.12
R55	Sarcocornia	0.29	0.22	0.10	0.19	0.12	0.18	0.10	0.10	0.15
R56	Sarcocornia	0.13	0.28	0.06	0.23	0.11	0.21	0.03	0.17	0.11

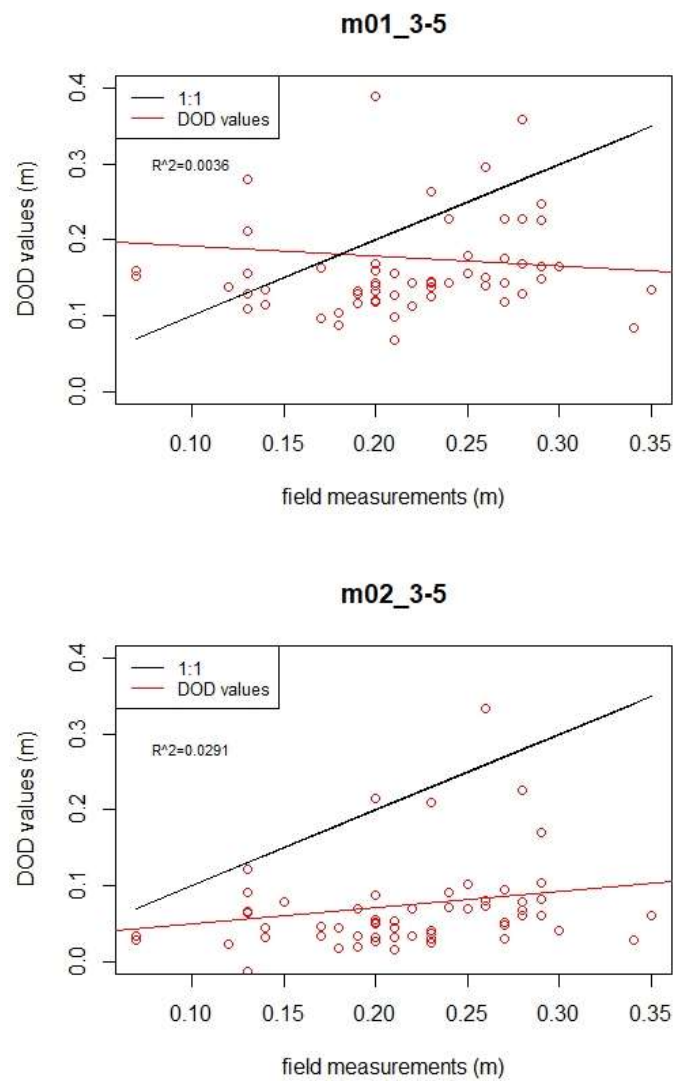


Figure S25. (Continue)

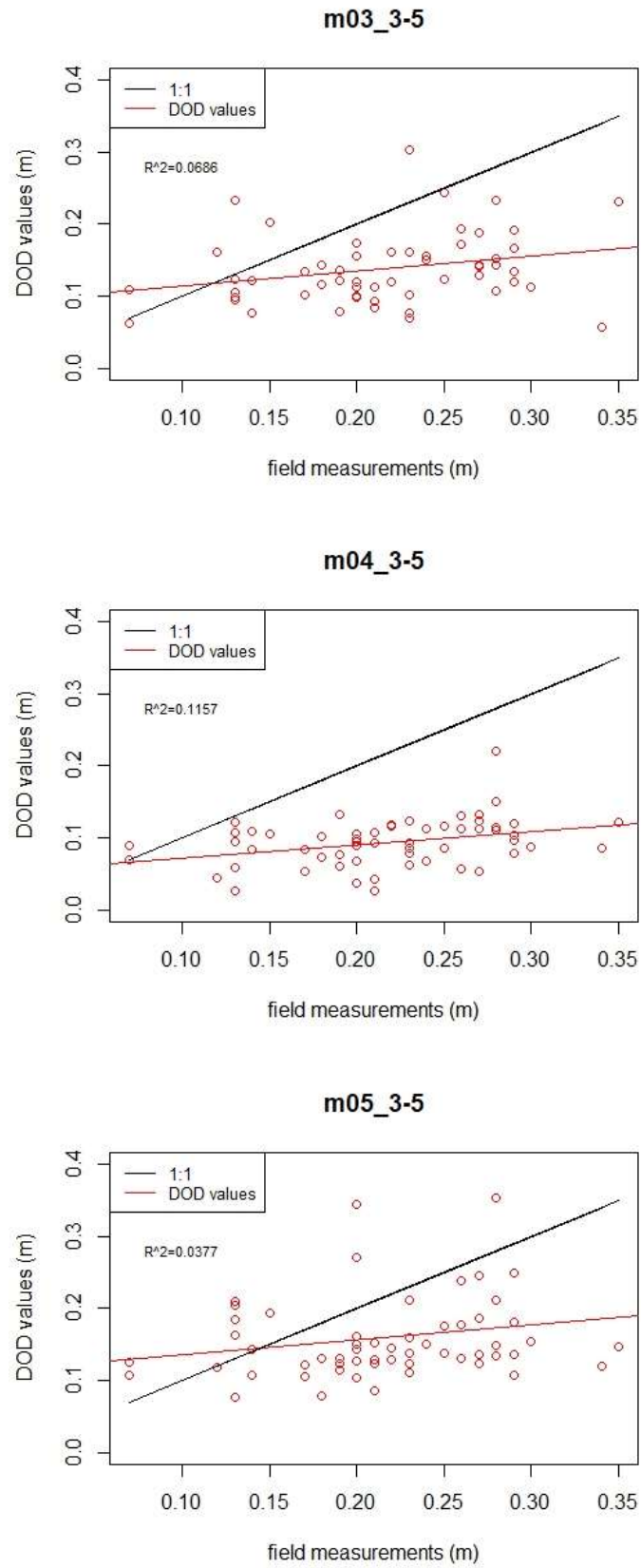


Figure S25. (Continue)

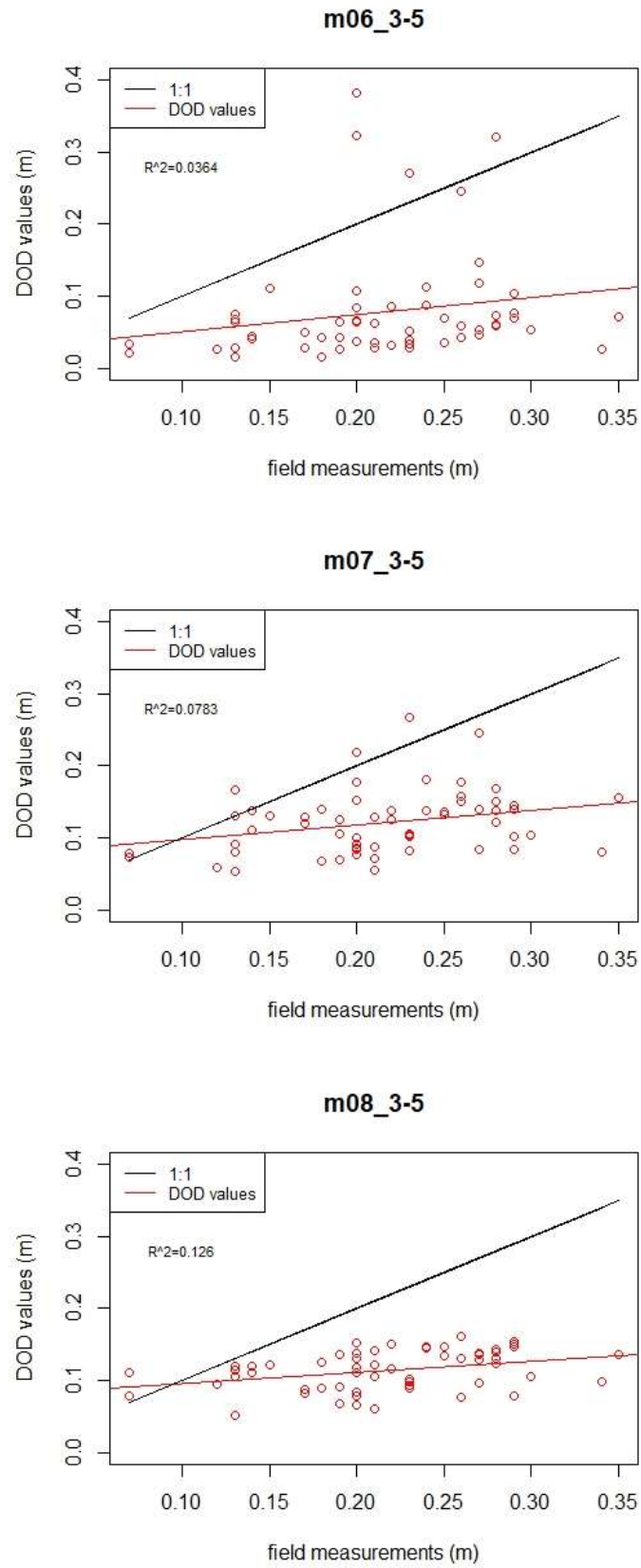


Figure S25. Linear regression and  $R^2$  value for  $DOD_{3-5}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S70. Values of difference from field measurements for  $DOD_{3-5}$  for the eight missions at each point. Each column identifies the mission:  $m01_{3-5}$  represents data extracted from  $DOD_{3-5}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{3-5}$	$m02_{3-5}$	$m03_{3-5}$	$m04_{3-5}$	$m05_{3-5}$	$m06_{3-5}$	$m07_{3-5}$	$m08_{3-5}$
C1	0.08	-0.04	-0.01	0.00	-	-	-	-
C2	0.09	-0.04	0.04	0.02	-	-	-	-
C3	0.03	-0.01	-0.01	-0.04	-	-	-	-
C4	0.00	-0.04	-0.04	-0.07	-	-	-	-
R2	-0.08	-0.16	-0.06	-0.11	-0.05	-0.17	-0.11	-0.09
R3	-0.06	-0.15	-0.03	-0.16	-0.05	-0.14	-0.10	-0.12
R4	-0.02	-0.14	-0.03	-0.10	-0.05	-0.12	-0.08	-0.08
R5	0.02	-0.10	0.04	-0.08	0.00	-0.09	-0.06	-0.03
R6	-0.03	-0.17	-0.10	-0.13	-0.10	-0.16	-0.12	-0.12
R7	-0.07	-0.17	-0.05	-0.11	-0.07	-0.16	-0.12	-0.10
R8	-0.06	-0.17	-0.10	-0.13	-0.06	-0.16	-0.11	-0.13
R9	-0.06	-0.16	-0.07	-0.13	-0.07	-0.15	-0.09	-0.12
R10	-0.09	-0.19	-0.15	-0.15	-0.12	-0.19	-0.15	-0.14
R11	0.08	-0.06	-0.05	-0.06	0.07	0.04	-0.14	-0.14
R12	-0.14	-0.26	-0.19	-0.21	-0.15	-0.25	-0.20	-0.20
R13	-0.10	-0.21	-0.13	-0.14	-0.11	-0.20	-0.13	-0.14
R14	-0.10	-0.17	-0.09	-0.17	-0.09	-0.15	-0.10	-0.09
R15	-0.21	-0.29	-0.12	-0.23	-0.20	-0.28	-0.19	-0.21
R16	-0.07	-0.15	-0.13	-0.16	-0.07	-0.21	-0.11	-0.12
R17	0.04	0.07	-0.07	-0.20	-0.02	-0.01	-0.08	-0.18
R18	-0.15	-0.22	-0.14	-0.22	-0.13	-0.22	-0.19	-0.17
R19	-0.13	-0.24	-0.13	-0.16	-0.15	-0.22	-0.19	-0.13
R20	-0.04	-0.12	-0.12	-0.19	-0.04	-0.19	-0.15	-0.14
R21	-0.09	-0.19	-0.16	-0.17	-0.07	-0.20	-0.13	-0.13
R22	-0.11	-0.20	-0.14	-0.17	-0.13	-0.22	-0.11	-0.14
R23	-0.08	-0.19	-0.10	-0.10	-0.08	-0.19	-0.08	-0.10
R24	-0.04	-0.18	-0.08	-0.15	-0.02	-0.12	-0.02	-0.14
R25	-0.05	-0.16	-0.10	-0.12	-0.06	-0.15	-0.08	-0.07
R26	0.19	0.24	-0.03	-0.11	0.14	0.18	0.02	-0.05
R27	-0.08	-0.15	-0.04	-0.11	-0.07	-0.13	-0.05	-0.06
R28	0.03	-0.02	0.07	-0.11	-0.02	0.04	0.04	-0.13
R29	-0.09	-0.20	-0.07	-0.14	-0.09	-0.18	-0.12	-0.14
R30	-0.12	-0.18	-0.09	-0.13	-0.08	-0.22	-0.10	-0.13
R31	-0.11	-0.19	-0.09	-0.15	-0.13	-0.20	-0.11	-0.10
R32	-0.14	-0.18	-0.12	-0.18	-0.12	-0.18	-0.14	-0.10
R33	-0.08	-0.19	-0.12	-0.10	-0.09	-0.18	-0.12	-0.09
R34	-0.15	-0.22	-0.13	-0.13	-0.15	-0.22	-0.16	-0.15
R35	-0.09	-0.22	-0.13	-0.14	-0.08	-0.15	-0.13	-0.13
R36	-0.05	-0.21	-0.17	-0.17	-0.07	-0.21	-0.13	-0.16
R37	-0.08	-0.15	-0.09	-0.10	-0.05	-0.12	-0.02	-0.09
R38	-0.01	-0.15	-0.08	-0.13	0.19	-0.13	-0.06	-0.10
R39	-0.13	-0.23	-0.15	-0.19	-0.15	-0.22	-0.15	-0.14
R40	-0.11	-0.15	-0.06	-0.10	-0.09	-0.13	-0.09	-0.07
R41	-0.11	-0.16	-0.13	-0.17	-0.08	-0.17	-0.15	-0.15
R42	-0.07	-0.11	-0.08	-0.10	-0.04	-0.09	-0.12	-0.07
R43	-0.26	-0.31	-0.28	-0.25	-0.22	-0.31	-0.26	-0.24
R44	-0.06	-0.12	-0.11	-0.06	-0.06	-0.13	-0.07	-0.05
R45	-0.14	-0.21	-0.17	-0.21	-0.18	-0.21	-0.21	-0.21
R46	-0.07	-0.14	-0.04	-0.12	-0.07	-0.14	-0.04	-0.08
R47	-0.09	-0.14	-0.04	-0.08	-0.10	-0.14	-0.04	-0.06
R48	-0.01	-0.12	-0.07	-0.09	-0.05	-0.12	-0.05	-0.09
R49	-0.03	-0.11	-0.06	-0.03	0.00	-0.10	-0.03	-0.03
R50	-0.01	-0.09	-0.02	-0.06	-0.03	-0.09	0.00	-0.02
R51	0.94	-0.07	0.05	-0.04	0.04	-0.04	-0.02	-0.03
R52	0.08	-0.06	-0.02	-0.01	0.07	-0.07	0.00	-0.02

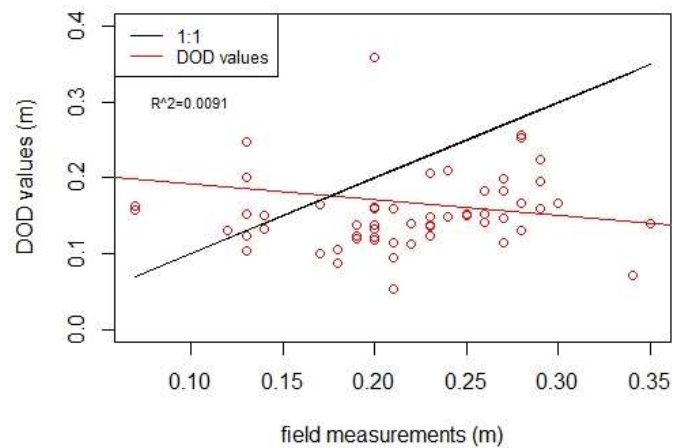
R53	-0.09	-0.18	-0.01	-0.13	-0.11	-0.18	-0.12	-0.10
R54	-0.04	0.02	-0.03	-0.10	0.07	0.12	-0.11	-0.08
R55	-0.07	-0.19	-0.10	-0.17	-0.11	-0.19	-0.19	-0.14
R56	0.15	-0.07	0.10	-0.02	0.08	-0.10	0.04	-0.02
PROMEDIO	-0.05	-0.15	-0.08	-0.13	-0.06	-0.14	-0.10	-0.11
MEDIANA	-0.07	-0.16	-0.09	-0.13	-0.07	-0.16	-0.11	-0.12
RMSE	0.156	0.167	0.103	0.136	0.100	0.169	0.119	0.121

Table S71. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>3-10</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>3-10</sub> represents data extracted from DOD<sub>3-10</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>3-10</sub>	m02 <sub>3-10</sub>	m03 <sub>3-10</sub>	m04 <sub>3-10</sub>	m05 <sub>3-10</sub>	m06 <sub>3-10</sub>	m07 <sub>3-10</sub>	m08 <sub>3-10</sub>
C1	Salicornia	0.07	0.16	0.03	0.07	0.07	-	-	-	-
C2	Salicornia	0.07	0.16	0.04	0.10	0.09	-	-	-	-
C3	Salicornia	0.13	0.15	0.12	0.12	0.10	-	-	-	-
C4	Salicornia	0.13	0.12	0.09	0.10	0.06	-	-	-	-
R2	Salicornia	0.18	0.11	0.01	0.12	0.07	0.14	0.01	0.07	0.09
R3	Salicornia	0.20	0.14	0.05	0.15	0.04	0.15	0.06	0.13	0.08
R4	Salicornia	0.13	0.10	-0.02	0.13	0.02	0.07	0.01	0.06	0.05
R5	Salicornia	0.12	0.13	0.02	0.13	0.05	0.12	0.02	0.05	0.09
R6	Salicornia	0.20	0.16	0.04	0.11	0.07	0.10	0.04	0.08	0.08
R7	Salicornia	0.19	0.12	0.02	0.09	0.08	0.12	0.02	0.07	0.09
R8	Salicornia	0.20	0.13	0.03	0.10	0.07	0.14	0.04	0.09	0.07
R9	Salicornia	0.19	0.14	0.04	0.11	0.06	0.12	0.05	0.10	0.07
R10	Salicornia	0.23	0.14	0.04	0.07	0.08	0.11	0.04	0.09	0.10
R11	Salicornia	0.28	0.26	0.07	0.22	0.15	0.31	0.20	0.15	0.13
R12	Salicornia	0.30	0.17	0.05	0.11	0.09	0.16	0.06	0.09	0.12
R13	Sarcocornia	0.23	0.12	0.02	0.08	0.08	0.13	0.03	0.07	0.09
R14	Sarcocornia	0.24	0.15	0.09	0.15	0.07	0.16	0.09	0.12	0.14
R15	Sarcocornia+Sporobolus	0.35	0.14	0.06	0.22	0.12	0.15	0.08	0.16	0.14
R16	Sarcocornia	0.25	0.15	0.07	0.14	0.09	0.16	0.08	0.13	0.13
R17	Sarcocornia	0.26	0.18	0.25	0.23	0.06	0.15	0.12	0.18	0.10
R18	Sarcocornia	0.27	0.12	0.05	0.11	0.05	0.13	0.06	0.06	0.10
R19	Sarcocornia	0.27	0.15	0.04	0.16	0.12	0.13	0.05	0.09	0.14
R20	Sarcocornia	0.29	0.20	0.13	0.19	0.10	0.23	0.11	0.14	0.18
R21	Sarcocornia	0.23	0.15	0.04	0.08	0.07	0.17	0.04	0.10	0.10
R22	Sarcocornia	0.28	0.17	0.07	0.15	0.12	0.15	0.06	0.16	0.14
R23	Sarcocornia	0.22	0.14	0.03	0.13	0.12	0.14	0.03	0.13	0.12
R24	Sarcocornia	0.27	0.18	0.13	0.18	0.15	0.22	0.13	0.21	0.15
R25	Sarcocornia	0.21	0.16	0.06	0.13	0.10	0.15	0.07	0.12	0.14
R26	Sarcocornia	0.20	0.36	0.44	0.23	0.10	0.39	0.35	0.22	0.14
R27	Sarcocornia	0.20	0.12	0.06	0.16	0.09	0.14	0.06	0.16	0.14
R28	Sarcocornia	0.23	0.21	0.12	0.29	0.10	0.17	0.18	0.23	0.14
R29	Sarcocornia	0.23	0.14	0.04	0.14	0.09	0.13	0.05	0.09	0.10
R30	Sarcocornia	0.26	0.14	0.09	0.15	0.12	0.18	0.04	0.13	0.13
R31	Sarcocornia	0.26	0.15	0.06	0.17	0.11	0.14	0.06	0.14	0.16
R32	Sarcocornia	0.21	0.05	0.02	0.10	0.05	0.09	0.02	0.06	0.09
R33	Sarcocornia	0.21	0.12	0.01	0.09	0.11	0.12	0.03	0.09	0.12
R34	Sarcocornia	0.28	0.13	0.06	0.14	0.15	0.14	0.05	0.13	0.13
R35	Sarcocornia	0.27	0.20	0.10	0.14	0.14	0.19	0.12	0.14	0.16
R36	Sarcocornia	0.28	0.25	0.09	0.11	0.12	0.23	0.09	0.14	0.14
R37	Sarcocornia	0.20	0.12	0.04	0.10	0.11	0.16	0.07	0.17	0.10

