RUPUBLIC OF TURKEY
MINISTRY OF FORESTRY AND WATER AFFAIRS
TURKISH STATE METEOROLOGICAL SERVICE

Advances in SEEFFG System Snow Products

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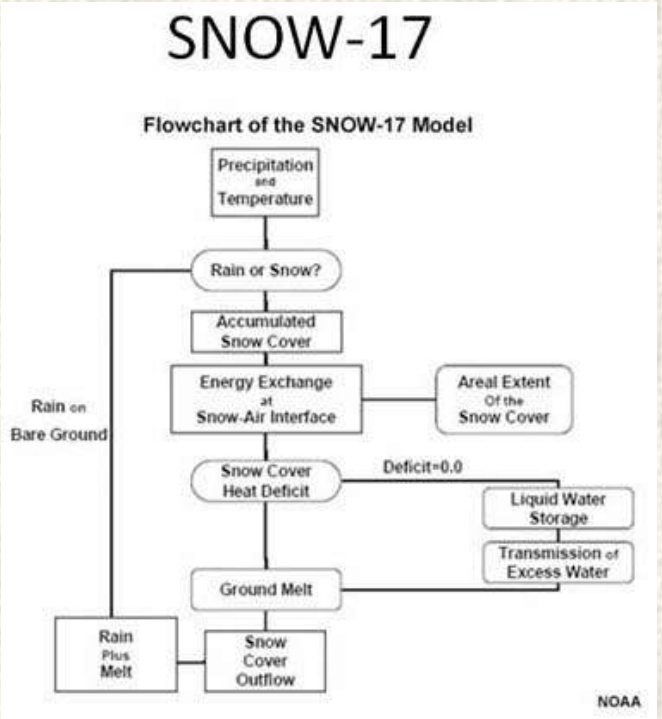
SNOW-17

A snow model (Snow-17) estimates snow water equivalent (SWE) and MELT for sub basins using satellite snow products and precipitation and temperature.

