

Annex C KPI Results

Table C-1. PreDF - Summary statistics of MBE of MWS for 1 day and 60 days gap scenarios

Sector	Mean [m/s]		Standard deviation [m/s]		Max [m/s]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	0.275	0.250	0.048	0.090	0.301	0.357
1	0.257	0.237	0.045	0.088	0.288	0.360
2	0.609	0.556	0.106	0.198	0.652	0.703
3	0.958	0.878	0.167	0.310	1.006	1.051
4	0.850	0.781	0.148	0.274	0.914	0.977
5	0.795	0.734	0.138	0.259	0.842	0.903
6	0.766	0.706	0.133	0.247	0.806	0.851
7	0.439	0.406	0.076	0.145	0.463	0.526
8	0.436	0.399	0.076	0.140	0.463	0.484
9	0.398	0.363	0.069	0.127	0.422	0.467
10	0.494	0.453	0.086	0.158	0.522	0.543
11	0.376	0.344	0.065	0.121	0.406	0.433

Source: Author's own calculation/assessment

Table C-2. PreDF - Summary statistics of MAE of MWS for 1 day and 60 days gap scenarios

Sector	Mean [m/s]		Standard deviation [m/s]		Max [m/s]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	0.877	0.804	0.153	0.280	0.914	0.953
1	0.857	0.789	0.149	0.276	0.896	0.998
2	1.110	1.020	0.193	0.355	1.155	1.179
3	1.296	1.189	0.225	0.416	1.348	1.396
4	1.263	1.164	0.220	0.406	1.323	1.358
5	1.281	1.181	0.223	0.412	1.337	1.381
6	1.237	1.141	0.215	0.398	1.285	1.355
7	1.089	1.002	0.189	0.349	1.127	1.172
8	1.119	1.031	0.195	0.359	1.158	1.183
9	0.938	0.863	0.163	0.301	0.973	0.997
10	0.921	0.846	0.160	0.295	0.960	0.971
11	0.867	0.795	0.151	0.277	0.902	0.938

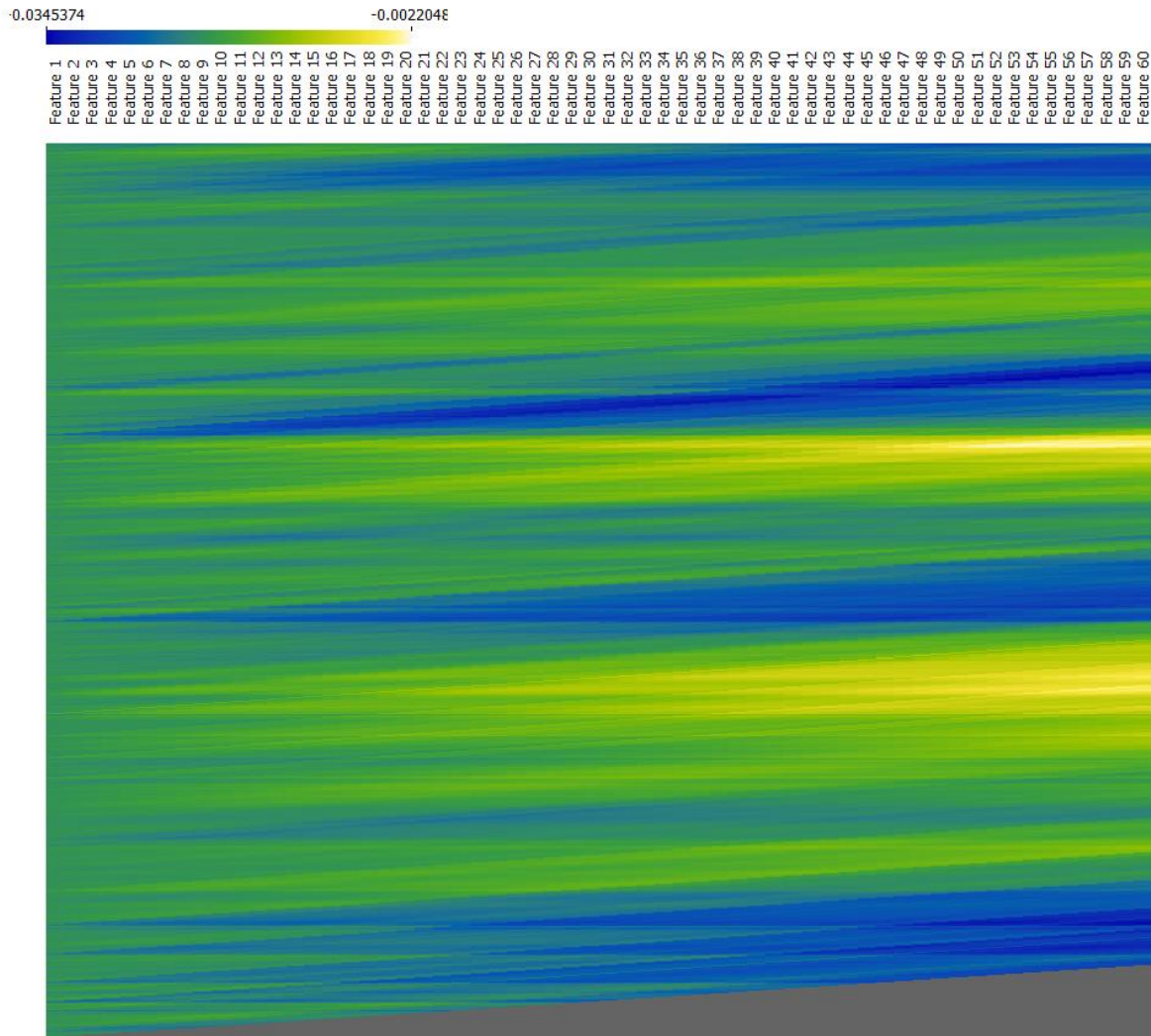
Source: Author's own calculation/assessment