R38	Sarcocornia	0.24	0.21	0.10	0.26	0.12	0.38	0.15	0.22	0.13
R39	Sarcocornia	0.29	0.16	0.06	0.13	0.10	0.14	0.07	0.12	0.14
R40	Sarcocornia	0.22	0.11	0.07	0.16	0.11	0.14	0.09	0.14	0.16
R41	Sarcocornia	0.21	0.09	0.04	0.11	0.05	0.13	0.04	0.06	0.06
R42	Sarcocornia	0.20	0.13	0.10	0.10	0.10	0.16	0.12	0.09	0.14
R43	Sarcocornia+Sporobolus	0.34	0.07	0.04	0.07	0.09	0.11	0.04	0.05	0.10
R44	Sarcocornia	0.19	0.12	0.07	0.08	0.13	0.13	0.07	0.12	0.13
R45	Sarcocornia	0.29	0.16	0.10	0.12	0.08	0.12	0.08	0.09	0.09
R46	Salicornia	0.17	0.10	0.03	0.15	0.05	0.11	0.03	0.11	0.09
R47	Salicornia	0.18	0.09	0.05	0.14	0.10	0.08	0.05	0.14	0.12
R48	Salicornia	0.17	0.17	0.05	0.13	0.09	0.13	0.05	0.11	0.08
R49	Salicornia	0.14	0.15	0.04	0.09	0.10	0.13	0.05	0.09	0.12
R50	Salicornia	0.14	0.13	0.05	0.12	0.09	0.11	0.05	0.13	0.11
R51	Salicornia	0.15	1.10	0.09	0.18	0.10	0.19	0.11	0.14	0.13
R52	Salicornia	0.13	0.20	0.08	0.12	0.12	0.20	0.07	0.13	0.12
R53	Sarcocornia	0.25	0.15	0.07	0.24	0.12	0.13	0.08	0.13	0.15
R54	Sarcocornia	0.20	0.16	0.18	0.19	0.11	0.28	0.26	0.10	0.13
R55	Sarcocornia	0.29	0.22	0.10	0.18	0.12	0.17	0.08	0.13	0.15
R56	Sarcocornia	0.13	0.25	0.05	0.22	0.11	0.22	0.08	0.16	0.12

**m01\_3-10**



**m02\_3-10**

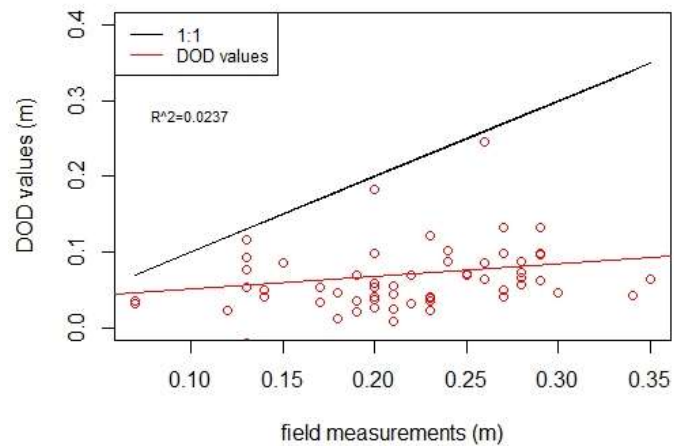


Figure S26. (Continue)

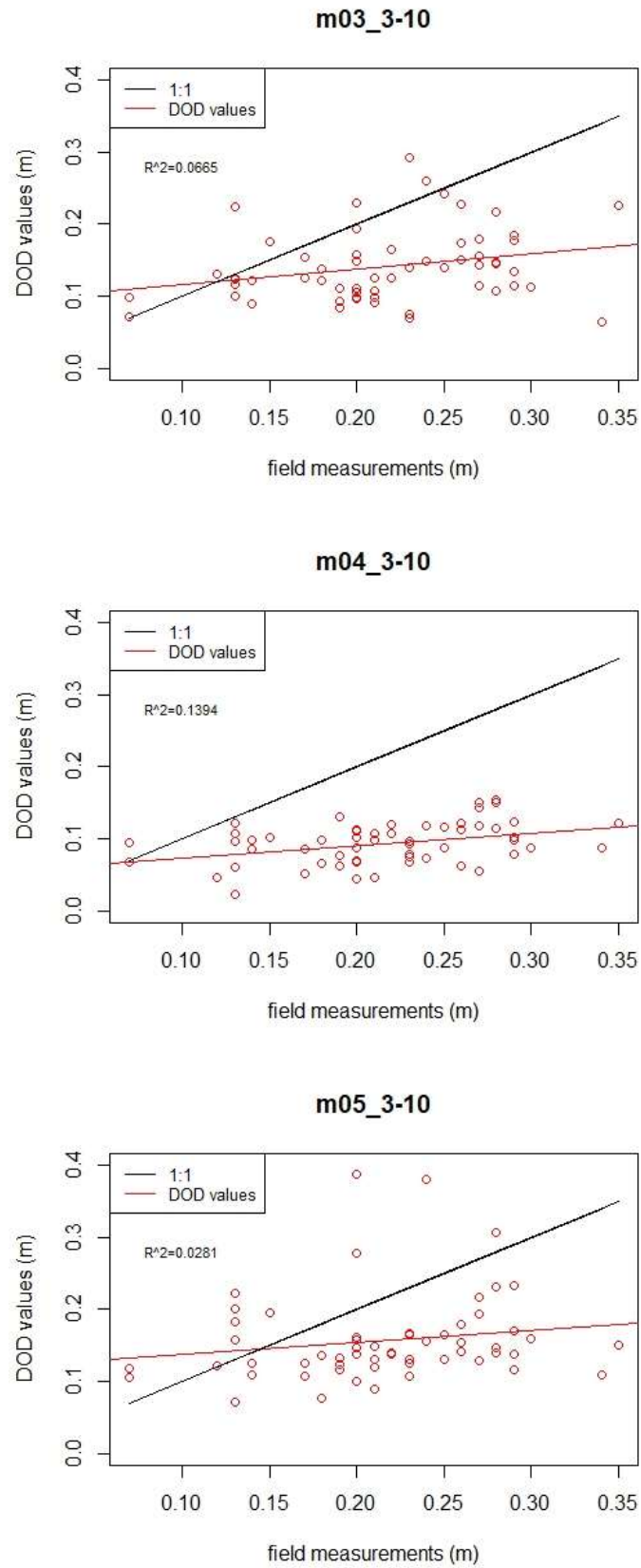


Figure S26. (Continue)

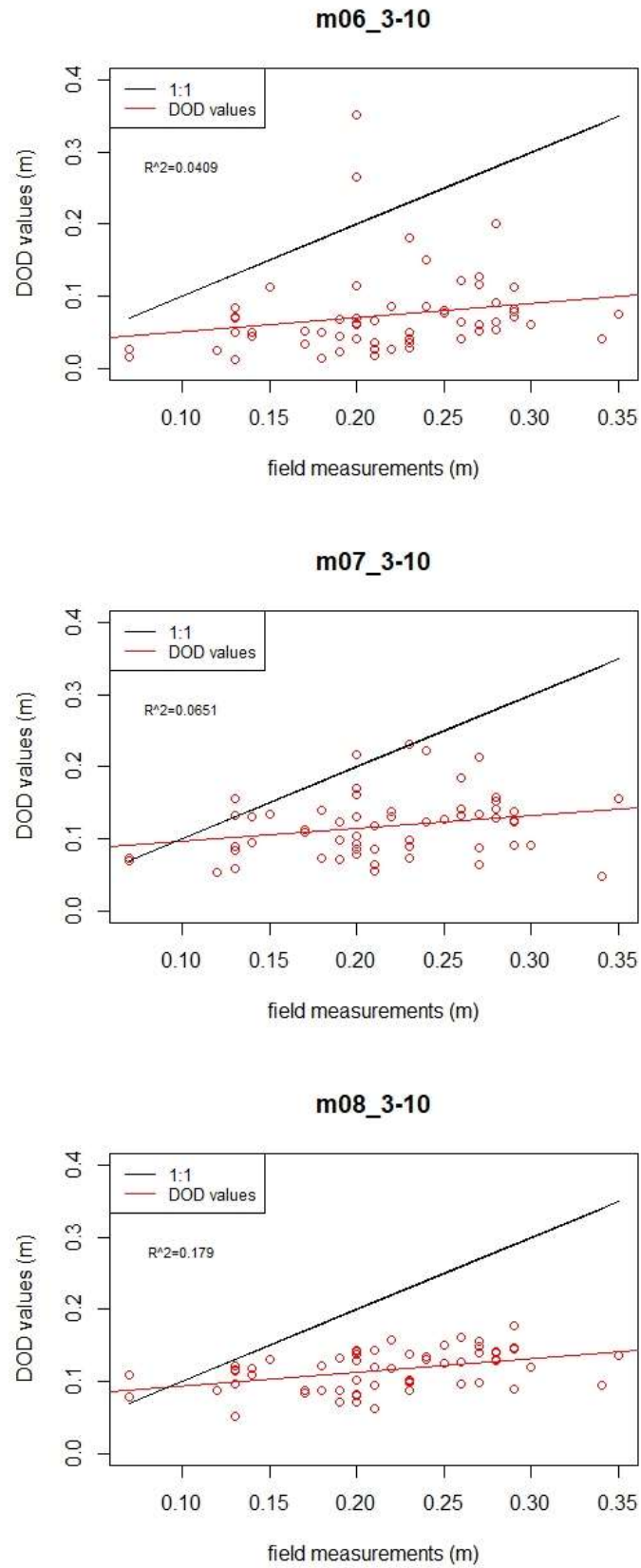


Figure S26. Linear regression and  $R^2$  value for  $DOD_{3-10}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S72. Values of difference from field measurements for  $DOD_{3-10}$  for the eight missions at each point. Each column identifies the mission:  $m01_{3-10}$  represents data extracted from  $DOD_{3-10}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{3-10}$	$m02_{3-10}$	$m03_{3-10}$	$m04_{3-10}$	$m05_{3-10}$	$m06_{3-10}$	$m07_{3-10}$	$m08_{3-10}$
C1	0.09	-0.04	0.00	0.00	-	-	-	-
C2	0.09	-0.03	0.03	0.02	-	-	-	-
C3	0.02	-0.01	-0.01	-0.03	-	-	-	-
C4	-0.01	-0.04	-0.03	-0.07	-	-	-	-
R2	-0.07	-0.17	-0.06	-0.11	-0.04	-0.17	-0.11	-0.09
R3	-0.06	-0.15	-0.05	-0.16	-0.05	-0.14	-0.07	-0.12
R4	-0.03	-0.15	-0.01	-0.11	-0.06	-0.12	-0.07	-0.08
R5	0.01	-0.10	0.01	-0.07	0.00	-0.10	-0.07	-0.03
R6	-0.04	-0.16	-0.09	-0.13	-0.10	-0.16	-0.12	-0.12
R7	-0.07	-0.17	-0.10	-0.11	-0.07	-0.17	-0.12	-0.10
R8	-0.07	-0.17	-0.10	-0.13	-0.06	-0.16	-0.11	-0.13
R9	-0.05	-0.15	-0.08	-0.13	-0.07	-0.14	-0.09	-0.12
R10	-0.09	-0.19	-0.16	-0.15	-0.12	-0.19	-0.14	-0.13
R11	-0.02	-0.21	-0.06	-0.13	0.03	-0.08	-0.13	-0.15
R12	-0.13	-0.25	-0.19	-0.21	-0.14	-0.24	-0.21	-0.18
R13	-0.11	-0.21	-0.15	-0.15	-0.11	-0.20	-0.16	-0.14
R14	-0.09	-0.15	-0.09	-0.17	-0.08	-0.15	-0.12	-0.10
R15	-0.21	-0.29	-0.13	-0.23	-0.20	-0.27	-0.19	-0.21
R16	-0.10	-0.18	-0.11	-0.16	-0.09	-0.17	-0.12	-0.12
R17	-0.08	-0.01	-0.03	-0.20	-0.11	-0.14	-0.08	-0.16
R18	-0.15	-0.22	-0.16	-0.22	-0.14	-0.21	-0.21	-0.17
R19	-0.12	-0.23	-0.11	-0.15	-0.14	-0.22	-0.18	-0.13
R20	-0.09	-0.16	-0.10	-0.19	-0.06	-0.18	-0.15	-0.11
R21	-0.08	-0.19	-0.15	-0.16	-0.06	-0.19	-0.13	-0.13
R22	-0.11	-0.21	-0.13	-0.16	-0.13	-0.22	-0.12	-0.14
R23	-0.08	-0.19	-0.09	-0.10	-0.08	-0.19	-0.09	-0.10
R24	-0.09	-0.14	-0.09	-0.12	-0.05	-0.14	-0.06	-0.12
R25	-0.05	-0.15	-0.09	-0.11	-0.06	-0.14	-0.09	-0.07
R26	0.16	0.24	0.03	-0.10	0.19	0.15	0.02	-0.06
R27	-0.08	-0.14	-0.04	-0.11	-0.06	-0.14	-0.04	-0.06
R28	-0.02	-0.11	0.06	-0.13	-0.06	-0.05	0.00	-0.09
R29	-0.09	-0.19	-0.09	-0.14	-0.10	-0.18	-0.14	-0.13
R30	-0.12	-0.17	-0.11	-0.14	-0.08	-0.22	-0.13	-0.13
R31	-0.11	-0.20	-0.09	-0.15	-0.12	-0.20	-0.12	-0.10
R32	-0.16	-0.19	-0.11	-0.16	-0.12	-0.19	-0.15	-0.12
R33	-0.09	-0.20	-0.12	-0.10	-0.09	-0.18	-0.12	-0.09
R34	-0.15	-0.22	-0.14	-0.13	-0.14	-0.23	-0.15	-0.15
R35	-0.07	-0.17	-0.13	-0.13	-0.08	-0.15	-0.13	-0.11
R36	-0.03	-0.19	-0.17	-0.16	-0.05	-0.19	-0.14	-0.14
R37	-0.08	-0.16	-0.10	-0.09	-0.04	-0.13	-0.03	-0.10
R38	-0.03	-0.14	0.02	-0.12	0.14	-0.09	-0.02	-0.11
R39	-0.13	-0.23	-0.16	-0.19	-0.15	-0.22	-0.17	-0.15
R40	-0.11	-0.15	-0.06	-0.11	-0.08	-0.13	-0.08	-0.06
R41	-0.12	-0.17	-0.10	-0.16	-0.08	-0.17	-0.15	-0.15
R42	-0.07	-0.10	-0.10	-0.10	-0.04	-0.08	-0.11	-0.06
R43	-0.27	-0.30	-0.28	-0.25	-0.23	-0.30	-0.29	-0.25
R44	-0.07	-0.12	-0.11	-0.06	-0.06	-0.12	-0.07	-0.06
R45	-0.13	-0.19	-0.17	-0.21	-0.17	-0.21	-0.20	-0.20
R46	-0.07	-0.14	-0.02	-0.12	-0.06	-0.14	-0.06	-0.08
R47	-0.09	-0.13	-0.04	-0.08	-0.10	-0.13	-0.04	-0.06
R48	0.00	-0.12	-0.05	-0.08	-0.05	-0.12	-0.06	-0.09
R49	0.01	-0.10	-0.05	-0.04	-0.01	-0.09	-0.05	-0.02
R50	-0.01	-0.09	-0.02	-0.05	-0.03	-0.09	-0.01	-0.03
R51	0.95	-0.06	0.03	-0.05	0.04	-0.04	-0.01	-0.02
R52	0.07	-0.05	-0.01	-0.01	0.07	-0.06	0.00	-0.01

R53	-0.10	-0.18	-0.01	-0.13	-0.12	-0.17	-0.12	-0.10
R54	-0.04	-0.02	-0.01	-0.09	0.08	0.06	-0.10	-0.07
R55	-0.07	-0.19	-0.11	-0.17	-0.12	-0.21	-0.16	-0.14
R56	0.12	-0.08	0.09	-0.02	0.09	-0.05	0.03	-0.01
PROMEDIO	-0.05	-0.15	-0.08	-0.13	-0.07	-0.15	-0.10	-0.11
MEDIANA	-0.08	-0.17	-0.09	-0.13	-0.07	-0.16	-0.12	-0.11
RMSE	0.158	0.167	0.102	0.135	0.101	0.166	0.122	0.118

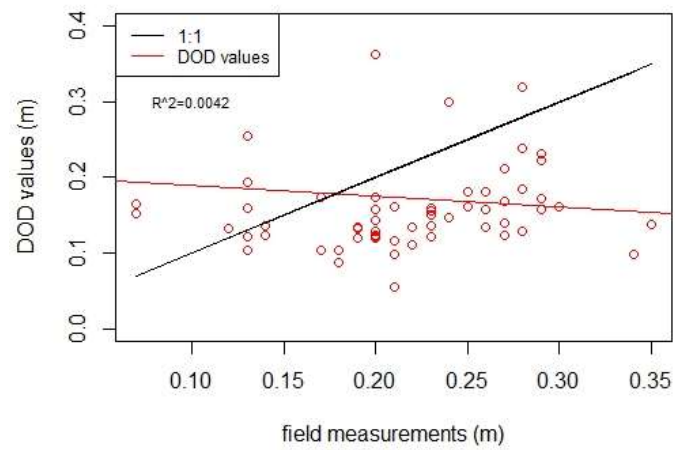
Table S73. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>3-15</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>3-15</sub> represents data extracted from DOD<sub>3-15</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>3-15</sub>	m02 <sub>3-15</sub>	m03 <sub>3-15</sub>	m04 <sub>3-15</sub>	m05 <sub>3-15</sub>	m06 <sub>3-15</sub>	m07 <sub>3-15</sub>	m08 <sub>3-15</sub>
C1	Salicornia	0.07	0.15	0.03	0.07	0.07	-	-	-	-
C2	Salicornia	0.07	0.16	0.04	0.10	0.09	-	-	-	-
C3	Salicornia	0.13	0.16	0.12	0.12	0.10	-	-	-	-
C4	Salicornia	0.13	0.12	0.09	0.10	0.06	-	-	-	-
R2	Salicornia	0.18	0.10	0.01	0.11	0.07	0.13	0.01	0.07	0.09
R3	Salicornia	0.2	0.14	0.05	0.16	0.05	0.15	0.07	0.14	0.08
R4	Salicornia	0.13	0.10	-0.02	0.12	0.02	0.07	0.01	0.06	0.05
R5	Salicornia	0.12	0.13	0.02	0.13	0.04	0.12	0.02	0.05	0.09
R6	Salicornia	0.2	0.16	0.04	0.11	0.07	0.10	0.04	0.08	0.09
R7	Salicornia	0.19	0.12	0.02	0.10	0.08	0.11	0.03	0.07	0.09
R8	Salicornia	0.2	0.12	0.03	0.10	0.07	0.13	0.04	0.10	0.07
R9	Salicornia	0.19	0.14	0.04	0.11	0.06	0.12	0.05	0.10	0.07
R10	Salicornia	0.23	0.14	0.04	0.07	0.07	0.11	0.05	0.09	0.10
R11	Salicornia	0.28	0.32	0.10	0.22	0.18	0.12	0.17	0.16	0.17
R12	Salicornia	0.3	0.16	0.05	0.11	0.09	0.16	0.06	0.08	0.11
R13	Sarcocornia	0.23	0.12	0.02	0.08	0.08	0.12	0.03	0.06	0.09
R14	Sarcocornia	0.24	0.15	0.08	0.13	0.07	0.16	0.09	0.12	0.12
R15	Sarcocornia+Sporobolus	0.35	0.14	0.06	0.22	0.12	0.15	0.08	0.15	0.14
R16	Sarcocornia	0.25	0.18	0.12	0.15	0.10	0.16	0.07	0.14	0.14
R17	Sarcocornia	0.26	0.18	0.29	0.22	0.07	0.15	0.30	0.22	0.10
R18	Sarcocornia	0.27	0.12	0.05	0.11	0.06	0.12	0.06	0.06	0.09
R19	Sarcocornia	0.27	0.14	0.04	0.16	0.12	0.11	0.05	0.11	0.14
R20	Sarcocornia	0.29	0.22	0.15	0.20	0.12	0.23	0.10	0.14	0.16

