



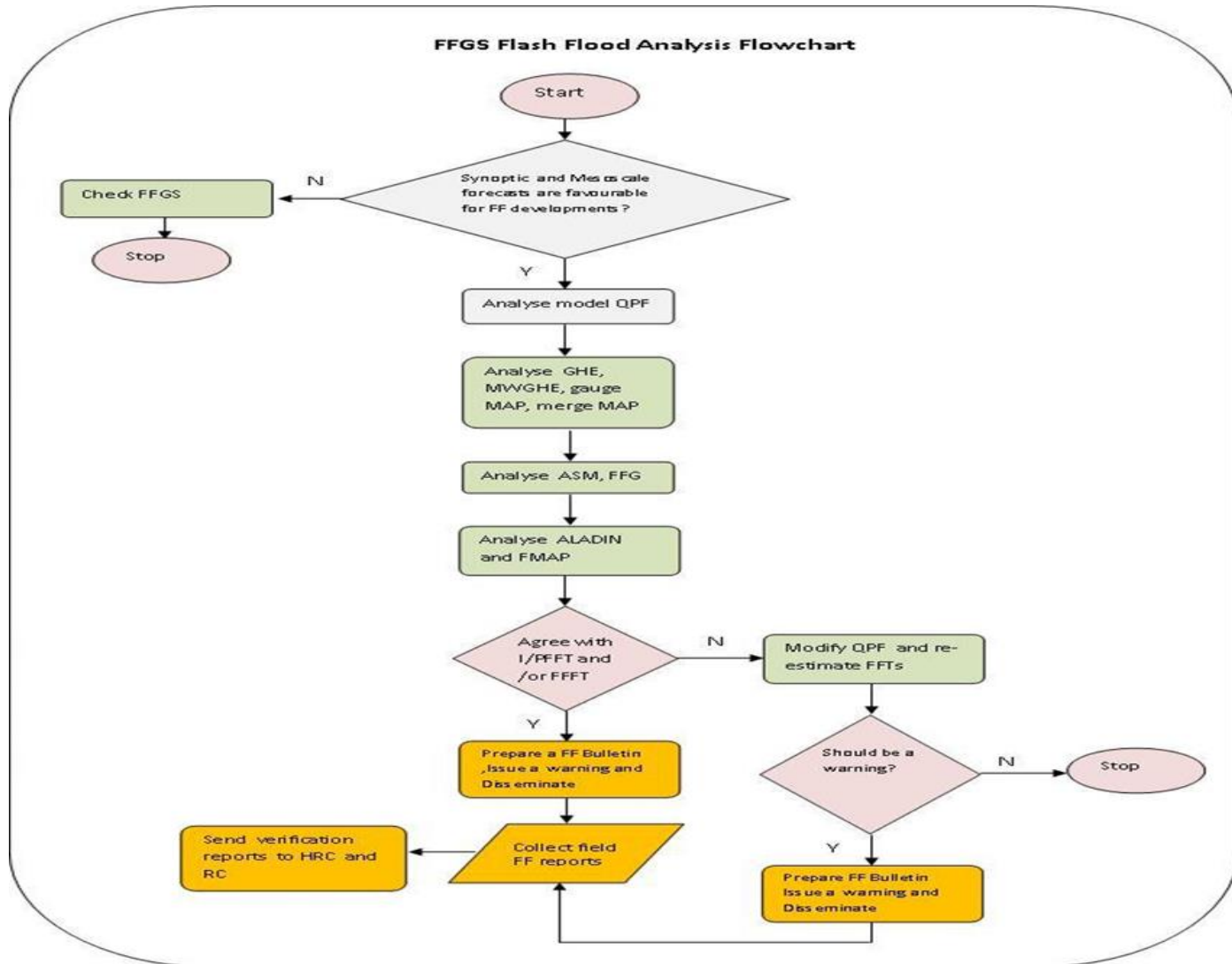
World Meteorological Organization

Weather • Climate • Water

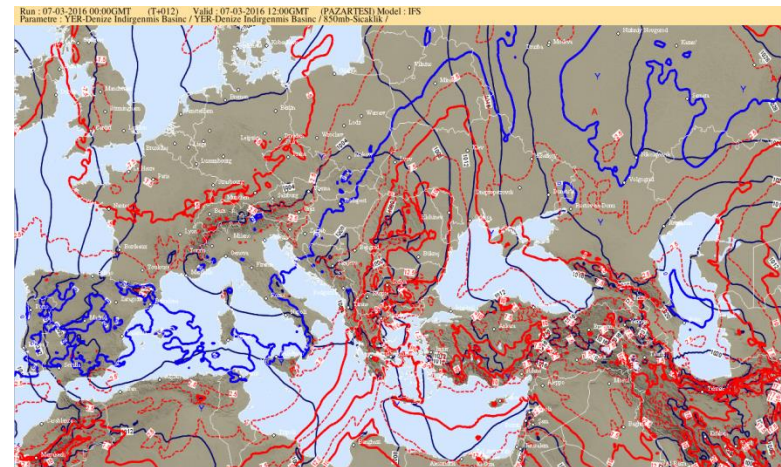
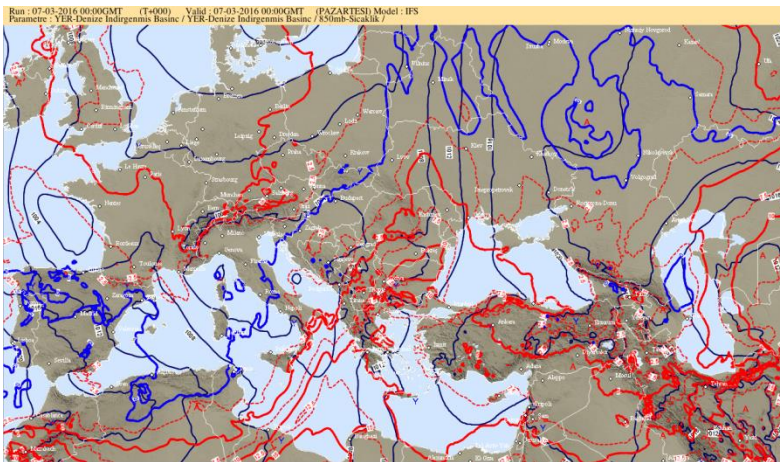
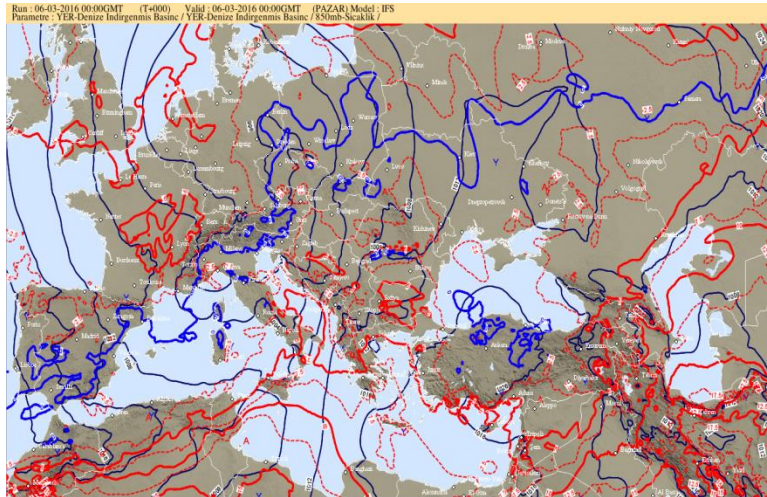
South East Europe Flash Flood Guidance (SEEFFG) System A Case Study: 6-8 March 2016 Flash Flood Events