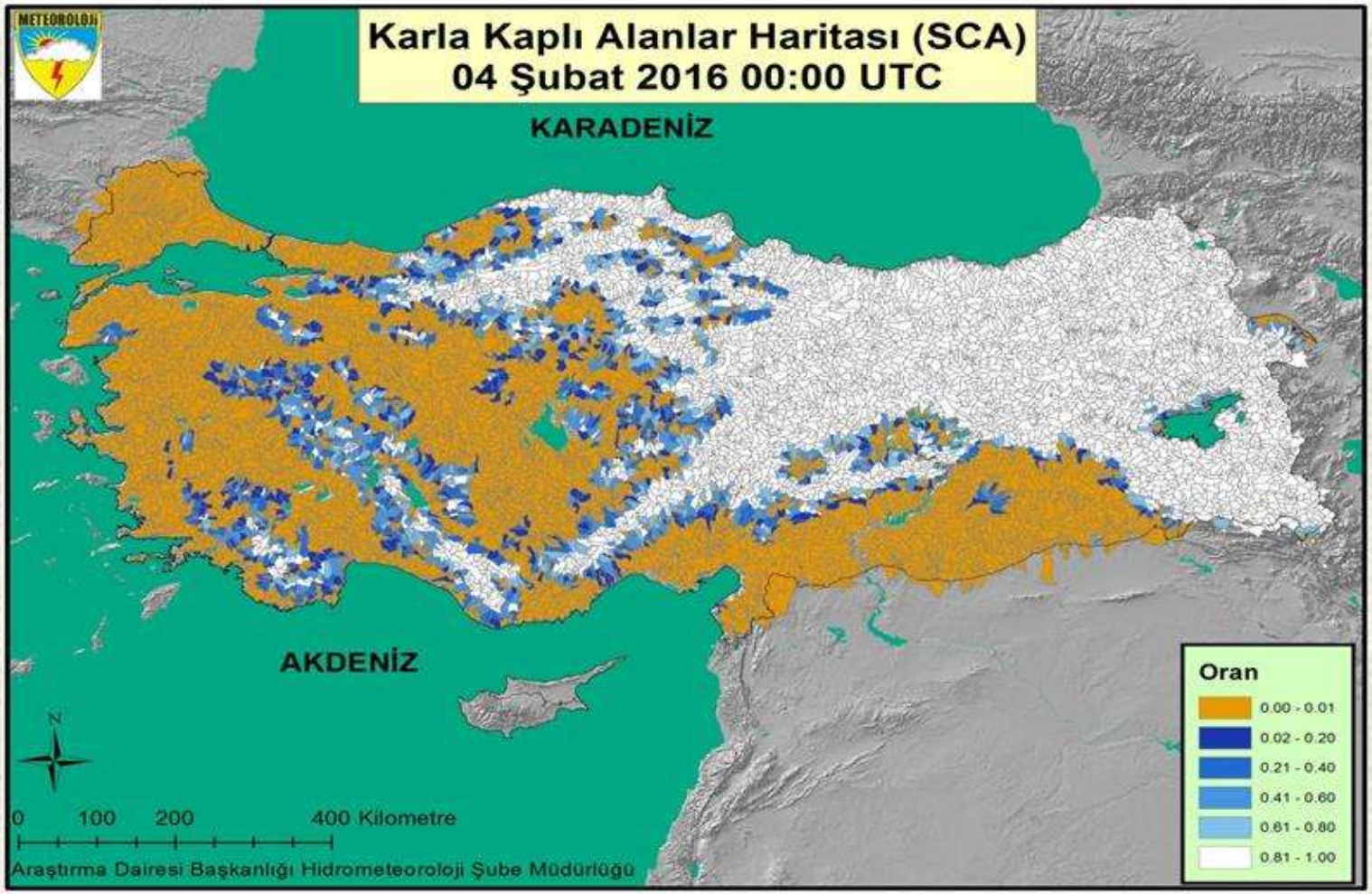
Product Console - Snowpack Products

DT	Gauge MAT	Latest IMS SCA	SWE	Melt
06-hr	 2017-09-20 06:00 UTC Text: view		 2017-09-20 06:00 UTC Text: view	
24-hr		 2017-09-20 00:00 UTC Text: view		 2017-09-20 06:00 UTC Text: view
4-day				 2017-09-20 06:00 UTC Text: view

Data of 850 observation stations are used in the model in order to increase precision and accuracy of the model.