Table C-3. PreDF - Summary statistics of RMSE of MWS for 1 day and 60 days gap scenarios

Sector	Mean [m/s]		Standard deviation [m/s]		Max [m/s]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	1.184	1.084	0.206	0.378	1.229	1.283
1	1.182	1.087	0.206	0.381	1.230	1.366
2	1.460	1.343	0.254	0.468	1.515	1.546
3	1.673	1.535	0.291	0.536	1.736	1.804
4	1.692	1.559	0.294	0.544	1.764	1.824
5	1.677	1.545	0.292	0.539	1.743	1.787
6	1.600	1.476	0.278	0.515	1.658	1.755
7	1.427	1.313	0.248	0.458	1.476	1.529
8	1.500	1.381	0.261	0.481	1.551	1.587
9	1.228	1.130	0.214	0.394	1.272	1.302
10	1.199	1.101	0.209	0.383	1.245	1.264
11	1.151	1.054	0.200	0.367	1.194	1.234

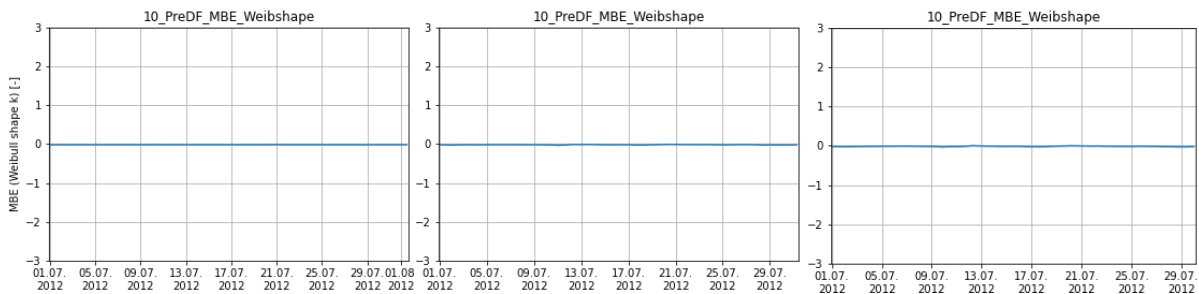
Source: Author's own calculation/assessment

Figure C-1. PreDF – Heatmap of MBE of Weibull shape factors for all iterations and gap scenarios – weighted from sectorwise analysis



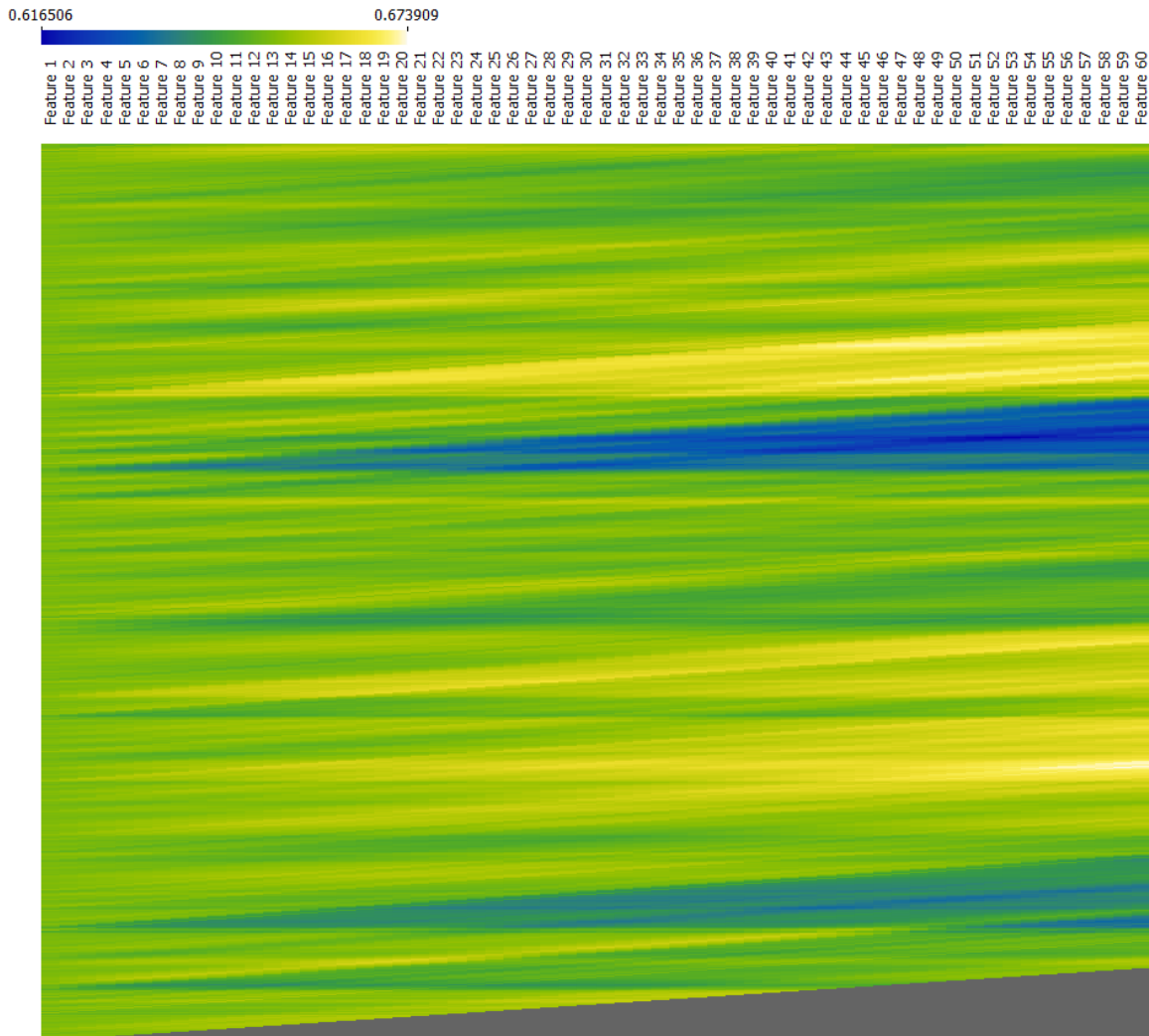
Source: Author’s own illustration, grey means no data values, feature stands for gap.