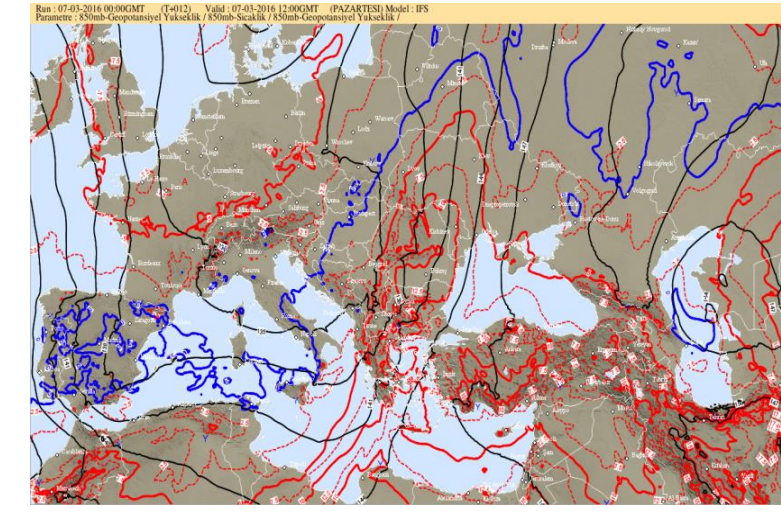
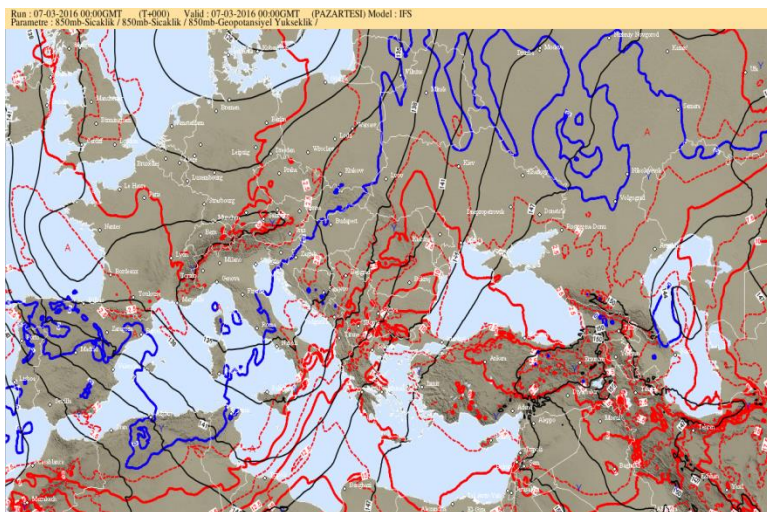
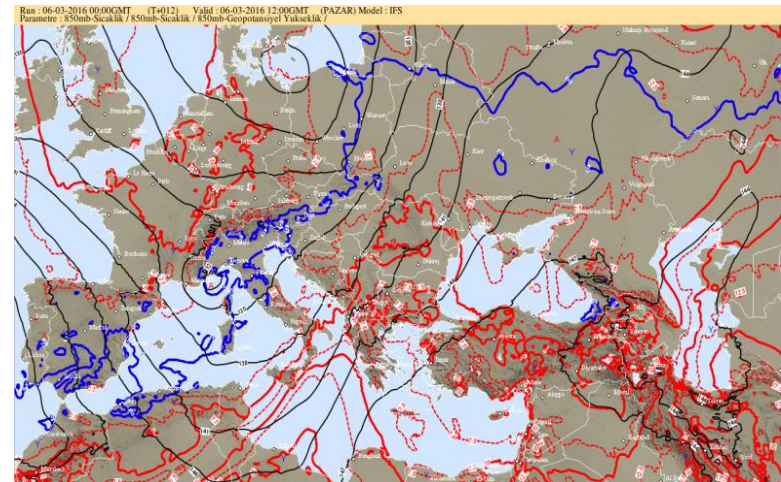
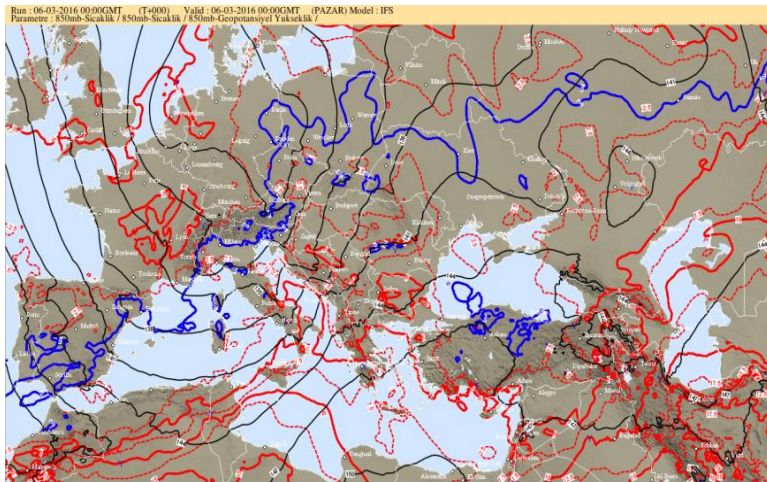
Flash Flood Warning Flow Chart



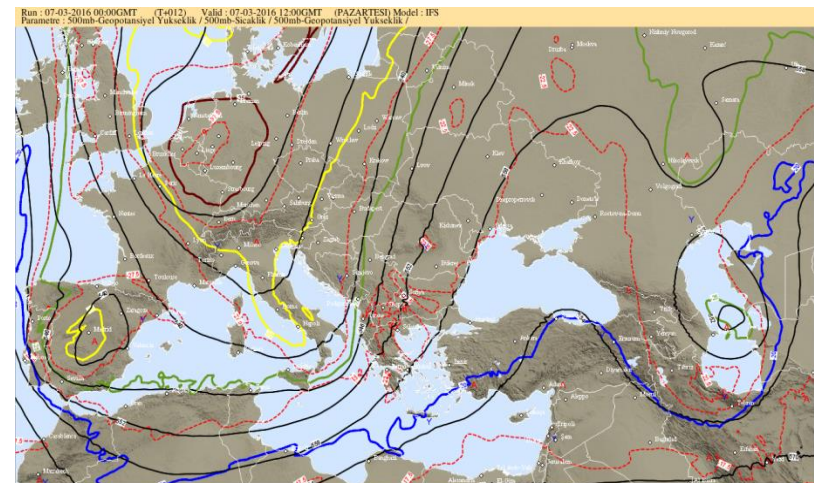
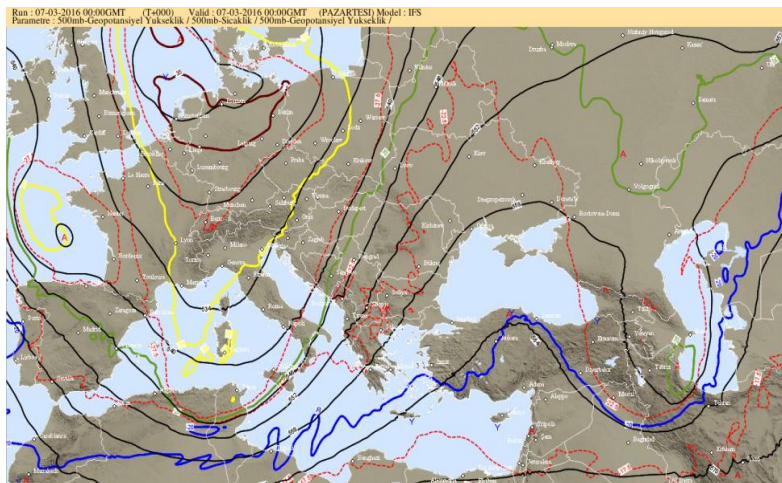
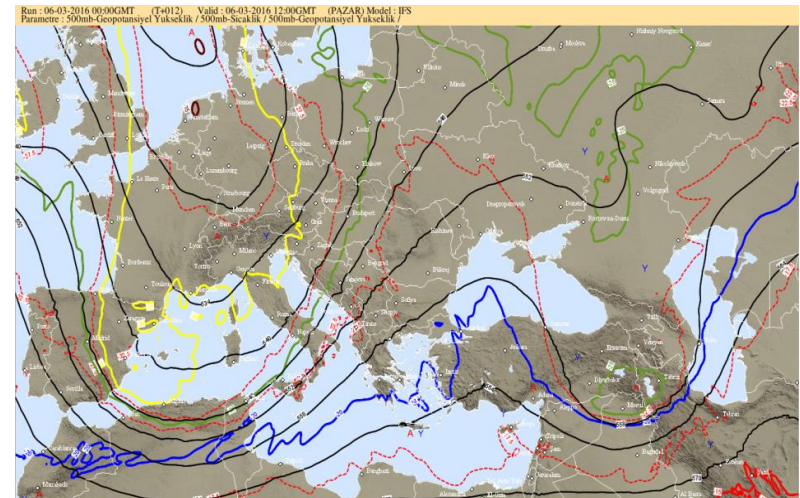
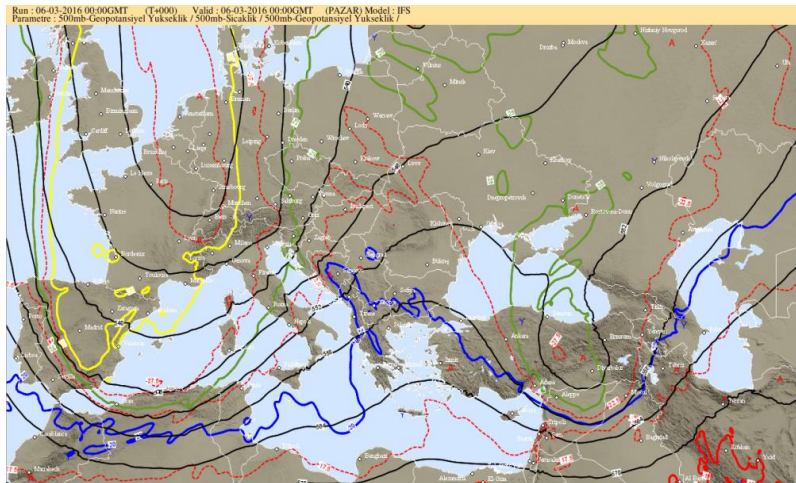
ECMWF Surface Pressure + 850 hPa Temperature 6-7 March 2016 00 and 12 UCT