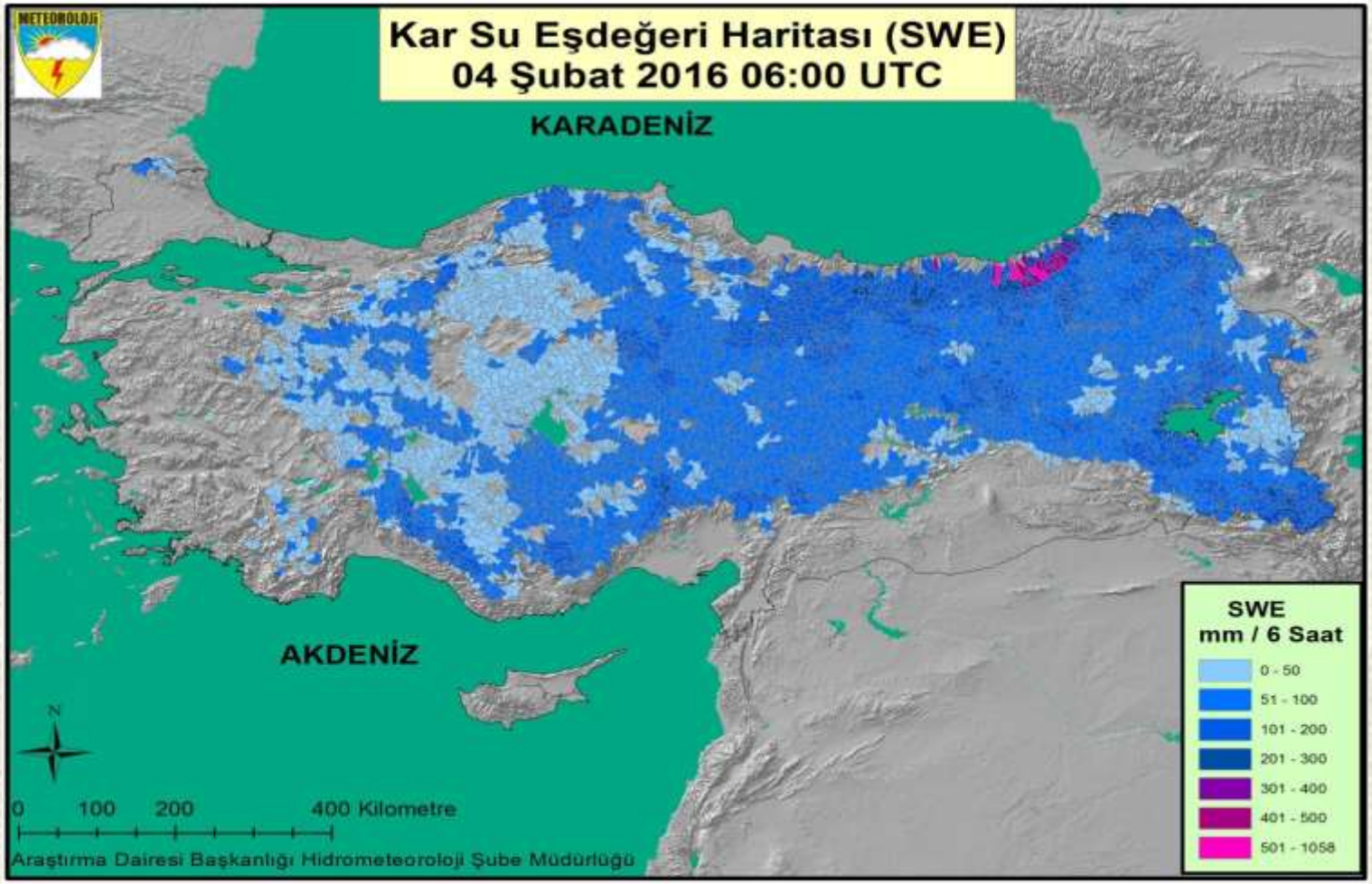


Snow Coverage Area



Snow Coverage Area from satellites (NOAA, EUMETSAT, SSM/I) is stated in percentage (%). If the whole subbasin covered with snow, it has the value 1.00 (100%).

Snow Water Equivalent



SNOW-17 model includes calculation of Snow Water Equivalent (SWE) in mm using precipitation and temperature measurements. Values are calculated as mean of 65 km^2 subbasins. This product shows the water potential of existing snow

Snow Water Equivalent of Basins

Snow Water Equivalent (SWE) of basins are calculated from the results of SNOW-17 model. Total SWE of 25 River Basins is 35,8 billion m^3.

MELT

SNOW-17 model calculates daily snow melt in mm as mean for approximately 65 km^2 subbasins. Daily total water amount as a result of snow melt is 635 million m^3.

SNOW-17 model also calculates 4-day snow melt in mm. 4-day total water amount as a result of snow melt is million m^3.

Tables of Model Results

Havza_Adi	Alan	SCA	SWE	M24	M96	MAP	ALD	IFS	WRF	ORTLM
Turkiye	750568	74.9	25973.6	134.3	1422.6	830.8	551.6	447.0	668.1	555.5

No	Baraj_Adi	Alan	SCA	SWE	M24	M96	MAP	ALD	IFS	WRF	ORTLM	GMAT	ASM
36	Almus	2330	94.7	158	0	3	0	0	0	0	0.4	-4.2	0.27
28	Arpacay	7757	99.9	286	0	0	1	0	0	0	0.1	-19.1	0.44
38	Asimalkumru	7688	87.3	328	0	5	0	26	17	21	21.7	-4.8	0.53
39	Atasu	185	100.0	3	0	4	0	0	0	0	0.0	-4.8	0.57
27	Batman	4147	39.2	107	0	5	1	22	7	12	14.3	-2.5	0.57
30	Catalan	15135	86.9	744	1	17	36	35	9	4	16.3	-2.8	0.55
31	Deriner	17446	100.0	1073	0	2	0	0	0	1	0.8	-8.8	0.52
32	Ermenek	2619	92.7	405	0	0	40	0	0	0	0.0	-3.4	0.51
46	Karacaoren	4696	83.9	283	0	0	8	0	0	0	0.0	-6.7	0.42
26	Keban	62130	91.5	3213	0	44	5	49	30	60	46.8	-8.0	0.44
37	Kilickaya	8054	100.0	493	0	6	0	2	0	2	2.0	-7.7	0.36
41	Kockopru	695	100.0	113	0	0	0	0	0	1	0.6	-9.7	0.65
42	Kral	1357	38.2	27	0	10	0	5	2	6	4.7	-1.2	0.60
33	Menzelet	8713	78.6	445	0	9	19	8	9	12	10.0	-3.7	0.49
34	Oymapinar	1048	43.3	52	0	3	3	0	0	0	0.0	-2.2	0.76
43	Sarimehmet	1247	100.0	72	0	0	0	2	1	0	1.5	-10.9	0.54
35	Sariyar	47312	99.7	972	0	2	10	0	1	1	1.1	-5.9	0.37
44	Topcam	1321	98.2	79	0	9	0	0	0	0	0.1	-4.7	0.44
40	Torul	2174	100.0	217	0	2	0	0	0	0	0.2	-9.2	0.46
29	Yamula	16059	88.7	661	0	36	1	6	1	7	5.3	-4.1	0.33
45	Zernek	1492	100.0	33	0	0	0	0	0	1	1.1	-7.8	0.33