R21	Sarcocornia	0.2 3	0.16	0.04	0.07	0.07	0.15	0.04	0.10	0.10
R22	Sarcocornia	0.2 8	0.18	0.06	0.14	0.11	0.14	0.07	0.15	0.14
R23	Sarcocornia	0.2 2	0.14	0.03	0.12	0.12	0.14	0.03	0.13	0.12
R24	Sarcocornia	0.2 7	0.17	0.07	0.20	0.12	0.21	0.12	0.21	0.14
R25	Sarcocornia	0.2 1	0.16	0.05	0.13	0.09	0.15	0.06	0.11	0.15
R26	Sarcocornia	0.2	0.36	0.40	0.19	0.14	0.39	0.08	0.26	0.14
R27	Sarcocornia	0.2	0.12	0.05	0.16	0.09	0.14	0.05	0.16	0.14
R28	Sarcocornia	0.2 3	0.15	0.12	0.29	0.22	0.15	0.19	0.26	0.10
R29	Sarcocornia	0.2 3	0.16	0.08	0.15	0.09	0.12	0.05	0.08	0.10
R30	Sarcocornia	0.2 6	0.14	0.08	0.16	0.12	0.17	0.04	0.12	0.13
R31	Sarcocornia	0.2 6	0.16	0.06	0.16	0.11	0.14	0.06	0.11	0.16
R32	Sarcocornia	0.2 1	0.05	0.02	0.08	0.05	0.06	0.02	0.06	0.09
R33	Sarcocornia	0.2 1	0.12	0.01	0.10	0.11	0.12	0.03	0.09	0.12
R34	Sarcocornia	0.2 8	0.13	0.06	0.13	0.15	0.14	0.06	0.13	0.13
R35	Sarcocornia	0.2 7	0.21	0.09	0.14	0.13	0.20	0.12	0.14	0.15
R36	Sarcocornia	0.2 8	0.24	0.06	0.11	0.11	0.23	0.11	0.14	0.14
R37	Sarcocornia	0.2	0.12	0.06	0.10	0.11	0.16	0.07	0.16	0.10
R38	Sarcocornia	0.2 4	0.30	0.11	0.17	0.13	0.25	0.15	0.20	0.14
R39	Sarcocornia	0.2 9	0.17	0.07	0.12	0.10	0.14	0.07	0.11	0.15
R40	Sarcocornia	0.2 2	0.11	0.06	0.16	0.11	0.14	0.09	0.13	0.16
R41	Sarcocornia	0.2 1	0.10	0.05	0.11	0.05	0.13	0.04	0.06	0.06
R42	Sarcocornia	0.2	0.13	0.10	0.10	0.10	0.17	0.11	0.10	0.14
R43	Sarcocornia+Sporobolus	0.3 4	0.10	0.03	0.06	0.08	0.09	0.02	0.08	0.10
R44	Sarcocornia	0.1 9	0.13	0.07	0.09	0.13	0.13	0.07	0.13	0.13
R45	Sarcocornia	0.2 9	0.16	0.11	0.13	0.08	0.12	0.08	0.09	0.09
R46	Salicornia	0.1 7	0.10	0.04	0.16	0.05	0.11	0.04	0.12	0.09
R47	Salicornia	0.1 8	0.09	0.05	0.15	0.10	0.08	0.05	0.13	0.12
R48	Salicornia	0.1 7	0.17	0.05	0.14	0.08	0.13	0.05	0.11	0.08
R49	Salicornia	0.1 4	0.12	0.04	0.09	0.11	0.13	0.05	0.09	0.12
R50	Salicornia	0.1 4	0.14	0.05	0.13	0.09	0.12	0.05	0.14	0.11

R51	Salicornia	0.15	1.10	0.10	0.17	0.11	0.20	0.10	0.14	0.14
R52	Salicornia	0.13	0.19	0.08	0.12	0.12	0.19	0.07	0.13	0.13
R53	Sarcocornia	0.25	0.16	0.08	0.22	0.12	0.14	0.08	0.13	0.15
R54	Sarcocornia	0.2	0.17	0.18	0.20	0.11	0.30	0.19	0.11	0.13
R55	Sarcocornia	0.29	0.23	0.12	0.18	0.12	0.19	0.09	0.12	0.15
R56	Sarcocornia	0.13	0.25	0.00	0.20	0.10	0.22	0.10	0.16	0.10

**m01\_3-15**



**m02\_3-15**

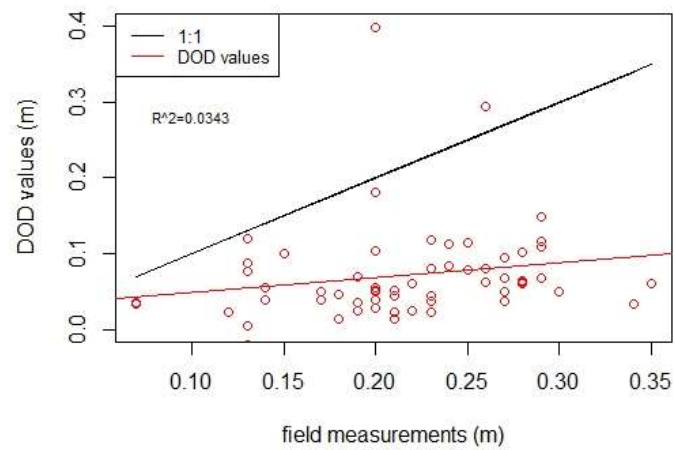


Figure S27. (Continue)

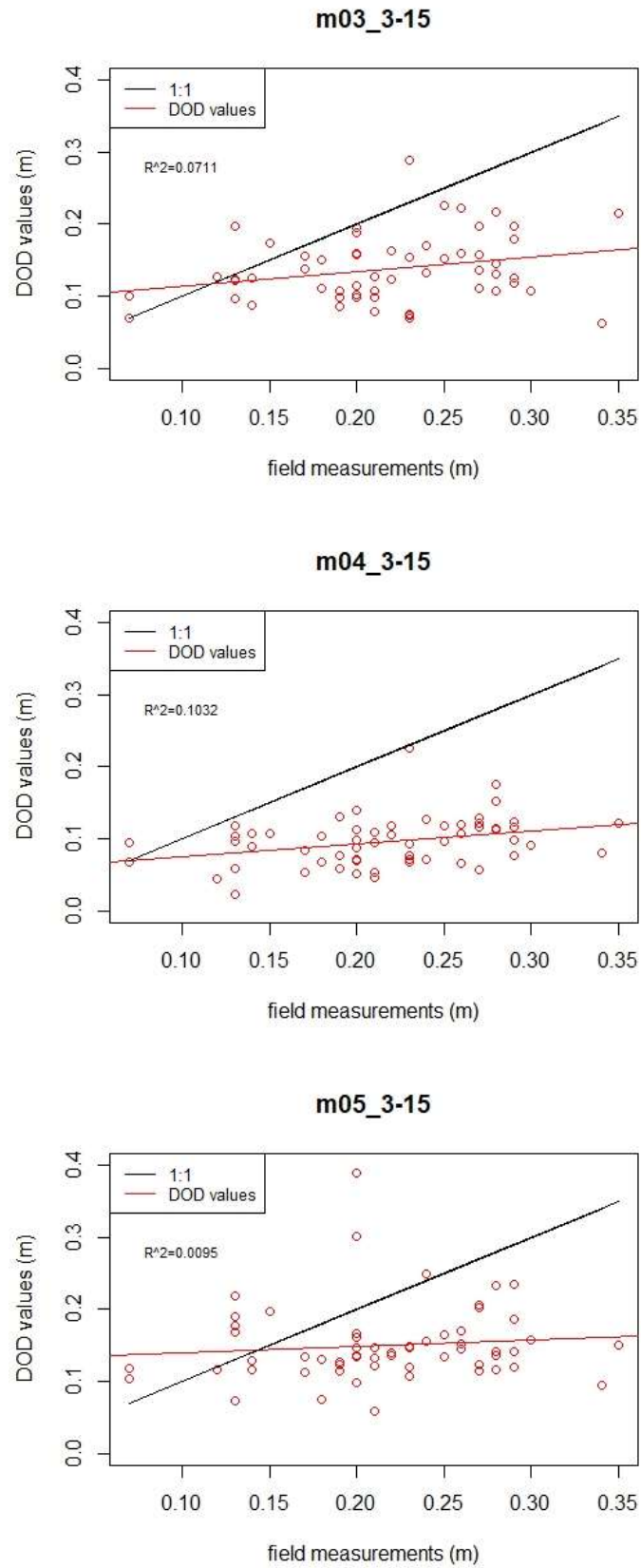


Figure S27. (Continue)

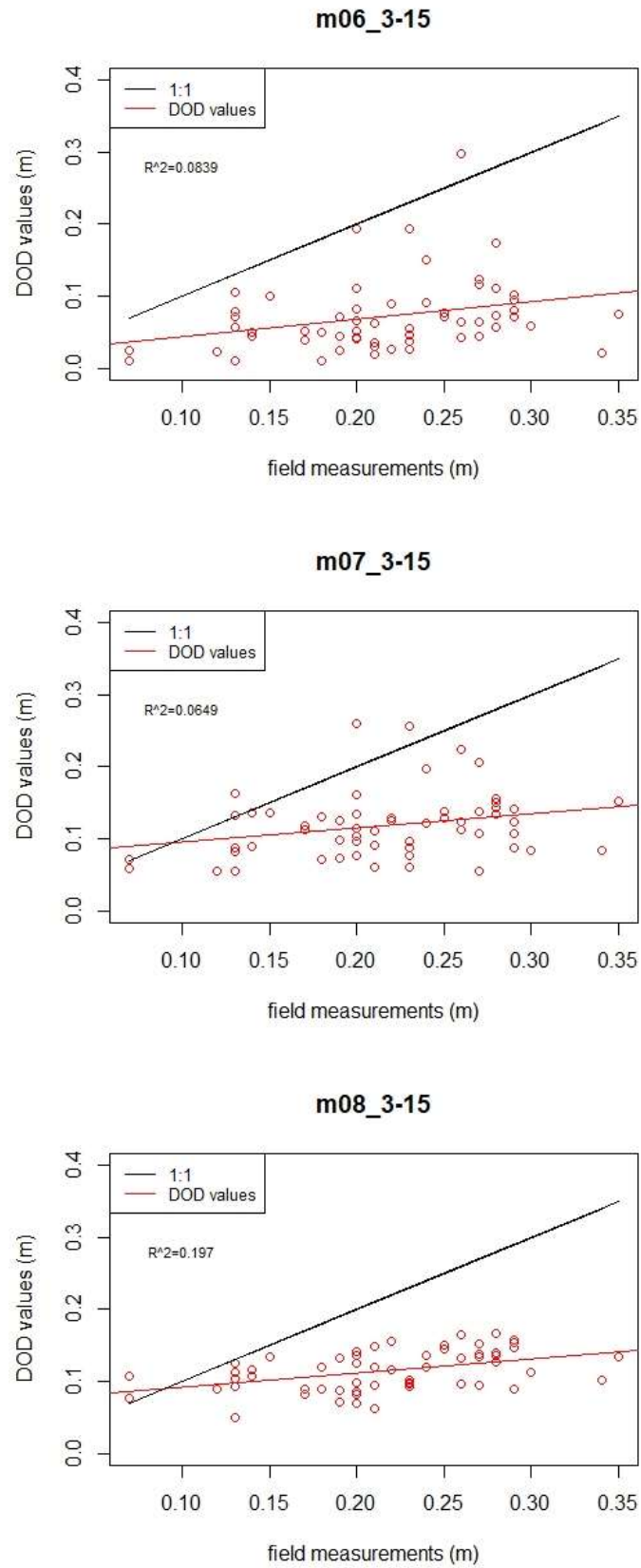


Figure S27. Linear regression and  $R^2$  value for  $DOD_{3-15}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S74. Values of difference from field measurements for  $DOD_{3-15}$  for the eight missions at each point. Each column identifies the mission:  $m01_{3-15}$  represents data extracted from  $DOD_{3-15}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{3-15}$	$m02_{3-15}$	$m03_{3-15}$	$m04_{3-15}$	$m05_{3-15}$	$m06_{3-15}$	$m07_{3-15}$	$m08_{3-15}$
C1	0.08	-0.04	0.00	0.00	-	-	-	-
C2	0.09	-0.03	0.03	0.02	-	-	-	-
C3	0.03	-0.01	-0.01	-0.03	-	-	-	-
C4	-0.01	-0.04	-0.03	-0.07	-	-	-	-
R2	-0.08	-0.17	-0.07	-0.11	-0.05	-0.17	-0.11	-0.09
R3	-0.06	-0.15	-0.04	-0.15	-0.05	-0.13	-0.06	-0.12
R4	-0.03	-0.15	-0.01	-0.11	-0.06	-0.12	-0.07	-0.08
R5	0.01	-0.10	0.01	-0.08	0.00	-0.10	-0.07	-0.03
R6	-0.04	-0.16	-0.09	-0.13	-0.10	-0.16	-0.12	-0.11
R7	-0.07	-0.17	-0.09	-0.11	-0.08	-0.16	-0.12	-0.10
R8	-0.08	-0.17	-0.10	-0.13	-0.07	-0.16	-0.10	-0.13
R9	-0.05	-0.15	-0.08	-0.13	-0.07	-0.14	-0.09	-0.12
R10	-0.09	-0.19	-0.16	-0.16	-0.12	-0.18	-0.14	-0.13
R11	0.04	-0.18	-0.06	-0.10	-0.16	-0.11	-0.12	-0.11
R12	-0.14	-0.25	-0.19	-0.21	-0.14	-0.24	-0.22	-0.19
R13	-0.11	-0.21	-0.15	-0.15	-0.11	-0.20	-0.17	-0.14
R14	-0.09	-0.16	-0.11	-0.17	-0.08	-0.15	-0.12	-0.12
R15	-0.21	-0.29	-0.13	-0.23	-0.20	-0.27	-0.20	-0.21
R16	-0.07	-0.13	-0.10	-0.15	-0.09	-0.18	-0.11	-0.11
R17	-0.08	0.03	-0.04	-0.19	-0.11	0.04	-0.04	-0.16
R18	-0.15	-0.22	-0.16	-0.21	-0.15	-0.21	-0.21	-0.18
R19	-0.13	-0.23	-0.11	-0.15	-0.16	-0.22	-0.16	-0.13
R20	-0.07	-0.14	-0.09	-0.17	-0.06	-0.19	-0.15	-0.13
R21	-0.07	-0.19	-0.16	-0.16	-0.08	-0.19	-0.13	-0.13
R22	-0.10	-0.22	-0.14	-0.17	-0.14	-0.21	-0.13	-0.14
R23	-0.08	-0.19	-0.10	-0.10	-0.08	-0.19	-0.09	-0.10
R24	-0.10	-0.20	-0.07	-0.15	-0.06	-0.15	-0.06	-0.13
R25	-0.05	-0.16	-0.08	-0.12	-0.06	-0.15	-0.10	-0.06
R26	0.16	0.20	-0.01	-0.06	0.19	-0.12	0.06	-0.06
R27	-0.08	-0.15	-0.04	-0.11	-0.06	-0.15	-0.04	-0.06
R28	-0.08	-0.11	0.06	-0.01	-0.08	-0.04	0.03	-0.13
R29	-0.07	-0.15	-0.08	-0.14	-0.11	-0.18	-0.15	-0.13
R30	-0.12	-0.18	-0.10	-0.14	-0.09	-0.22	-0.14	-0.13
R31	-0.10	-0.20	-0.10	-0.15	-0.12	-0.20	-0.15	-0.10
R32	-0.16	-0.19	-0.13	-0.16	-0.15	-0.19	-0.15	-0.12
R33	-0.09	-0.20	-0.11	-0.10	-0.09	-0.18	-0.12	-0.09
R34	-0.15	-0.22	-0.15	-0.13	-0.14	-0.22	-0.15	-0.15
R35	-0.06	-0.18	-0.13	-0.14	-0.07	-0.15	-0.13	-0.12
R36	-0.04	-0.22	-0.17	-0.17	-0.05	-0.17	-0.14	-0.14
R37	-0.08	-0.14	-0.10	-0.09	-0.04	-0.13	-0.04	-0.10
R38	0.06	-0.13	-0.07	-0.11	0.01	-0.09	-0.04	-0.10
R39	-0.12	-0.22	-0.17	-0.19	-0.15	-0.22	-0.18	-0.14
R40	-0.11	-0.16	-0.06	-0.11	-0.08	-0.13	-0.09	-0.06
R41	-0.11	-0.16	-0.10	-0.16	-0.08	-0.17	-0.15	-0.15
R42	-0.07	-0.10	-0.10	-0.10	-0.03	-0.09	-0.10	-0.06
R43	-0.24	-0.31	-0.28	-0.26	-0.25	-0.32	-0.26	-0.24
R44	-0.06	-0.12	-0.10	-0.06	-0.06	-0.12	-0.07	-0.06
R45	-0.13	-0.18	-0.16	-0.21	-0.17	-0.21	-0.20	-0.20
R46	-0.07	-0.13	-0.01	-0.12	-0.06	-0.13	-0.05	-0.08
R47	-0.09	-0.13	-0.03	-0.08	-0.10	-0.13	-0.05	-0.06

R48	0.00	-0.12	-0.03	-0.09	-0.04	-0.12	-0.06	-0.09
R49	-0.02	-0.10	-0.05	-0.03	-0.01	-0.09	-0.05	-0.02
R50	0.00	-0.09	-0.02	-0.05	-0.02	-0.09	0.00	-0.03
R51	0.95	-0.05	0.02	-0.04	0.05	-0.05	-0.01	-0.01
R52	0.06	-0.05	-0.01	-0.01	0.06	-0.06	0.00	-0.01
R53	-0.09	-0.17	-0.03	-0.13	-0.11	-0.17	-0.12	-0.10
R54	-0.03	-0.02	0.00	-0.09	0.10	-0.01	-0.09	-0.07
R55	-0.06	-0.17	-0.11	-0.17	-0.10	-0.20	-0.17	-0.14
R56	0.12	-0.13	0.07	-0.03	0.09	-0.03	0.03	-0.03
PROMEDIO	-0.05	-0.15	-0.08	-0.13	-0.07	-0.15	-0.10	-0.11
MEDIANA	-0.08	-0.16	-0.09	-0.13	-0.08	-0.16	-0.11	-0.11
RMSE	0.156	0.165	0.103	0.134	0.104	0.164	0.122	0.119