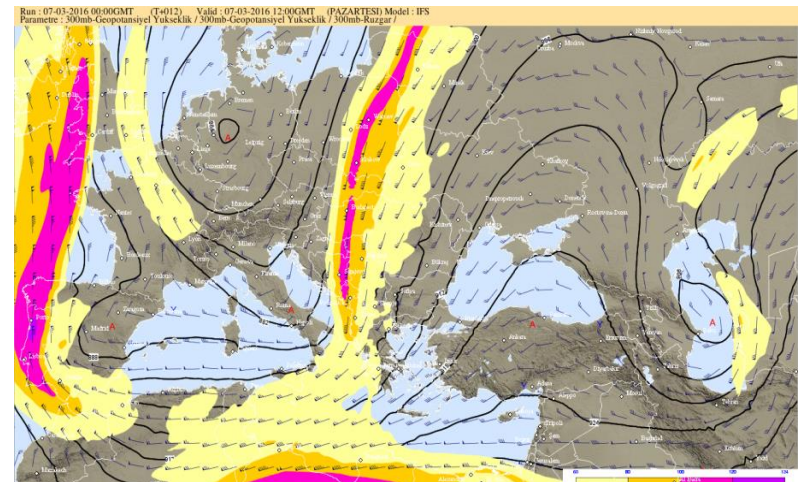
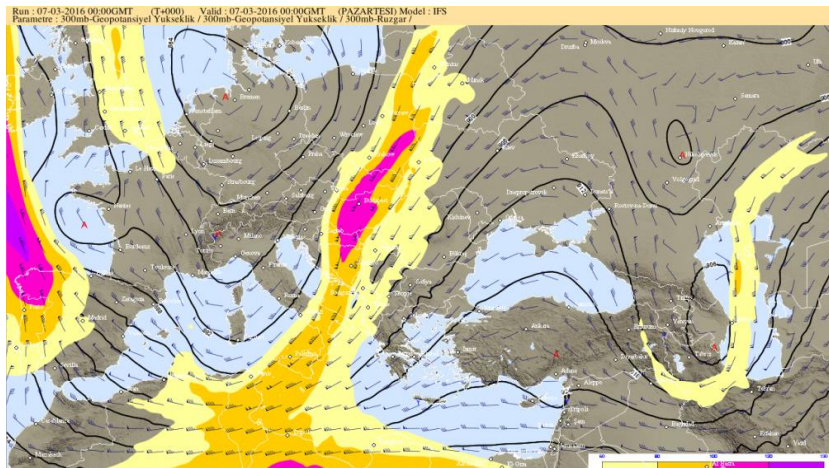
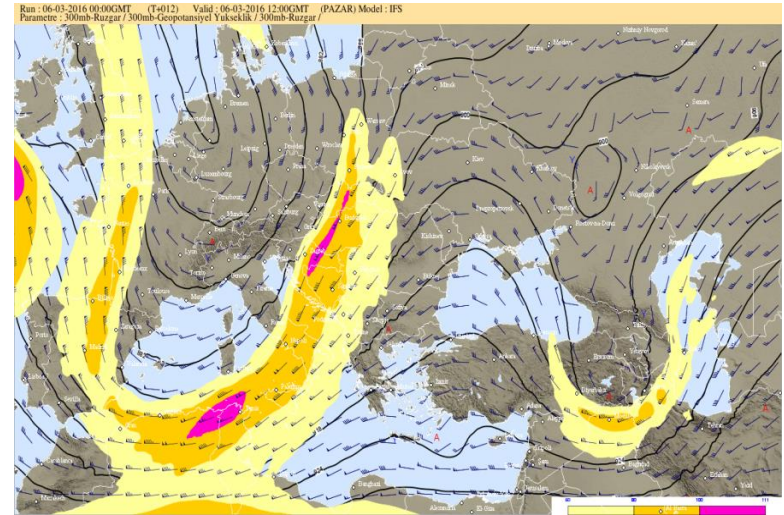
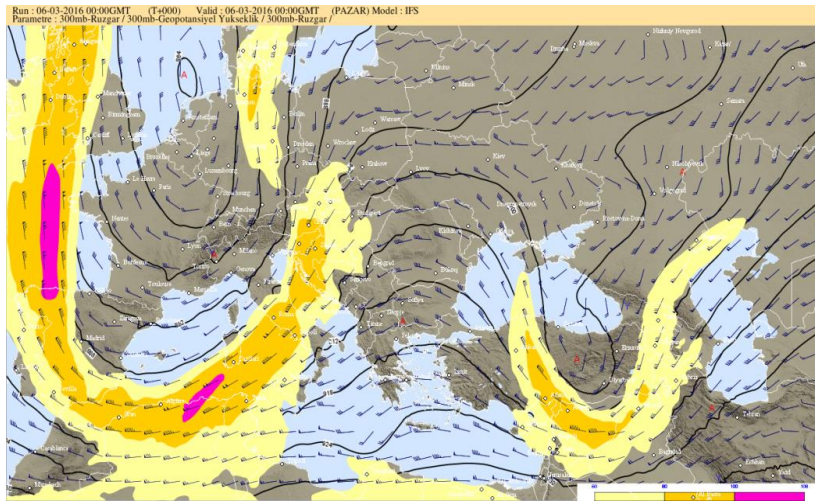
ECMWF 850 hPa Charts 6-7 March 2016 00 and 12 UCT