Figure C-2. PreDF – Evolution of MBE weighted Weibull shape factor 1-day (left), 30 days (middle) and 60 days (right) scenarios



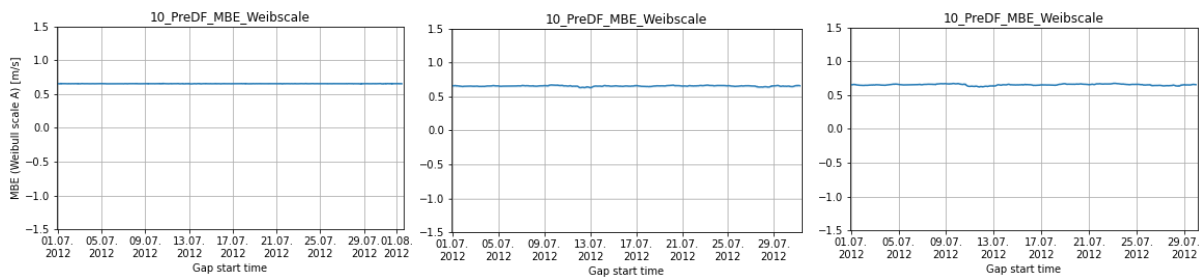
Source: Author’s own illustration, x-axis start of the gap-time.

Figure C-3. PreDF – Heatmap of MBE of Weibull scale factors for all iterations and gap scenarios – weighted from sectorwise analysis



Source: Author's own illustration, grey means no data values, feature stands for gap.

Figure C-4. PreDF – Evolution of MBE weighted Weibull scale factor 1-day (left), 30 days (middle) and 60 days (right) scenarios



Source: Author's own illustration, x-axis start of the gap-time.

Table C-4. PreDF - Summary statistics of MBE of WPD for 1 day and 60 days gap scenarios

Sector	Mean [W/m ²]		Standard deviation [W/m ²]		Min [W/m ²]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	83	76	14	27	88	103
1	58	54	10	20	65	74
2	139	127	24	46	149	161
3	301	274	52	100	315	338
4	179	164	31	58	190	200
5	182	167	32	60	191	204
6	261	239	45	84	273	286
7	153	141	27	50	162	177
8	159	145	28	51	166	182
9	106	97	18	34	113	122
10	118	108	21	38	126	129
11	73	67	13	24	77	86

Source: Author's own calculation/assessment

Table C-5. PreDF - Summary statistics of MAE of WPD for 1 day and 60 days gap scenarios

Sector	Mean [W/m ²]		Standard deviation [W/m ²]		Min [W/m ²]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	134	122	23	43	140	158
1	118	109	21	39	124	142
2	195	178	34	63	203	217
3	328	299	57	108	343	365
4	215	197	37	69	225	234
5	232	212	40	75	242	254
6	354	324	62	113	368	387
7	332	304	58	106	344	358
8	286	262	50	92	297	317
9	192	176	33	62	199	209
10	178	163	31	57	187	193
11	125	114	22	40	130	143

Source: Author's own calculation/assessment

Table C-6. PreDF - Summary statistics of RMSE of WPD for 1 day and 60 days gap scenarios

Sector	Mean [W/m ²]		Standard deviation [W/m ²]		Min [W/m ²]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	295	269	51	96	306	336
1	232	213	40	76	242	278
2	322	295	56	104	335	355
3	583	530	102	193	606	650
4	376	345	65	121	392	405
5	446	408	78	144	464	483
6	583	534	101	187	604	629
7	540	495	94	173	559	578
8	530	485	92	170	548	580
9	412	376	72	135	427	447
10	349	320	61	113	363	378
11	254	232	44	81	263	282