Table S75. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>5-5</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>5-5</sub> represents data extracted from DOD<sub>5-5</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>5-5</sub>	m02 <sub>5-5</sub>	m03 <sub>5-5</sub>	m04 <sub>5-5</sub>	m05 <sub>5-5</sub>	m06 <sub>5-5</sub>	m07 <sub>5-5</sub>	m08 <sub>5-5</sub>
C1	Salicornia	0.07	0.16	0.03	0.09	0.07	-	-	-	-
C2	Salicornia	0.07	0.16	0.05	0.14	0.10	-	-	-	-
C3	Salicornia	0.13	0.18	0.11	0.13	0.12	-	-	-	-
C4	Salicornia	0.13	0.15	0.10	0.09	0.10	-	-	-	-
R2	Salicornia	0.18	0.12	0.04	0.11	0.09	0.14	0.04	0.07	0.09
R3	Salicornia	0.2	0.14	0.07	0.20	0.06	0.16	0.06	0.12	0.09
R4	Salicornia	0.13	0.12	0.03	0.10	0.03	0.10	0.03	0.06	0.06
R5	Salicornia	0.12	0.14	0.03	0.23	0.09	0.12	0.03	0.07	0.10
R6	Salicornia	0.2	0.18	0.04	0.11	0.08	0.12	0.05	0.09	0.09
R7	Salicornia	0.19	0.12	0.02	0.08	0.08	0.12	0.04	0.08	0.10
R8	Salicornia	0.2	0.14	0.04	0.10	0.08	0.14	0.05	0.09	0.08
R9	Salicornia	0.19	0.15	0.04	0.11	0.09	0.14	0.05	0.13	0.08
R10	Salicornia	0.23	0.18	0.06	0.17	0.09	0.15	0.05	0.12	0.11
R11	Salicornia	0.28	0.37	0.28	0.26	0.24	0.37	0.32	0.16	0.16
R12	Salicornia	0.3	0.17	0.05	0.12	0.10	0.15	0.07	0.11	0.11
R13	Sarcocornia	0.23	0.13	0.04	0.14	0.09	0.14	0.05	0.10	0.12
R14	Sarcocornia	0.24	0.15	0.09	0.17	0.07	0.16	0.09	0.16	0.13
R15	Sarcocornia+Sporobolus	0.35	0.14	0.09	0.24	0.12	0.15	0.08	0.18	0.14
R16	Sarcocornia	0.25	0.19	0.11	0.07	0.08	0.19	0.04	0.10	0.14
R17	Sarcocornia	0.26	0.31	0.35	0.24	0.07	0.26	0.27	0.21	0.08
R18	Sarcocornia	0.27	0.13	0.05	0.14	0.06	0.15	0.03	0.12	0.11
R19	Sarcocornia	0.27	0.15	0.08	0.14	0.10	0.15	0.07	0.13	0.14
R20	Sarcocornia	0.29	0.26	0.18	0.17	0.12	0.25	0.12	0.16	0.16
R21	Sarcocornia	0.23	0.16	0.06	0.09	0.08	0.18	0.07	0.14	0.12
R22	Sarcocornia	0.28	0.17	0.09	0.14	0.13	0.19	0.06	0.19	0.15
R23	Sarcocornia	0.22	0.16	0.04	0.15	0.12	0.16	0.04	0.15	0.13
R24	Sarcocornia	0.27	0.24	0.10	0.23	0.14	0.24	0.17	0.24	0.15
R25	Sarcocornia	0.21	0.17	0.06	0.09	0.11	0.17	0.07	0.17	0.15
R26	Sarcocornia	0.2	0.42	0.44	0.18	0.11	0.37	0.39	0.25	0.16
R27	Sarcocornia	0.2	0.13	0.06	0.14	0.09	0.13	0.08	0.17	0.14
R28	Sarcocornia	0.23	0.27	0.22	0.34	0.12	0.24	0.29	0.27	0.13
R29	Sarcocornia	0.23	0.15	0.06	0.17	0.10	0.15	0.07	0.13	0.12
R30	Sarcocornia	0.26	0.16	0.10	0.20	0.14	0.16	0.08	0.16	0.14
R31	Sarcocornia	0.26	0.16	0.07	0.16	0.12	0.14	0.06	0.16	0.18
R32	Sarcocornia	0.21	0.09	0.04	0.11	0.03	0.10	0.04	0.10	0.12
R33	Sarcocornia	0.21	0.14	0.04	0.10	0.12	0.15	0.04	0.10	0.14
R34	Sarcocornia	0.28	0.17	0.08	0.16	0.16	0.15	0.09	0.17	0.16
R35	Sarcocornia	0.27	0.20	0.08	0.13	0.14	0.21	0.14	0.15	0.14
R36	Sarcocornia	0.28	0.23	0.09	0.12	0.12	0.22	0.07	0.14	0.13
R37	Sarcocornia	0.2	0.14	0.06	0.13	0.11	0.14	0.08	0.17	0.13

R38	Sarcocornia	0.24	0.23	0.11	0.16	0.13	0.43	0.11	0.22	0.15
R39	Sarcocornia	0.29	0.18	0.06	0.14	0.14	0.15	0.07	0.14	0.15
R40	Sarcocornia	0.22	0.13	0.09	0.17	0.13	0.13	0.10	0.18	0.16
R41	Sarcocornia	0.21	0.11	0.05	0.09	0.05	0.12	0.04	0.07	0.07
R42	Sarcocornia	0.2	0.16	0.10	0.11	0.12	0.17	0.12	0.10	0.16
R43	Sarcocornia+Sporobolus	0.34	0.09	0.05	0.08	0.09	0.13	0.05	0.09	0.13
R44	Sarcocornia	0.19	0.14	0.07	0.07	0.13	0.14	0.07	0.12	0.17
R45	Sarcocornia	0.29	0.16	0.09	0.12	0.09	0.13	0.09	0.10	0.09
R46	Salicornia	0.17	0.13	0.05	0.14	0.06	0.13	0.04	0.16	0.11
R47	Salicornia	0.18	0.12	0.04	0.14	0.12	0.11	0.06	0.15	0.14
R48	Salicornia	0.17	0.17	0.05	0.14	0.11	0.14	0.06	0.13	0.10
R49	Salicornia	0.14	0.11	0.03	0.11	0.10	0.15	0.04	0.12	0.13
R50	Salicornia	0.14	0.14	0.05	0.17	0.11	0.12	0.05	0.14	0.12
R51	Salicornia	0.15	1.29	0.10	0.23	0.11	0.19	0.12	0.16	0.13
R52	Salicornia	0.13	0.22	0.07	0.10	0.13	0.21	0.06	0.15	0.13
R53	Sarcocornia	0.25	0.16	0.07	0.25	0.13	0.14	0.07	0.17	0.17
R54	Sarcocornia	0.2	0.17	0.23	0.14	0.12	0.30	0.32	0.14	0.12
R55	Sarcocornia	0.29	0.25	0.11	0.23	0.12	0.20	0.10	0.14	0.16
R56	Sarcocornia	0.13	0.28	0.08	0.26	0.13	0.23	0.03	0.16	0.11

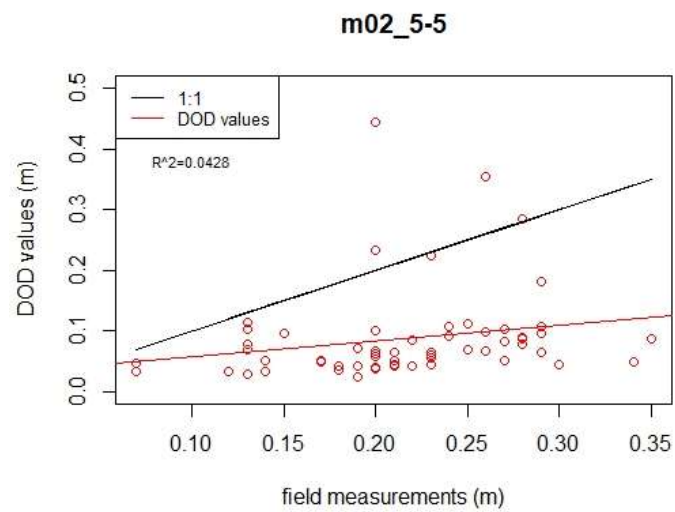
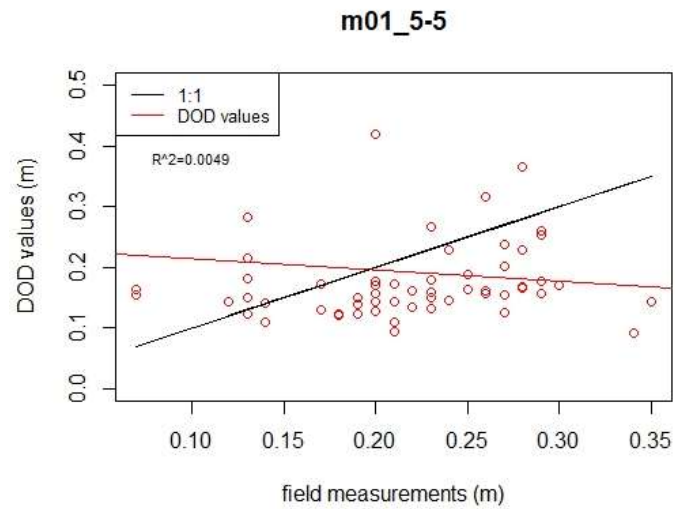


Figure S28. (Continue)

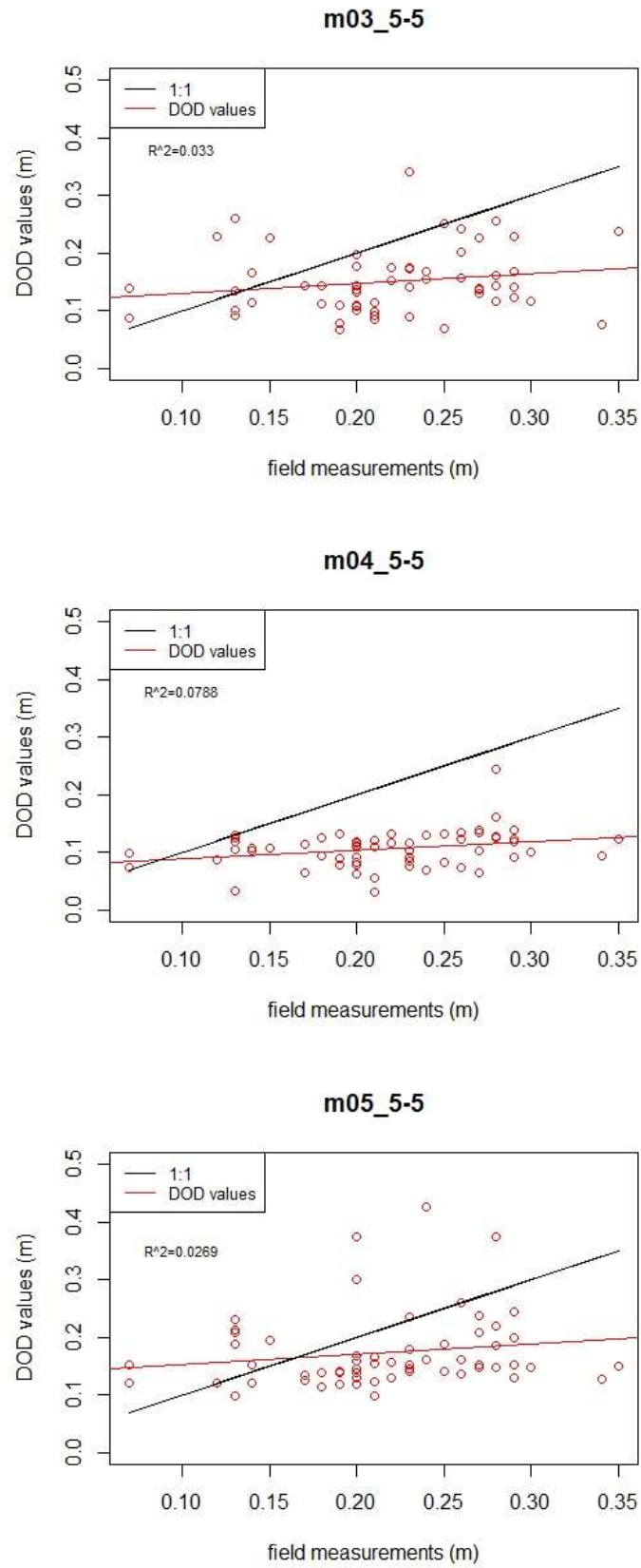


Figure S28. (Continue)

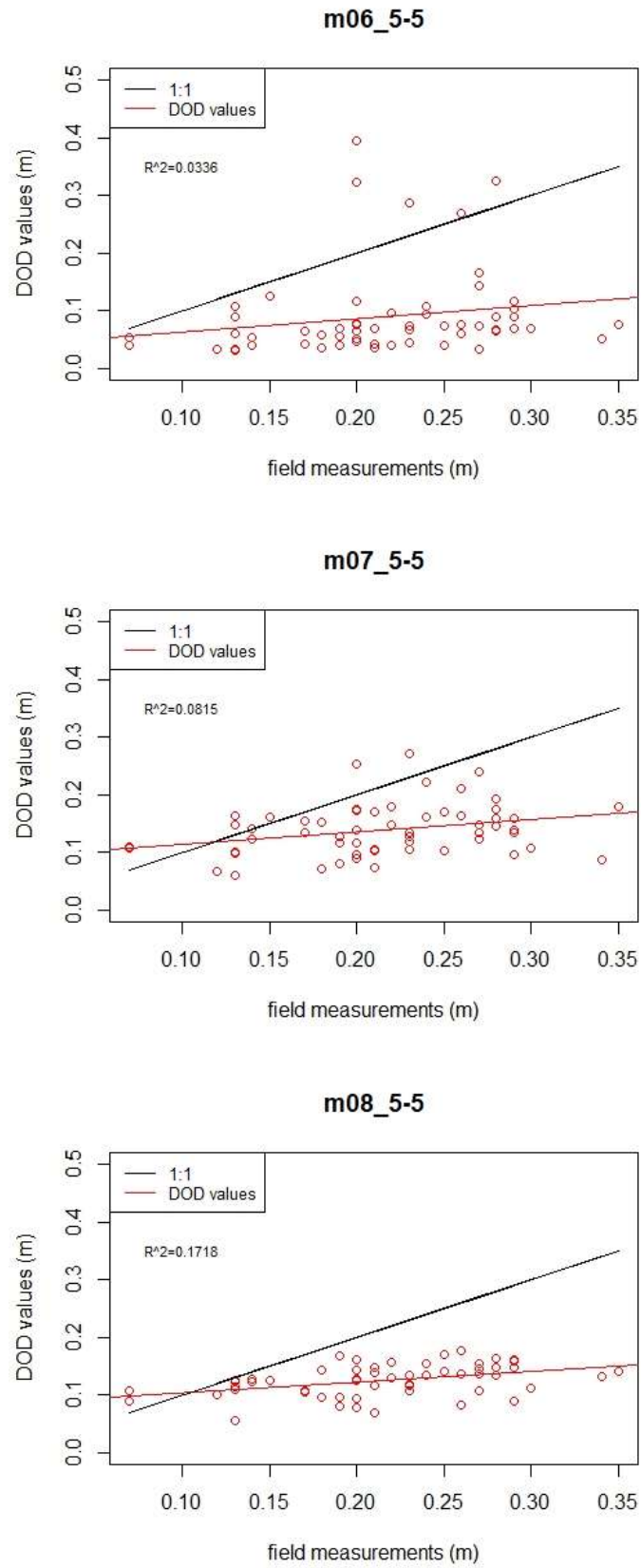


Figure S28. Linear regression and  $R^2$  value for  $DOD_{5-5}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S76. Values of difference from field measurements for  $DOD_{5-5}$  for the eight missions at each point. Each column identifies the mission:  $m01_{5-5}$  represents data extracted from  $DOD_{5-5}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{5-5}$	$m02_{5-5}$	$m03_{5-5}$	$m04_{5-5}$	$m05_{5-5}$	$m06_{5-5}$	$m07_{5-5}$	$m08_{5-5}$
C1	0.09	-0.04	0.02	0.00	-	-	-	-
C2	0.09	-0.02	0.07	0.03	-	-	-	-
C3	0.05	-0.02	0.00	-0.01	-	-	-	-
C4	0.02	-0.03	-0.04	-0.03	-	-	-	-
R2	-0.06	-0.14	-0.07	-0.09	-0.04	-0.14	-0.11	-0.09
R3	-0.06	-0.13	0.00	-0.14	-0.04	-0.14	-0.08	-0.11
R4	-0.01	-0.10	-0.03	-0.10	-0.03	-0.10	-0.07	-0.07
R5	0.02	-0.09	0.11	-0.03	0.00	-0.09	-0.05	-0.02
R6	-0.02	-0.16	-0.09	-0.12	-0.08	-0.15	-0.11	-0.11
R7	-0.07	-0.17	-0.11	-0.11	-0.07	-0.15	-0.11	-0.09
R8	-0.06	-0.16	-0.10	-0.12	-0.06	-0.15	-0.11	-0.12
R9	-0.04	-0.15	-0.08	-0.10	-0.05	-0.14	-0.06	-0.11
R10	-0.05	-0.17	-0.06	-0.14	-0.08	-0.18	-0.11	-0.12
R11	0.09	0.00	-0.02	-0.04	0.09	0.04	-0.12	-0.12
R12	-0.13	-0.25	-0.18	-0.20	-0.15	-0.23	-0.19	-0.19
R13	-0.10	-0.19	-0.09	-0.14	-0.09	-0.18	-0.13	-0.11
R14	-0.09	-0.15	-0.07	-0.17	-0.08	-0.15	-0.08	-0.11
R15	-0.21	-0.26	-0.11	-0.23	-0.20	-0.27	-0.17	-0.21
R16	-0.06	-0.14	-0.18	-0.17	-0.06	-0.21	-0.15	-0.11
R17	0.05	0.09	-0.02	-0.19	0.00	0.01	-0.05	-0.18
R18	-0.15	-0.22	-0.13	-0.21	-0.12	-0.24	-0.15	-0.16
R19	-0.12	-0.19	-0.13	-0.17	-0.12	-0.20	-0.14	-0.13
R20	-0.03	-0.11	-0.12	-0.17	-0.04	-0.17	-0.13	-0.13
R21	-0.07	-0.17	-0.14	-0.15	-0.05	-0.16	-0.09	-0.11
R22	-0.11	-0.19	-0.14	-0.15	-0.09	-0.22	-0.09	-0.13
R23	-0.06	-0.18	-0.07	-0.10	-0.06	-0.18	-0.07	-0.09
R24	-0.03	-0.17	-0.04	-0.13	-0.03	-0.10	-0.03	-0.12
R25	-0.04	-0.15	-0.12	-0.10	-0.04	-0.14	-0.04	-0.06
R26	0.22	0.24	-0.02	-0.09	0.17	0.19	0.05	-0.04
R27	-0.07	-0.14	-0.06	-0.11	-0.07	-0.12	-0.03	-0.06
R28	0.04	-0.01	0.11	-0.11	0.01	0.06	0.04	-0.10
R29	-0.08	-0.17	-0.06	-0.13	-0.08	-0.16	-0.10	-0.11
R30	-0.10	-0.16	-0.06	-0.12	-0.10	-0.18	-0.10	-0.12
R31	-0.10	-0.19	-0.10	-0.14	-0.12	-0.20	-0.10	-0.08
R32	-0.12	-0.17	-0.10	-0.18	-0.11	-0.17	-0.11	-0.09
R33	-0.07	-0.17	-0.11	-0.09	-0.06	-0.17	-0.11	-0.07
R34	-0.11	-0.20	-0.12	-0.12	-0.13	-0.19	-0.11	-0.12
R35	-0.07	-0.19	-0.14	-0.13	-0.06	-0.13	-0.12	-0.13
R36	-0.05	-0.19	-0.16	-0.16	-0.06	-0.21	-0.14	-0.15
R37	-0.06	-0.14	-0.07	-0.09	-0.06	-0.12	-0.03	-0.07
R38	-0.01	-0.13	-0.08	-0.11	0.19	-0.13	-0.02	-0.09
R39	-0.11	-0.23	-0.15	-0.15	-0.14	-0.22	-0.15	-0.14
R40	-0.09	-0.13	-0.05	-0.09	-0.09	-0.12	-0.04	-0.06
R41	-0.10	-0.16	-0.12	-0.16	-0.09	-0.17	-0.14	-0.14
R42	-0.04	-0.10	-0.09	-0.08	-0.03	-0.08	-0.10	-0.04
R43	-0.25	-0.29	-0.26	-0.25	-0.21	-0.29	-0.25	-0.21
R44	-0.05	-0.12	-0.12	-0.06	-0.05	-0.12	-0.07	-0.02
R45	-0.13	-0.20	-0.17	-0.20	-0.16	-0.20	-0.19	-0.20
R46	-0.04	-0.12	-0.03	-0.11	-0.05	-0.13	-0.01	-0.06
R47	-0.06	-0.14	-0.04	-0.06	-0.07	-0.12	-0.03	-0.04

R48	0.00	-0.12	-0.03	-0.06	-0.03	-0.11	-0.04	-0.07
R49	-0.03	-0.11	-0.03	-0.04	0.01	-0.10	-0.02	-0.01
R50	0.00	-0.09	0.03	-0.03	-0.02	-0.09	0.00	-0.02
R51	1.14	-0.05	0.08	-0.04	0.04	-0.03	0.01	-0.03
R52	0.09	-0.06	-0.03	0.00	0.08	-0.07	0.02	0.00
R53	-0.09	-0.18	0.00	-0.12	-0.11	-0.18	-0.08	-0.08
R54	-0.03	0.03	-0.06	-0.08	0.10	0.12	-0.06	-0.08
R55	-0.04	-0.18	-0.06	-0.17	-0.09	-0.19	-0.15	-0.13
R56	0.15	-0.05	0.13	0.00	0.10	-0.10	0.03	-0.02
PROMEDIO	-0.03	-0.14	-0.07	-0.12	-0.05	-0.13	-0.08	-0.10
MEDIANA	-0.06	-0.15	-0.07	-0.12	-0.06	-0.15	-0.09	-0.11
RMSE	0.173	0.155	0.100	0.126	0.093	0.160	0.104	0.110