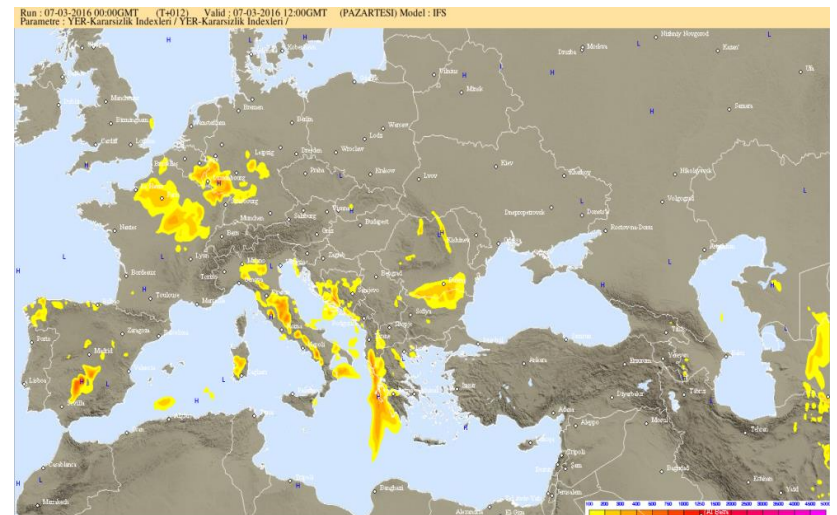
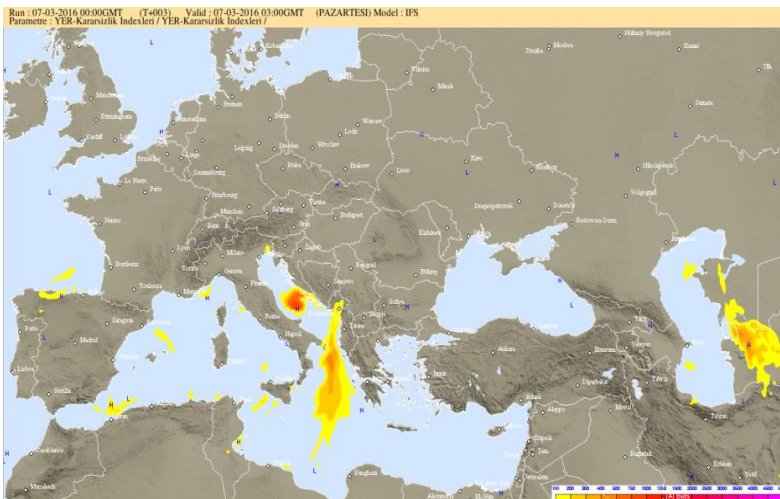
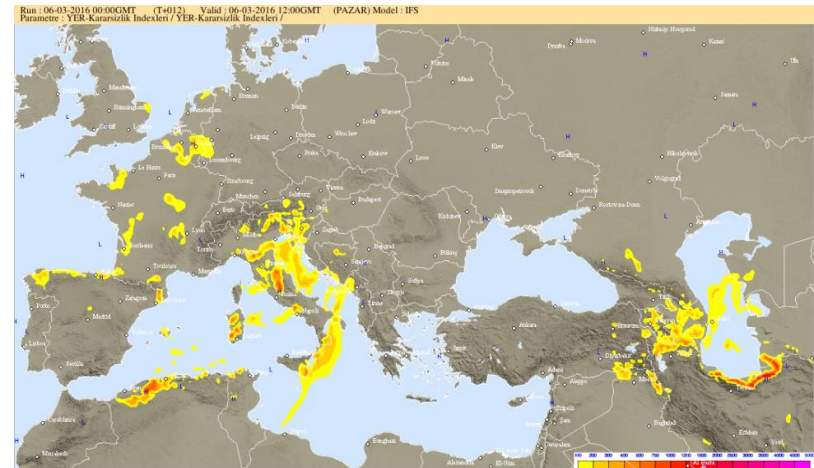
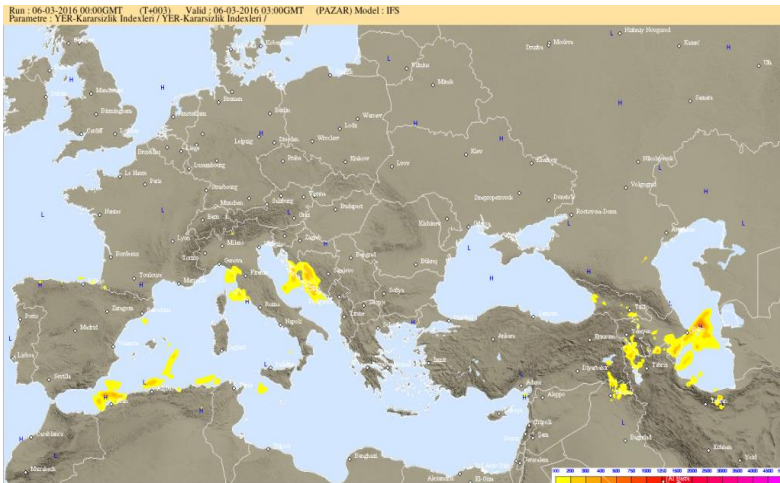
ECMWF 500 hPa Charts 6-7 March 2016 00 and 12 UCT



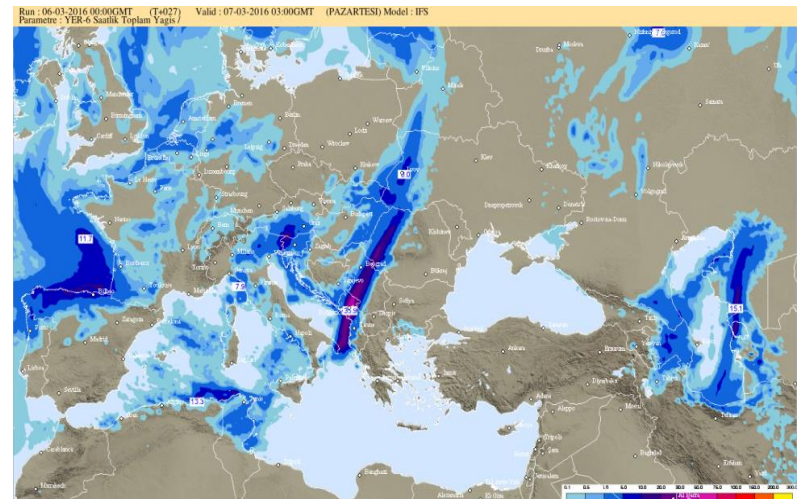
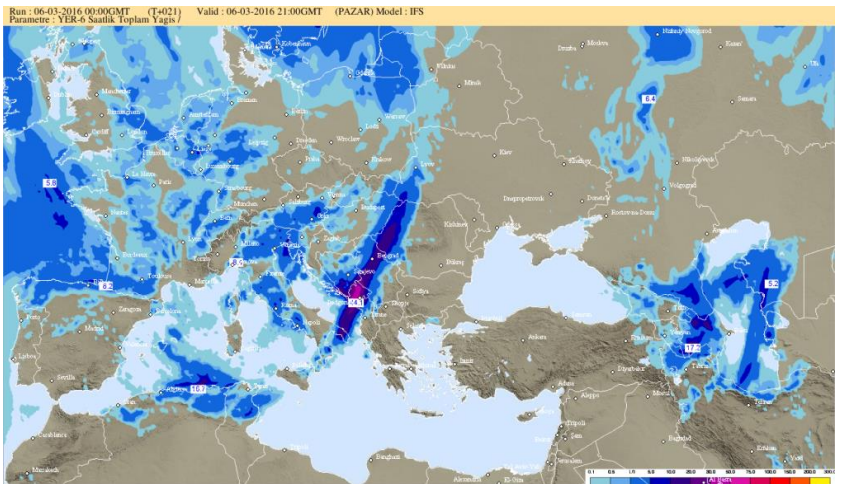
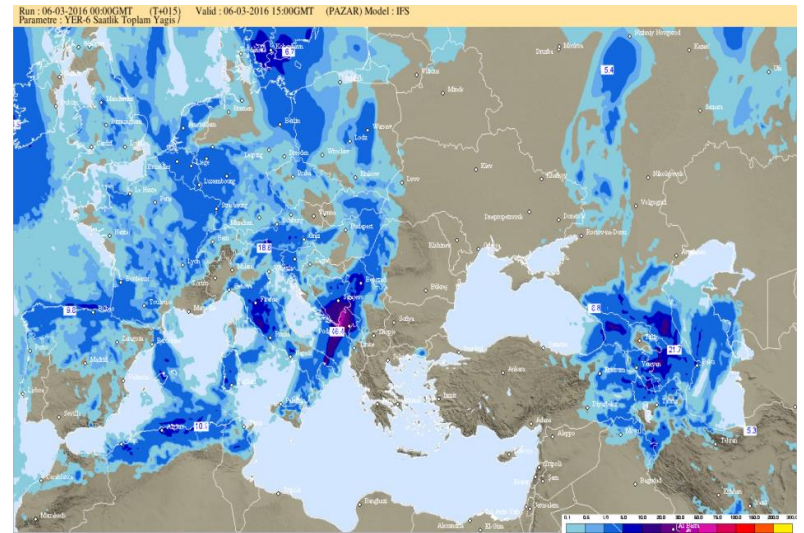
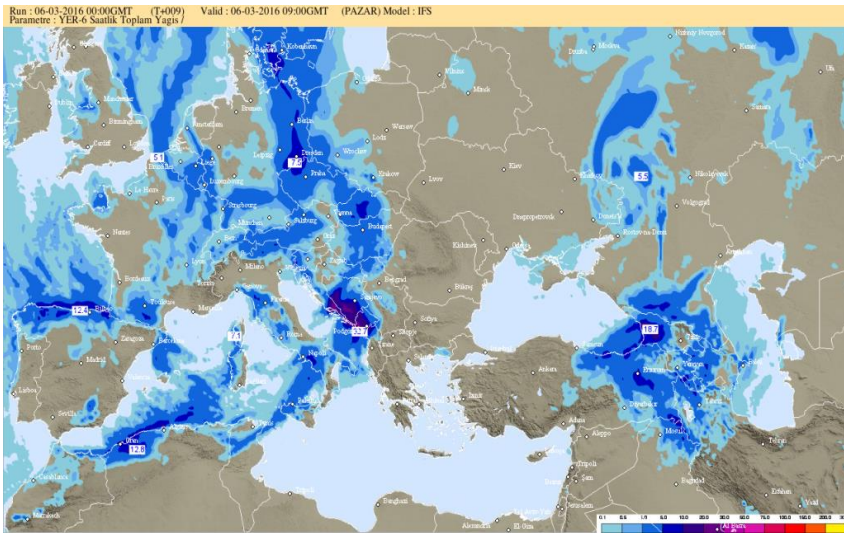
ECMWF Jet 6-7 March 2016 00 and 12 UCT