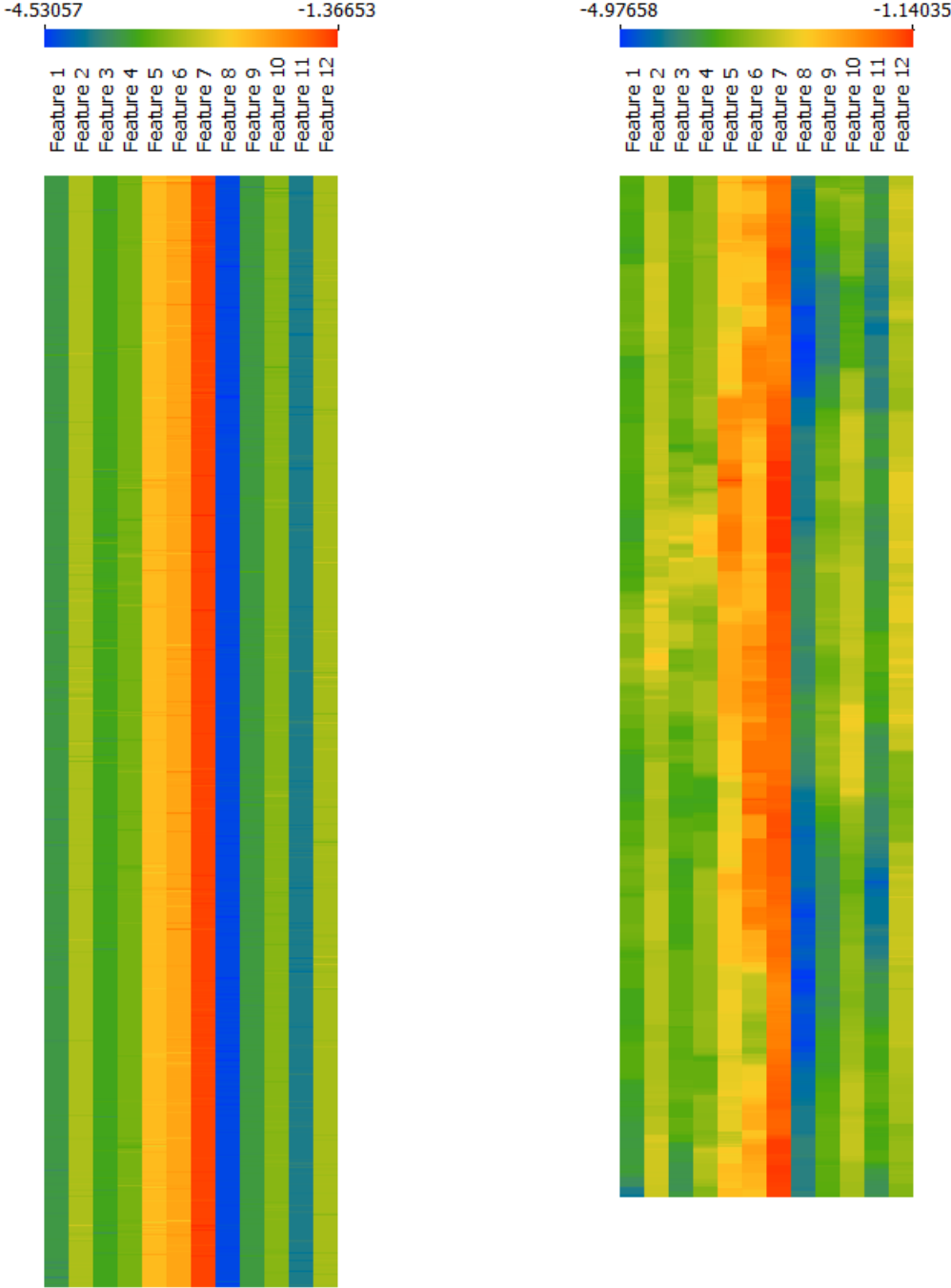
Source: Author's own calculation/assessment

Table C-7. PreDF - Summary statistics of KS of MWS for 1 day and 60 days gap scenarios

Sector	Mean		Standard deviation		Max	
	1 day	60 days	1 day	60 days	1 day	60 days
0	4.9%	4.4%	0.8%	1.6%	5.2%	6.1%
1	5.6%	5.3%	1.0%	1.9%	6.1%	7.0%
2	8.6%	8.0%	1.5%	2.8%	9.2%	10.3%
3	11.2%	10.5%	2.0%	3.7%	11.9%	13.2%
4	8.6%	8.1%	1.5%	2.9%	9.2%	10.3%
5	8.7%	8.3%	1.5%	2.9%	9.2%	10.9%
6	6.4%	6.1%	1.1%	2.1%	6.7%	7.8%
7	4.1%	3.8%	0.7%	1.4%	4.3%	4.9%
8	5.0%	4.7%	0.9%	1.7%	5.3%	5.9%
9	4.5%	4.2%	0.8%	1.5%	4.7%	5.3%
10	7.1%	6.6%	1.2%	2.4%	7.6%	8.3%
11	6.4%	6.0%	1.1%	2.1%	7.0%	7.6%