Table S77. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>5-10</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>5-10</sub> represents data extracted from DOD<sub>5-10</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>5-10</sub>	m02 <sub>5-10</sub>	m03 <sub>5-10</sub>	m04 <sub>5-10</sub>	m05 <sub>5-10</sub>	m06 <sub>5-10</sub>	m07 <sub>5-10</sub>	m08 <sub>5-10</sub>
C1	Salicornia	0.07	0.16	0.04	0.10	0.07	-	-	-	-
C2	Salicornia	0.07	0.17	0.05	0.13	0.10	-	-	-	-
C3	Salicornia	0.13	0.18	0.11	0.13	0.12	-	-	-	-
C4	Salicornia	0.13	0.15	0.10	0.10	0.11	-	-	-	-
R2	Salicornia	0.18	0.12	0.03	0.12	0.08	0.14	0.04	0.08	0.10
R3	Salicornia	0.2	0.14	0.07	0.17	0.06	0.15	0.06	0.14	0.10
R4	Salicornia	0.13	0.12	0.02	0.13	0.03	0.09	0.03	0.07	0.05
R5	Salicornia	0.12	0.13	0.03	0.16	0.09	0.13	0.03	0.06	0.10
R6	Salicornia	0.2	0.17	0.05	0.12	0.08	0.12	0.05	0.09	0.09
R7	Salicornia	0.19	0.13	0.03	0.10	0.08	0.12	0.04	0.08	0.09
R8	Salicornia	0.2	0.14	0.04	0.10	0.08	0.13	0.06	0.09	0.08
R9	Salicornia	0.19	0.16	0.04	0.12	0.09	0.14	0.06	0.12	0.08
R10	Salicornia	0.23	0.17	0.06	0.17	0.08	0.14	0.05	0.12	0.12
R11	Salicornia	0.28	0.28	0.12	0.22	0.18	0.33	0.20	0.17	0.16
R12	Salicornia	0.3	0.17	0.05	0.12	0.10	0.15	0.08	0.11	0.13
R13	Sarcocornia	0.23	0.13	0.04	0.12	0.09	0.14	0.04	0.10	0.11
R14	Sarcocornia	0.24	0.15	0.11	0.17	0.08	0.17	0.09	0.15	0.13
R15	Sarcocornia+Sporobolus	0.35	0.15	0.09	0.23	0.12	0.15	0.08	0.17	0.14
R16	Sarcocornia	0.25	0.16	0.08	0.12	0.09	0.17	0.09	0.13	0.14
R17	Sarcocornia	0.26	0.20	0.26	0.27	0.07	0.18	0.14	0.22	0.10
R18	Sarcocornia	0.27	0.12	0.05	0.13	0.06	0.15	0.05	0.11	0.11
R19	Sarcocornia	0.27	0.16	0.09	0.14	0.11	0.15	0.07	0.15	0.15

R20	Sarcocornia	0.2 9	0.20	0.15	0.18	0.12	0.23	0.12	0.15	0.18
R21	Sarcocornia	0.2 3	0.16	0.06	0.10	0.08	0.19	0.08	0.13	0.12
R22	Sarcocornia	0.2 8	0.17	0.07	0.15	0.13	0.18	0.07	0.18	0.15
R23	Sarcocornia	0.2 2	0.16	0.04	0.16	0.12	0.15	0.04	0.14	0.13
R24	Sarcocornia	0.2 7	0.20	0.15	0.21	0.16	0.22	0.13	0.22	0.17
R25	Sarcocornia	0.2 1	0.17	0.06	0.13	0.11	0.16	0.07	0.16	0.15
R26	Sarcocornia	0.2	0.38	0.43	0.22	0.12	0.40	0.36	0.27	0.14
R27	Sarcocornia	0.2	0.13	0.07	0.14	0.09	0.14	0.07	0.18	0.14
R28	Sarcocornia	0.2 3	0.21	0.13	0.31	0.10	0.18	0.20	0.25	0.18
R29	Sarcocornia	0.2 3	0.15	0.06	0.15	0.10	0.14	0.06	0.11	0.13
R30	Sarcocornia	0.2 6	0.16	0.10	0.15	0.13	0.17	0.07	0.14	0.14
R31	Sarcocornia	0.2 6	0.16	0.06	0.16	0.12	0.14	0.06	0.15	0.17
R32	Sarcocornia	0.2 1	0.08	0.04	0.12	0.05	0.10	0.03	0.09	0.11
R33	Sarcocornia	0.2 1	0.13	0.03	0.11	0.12	0.15	0.04	0.10	0.14
R34	Sarcocornia	0.2 8	0.17	0.08	0.16	0.16	0.16	0.09	0.18	0.16
R35	Sarcocornia	0.2 7	0.23	0.14	0.14	0.15	0.22	0.14	0.14	0.16
R36	Sarcocornia	0.2 8	0.25	0.11	0.13	0.13	0.24	0.08	0.14	0.15
R37	Sarcocornia	0.2	0.14	0.05	0.13	0.11	0.15	0.07	0.17	0.12
R38	Sarcocornia	0.2 4	0.21	0.12	0.27	0.13	0.38	0.14	0.26	0.15
R39	Sarcocornia	0.2 9	0.17	0.07	0.16	0.14	0.15	0.07	0.13	0.14
R40	Sarcocornia	0.2 2	0.13	0.09	0.18	0.12	0.14	0.09	0.19	0.16
R41	Sarcocornia	0.2 1	0.11	0.05	0.12	0.06	0.13	0.04	0.07	0.07
R42	Sarcocornia	0.2	0.16	0.11	0.11	0.12	0.17	0.12	0.10	0.17
R43	Sarcocornia+Sporobolus	0.3 4	0.10	0.05	0.09	0.09	0.12	0.05	0.09	0.13
R44	Sarcocornia	0.1 9	0.14	0.07	0.08	0.13	0.14	0.07	0.12	0.16
R45	Sarcocornia	0.2 9	0.17	0.11	0.13	0.09	0.14	0.09	0.11	0.10
R46	Salicornia	0.1 7	0.13	0.05	0.16	0.06	0.13	0.05	0.13	0.11
R47	Salicornia	0.1 8	0.12	0.05	0.15	0.12	0.11	0.06	0.16	0.14
R48	Salicornia	0.1 7	0.17	0.06	0.17	0.11	0.14	0.07	0.13	0.11
R49	Salicornia	0.1 4	0.15	0.04	0.14	0.10	0.14	0.05	0.11	0.13
R50	Salicornia	0.1 4	0.14	0.06	0.16	0.10	0.12	0.06	0.13	0.11
R51	Salicornia	0.1 5	1.30	0.11	0.19	0.11	0.20	0.12	0.16	0.13
R52	Salicornia	0.1 3	0.21	0.08	0.12	0.13	0.20	0.07	0.15	0.13

R53	Sarcocornia	0.25	0.16	0.07	0.25	0.13	0.13	0.08	0.16	0.17
R54	Sarcocornia	0.2	0.17	0.19	0.16	0.12	0.30	0.27	0.15	0.14
R55	Sarcocornia	0.29	0.25	0.10	0.22	0.12	0.19	0.08	0.16	0.16
R56	Sarcocornia	0.13	0.25	0.08	0.23	0.12	0.25	0.09	0.15	0.12

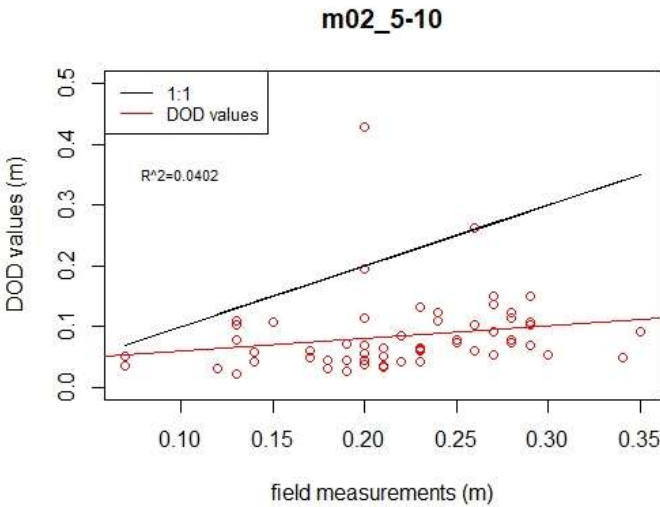
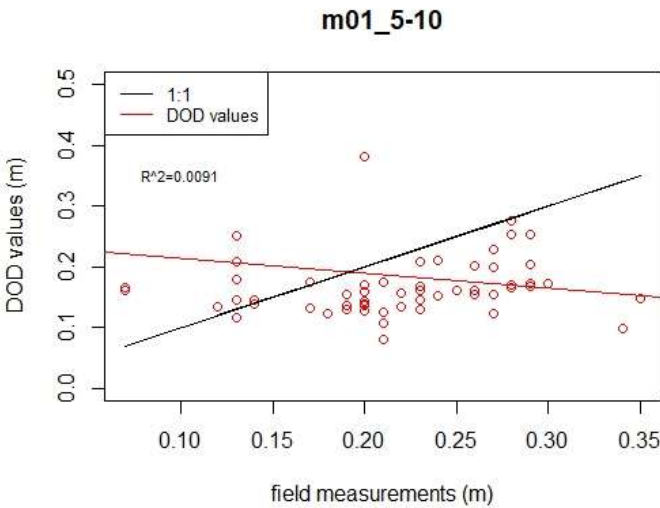


Figure S29. (Continue)

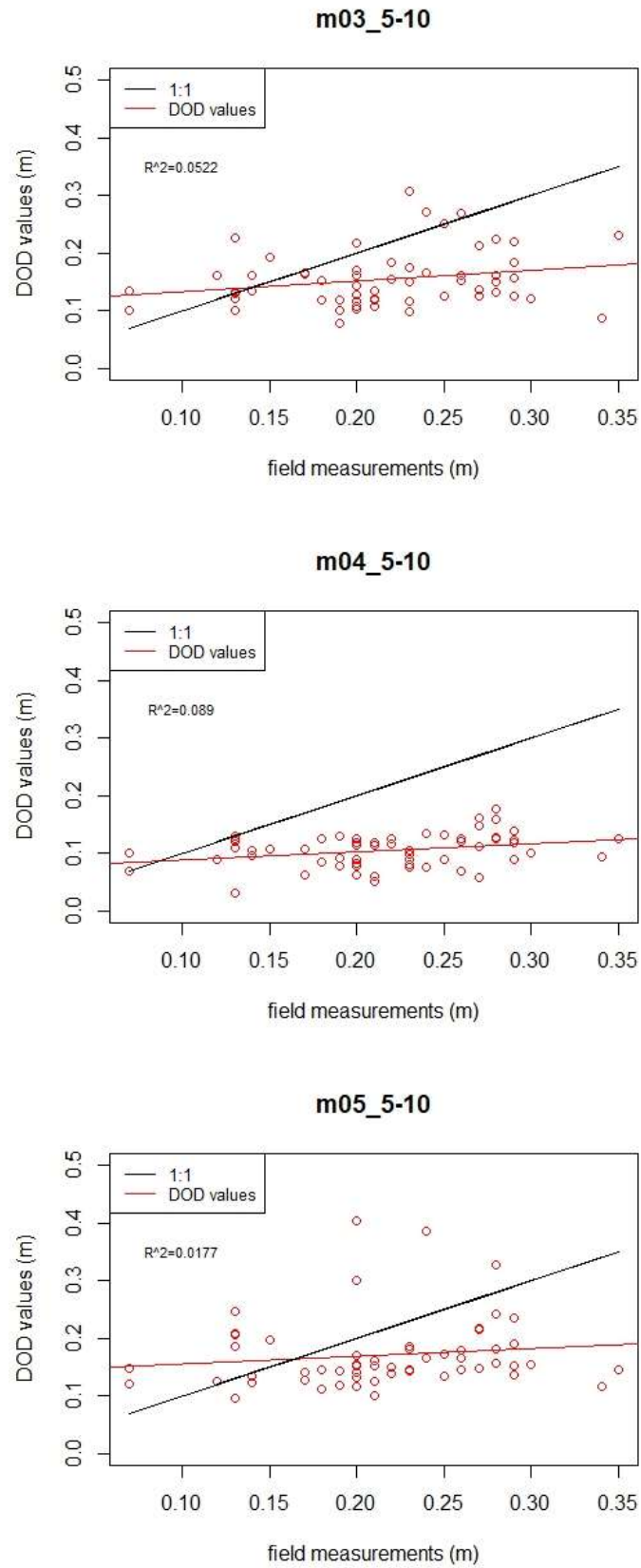


Figure S29. (Continue)

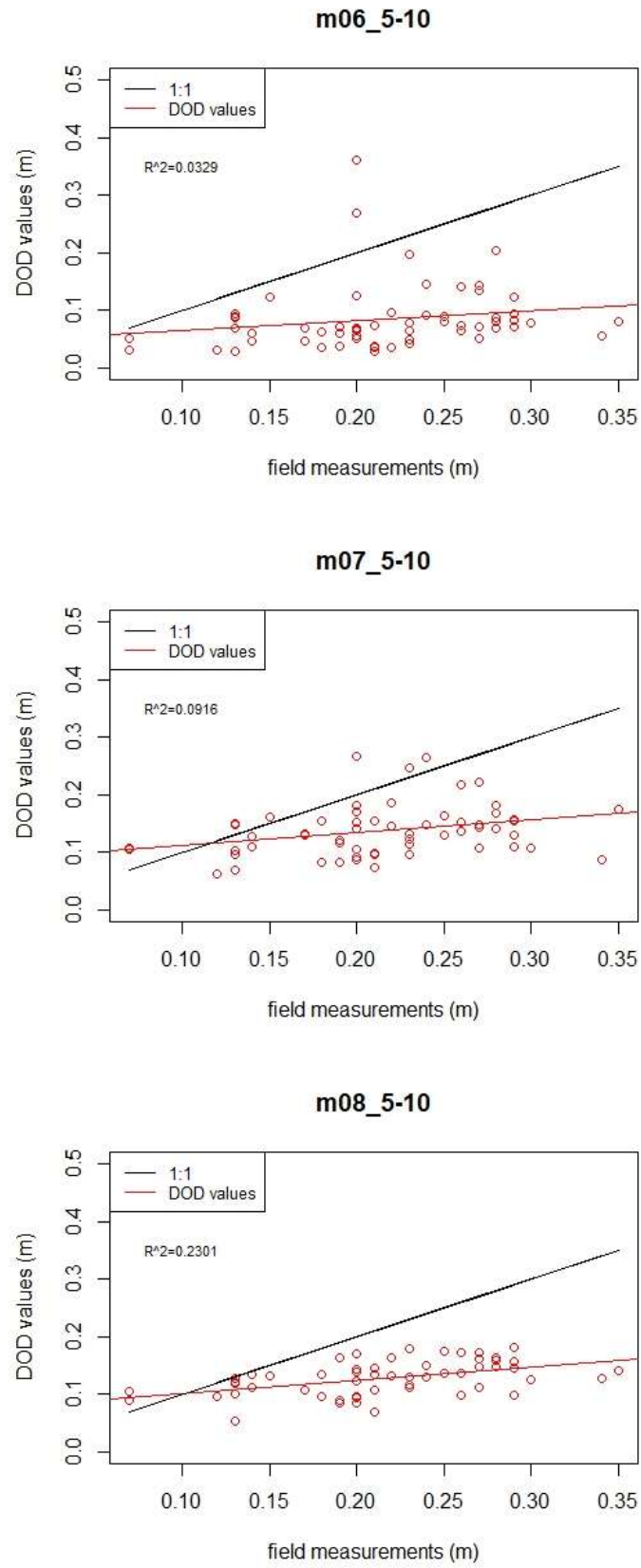


Figure S29. Linear regression and  $R^2$  value for  $DOD_{5-10}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S78. Values of difference from field measurements for  $DOD_{5-10}$  for the eight missions at each point. Each column identifies the mission:  $m01_{5-10}$  represents data extracted from  $DOD_{5-10}$  of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.

Point Id	$m01_{5-10}$	$m02_{5-10}$	$m03_{5-10}$	$m04_{5-10}$	$m05_{5-10}$	$m06_{5-10}$	$m07_{5-10}$	$m08_{5-10}$
C1	0.09	-0.03	0.03	0.00	-	-	-	-
C2	0.10	-0.02	0.06	0.03	-	-	-	-
C3	0.05	-0.02	0.00	-0.01	-	-	-	-
C4	0.02	-0.03	-0.03	-0.02	-	-	-	-
R2	-0.06	-0.15	-0.06	-0.10	-0.04	-0.14	-0.10	-0.08
R3	-0.06	-0.13	-0.03	-0.14	-0.05	-0.14	-0.06	-0.10
R4	-0.01	-0.11	0.00	-0.10	-0.04	-0.10	-0.06	-0.08
R5	0.01	-0.09	0.04	-0.03	0.01	-0.09	-0.06	-0.02
R6	-0.03	-0.15	-0.08	-0.12	-0.08	-0.15	-0.11	-0.11
R7	-0.06	-0.16	-0.09	-0.11	-0.07	-0.15	-0.11	-0.10
R8	-0.06	-0.16	-0.10	-0.12	-0.07	-0.14	-0.11	-0.12
R9	-0.03	-0.15	-0.07	-0.10	-0.05	-0.13	-0.07	-0.11
R10	-0.06	-0.17	-0.06	-0.15	-0.09	-0.18	-0.11	-0.11
R11	0.00	-0.16	-0.06	-0.10	0.05	-0.08	-0.11	-0.12
R12	-0.13	-0.25	-0.18	-0.20	-0.15	-0.22	-0.19	-0.18
R13	-0.10	-0.19	-0.11	-0.14	-0.09	-0.19	-0.13	-0.12
R14	-0.09	-0.13	-0.07	-0.16	-0.07	-0.15	-0.09	-0.11
R15	-0.20	-0.26	-0.12	-0.23	-0.20	-0.27	-0.18	-0.21
R16	-0.09	-0.17	-0.13	-0.16	-0.08	-0.16	-0.12	-0.11
R17	-0.06	0.00	0.01	-0.19	-0.08	-0.12	-0.04	-0.16
R18	-0.15	-0.22	-0.15	-0.21	-0.12	-0.22	-0.16	-0.16
R19	-0.11	-0.18	-0.13	-0.16	-0.12	-0.20	-0.12	-0.12
R20	-0.09	-0.14	-0.11	-0.17	-0.06	-0.17	-0.14	-0.11
R21	-0.07	-0.17	-0.13	-0.15	-0.04	-0.15	-0.10	-0.11
R22	-0.11	-0.21	-0.13	-0.15	-0.10	-0.21	-0.10	-0.13
R23	-0.06	-0.18	-0.06	-0.10	-0.07	-0.18	-0.08	-0.09
R24	-0.07	-0.12	-0.06	-0.11	-0.05	-0.14	-0.05	-0.10
R25	-0.04	-0.15	-0.08	-0.10	-0.05	-0.14	-0.05	-0.06
R26	0.18	0.23	0.02	-0.08	0.20	0.16	0.07	-0.06
R27	-0.07	-0.13	-0.06	-0.11	-0.06	-0.13	-0.02	-0.06
R28	-0.02	-0.10	0.08	-0.13	-0.05	-0.03	0.02	-0.05
R29	-0.08	-0.17	-0.08	-0.13	-0.09	-0.17	-0.12	-0.10
R30	-0.10	-0.16	-0.11	-0.14	-0.09	-0.19	-0.12	-0.12
R31	-0.10	-0.20	-0.10	-0.14	-0.12	-0.20	-0.11	-0.09
R32	-0.13	-0.17	-0.09	-0.16	-0.11	-0.18	-0.12	-0.10
R33	-0.09	-0.18	-0.10	-0.09	-0.06	-0.17	-0.11	-0.07
R34	-0.11	-0.20	-0.12	-0.12	-0.12	-0.19	-0.10	-0.12
R35	-0.04	-0.13	-0.13	-0.12	-0.05	-0.13	-0.13	-0.11
R36	-0.03	-0.17	-0.15	-0.15	-0.04	-0.20	-0.14	-0.13
R37	-0.06	-0.15	-0.07	-0.09	-0.05	-0.13	-0.03	-0.08
R38	-0.03	-0.12	0.03	-0.11	0.14	-0.10	0.02	-0.09
R39	-0.12	-0.22	-0.13	-0.15	-0.14	-0.22	-0.16	-0.15
R40	-0.09	-0.13	-0.04	-0.10	-0.08	-0.13	-0.03	-0.06
R41	-0.10	-0.16	-0.09	-0.15	-0.09	-0.17	-0.14	-0.14
R42	-0.04	-0.09	-0.09	-0.08	-0.03	-0.08	-0.10	-0.03
R43	-0.24	-0.29	-0.25	-0.25	-0.22	-0.29	-0.25	-0.21
R44	-0.05	-0.12	-0.11	-0.06	-0.05	-0.12	-0.07	-0.03
R45	-0.12	-0.18	-0.17	-0.20	-0.15	-0.20	-0.18	-0.19
R46	-0.04	-0.12	-0.01	-0.11	-0.04	-0.12	-0.04	-0.06
R47	-0.06	-0.13	-0.03	-0.06	-0.07	-0.12	-0.02	-0.04
R48	0.00	-0.11	0.00	-0.06	-0.03	-0.10	-0.04	-0.06
R49	0.01	-0.10	0.00	-0.04	0.00	-0.09	-0.03	-0.01
R50	0.00	-0.08	0.02	-0.04	-0.02	-0.08	-0.01	-0.03
R51	1.15	-0.04	0.04	-0.04	0.05	-0.03	0.01	-0.02
R52	0.08	-0.05	-0.01	0.00	0.07	-0.06	0.02	0.00