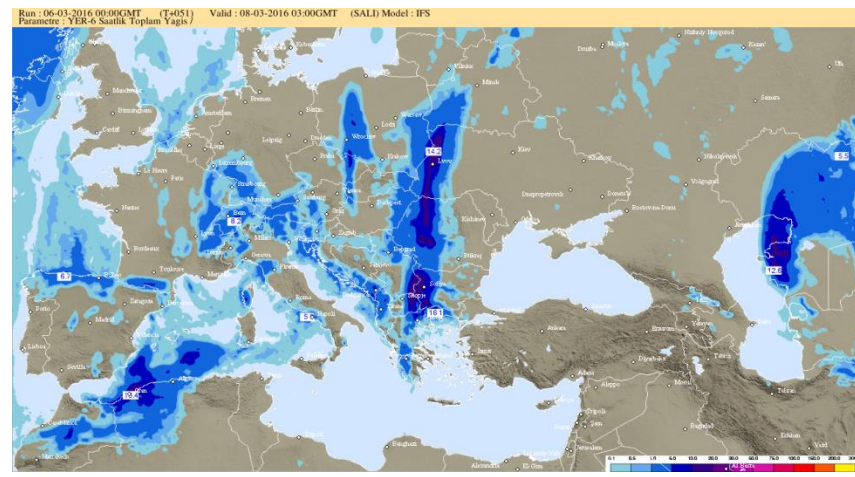
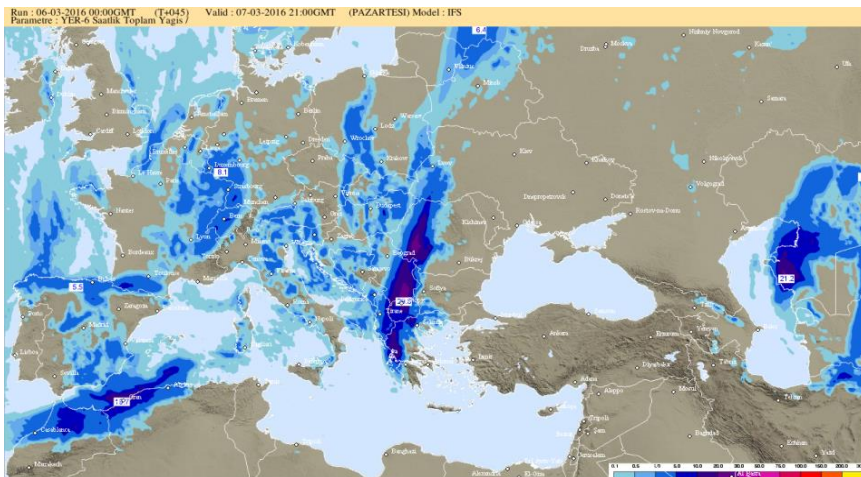
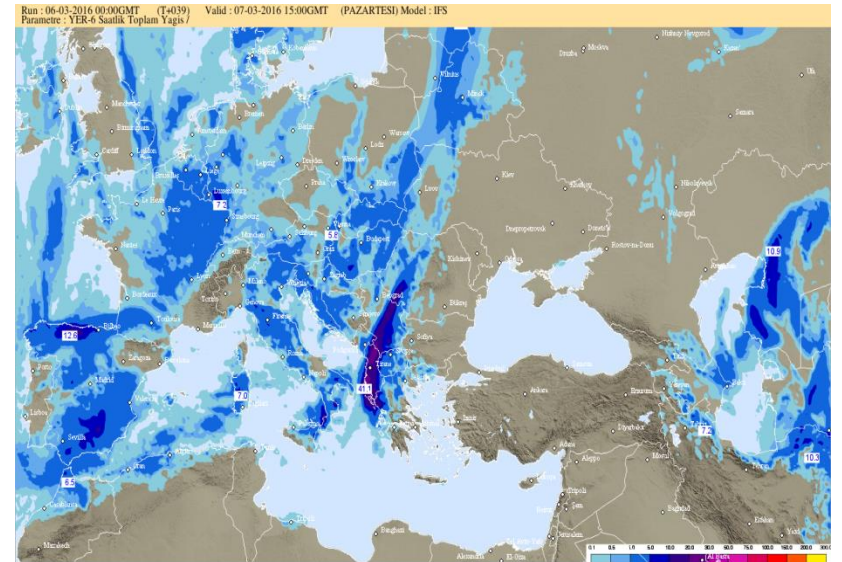
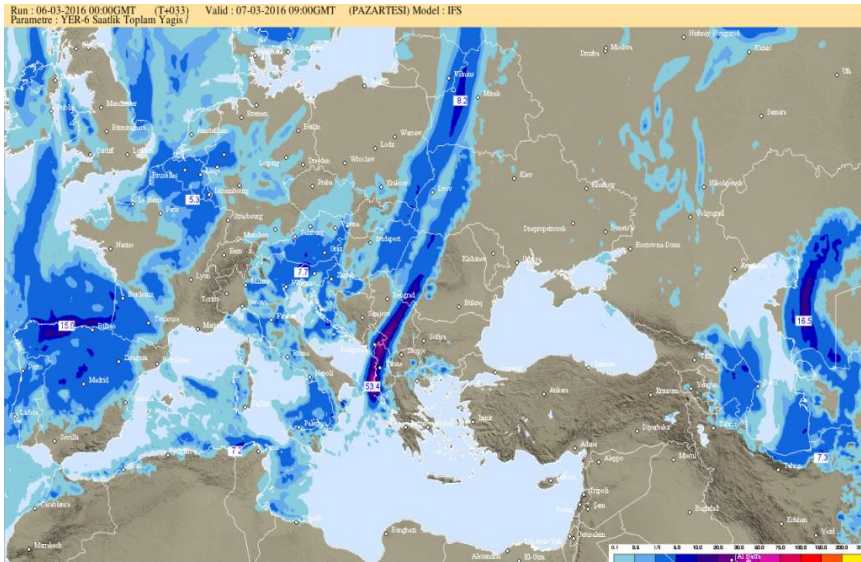
ECMWF Instability 6-7 March 2016 00 and 12 UCT