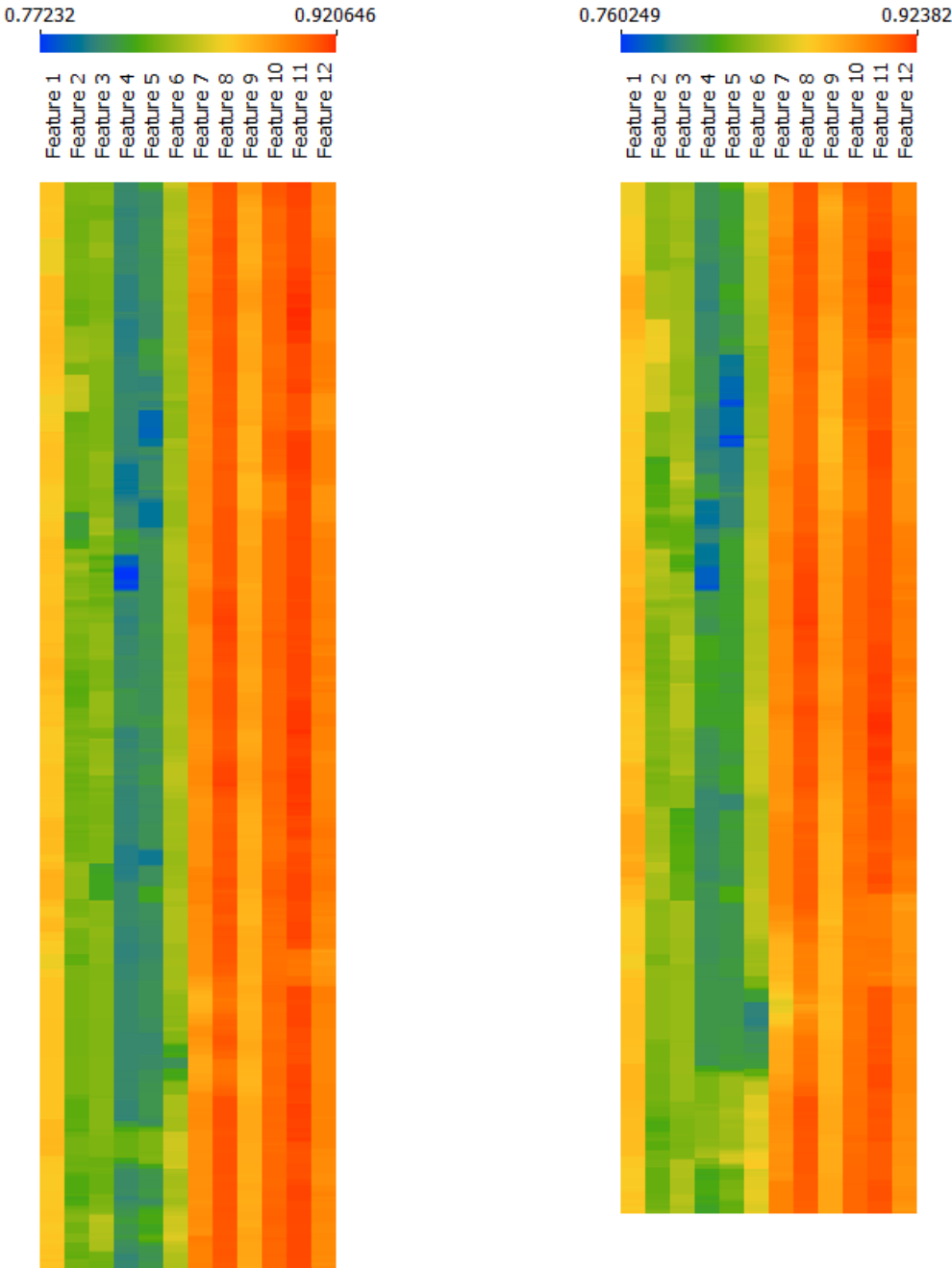
Source: Author's own calculation/assessment

Figure C-5. PreDF – Heatmap of sectorwise WDD for 1-day (left) and 60-days gap scenarios (right)



Source: Author's own illustration, the description "feature" represents the sector, the colours within the vertical columns represent the iteration results within the gap.

Figure C-6. SelfDF – Heatmap of R^2 values of sectorwise hourly wind speeds correlation for 1-day (left) and 60-days gap scenarios (right)



Source: Author’s own illustration, the description “feature” represents the sector.

Table C-8. SelfDF - Summary statistics of MAE of MWS for 1 day and 60 days gap scenarios

Sector	Mean [m/s]		Standard deviation [m/s]		Max [m/s]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	0.860	0.788	0.150	0.275	0.894	0.925
1	0.843	0.776	0.147	0.271	0.879	0.978
2	1.004	0.924	0.175	0.322	1.050	1.086
3	0.978	0.898	0.170	0.313	1.016	1.063
4	1.029	0.949	0.179	0.332	1.076	1.119
5	1.094	1.007	0.190	0.351	1.138	1.166
6	1.021	0.941	0.178	0.329	1.058	1.144
7	1.011	0.929	0.176	0.324	1.048	1.076
8	1.027	0.946	0.179	0.330	1.064	1.093
9	0.869	0.801	0.151	0.279	0.902	0.927
10	0.822	0.755	0.143	0.263	0.852	0.863
11	0.809	0.741	0.141	0.258	0.840	0.858