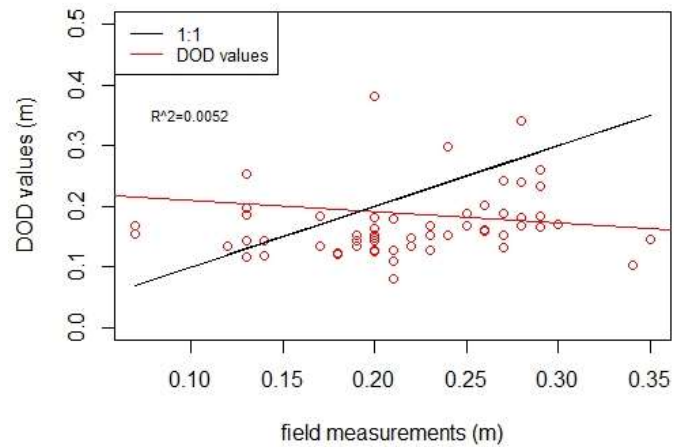
R53	-0.09	-0.18	0.00	-0.12	-0.12	-0.17	-0.09	-0.08
R54	-0.03	-0.01	-0.04	-0.08	0.10	0.07	-0.05	-0.06
R55	-0.04	-0.19	-0.07	-0.17	-0.10	-0.21	-0.13	-0.13
R56	0.12	-0.05	0.10	-0.01	0.12	-0.04	0.02	-0.01
PROMEDIO	-0.04	-0.14	-0.07	-0.12	-0.05	-0.14	-0.08	-0.09
MEDIANA	-0.06	-0.15	-0.07	-0.12	-0.06	-0.14	-0.10	-0.10
RMSE	0.174	0.153	0.092	0.126	0.094	0.157	0.104	0.106

Table S79. Field values of vegetation height measured at GCPs ('field' column) and values extracted from DOD<sub>5-15</sub> for the eight missions. For each point corresponding specie ('spp' column) is also reported. Each column identifies the mission: m01<sub>5-15</sub> represents data extracted from DOD<sub>5-15</sub> of mission 1, and so on. Values expressed in meters.

Point Id	spp	field	m01 <sub>5-15</sub>	m02 <sub>5-15</sub>	m03 <sub>5-15</sub>	m04 <sub>5-15</sub>	m05 <sub>5-15</sub>	m06 <sub>5-15</sub>	m07 <sub>5-15</sub>	m08 <sub>5-15</sub>
C1	Salicornia	0.07	0.16	0.04	0.10	0.07	-	-	-	-
C2	Salicornia	0.07	0.17	0.05	0.13	0.10	-	-	-	-
C3	Salicornia	0.13	0.19	0.11	0.13	0.13	-	-	-	-
C4	Salicornia	0.13	0.14	0.10	0.10	0.11	-	-	-	-
R2	Salicornia	0.18	0.12	0.03	0.11	0.08	0.14	0.03	0.08	0.10
R3	Salicornia	0.2	0.14	0.07	0.17	0.07	0.15	0.07	0.14	0.10
R4	Salicornia	0.13	0.12	0.02	0.13	0.03	0.10	0.03	0.07	0.05
R5	Salicornia	0.12	0.14	0.03	0.15	0.09	0.12	0.03	0.07	0.10
R6	Salicornia	0.2	0.16	0.05	0.12	0.08	0.11	0.05	0.08	0.10
R7	Salicornia	0.19	0.13	0.03	0.11	0.08	0.12	0.04	0.09	0.09
R8	Salicornia	0.2	0.13	0.04	0.10	0.08	0.13	0.06	0.09	0.08
R9	Salicornia	0.19	0.15	0.04	0.11	0.09	0.14	0.06	0.12	0.09
R10	Salicornia	0.23	0.17	0.07	0.17	0.08	0.14	0.05	0.12	0.12
R11	Salicornia	0.28	0.34	0.15	0.22	0.21	0.12	0.18	0.19	0.20
R12	Salicornia	0.3	0.17	0.06	0.12	0.10	0.15	0.08	0.10	0.12
R13	Sarcocornia	0.23	0.13	0.04	0.12	0.09	0.14	0.04	0.09	0.12
R14	Sarcocornia	0.24	0.15	0.10	0.15	0.07	0.17	0.10	0.15	0.11
R15	Sarcocornia+Sporobolus	0.35	0.14	0.09	0.22	0.12	0.15	0.08	0.17	0.14
R16	Sarcocornia	0.25	0.19	0.12	0.14	0.10	0.17	0.08	0.15	0.15
R17	Sarcocornia	0.26	0.20	0.31	0.29	0.07	0.18	0.32	0.26	0.10
R18	Sarcocornia	0.27	0.13	0.05	0.12	0.06	0.14	0.05	0.10	0.11
R19	Sarcocornia	0.27	0.15	0.09	0.15	0.11	0.13	0.06	0.17	0.14
R20	Sarcocornia	0.29	0.23	0.17	0.19	0.14	0.23	0.11	0.16	0.16
R21	Sarcocornia	0.23	0.17	0.06	0.10	0.08	0.17	0.08	0.13	0.12
R22	Sarcocornia	0.28	0.18	0.07	0.15	0.12	0.18	0.08	0.17	0.14
R23	Sarcocornia	0.22	0.15	0.04	0.15	0.12	0.15	0.04	0.14	0.13
R24	Sarcocornia	0.27	0.19	0.08	0.22	0.13	0.22	0.13	0.21	0.16
R25	Sarcocornia	0.21	0.18	0.06	0.13	0.11	0.16	0.07	0.14	0.15
R26	Sarcocornia	0.2	0.38	0.40	0.20	0.16	0.40	0.09	0.30	0.14
R27	Sarcocornia	0.2	0.13	0.06	0.14	0.09	0.14	0.06	0.18	0.14
R28	Sarcocornia	0.23	0.15	0.13	0.31	0.21	0.16	0.21	0.26	0.13
R29	Sarcocornia	0.23	0.17	0.10	0.17	0.10	0.14	0.07	0.11	0.13
R30	Sarcocornia	0.26	0.16	0.09	0.15	0.12	0.16	0.08	0.13	0.14
R31	Sarcocornia	0.26	0.16	0.06	0.13	0.11	0.15	0.06	0.12	0.18
R32	Sarcocornia	0.21	0.08	0.04	0.09	0.05	0.07	0.03	0.09	0.11
R33	Sarcocornia	0.21	0.13	0.04	0.11	0.12	0.15	0.04	0.10	0.13
R34	Sarcocornia	0.28	0.17	0.08	0.15	0.16	0.15	0.09	0.19	0.16
R35	Sarcocornia	0.27	0.24	0.14	0.14	0.14	0.23	0.14	0.15	0.16
R36	Sarcocornia	0.28	0.24	0.10	0.13	0.13	0.25	0.09	0.15	0.15
R37	Sarcocornia	0.2	0.15	0.07	0.12	0.12	0.16	0.06	0.16	0.12

R38	Sarcocornia	0.24	0.30	0.13	0.17	0.14	0.25	0.14	0.24	0.15
R39	Sarcocornia	0.29	0.18	0.07	0.14	0.14	0.16	0.07	0.12	0.15
R40	Sarcocornia	0.22	0.13	0.08	0.19	0.12	0.14	0.10	0.17	0.16
R41	Sarcocornia	0.21	0.11	0.05	0.12	0.06	0.13	0.04	0.08	0.07
R42	Sarcocornia	0.2	0.15	0.12	0.10	0.12	0.18	0.12	0.12	0.17
R43	Sarcocornia+Sporobolus	0.34	0.10	0.05	0.08	0.09	0.10	0.05	0.08	0.13
R44	Sarcocornia	0.19	0.14	0.07	0.08	0.13	0.14	0.08	0.12	0.16
R45	Sarcocornia	0.29	0.17	0.12	0.14	0.09	0.14	0.10	0.11	0.10
R46	Salicornia	0.17	0.13	0.05	0.17	0.06	0.13	0.05	0.14	0.11
R47	Salicornia	0.18	0.12	0.05	0.16	0.13	0.11	0.06	0.14	0.14
R48	Salicornia	0.17	0.18	0.05	0.17	0.11	0.15	0.07	0.14	0.10
R49	Salicornia	0.14	0.12	0.04	0.13	0.10	0.14	0.05	0.10	0.13
R50	Salicornia	0.14	0.14	0.06	0.16	0.11	0.13	0.06	0.13	0.11
R51	Salicornia	0.15	1.30	0.12	0.19	0.11	0.20	0.11	0.16	0.14
R52	Salicornia	0.13	0.20	0.08	0.13	0.13	0.20	0.07	0.15	0.13
R53	Sarcocornia	0.25	0.17	0.08	0.23	0.13	0.14	0.08	0.17	0.17
R54	Sarcocornia	0.2	0.18	0.20	0.16	0.12	0.32	0.20	0.16	0.13
R55	Sarcocornia	0.29	0.26	0.12	0.22	0.12	0.21	0.09	0.16	0.16
R56	Sarcocornia	0.13	0.25	0.02	0.20	0.12	0.24	0.12	0.16	0.11

**m01\_5-15**



**m02\_5-15**

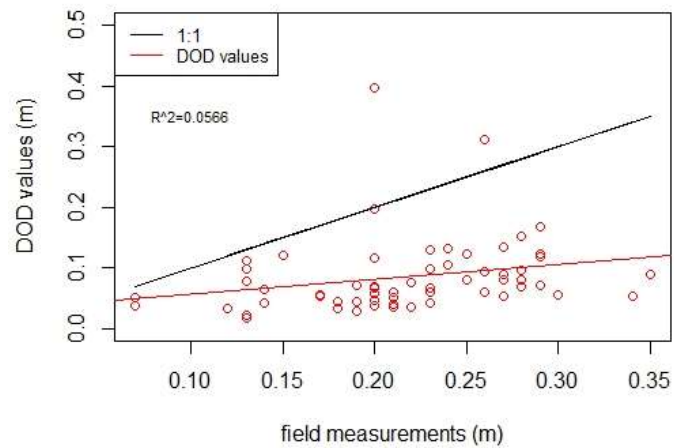


Figure S30. (Continue)

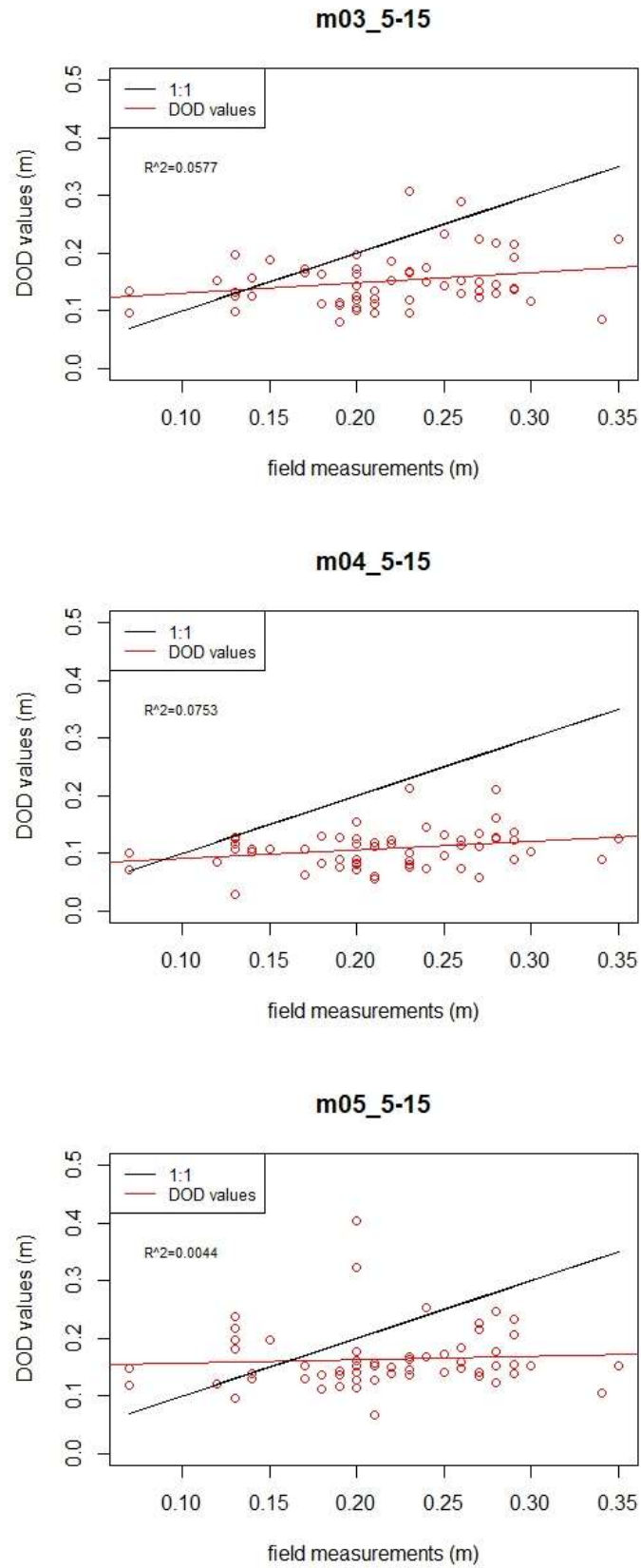


Figure S30. (Continue)

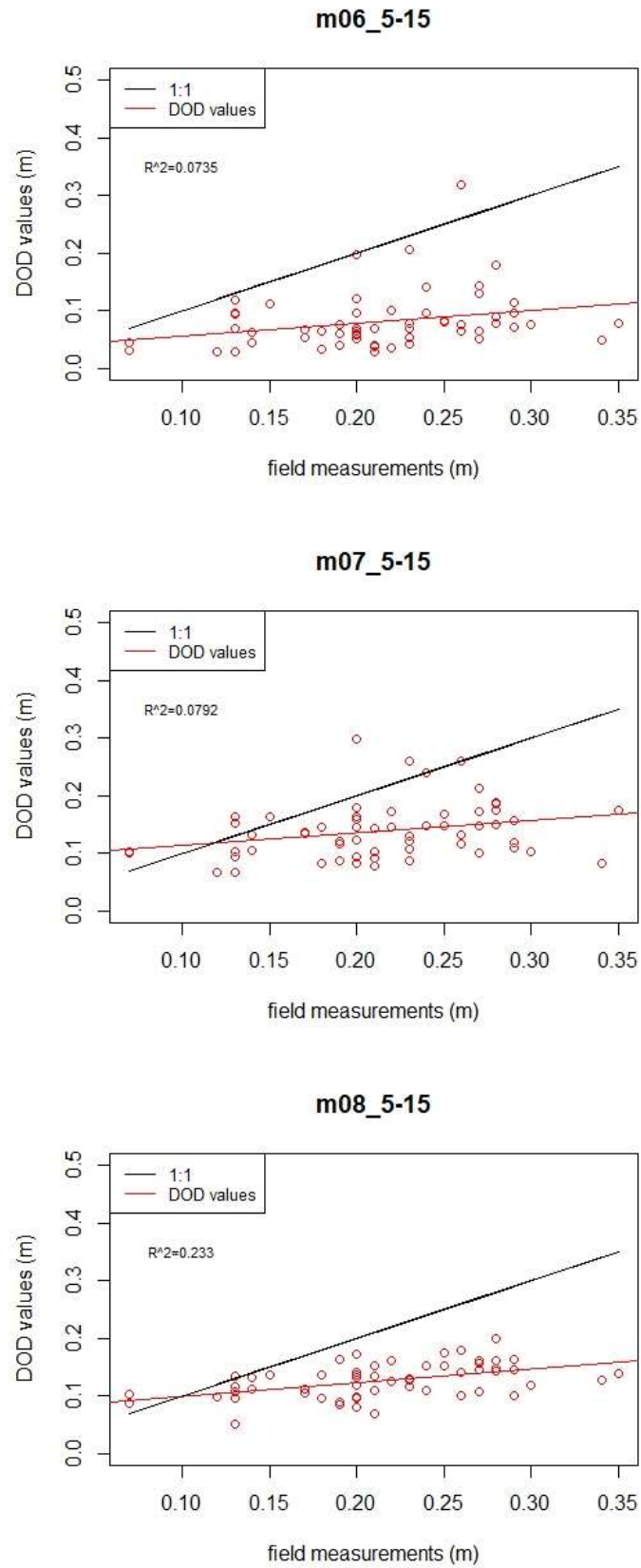


Figure S30. Linear regression and  $R^2$  value for  $DOD_{5-15}$  for all the eight missions compared to vegetation height values of GCPs. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

*Table S80. Values of difference from field measurements for DOD<sub>5-15</sub> for the eight missions at each point. Each column identifies the mission: m01<sub>5-15</sub> represents data extracted from DOD<sub>5-15</sub> of mission 1, and so on. Values expressed in meters. Negative values underestimate canopy height, positive values overestimate canopy height. The average RMSE defining the output for each mission is shown at the bottom of the respective column.*