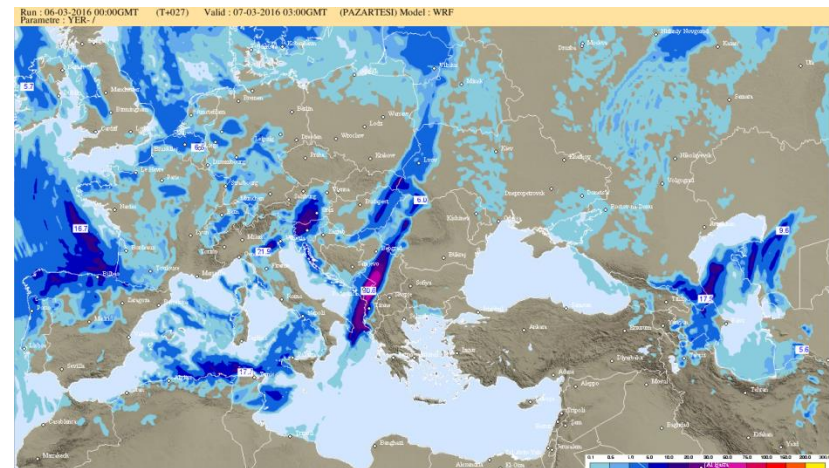
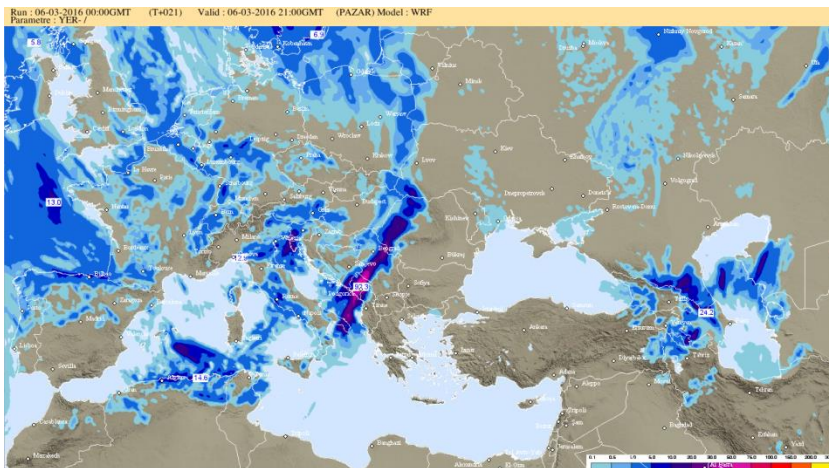
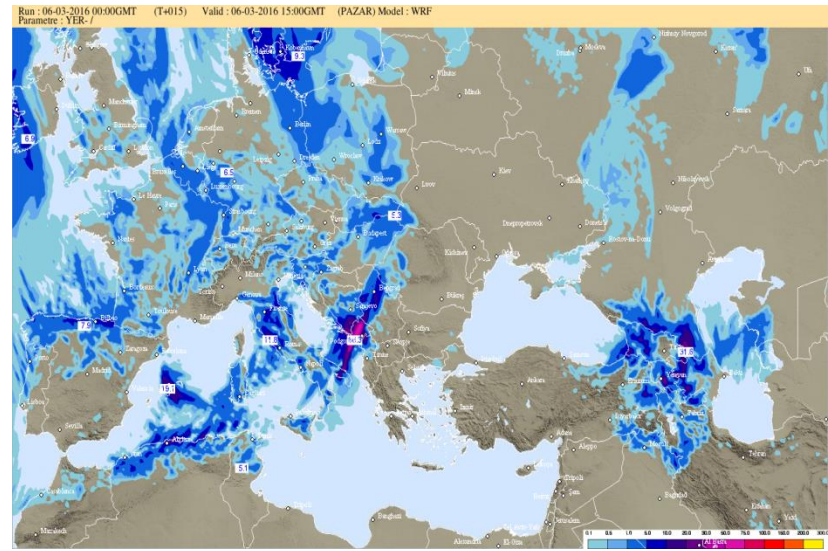
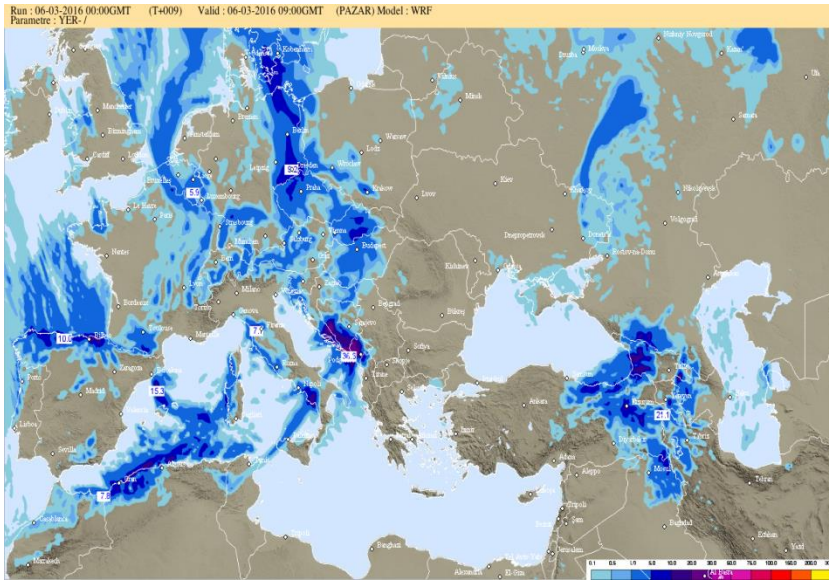
ECMWF 00+6-hr Precipitation 6 March 2016



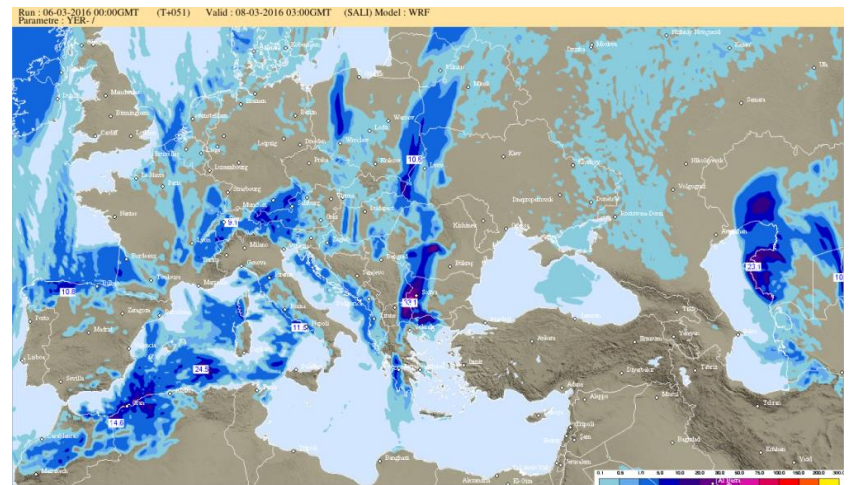
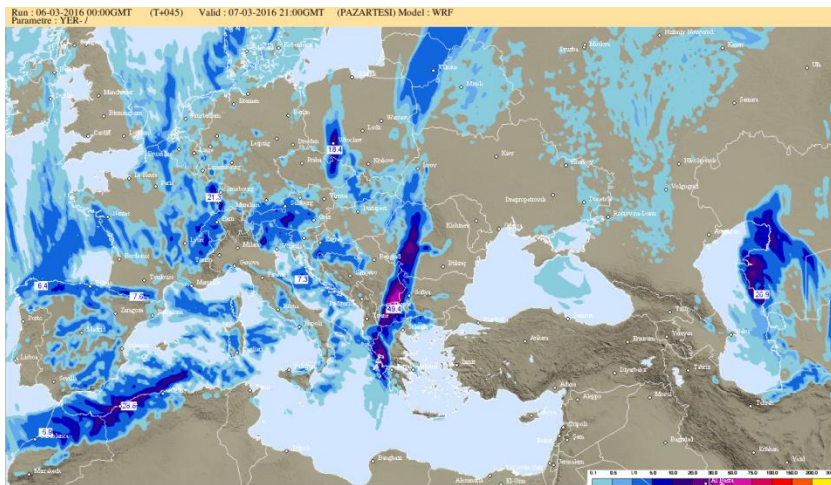
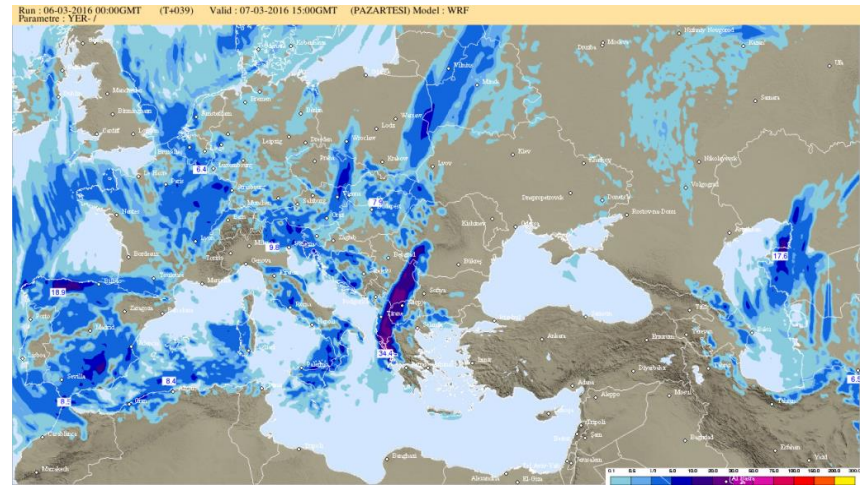
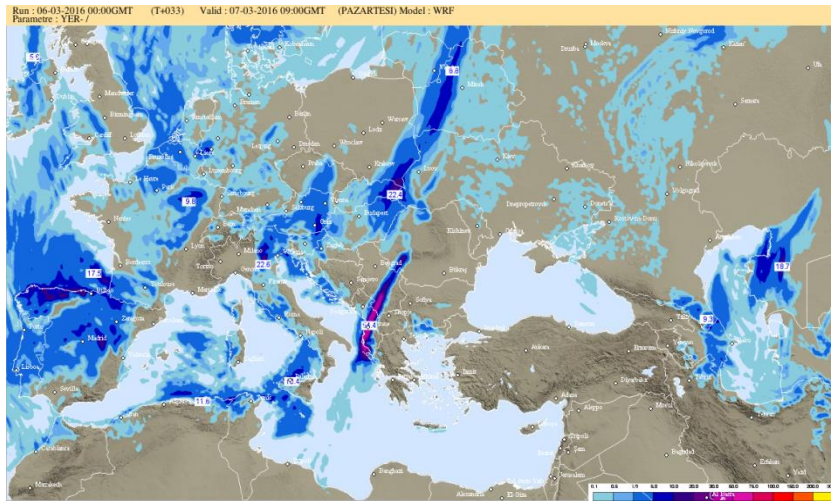
ECMWF 00+6-hr Precipitation 6 March 2016