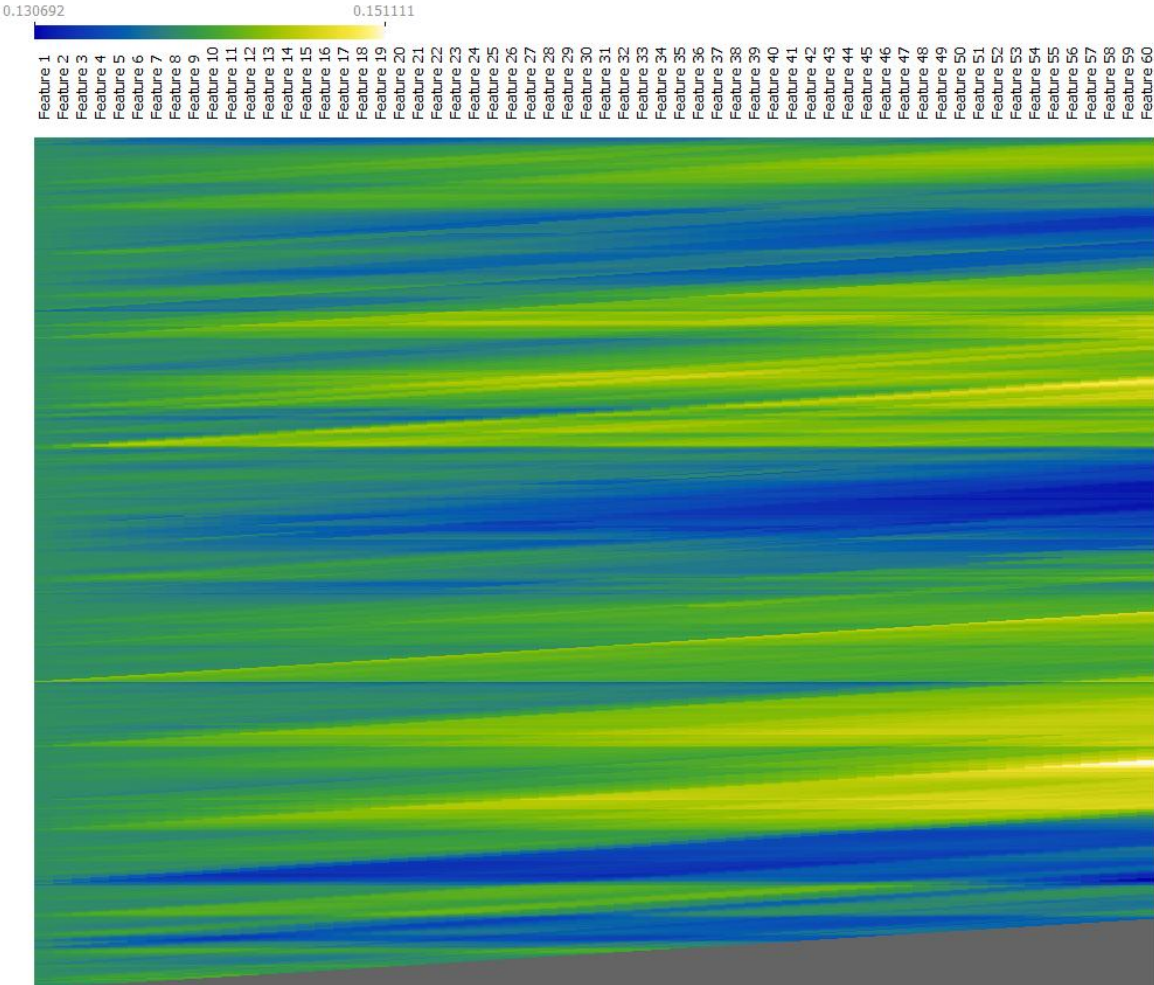
Source: Author's own calculation/assessment

Table C-9. SelfDF - Summary statistics of RMSE of MWS for 1 day and 60 days gap scenarios

Sector	Mean [m/s]		Standard deviation [m/s]		Max [m/s]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	1.133	1.038	0.197	0.362	1.175	1.218
1	1.153	1.061	0.201	0.372	1.200	1.325
2	1.324	1.219	0.230	0.425	1.378	1.452
3	1.281	1.177	0.223	0.411	1.329	1.408
4	1.461	1.347	0.254	0.470	1.521	1.583
5	1.473	1.356	0.256	0.473	1.528	1.577
6	1.404	1.295	0.244	0.452	1.455	1.566
7	1.353	1.243	0.235	0.433	1.399	1.439
8	1.435	1.322	0.250	0.461	1.485	1.525
9	1.162	1.070	0.202	0.373	1.204	1.238
10	1.088	0.999	0.189	0.348	1.127	1.147
11	1.087	0.996	0.189	0.347	1.127	1.156