Point Id	m01 <sub>5-15</sub>	m02 <sub>5-15</sub>	m03 <sub>5-15</sub>	m04 <sub>5-15</sub>	m05 <sub>5-15</sub>	m06 <sub>5-15</sub>	m07 <sub>5-15</sub>	m08 <sub>5-15</sub>
C1	0.09	-0.03	0.03	0.00	-	-	-	-
C2	0.10	-0.02	0.06	0.03	-	-	-	-
C3	0.06	-0.02	0.00	0.00	-	-	-	-
C4	0.01	-0.03	-0.03	-0.02	-	-	-	-
R2	-0.06	-0.15	-0.07	-0.10	-0.04	-0.15	-0.10	-0.08
R3	-0.06	-0.13	-0.03	-0.13	-0.05	-0.13	-0.06	-0.10
R4	-0.01	-0.11	0.00	-0.10	-0.03	-0.10	-0.06	-0.08
R5	0.02	-0.09	0.03	-0.03	0.00	-0.09	-0.05	-0.02
R6	-0.04	-0.15	-0.08	-0.12	-0.09	-0.15	-0.12	-0.10
R7	-0.06	-0.16	-0.08	-0.11	-0.07	-0.15	-0.10	-0.10
R8	-0.07	-0.16	-0.10	-0.12	-0.07	-0.14	-0.11	-0.12
R9	-0.04	-0.15	-0.08	-0.10	-0.05	-0.13	-0.07	-0.10
R10	-0.06	-0.16	-0.06	-0.15	-0.09	-0.18	-0.11	-0.11
R11	0.06	-0.13	-0.06	-0.07	-0.16	-0.10	-0.09	-0.08
R12	-0.13	-0.24	-0.18	-0.20	-0.15	-0.22	-0.20	-0.18
R13	-0.10	-0.19	-0.11	-0.14	-0.09	-0.19	-0.14	-0.11
R14	-0.09	-0.14	-0.09	-0.17	-0.07	-0.14	-0.09	-0.13
R15	-0.21	-0.26	-0.13	-0.23	-0.20	-0.27	-0.18	-0.21
R16	-0.06	-0.13	-0.11	-0.15	-0.08	-0.17	-0.10	-0.10
R17	-0.06	0.05	0.03	-0.19	-0.08	0.06	0.00	-0.16
R18	-0.14	-0.22	-0.15	-0.21	-0.13	-0.22	-0.17	-0.16
R19	-0.12	-0.18	-0.12	-0.16	-0.14	-0.21	-0.10	-0.13
R20	-0.06	-0.12	-0.10	-0.15	-0.06	-0.18	-0.13	-0.13
R21	-0.06	-0.17	-0.13	-0.15	-0.06	-0.15	-0.10	-0.11
R22	-0.10	-0.21	-0.13	-0.16	-0.10	-0.20	-0.11	-0.14
R23	-0.07	-0.18	-0.07	-0.10	-0.07	-0.18	-0.08	-0.09
R24	-0.08	-0.19	-0.05	-0.14	-0.05	-0.14	-0.06	-0.11
R25	-0.03	-0.15	-0.08	-0.10	-0.05	-0.14	-0.07	-0.06
R26	0.18	0.20	0.00	-0.04	0.20	-0.11	0.10	-0.06
R27	-0.07	-0.14	-0.06	-0.11	-0.06	-0.14	-0.02	-0.06
R28	-0.08	-0.10	0.08	-0.02	-0.07	-0.02	0.03	-0.10
R29	-0.06	-0.13	-0.06	-0.13	-0.09	-0.16	-0.12	-0.10
R30	-0.10	-0.17	-0.11	-0.14	-0.10	-0.18	-0.13	-0.12
R31	-0.10	-0.20	-0.13	-0.15	-0.11	-0.20	-0.14	-0.08
R32	-0.13	-0.17	-0.12	-0.16	-0.14	-0.18	-0.12	-0.10
R33	-0.08	-0.17	-0.10	-0.09	-0.06	-0.17	-0.11	-0.08
R34	-0.11	-0.20	-0.13	-0.12	-0.13	-0.19	-0.09	-0.12
R35	-0.03	-0.13	-0.13	-0.13	-0.04	-0.13	-0.12	-0.11
R36	-0.04	-0.18	-0.15	-0.15	-0.03	-0.19	-0.13	-0.13
R37	-0.05	-0.13	-0.08	-0.08	-0.04	-0.14	-0.04	-0.08
R38	0.06	-0.11	-0.07	-0.10	0.01	-0.10	0.00	-0.09
R39	-0.11	-0.22	-0.15	-0.15	-0.13	-0.22	-0.17	-0.14
R40	-0.09	-0.14	-0.03	-0.10	-0.08	-0.12	-0.05	-0.06
R41	-0.10	-0.16	-0.09	-0.15	-0.08	-0.17	-0.13	-0.14
R42	-0.05	-0.08	-0.10	-0.08	-0.02	-0.08	-0.08	-0.03
R43	-0.24	-0.29	-0.26	-0.25	-0.24	-0.29	-0.26	-0.21
R44	-0.05	-0.12	-0.11	-0.06	-0.05	-0.11	-0.07	-0.03
R45	-0.12	-0.17	-0.15	-0.20	-0.15	-0.19	-0.18	-0.19
R46	-0.04	-0.12	0.00	-0.11	-0.04	-0.12	-0.03	-0.06
R47	-0.06	-0.13	-0.02	-0.05	-0.07	-0.12	-0.04	-0.04
R48	0.01	-0.12	0.00	-0.06	-0.02	-0.10	-0.03	-0.07
R49	-0.02	-0.10	-0.01	-0.04	0.00	-0.09	-0.04	-0.01
R50	0.00	-0.08	0.02	-0.03	-0.01	-0.08	-0.01	-0.03
R51	1.15	-0.03	0.04	-0.04	0.05	-0.04	0.01	-0.01
R52	0.07	-0.05	-0.01	0.00	0.07	-0.06	0.02	0.00

R53	-0.08	-0.17	-0.02	-0.12	-0.11	-0.17	-0.08	-0.08
R54	-0.02	0.00	-0.04	-0.08	0.12	0.00	-0.04	-0.07
R55	-0.03	-0.17	-0.07	-0.17	-0.08	-0.20	-0.13	-0.13
R56	0.12	-0.11	0.07	-0.01	0.11	-0.01	0.03	-0.02
PROMEDIO	-0.03	-0.14	-0.07	-0.12	-0.06	-0.14	-0.08	-0.10
MEDIANA	-0.06	-0.15	-0.08	-0.12	-0.07	-0.14	-0.09	-0.10
RMSE	0.173	0.152	0.093	0.124	0.096	0.155	0.105	0.107

Table S81. Resume of  $R^2$  and RMSE values for selected CHMs (corresponding to  $DOD_{1-5}$ ,  $DOD_{3-5}$ , and  $DOD_{5-5}$ ) of each mission (1-8). The resolution of each CHM is indicated by its respective subindex. RMSE is shown as the average [min, max].

mission	$R^2$			RMSE		
	CHM <sub>0.2</sub>	CHM <sub>0.6</sub>	CHM <sub>0.9</sub>	CHM <sub>0.2</sub>	CHM <sub>0.6</sub>	CHM <sub>0.9</sub>
1	0.002	0.004	0.005	0.123 [0.002, 0.389]	0.156 [0.001, 0.941]	0.173 [0.000, 1.138]
2	0.038	0.029	0.043	0.179 [0.005, 0.321]	0.167 [0.009, 0.312]	0.155 [0.004, 0.292]
3	0.069	0.069	0.033	0.138 [0.019, 0.298]	0.103 [0.006, 0.283]	0.100 [0.001, 0.264]
4	0.061	0.116	0.079	0.164 [0.013, 0.306]	0.136 [0.000, 0.255]	0.126 [0.001, 0.246]
5	0.021	0.038	0.027	0.124 [0.008, 0.277]	0.100 [0.002, 0.221]	0.093 [0.000, 0.212]
6	0.035	0.036	0.034	0.183 [0.006, 0.328]	0.169 [0.014, 0.313]	0.160 [0.009, 0.289]
7	0.105	0.078	0.082	0.151 [0.003, 0.300]	0.119 [0.001, 0.260]	0.104 [0.000, 0.253]
8	0.079	0.126	0.172	0.152 [0.033, 0.285]	0.121 [0.016, 0.242]	0.110 [0.004, 0.210]

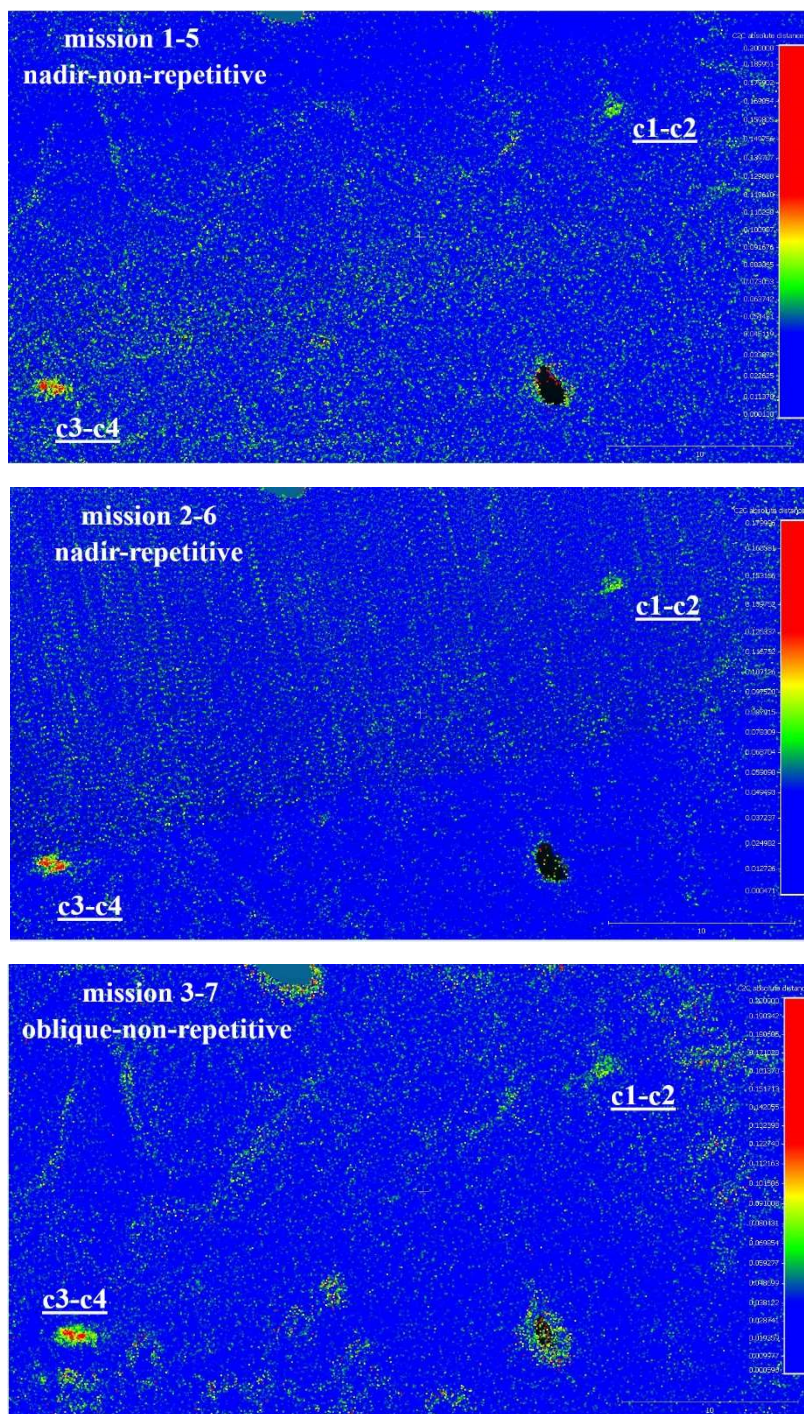


Figure S31. (Continue)

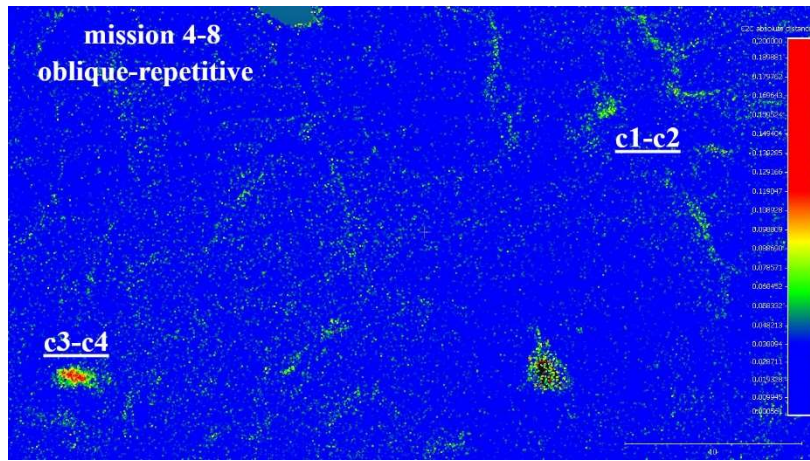


Figure S31. Outputs from contrasting pre- and post- pruning point clouds (method A) for the eight missions. Red and green spots identify the difference in elevation at the two sectors of peeled areas (c1-c2 and c3-c4).

Table S82. Values representing the distance between pre- and post-pruning point clouds estimated with the 'Compute cloud/cloud distance' tool of through CloudCompare (method A). Points selected from the identified area were averaged to estimate the reference value of elevation difference for each sector. Values are in meters.

mission 1-5		mission 2-6		mission 3-7		mission 4-8	
c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4
0.099	0.118	0.107	0.115	0.089	0.088	0.097	0.091
0.092	0.092	0.095	0.105	0.069	0.144	0.075	0.075
0.077	0.135	0.069	0.123	0.084	0.128	0.063	0.092
0.089	0.120	0.095	0.109	0.070	0.100	0.085	0.100
0.071	0.116	0.083	0.127	0.085	0.094	0.089	0.107
0.080	0.107	0.091	0.123	0.052	0.135	0.084	0.106
0.082	0.110	0.068	0.101	0.075	0.115	0.072	0.126
0.061	0.128	0.098	0.088	0.061	0.138	0.050	0.098
0.078	0.184	0.077	0.148	0.095	0.114	0.074	0.151
0.074	0.148	0.090	0.172	0.098	0.107	0.067	0.134
0.063	0.129	0.088	0.116	0.061	0.137	0.059	0.111
0.075	0.101	0.069	0.112	0.068	0.147	0.090	0.110
0.104	0.083	0.080	0.160	0.061	0.146	0.065	0.106
0.074	0.139	0.083	0.131	0.086	0.116	0.067	0.105
0.067	0.126	0.063	0.166	0.068	0.104	0.075	0.109
0.081	0.112	0.094	0.109	0.055	0.115	0.055	0.130
0.074	0.118	0.077	0.109	0.068	0.097	0.063	0.116
0.098	0.110	0.089	0.098	0.075	0.122	0.079	0.140
0.066	0.112	0.069	0.116	0.071	0.101	0.061	0.089
0.061	0.082	0.068	0.115	0.059	0.096	0.061	0.111

Table S83. Resume of picked points. Average value was used as the reference one. Values are in meters.

		Min	Max	average
Sector c1-c2	Mission 1-5	0.061	0.104	<b>0.078</b>
	Mission 2-6	0.063	0.107	<b>0.083</b>
	Mission 3-7	0.052	0.098	<b>0.073</b>
	Mission 4-8	0.050	0.097	<b>0.072</b>
Sector c3-c4	Mission 1-5	0.082	0.184	<b>0.119</b>
	Mission 2-6	0.088	0.172	<b>0.122</b>
	Mission 3-7	0.088	0.147	<b>0.114</b>
	Mission 4-8	0.075	0.151	<b>0.110</b>

Table S84. Values of difference in elevation collected applying method B, from DSMs generated through Pix4Dmapper. Values were measured along the profile at the peeled areas and averaged to estimate the reference value of elevation difference for each sector. Values are expressed in meters.

mission1-5		mission2-6		mission3-7		mission4-8	
c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4
0.078	0.092	0.063	0.085	0.176	0.196	0.064	0.099
0.078	0.097	0.064	0.09	0.175	0.197	0.063	0.101
0.077	0.102	0.063	0.095	0.177	0.2	0.064	0.106
0.075	0.109	0.064	0.099	0.178	0.21	0.064	0.108
0.074	0.118	0.065	0.103	0.176	0.218	0.066	0.114
0.073	0.127	0.065	0.107	0.176	0.219	0.066	0.116
0.074	0.133	0.067	0.109	0.179	0.225	0.068	0.12
0.073	0.136	0.067	0.111	0.182	0.232	0.068	0.122
0.073	0.14	0.065	0.114	0.182	0.235	0.068	0.125
0.075	0.139	0.066	0.112	0.183	0.238	0.069	0.128
0.073	0.14	0.067	0.118	0.187	0.239	0.069	0.131
0.073	0.139	0.066	0.119	0.181	0.241	0.068	0.135
0.073	0.137	0.064	0.12	0.187	0.243	0.068	0.135
0.073	0.136	0.063	0.12	0.185	0.241	0.068	0.133
0.076	0.131	0.064	0.123	0.187	0.242	0.068	0.135

Table S85. Resume of elevation difference values collected from method B application on Pix4Dmapper DSMs.

		Min	Max	average
Sector c1-c2	Mission 1-5	0.073	0.078	0.075
	Mission 2-6	0.063	0.067	0.065
	Mission 3-7	0.175	0.187	0.181
	Mission 4-8	0.063	0.069	0.067
Sector c3-c4	Mission 1-5	0.092	0.14	0.125
	Mission 2-6	0.085	0.123	0.108
	Mission 3-7	0.196	0.243	0.225
	Mission 4-8	0.099	0.135	0.121

Table S86. Values of difference in elevation collected applying method B, from 1-point-spacing-DSMs generated through LiDAR processing. Values were measured along the profile at the peeled areas and averaged to estimate the reference value of elevation difference for each sector. Values are expressed in meters.

mission1-5		mission2-6		mission3-7		mission4-8	
c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4
0.076	0.091	0.085	0.11	0.073	0.088	0.083	0.118
0.065	0.114	0.085	0.116	0.074	0.068	0.107	0.096
0.058	0.176	0.08	0.122	0.077	0.074	0.068	0.12
0.056	0.179	0.079	0.124	0.077	0.137	0.054	0.15
0.055	0.139	0.079	0.128	0.095	0.132	0.042	0.139
0.067	0.116	0.078	0.132	0.069	0.148	0.069	0.109
0.069	0.124	0.078	0.133	0.034	0.101	0.058	0.13
0.076	0.144	0.076	0.136	0.076	0.118	0.065	0.128
0.08	0.183	0.074	0.13	0.058	0.156	0.053	0.121
0.068	0.186	0.072	0.125	0.042	0.147	0.055	0.128
0.066	0.165	0.07	0.13	0.049	0.139	0.065	0.139
0.07	0.156	0.068	0.128	0.046	0.151	0.045	0.097
0.084	0.149	0.074	0.135	0.054	0.15	0.08	0.134
0.09	0.17	0.079	0.133	0.069	0.153	0.09	0.087
0.079	0.19	0.081	0.133	0.081	0.133	0.076	0.148

Table S87. Resume of elevation difference values collected from method B application on 1-point-spacing-DSMs.

		min	max	average
sector c1-c2	mission1-5	0.055	0.09	<b>0.071</b>
	mission2-6	0.068	0.085	<b>0.077</b>
	mission3-7	0.034	0.095	<b>0.065</b>
	mission4-8	0.042	0.107	<b>0.067</b>
sector c3-c4	mission1-5	0.091	0.19	<b>0.152</b>
	mission2-6	0.11	0.136	<b>0.128</b>
	mission3-7	0.068	0.156	<b>0.126</b>
	mission4-8	0.087	0.15	<b>0.123</b>

Table S88. Values of difference in elevation collected applying method B, from 3-point-spacing-DSMs generated through LiDAR processing. Values were measured along the profile at the peeled areas averaged to estimate the reference value of elevation difference for each sector. Values are expressed in meters.

mission1-5		mission2-6		mission3-7		mission4-8	
c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4
0.064	0.071	0.064	0.154	0.096	0.08	0.06	0.129
0.066	0.083	0.068	0.156	0.085	0.097	0.056	0.091
0.062	0.093	0.07	0.151	0.065	0.115	0.055	0.101
0.062	0.101	0.073	0.142	0.06	0.132	0.048	0.109
0.061	0.112	0.076	0.135	0.058	0.131	0.042	0.118
0.061	0.117	0.075	0.13	0.062	0.13	0.042	0.114
0.06	0.131	0.078	0.125	0.063	0.126	0.043	0.109
0.064	0.138	0.076	0.118	0.06	0.125	0.045	0.105
0.069	0.147	0.073	0.109	0.06	0.12	0.049	0.105
0.074	0.149	0.074	0.112	0.063	0.115	0.053	0.103
0.08	0.138	0.076	0.11	0.062	0.112	0.059	0.116
0.082	0.135	0.075	0.105	0.051	0.128	0.063	0.129
0.082	0.135	0.074	0.1	0.046	0.138	0.063	0.127
0.077	0.134	0.072	0.094	0.057	0.142	0.063	0.129
0.073	0.138	0.074	0.084	0.062	0.145	0.06	0.127

Table S89. Resume of elevation difference values collected from method B application on 3-point-spacing-DSMs.

		min	max	average
sector c1-c2	mission1-5	0.06	0.082	<b>0.069</b>
	mission2-6	0.064	0.078	<b>0.073</b>
	mission3-7	0.046	0.096	<b>0.063</b>
	mission4-8	0.042	0.063	<b>0.053</b>
sector c3-c4	mission1-5	0.071	0.149	<b>0.121</b>
	mission2-6	0.084	0.156	<b>0.122</b>
	mission3-7	0.08	0.145	<b>0.122</b>
	mission4-8	0.091	0.129	<b>0.114</b>

Table S90. Values of difference in elevation collected applying method B, from 5-point-spacing-DSMs generated through LiDAR processing. Values were measured along the profile at the peeled areas averaged to estimate the reference value of elevation difference for each sector. Values are expressed in meters.

mission1-5		mission2-6		mission3-7		mission4-8	
c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4
0.042	0.07	0.066	0.098	0.057	0.084	0.065	0.102
0.047	0.075	0.063	0.081	0.077	0.101	0.066	0.108
0.05	0.083	0.061	0.083	0.064	0.124	0.059	0.115
0.051	0.091	0.061	0.085	0.055	0.125	0.053	0.12
0.055	0.096	0.058	0.087	0.06	0.118	0.045	0.121
0.06	0.104	0.057	0.088	0.056	0.106	0.04	0.12
0.057	0.112	0.054	0.09	0.055	0.111	0.039	0.111
0.056	0.118	0.053	0.092	0.059	0.121	0.043	0.101
0.054	0.12	0.051	0.094	0.063	0.129	0.048	0.095
0.054	0.116	0.049	0.093	0.064	0.134	0.055	0.092
0.054	0.11	0.047	0.093	0.064	0.133	0.06	0.095
0.056	0.107	0.046	0.092	0.059	0.132	0.065	0.099
0.054	0.105	0.041	0.092	0.049	0.133	0.063	0.104
0.055	0.101	0.041	0.091	0.045	0.135	0.061	0.11
0.054	0.095	0.039	0.096	0.046	0.136	0.056	0.118

Table S91. Resume of elevation difference values collected from method B application on 5-point-spacing-DSMs.

		min	max	average
sector c1-c2	mission1-5	0.042	0.06	<b>0.053</b>
	mission2-6	0.039	0.066	<b>0.052</b>
	mission3-7	0.045	0.077	<b>0.058</b>
	mission4-8	0.039	0.066	<b>0.055</b>
sector c3-c4	mission1-5	0.07	0.12	<b>0.100</b>
	mission2-6	0.081	0.098	<b>0.090</b>
	mission3-7	0.084	0.136	<b>0.121</b>
	mission4-8	0.092	0.121	<b>0.107</b>

Table S92. Field values of vegetation height removed at each sector. Values in meters.

