

Appendix B

Evolution of snowmaking potential over the 1961-2014 period

Alt. is the altitude (m.a.s.l.)

$\alpha_{1961-2014}$: Growth rate of the snowmaking potential linear trend (hours/year)

$D_{1961-70}$: Average snowmaking potential over the 1961-1970 period (hours)

$D_{2005-14}$: Average snowmaking potential over the 2005-2014 period (hours)

$\sigma_{1961-2014}$: Standard deviation of the snowmaking potential over the 1961-2014 period

$|r|$: Correlation coefficient of the snowmaking potential curve with time

How to read this table (cells outlined in red):

The snowmaking potential in autumn in the Northern Alps at an altitude of 1,200 m.a.s.l. is described for a wet-bulb temperature threshold of -2°C :

- It decreases at a rate of 4 hours/year
- Its average was 650 h over the 1961-1970 period
- Its average was 557 h over the 2005-2014 period
- Its variability in time and space is ± 43 h on average
- The correlation of its linear trend with time is 0.30
- Its significance score is 97%

All situations with a significance score of 95% or more are printed in green.

		Alt. (m.a.s.l.)	$\alpha_{1961-2014}$ (h/year)	$D_{1961-70}$ (h)	$D_{2005-2014}$ (h)	$\sigma_{1961-2014}$ (h)	r	Significance Score (%)	
AUTUMN (1 st October – 31 st December)	-2°C	Southern Alps	1,200	0	549	556	99	0.04	21
			1,500	0	684	672	123	0.03	17
			1,800	0	825	785	129	0.03	16
			2,100	-1	1,012	956	138	0.10	55
		Northern Alps	1,200	-4	650	557	43	0.30	97
			1,500	-4	777	699	48	0.27	95
			1,800	-2	904	880	53	0.17	77
			2,100	-3	1,116	1,046	73	0.21	87
		All French Alps	1,200	-2	644	592	72	0.21	86
			1,500	-2	775	723	77	0.18	81
			1,800	-2	913	883	81	0.11	58
			2,100	-3	1,121	1,055	94	0.18	80
-5°C	Southern Alps	1,200	0	239	244	64	0.03	16	
		1,500	1	289	323	81	0.10	54	
		1,800	1	393	403	97	0.09	45	
		2,100	0	579	550	98	0.03	16	
	Northern Alps	1,200	-2	308	235	27	0.24	92	
		1,500	-1	369	347	30	0.13	65	
		1,800	-1	487	482	37	0.06	33	
		2,100	-1	673	649	42	0.05	29	
	All French Alps	1,200	-1	297	256	44	0.13	66	
		1,500	0	353	355	49	0.04	24	
		1,800	0	471	473	58	0.00	2	
		2,100	0	665	638	61	0.02	12	
SEASON (1 st October – 1 st April)	-2°C	Southern Alps	1,200	-2	1,601	1,507	214	0.11	55
			1,500	-3	1,992	1,847	265	0.14	68
			1,800	-4	2,441	2,192	242	0.23	90
			2,100	-6	2,921	2,654	215	0.37	99
		Northern Alps	1,200	-9	1,815	1,516	94	0.44	100
			1,500	-11	2,247	1,918	94	0.48	100
			1,800	-9	2,636	2,378	99	0.43	100
			2,100	-7	3,025	2,867	109	0.34	99
		All French Alps	1,200	-6	1,828	1,606	163	0.33	98
			1,500	-8	2,244	1,984	163	0.36	99
			1,800	-8	2,674	2,413	164	0.37	99
			2,100	-7	3,116	2,909	168	0.36	99
-5°C	Southern Alps	1,200	0	757	712	139	0.00	0	
		1,500	1	947	953	195	0.07	36	
		1,800	0	1,276	1,205	230	0.02	10	
		2,100	-2	1,749	1,614	223	0.09	47	
	Northern Alps	1,200	-5	926	716	63	0.29	97	
		1,500	-5	1,165	1,017	73	0.25	92	
		1,800	-4	1,512	1,393	85	0.20	84	
		2,100	-4	1,956	1,851	89	0.18	81	
	All French Alps	1,200	-3	910	767	104	0.17	80	
		1,500	-2	1,129	1,045	119	0.13	63	
		1,800	-2	1,485	1,384	137	0.11	59	
		2,100	-3	1,959	1,839	137	0.15	71	