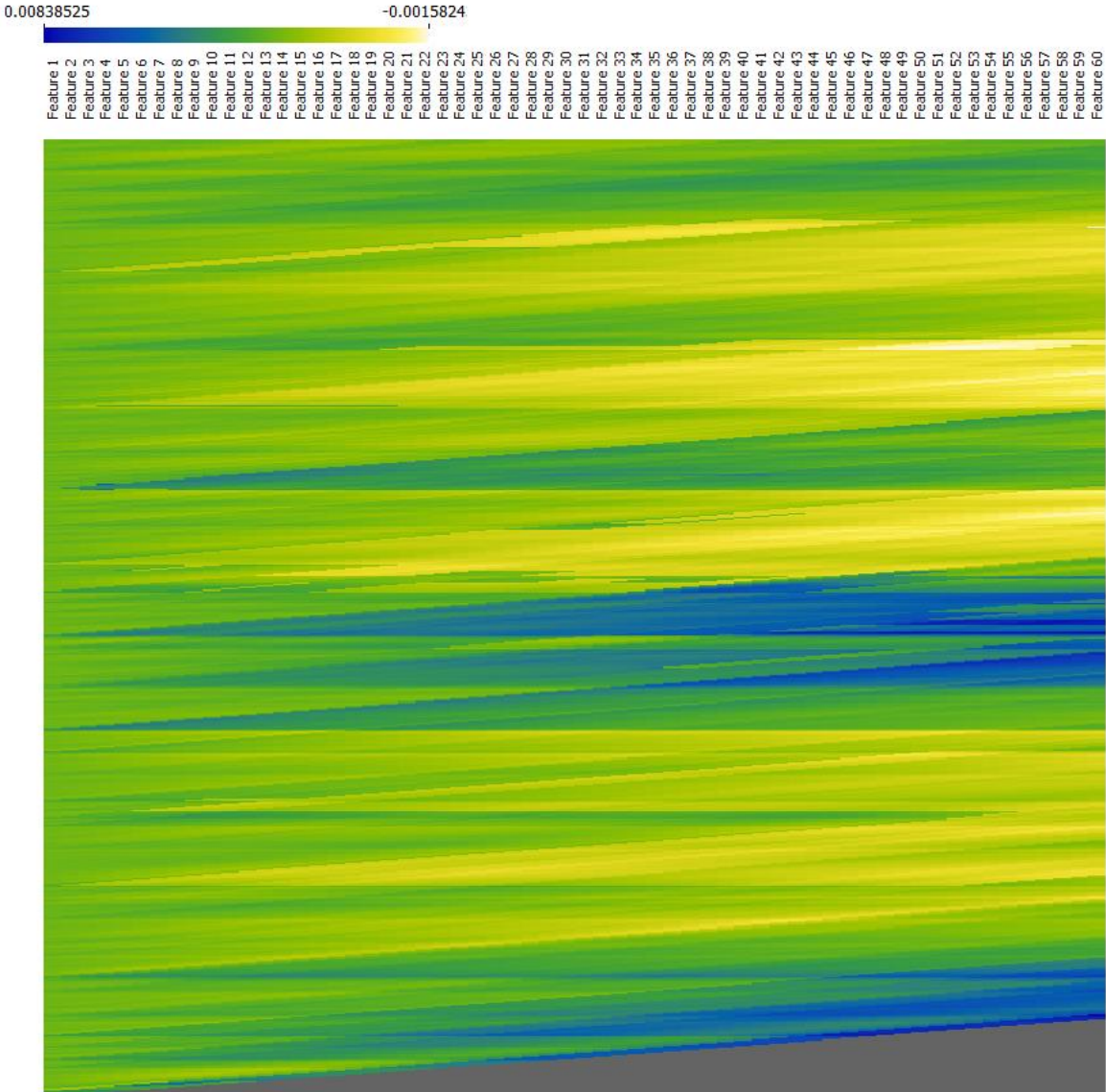
Source: Author's own calculation/assessment

Figure C-7. SelfDF – Heatmap of MBE of Weibull shape factors for all iterations and gap scenarios – weighted from sectorwise analysis



Source: Author's own illustration, grey means no data values, feature stands for gap.

Figure C-8. SelfDF – Heatmap of MBE of Weibull scale factors for all iterations and gap scenarios – weighted from sectorwise analysis



Source: Author’s own illustration, grey means no data values, feature stands for gap.

Table C-10. SelfDF - Summary statistics of MBE of WPD for 1 day and 60 days gap scenarios

Sector	Mean [W/m ²]		Standard deviation [W/m ²]		Min [W/m ²]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	-26	-24	5	8	-27	-30
1	-24	-22	4	8	-26	-30
2	-30	-28	5	10	-32	-34
3	-38	-35	7	12	-40	-45
4	-37	-34	6	12	-39	-43
5	-41	-37	7	13	-43	-45
6	-45	-42	8	15	-48	-54
7	-47	-43	8	15	-49	-51
8	-49	-45	9	16	-51	-54
9	-30	-28	5	10	-32	-34
10	-19	-17	3	6	-21	-22
11	-20	-18	3	6	-21	-22

Source: Author's own calculation/assessment

Table C-11. SelfDF - Summary statistics of MAE of WPD for 1 day and 60 days gap scenarios

Sector	Mean [W/m ²]		Standard deviation [W/m ²]		Max [W/m ²]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	124	113	22	40	129	145
1	116	107	20	38	121	139
2	167	153	29	54	174	186
3	206	188	36	66	215	227
4	166	153	29	53	174	180
5	189	173	33	61	198	208
6	281	257	49	90	292	303
7	314	287	55	101	326	340
8	260	238	45	83	270	287
9	177	162	31	57	184	192
10	154	141	27	49	161	167
11	115	104	20	37	120	131

Source: Author's own calculation/assessment

Table C-12. SelfDF - Summary statistics of RMSE of WPD for 1 day and 60 days gap scenarios

Sector	Mean [W/m^2]		Standard deviation [W/m^2]		Max [W/m^2]	
	1 day	60 days	1 day	60 days	1 day	60 days
0	251	228	44	81	261	284
1	221	202	38	72	230	262
2	274	251	48	88	285	301
3	327	298	57	105	341	362
4	295	271	51	95	307	318
5	355	325	62	114	369	384
6	480	440	84	154	498	517
7	517	473	90	166	536	555
8	484	443	84	155	501	527
9	389	354	68	127	403	421
10	326	298	57	106	339	355
11	228	208	40	73	237	254