No	Havza_Adi	Alan	SCA	SWE	M24	M96	MAP	ALD	IFS	WRF	ORTLM	GMAT	ASM
11	Akarcay	7876	94.8	261.2	0.0	0.0	1.4	0.0	0.0	0.0	0.0	-8.5	0.38
9	Antalya	18660	53.0	949.8	11.2	28.3	48.6	0.0	0.1	0.0	0.0	-2.1	0.55
24	Aras	27512	99.5	1042.6	0.0	0.0	1.0	1.6	0.3	2.7	1.6	-14.2	0.39
19	Asi	8749	11.1	2.3	3.1	3.3	39.3	42.9	19.7	19.6	27.4	4.6	0.66
8	Bati_Akdeniz	17842	50.8	281.9	4.3	8.3	9.3	6.2	5.0	4.9	5.4	-1.1	0.43
13	Bati_Karadeniz	27489	96.9	1076.7	5.1	81.2	0.3	0.0	0.4	0.6	0.4	-6.6	0.45
10	Burdur	5518	97.3	173.9	0.5	0.5	1.7	0.0	0.0	0.0	0.0	-4.8	0.43
7	Buyuk_Menderes	25477	61.6	316.9	2.9	7.5	0.4	0.0	0.3	1.6	0.6	-3.6	0.32
20	Ceyhan	20787	45.2	547.6	8.8	21.1	79.5	26.0	46.2	46.4	39.5	0.6	0.64
23	Coruh	20294	98.8	1355.8	0.8	10.8	0.0	0.7	0.5	1.4	0.9	-8.4	0.52
17	Dogu_Akdeniz	20489	63.0	1493.4	21.5	133.6	240.1	2.2	0.4	0.0	0.9	0.1	0.65
22	Dogu_Karadeniz	21198	80.6	3155.9	3.1	151.3	0.8	1.0	0.1	1.0	0.7	-2.7	0.52
21	Firat_Dicle	174550	54.6	5083.4	12.8	167.9	57.9	373.6	342.8	539.0	418.5	-3.0	0.46
5	Gediz	16748	67.1	258.2	5.0	10.1	0.0	0.0	0.1	0.1	0.1	-1.8	0.42
15	Kizilirmak	81398	87.1	2260.8	2.5	332.0	9.0	10.7	3.4	10.3	8.1	-4.8	0.42
16	Konya	46725	99.5	2337.2	0.0	10.8	194.7	6.2	2.1	6.3	4.8	-2.7	0.35
6	Kucuk_Menderes	5385	20.0	0.6	1.4	2.2	0.0	0.2	0.1	1.7	0.6	0.2	0.38
4	Kuzey_Ege	8781	48.7	24.5	6.7	10.1	0.1	2.8	0.6	3.1	2.2	0.8	0.35
2	Marmara	18934	74.2	241.9	23.7	79.8	0.2	1.0	2.1	2.8	2.0	1.5	0.48
1	Meric_Ergene	15373	99.5	195.4	11.6	15.3	0.0	1.7	1.7	6.3	3.2	-1.4	0.44
12	Sakarya	62972	96.7	1330.3	3.6	26.1	10.0	0.3	1.4	1.9	1.2	-5.9	0.39
18	Seyhan	21794	74.2	1012.5	2.0	24.9	135.0	38.4	9.9	4.5	17.6	-1.3	0.61
3	Susurluk	23494	99.2	552.1	2.9	13.6	0.4	0.0	0.6	1.0	0.6	-3.4	0.43
25	Van_Golu	13217	93.8	790.2	0.0	0.6	1.0	32.3	8.2	9.3	16.6	-9.5	0.54
14	Yesilirmak	39306	73.1	1308.4	0.9	283.6	0.0	3.5	1.0	3.6	2.7	-3.8	0.45

Model results – Snow Coverage Area (SCA), Snow Water Equivalent (SWE), snow melt (M24 and M96), mean areal precipitation for last 24 hour (MAP), precipitation forecast for 24 hour of ALADIN, ECMWF and WRF numerical models (ALD, IFS, WRF) , mean values (ORTLM), mean areal temperature (GMAT) and average soil moisture (ASM) – of river and dam basins are tabulated.

Thank you

Presented by

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