WRF 00+6-hr Precipitation 6 March 2016



WRF 00+6-hr Precipitation 6 March 2016



Comparison of ECMWF and WRF Precipitation Forecasts

Date & Time 06032016 00 +6 hr interval	ECMWF Precipitation Forecast (mm)	WRF Precipitation Forecast (mm)
00 UCC	32.7	36.9
06UTC	46.4	68.3
12 UTC	44.1	92.3
18 UTC	39.9	90.6
00 UTC	53.4	54.4
06 UTC	41.1	34.4
12 UTC	29.8	49.4
18 UTC	16.1	33.1



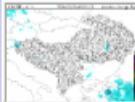
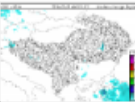




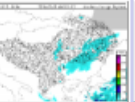
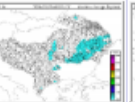
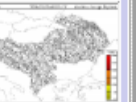
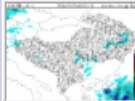
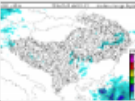




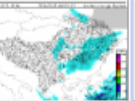
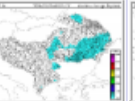
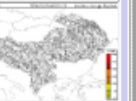
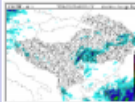
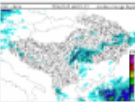
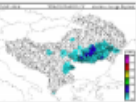

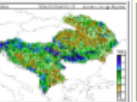
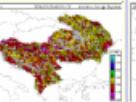
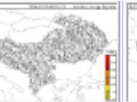
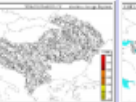
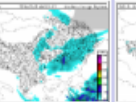
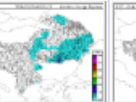
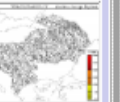
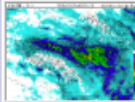
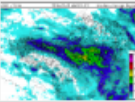
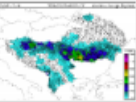
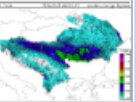
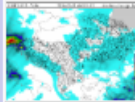
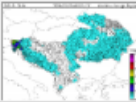
SEEFFG Products:05032016 00UTC

SEEFFG - Southeast Europe Flash Flood Guidance System

Current Date: 2016-07-11 11:41 UTC

Nav Date: 2016-03-05 00:00 UTC

Year: 2016 Month: 03 Day: 05 Hour: 00 REGION: Southeast Europe Regional

DT	MWGHE Precipitation	GHE Precipitation	Gauge MAP	Merged MAP	ASM	FFG	IFFT	PFFT	ALADIN Forecast	FMAP	FFFT
01-hr	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view		 2016-03-05 00:00 UTC Text view		 2016-03-05 00:00 UTC Text view	 2016-03-04 19:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view
03-hr	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view		 2016-03-05 00:00 UTC Text view		 2016-03-05 00:00 UTC Text view	 2016-03-04 21:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view
06-hr	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view
24-hr	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view	 2016-03-05 00:00 UTC Text view					 2016-03-05 00:00 UTC	 2016-03-05 00:00 UTC Text view	



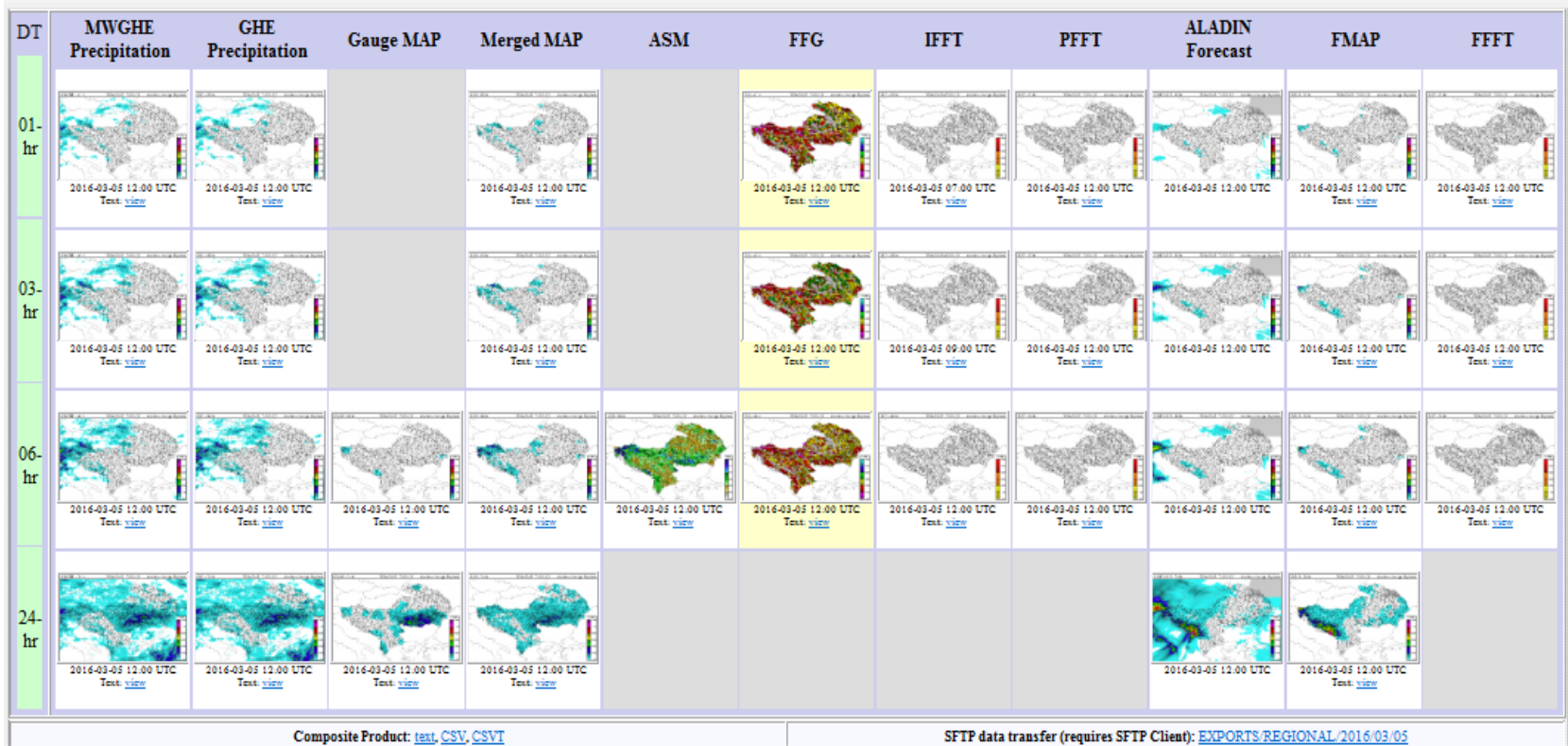
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SEEFFG - Southeast Europe Flash Flood Guidance System

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Nav Date: 2016-03-05 12:00 UTC