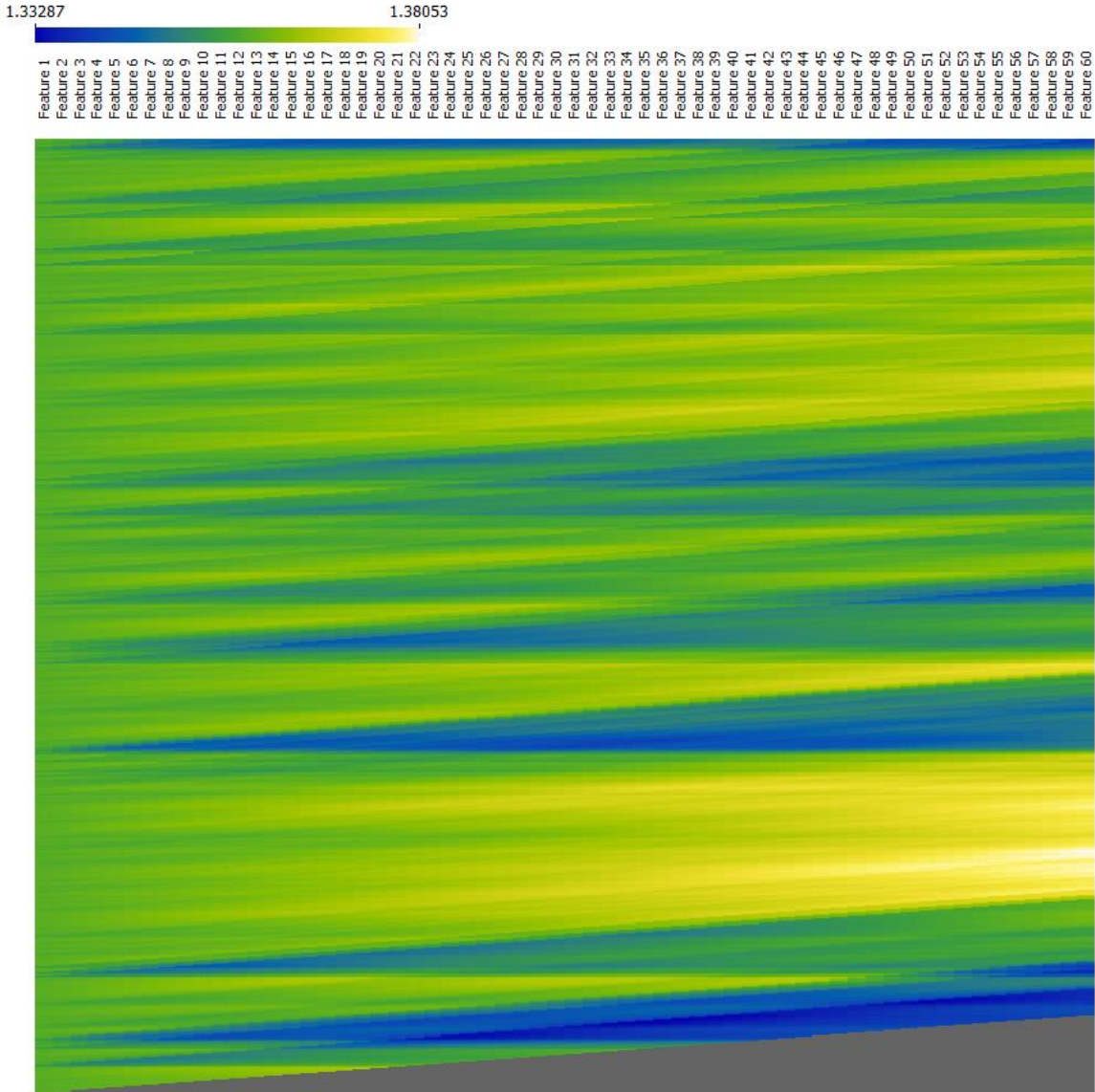
Source: Author's own calculation/assessment

Table C-13. SelfDF - Summary statistics of KS of MWS for 1 day and 60 days gap scenarios

Sector	Mean		Standard deviation		Max	
	1 day	60 days	1 day	60 days	1 day	60 days
0	3.1%	3.0%	0.5%	1.1%	3.6%	4.3%
1	4.3%	4.1%	0.7%	1.5%	4.9%	5.8%
2	3.9%	3.8%	0.7%	1.4%	4.3%	5.7%
3	2.8%	2.7%	0.5%	1.0%	3.3%	3.7%
4	4.6%	4.3%	0.8%	1.6%	5.3%	6.6%
5	5.5%	5.0%	1.0%	1.8%	5.9%	7.1%
6	2.2%	2.2%	0.4%	0.8%	2.5%	3.2%
7	1.9%	1.9%	0.3%	0.7%	2.3%	2.7%
8	2.4%	2.3%	0.4%	0.8%	2.7%	3.1%
9	2.1%	2.0%	0.4%	0.7%	2.4%	2.7%
10	3.0%	2.8%	0.5%	1.0%	3.3%	3.5%
11	3.7%	3.5%	0.7%	1.2%	4.0%	4.3%

Source: Author's own calculation/assessment

Figure C-9. SelfDF – Heatmap of RMSE of MWS for all iterations and gap scenarios – omnidirectional analysis



Source: Author's own illustration, grey means no data values, feature stands for gap.