	Field value	average
sector c1-c2	0.07	0.07
	0.06	
	0.06	
	0.09	
sector c3-c4	0.15	0.13
	0.18	
	0.10	
	0.10	

Table S93. Elevation difference estimations from method A and method B. 'CC' column shows values extracted from the point cloud through method A, while other columns identify the digital model: p4d corresponds to photogrammetric-processing-derived model; 1ps, 3ps and 5ps are the LiDAR-processing models build at 1-, 3- and 5-point-spacing resolution, respectively. Values expressed in meters.

		Method A	Method B			
		CC	p4d	1ps	3ps	5ps
sector c1-c2	mission1-5	0.08	0.07	0.07	0.07	0.05
	mission2-6	0.08	0.06	0.08	0.07	0.05
	mission3-7	0.07	0.18	0.06	0.06	0.06
	mission4-8	0.07	0.07	0.07	0.05	0.05
sector c3-c4	mission1-5	0.12	0.13	0.15	0.12	0.10
	mission2-6	0.12	0.11	0.13	0.12	0.09
	mission3-7	0.12	0.23	0.13	0.12	0.12
	mission4-8	0.11	0.12	0.12	0.11	0.11

Table S94. Values of deviation between field measures and values estimated through method A. Values in meters.

	point cloud vs field	
	c1-c2	c3-c4
mission1-5	0.01	-0.01
mission2-6	0.01	-0.01
mission3-7	0.00	-0.01
mission4-8	0.00	-0.02

Table S95. Deviations between field measures and values estimated through method B (Models). Values in meters.

	Models vs field							
	p4d		1ps		3ps		5ps	
	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4	c1-c2	c3-c4
mission1-5	0.00	0.00	0.00	0.02	0.00	-0.01	-0.02	-0.03
mission2-6	-0.01	-0.02	0.01	0.00	0.00	-0.01	-0.02	-0.04
mission3-7	0.11	0.10	-0.01	0.00	-0.01	-0.01	-0.01	-0.01
mission4-8	0.00	-0.01	0.00	-0.01	-0.02	-0.02	-0.02	-0.02

Table S96. Results from method C application. Comparison of elevation values difference at peeled areas measured on the field (onfield column), estimated through method A (CC column), method B (1ps, 3ps and 5ps column) and method C (extracted from DOD). In “divergence” columns the difference between DOD extracted values and field values are shown; just one column from method C was considered because results were pretty identical. Values are expressed in meters.

	onfield	mission	CC	1ps	DOD <sub>1-5</sub>	DOD <sub>1-10</sub>	DOD <sub>1-15</sub>	divergence
sector c1-c2	0.07	1	0.08	0.07	0.12	0.12	0.12	0.05
		2	0.08	0.08	0.01	0.02	0.01	-0.06
		3	0.07	0.06	0.04	0.04	0.04	-0.03
		4	0.07	0.07	0.06	0.06	0.06	-0.01
sector c3-c4	0.13	1	0.12	0.15	0.10	0.10	0.10	-0.03
		2	0.12	0.13	0.07	0.06	0.06	-0.06
		3	0.12	0.13	0.05	0.05	0.05	-0.09
		4	0.11	0.12	0.06	0.06	0.06	-0.07

	onfield	mission	CC	3ps	DOD <sub>3-5</sub>	DOD <sub>3-10</sub>	DOD <sub>3-15</sub>	divergence
sector c1-c2	0.07	1	0.08	0.07	0.16	0.16	0.16	0.09
		2	0.08	0.07	0.03	0.03	0.03	-0.04
		3	0.07	0.06	0.09	0.09	0.08	0.02
		4	0.07	0.05	0.08	0.08	0.08	0.01
sector c3-c4	0.13	1	0.12	0.12	0.14	0.14	0.14	0.01
		2	0.12	0.12	0.11	0.10	0.10	-0.02
		3	0.12	0.12	0.11	0.11	0.11	-0.02
		4	0.11	0.11	0.08	0.08	0.08	-0.05

	onfield	mission	CC	5ps	DOD <sub>5-5</sub>	DOD <sub>5-10</sub>	DOD <sub>5-15</sub>	divergence
sector c1-c2	0.07	1	0.08	0.05	0.16	0.16	0.16	0.09
		2	0.08	0.05	0.04	0.04	0.04	-0.03
		3	0.07	0.06	0.11	0.12	0.12	0.04
		4	0.07	0.05	0.09	0.09	0.09	0.02
sector c3-c4	0.13	1	0.12	0.10	0.17	0.16	0.17	0.04
		2	0.12	0.09	0.11	0.11	0.11	-0.02
		3	0.12	0.12	0.11	0.12	0.11	-0.02
		4	0.11	0.11	0.11	0.12	0.12	-0.02

Table S97. Quality check of point cloud from PNOA2015-LiDAR. Elevation values for GCPs (Point elevation), elevation values of the corresponding point from the PNOA2015-LiDAR point cloud (PNOA2015), and RMSE value at each point. Elevation values are expressed in orthometric height.

ID	Point elevation	PNOA2015	RMSE
T21	2.111	0.586	1.525
P6	2.416	0.947	1.469
P33	2.187	0.728	1.459
P21	2.588	1.159	1.429
P31	2.267	0.847	1.42
FIJO5	3.741	2.324	1.417
P22	2.451	1.034	1.417
P34	2.162	0.748	1.414
P11	2.712	1.3	1.412
T22	2.196	0.784	1.412
P14	2.626	1.218	1.408
T15	2.444	1.038	1.406
P1	2.739	1.333	1.406
FIJO2	3.93	2.532	1.398
T14	2.489	1.094	1.395
P12	2.693	1.3	1.393
T24	2.23	0.841	1.389
T68	2.658	1.27	1.388
P20	2.589	1.203	1.386
P2	2.569	1.183	1.386
P26	2.45	1.076	1.374
P19	2.577	1.205	1.372
P9	2.647	1.275	1.372
T20	2.451	1.082	1.369
FIJO6	3.87	2.502	1.368
P3	2.459	1.093	1.366
P25	2.469	1.109	1.36
T46	2.618	1.258	1.36
T30	2.465	1.109	1.356
T10	2.674	1.319	1.355
P24	2.538	1.184	1.354
P18	2.595	1.243	1.352
FIJO3	3.913	2.563	1.35
FIJO4	4.005	2.66	1.345
P8	2.634	1.289	1.345
P5	2.217	0.874	1.343
P7	2.516	1.176	1.34
T25	2.188	0.851	1.337
P32	2.211	0.879	1.332
FIJO1	3.956	2.628	1.328
T35	2.377	1.051	1.326
P13	2.683	1.358	1.325
T23	2.19	0.874	1.316
T17	2.68	1.369	1.311
P10	2.586	1.281	1.305
T56	2.664	1.382	1.282
P4	2.185	0.927	1.258
P35	2.082	0.826	1.256
P28	2.362	1.109	1.253
P17	2.519	1.283	1.236
P29	2.222	1.059	1.163
P23	2.234	1.086	1.148
P30	2.012	0.921	1.091

P15	2.273	1.185	1.088
P27	2.18	1.113	1.067
P16	2.259	1.247	1.012
R38	2.452	0.91	1.542
R56	2.347	0.844	1.503
R11	2.564	1.078	1.486
R26	2.644	1.175	1.469
R40	2.61	1.145	1.465
R54	2.417	0.954	1.463
R35	2.494	1.039	1.455
R55	2.479	1.029	1.45
C3	2.608	1.173	1.435
R45	2.581	1.171	1.41
R28	2.644	1.236	1.408
R8	2.589	1.187	1.402
R50	2.536	1.136	1.4
R46	2.59	1.192	1.398
R12	2.627	1.234	1.393
R53	2.57	1.177	1.393
R4	2.635	1.25	1.385
R5	2.614	1.232	1.382
C4	2.548	1.167	1.381
R14	2.672	1.292	1.38
R1	3.951	2.572	1.379
R44	2.577	1.2	1.377
R2	2.679	1.302	1.377
B1	2.199	0.823	1.376
R39	2.614	1.241	1.373
R21	2.66	1.288	1.372
R20	2.651	1.28	1.371
R51	2.5	1.135	1.365
R6	2.613	1.25	1.363
R10	2.614	1.253	1.361
R9	2.553	1.193	1.36
R17	2.69	1.33	1.36
R49	2.416	1.058	1.358
R48	2.436	1.079	1.357
R3	2.618	1.261	1.357
R22	2.62	1.263	1.357
B2	2.403	1.046	1.357
R31	2.688	1.335	1.353
R37	2.493	1.142	1.351
R7	2.588	1.239	1.349
R41	2.615	1.267	1.348
C2	2.707	1.36	1.347
R52	2.457	1.11	1.347
R43	2.635	1.289	1.346
R23	2.593	1.248	1.345
C1	2.71	1.365	1.345
R34	2.67	1.325	1.345
R33	2.647	1.305	1.342
R32	2.692	1.35	1.342
R24	2.551	1.211	1.34
R36	2.599	1.262	1.337
R30	2.641	1.309	1.332
R27	2.63	1.302	1.328
R25	2.658	1.331	1.327
R16	2.704	1.382	1.322

R47	2.512	1.195	1.317
B3	2.669	1.354	1.315
R18	2.712	1.409	1.303
R15	2.674	1.387	1.287
R42	2.65	1.367	1.283
R19	2.634	1.354	1.28
R29	2.675	1.4	1.275
R13	2.558	1.304	1.254
average RMSE			<b>1.3563962</b>

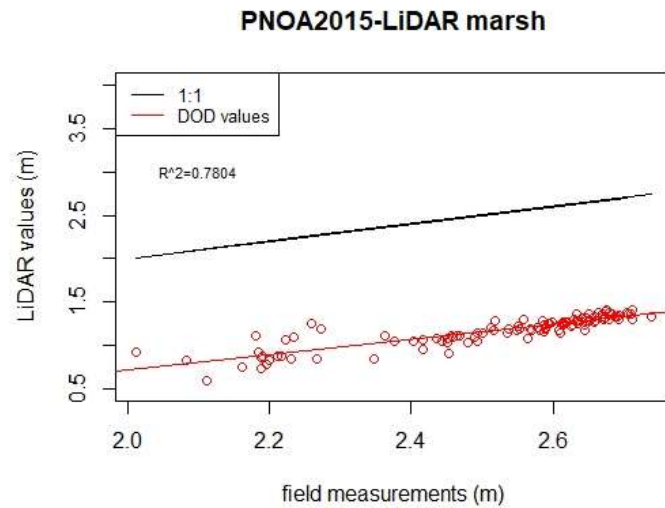
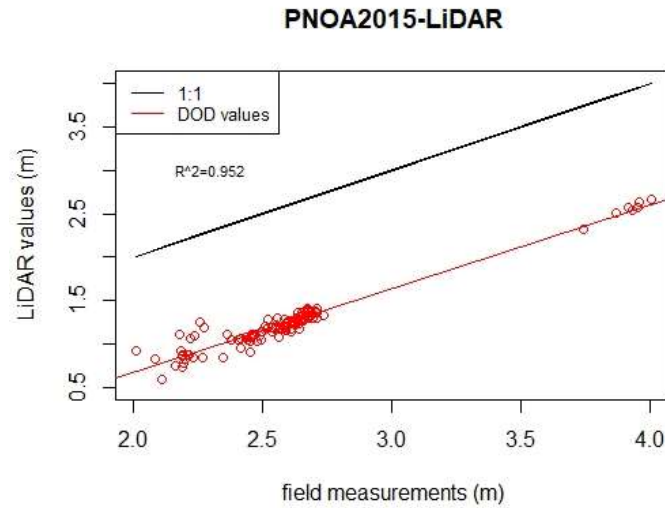


Figure S32. Linear regression and  $R^2$  value for the PNOA2015-LiDAR point cloud values compared to GCPs from both campaigns. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.

Table S98. Elevation values for GCPs, and the corresponding point from DEMs derived from PNOA2015-LiDAR dataset. 'Elevation' column represents the GCP elevation value, 'PNOA2015\_DEM' column shows the corresponding value of elevation sampled from the DEM. Elevation values are expressed in ellipsoidal height. In the last column the value of the error associated to each point.

Point Id	Elevation (m)	PNOA2015_DEM (m)	Difference (m)
FIJO1	47.457	46.167	-1.29
FIJO2	47.431	46.172	-1.259
FIJO3	47.413	46.14	-1.273
FIJO4	47.505	46.288	-1.217
FIJO5	47.242	46.148	-1.094
FIJO6	47.371	46.128	-1.243
P1	46.239	45.99	-0.249
P10	46.087	44.823	-1.264
P11	46.213	44.884	-1.329
P12	46.194	44.884	-1.31
P13	46.184	44.887	-1.297
P14	46.127	44.865	-1.262
P15	45.774	44.865	-0.909
P16	45.759	44.882	-0.877
P17	46.019	44.882	-1.137
P18	46.096	44.882	-1.214
P19	46.078	44.736	-1.342
P2	46.069	44.769	-1.3
P20	46.09	44.727	-1.363
P21	46.089	44.727	-1.362
P22	45.952	44.716	-1.236
P23	45.735	44.716	-1.019
P24	46.039	44.716	-1.323
P25	45.97	44.657	-1.313
P26	45.95	44.657	-1.293
P27	45.681	44.638	-1.043
P28	45.863	44.638	-1.225
P29	45.723	44.638	-1.085
P3	45.96	44.769	-1.191
P30	45.513	44.623	-0.89
P31	45.768	44.544	-1.224
P32	45.712	44.505	-1.207
P33	45.687	44.505	-1.182
P34	45.663	44.399	-1.264
P35	45.583	44.399	-1.184
P4	45.686	44.615	-1.071
P5	45.717	44.615	-1.102
P6	45.917	44.615	-1.302
P7	46.017	44.843	-1.174
P8	46.135	44.843	-1.292
P9	46.147	44.853	-1.294
T10	46.175	44.895	-1.28
T14	45.99	44.695	-1.295
T15	45.944	44.655	-1.289
T17	46.181	44.948	-1.233
T20	45.951	44.705	-1.246
T21	45.612	44.312	-1.3
T22	45.697	44.312	-1.385
T23	45.691	44.406	-1.285
T24	45.731	44.406	-1.325
T25	45.689	44.43	-1.259
T30	45.966	44.655	-1.311
T35	45.878	44.658	-1.22
T46	46.119	44.855	-1.264
T56	46.164	44.895	-1.269

T68	46.159	44.855	-1.304
B1	45.7	44.443	-1.257
B2	45.904	44.641	-1.263
B3	46.17	44.935	-1.235
C1	46.211	44.802	-1.409
C2	46.208	44.902	-1.306
C3	46.109	44.724	-1.385
C4	46.049	44.672	-1.377
R1	47.452	46.113	-1.339
R10	46.115	44.772	-1.343
R11	46.064	44.735	-1.329
R12	46.128	44.81	-1.318
R13	46.059	44.867	-1.192
R14	46.172	44.894	-1.278
R15	46.175	45.011	-1.164
R16	46.205	44.961	-1.244
R17	46.191	44.927	-1.264
R18	46.213	44.925	-1.288
R19	46.135	44.921	-1.214
R2	46.18	45.036	-1.144
R20	46.152	44.929	-1.223
R21	46.161	44.802	-1.359
R22	46.121	44.839	-1.282
R23	46.094	44.877	-1.217
R24	46.052	44.865	-1.187
R25	46.159	44.948	-1.211
R26	46.145	44.893	-1.252
R27	46.131	44.902	-1.229
R28	46.145	44.902	-1.243
R29	46.176	44.942	-1.234
R3	46.119	44.877	-1.242
R30	46.142	44.891	-1.251
R31	46.189	44.884	-1.305
R32	46.193	44.914	-1.279
R33	46.148	44.91	-1.238
R34	46.171	44.91	-1.261
R35	45.995	44.895	-1.1
R36	46.1	44.814	-1.286
R37	45.994	44.838	-1.156
R38	45.953	44.657	-1.296
R39	46.115	44.839	-1.276
R4	46.136	44.877	-1.259
R40	46.111	44.753	-1.358
R41	46.116	44.837	-1.279
R42	46.151	44.883	-1.268
R43	46.136	44.914	-1.222
R44	46.078	44.783	-1.295
R45	46.082	44.845	-1.237
R46	46.091	44.774	-1.317
R47	46.013	44.728	-1.285
R48	45.937	44.681	-1.256
R49	45.917	44.648	-1.269
R5	46.114	44.812	-1.302
R50	46.037	44.719	-1.318
R51	46.001	44.657	-1.344
R52	45.958	44.699	-1.259
R53	46.071	44.741	-1.33
R54	45.918	44.634	-1.284
R55	45.98	44.69	-1.29
R56	45.848	44.531	-1.317

R6	46.114	44.825	-1.289
R7	46.089	44.825	-1.264
R8	46.09	44.788	-1.302
R9	46.054	44.883	-1.171
average RMSE			1.24832383

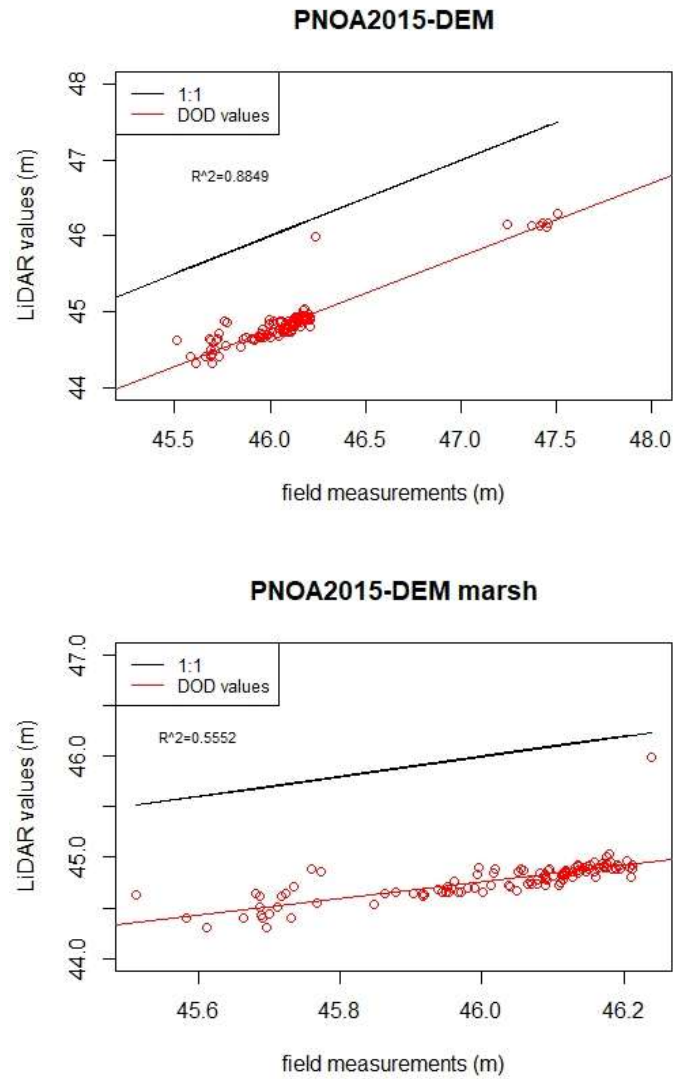


Figure S33. Linear regressions and  $R^2$  value for the DEM generated from the PNOA2015LiDAR dataset compared to GCPs from both campaigns. Upper graph plots all points, while lower graph shows the existing relationship by using only the points situated on the marsh surface. The red line is the regression line for the compared datasets, the black line represents the 1:1 pattern.