Year: 2016 Month: 03 Day: 05 Hour: 12 REGION: Southeast Europe Regional



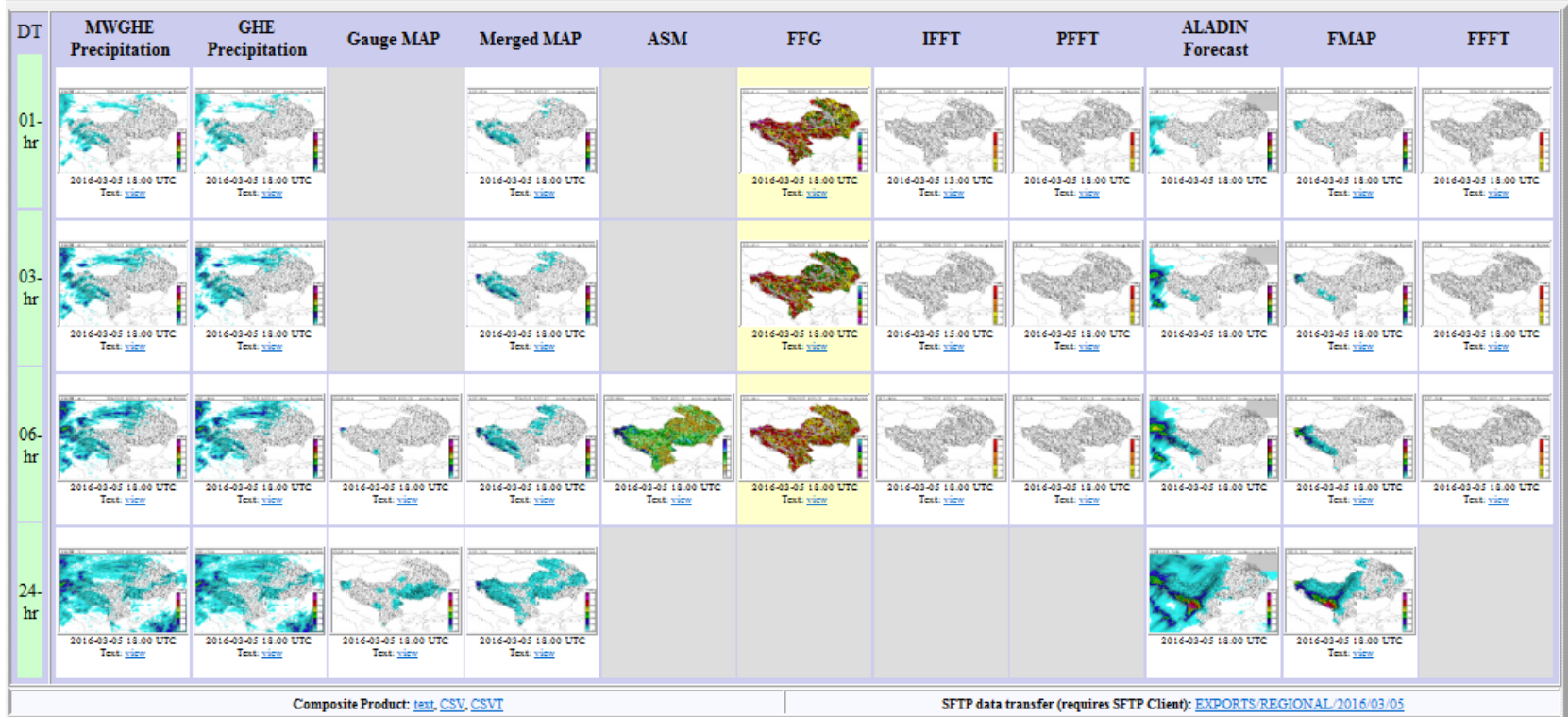
SEEFFG Products:05032016 18UTC

SEEFFG - Southeast Europe Flash Flood Guidance System

Current Date: 2016-05-07 12:28 UTC

Nav Date: 2016-03-05 18:00 UTC

Year: 2016 Month: 03 Day: 05 Hour: 18 REGION: Southeast Europe Regional



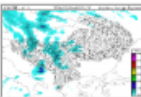
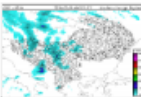

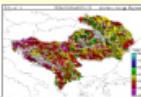


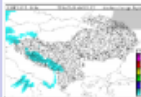


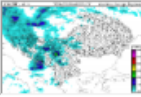
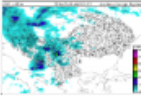
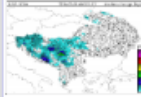
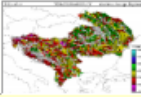


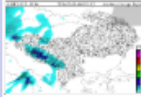
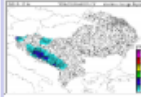

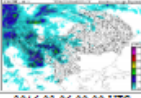
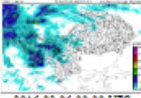
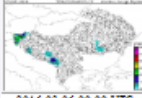
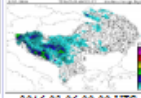
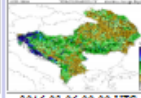
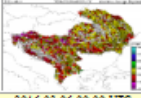
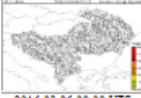
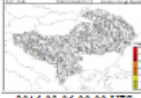
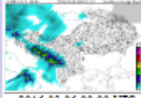
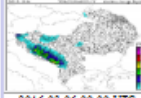
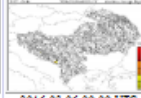
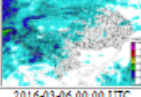
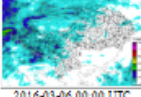
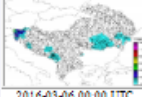
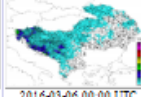
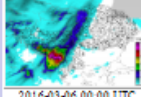
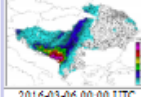
SEEFFG Products:05032016 18UTC

SEEFFG - Southeast Europe Flash Flood Guidance System

Current Date: 2016-05-07 13:57 UTC

Nav Date: 2016-03-06 00:00 UTC

Year: 2016 Month: 03 Day: 06 Hour: 00 REGION: Southeast Europe Regional

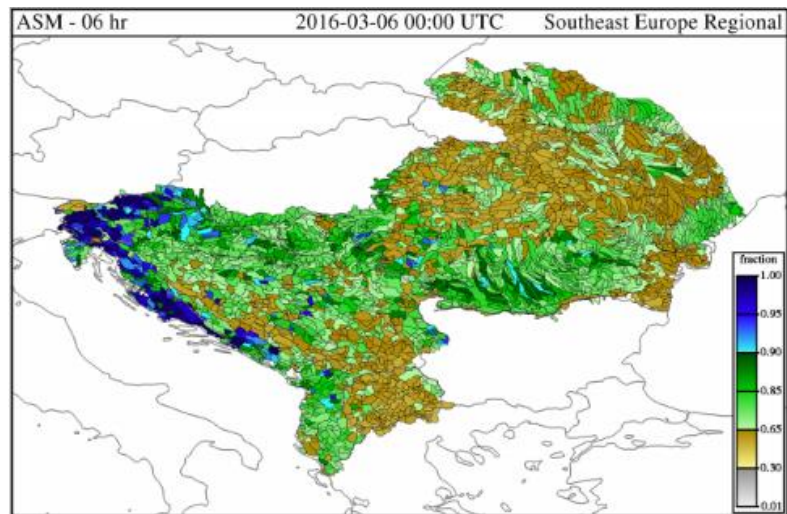
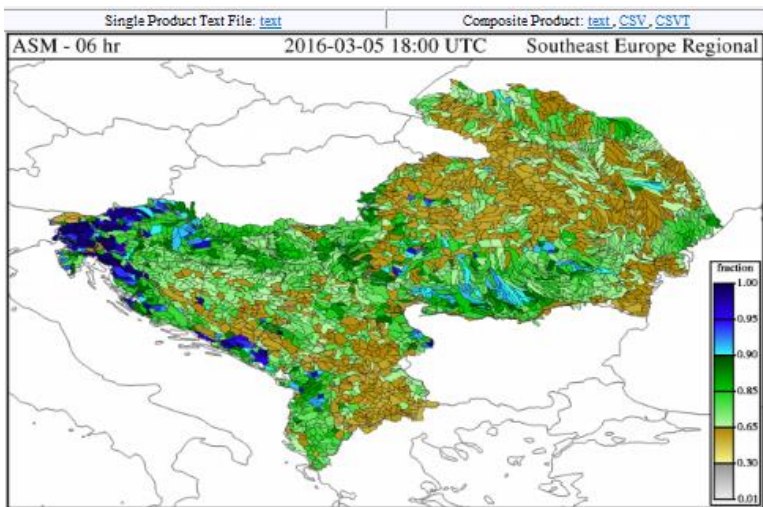
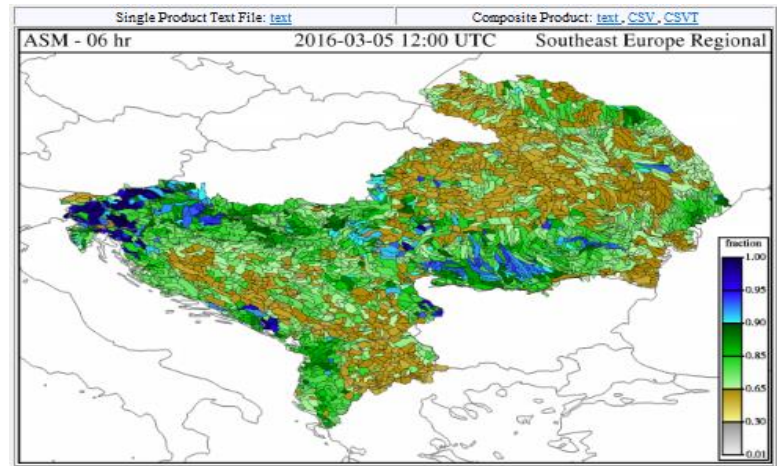
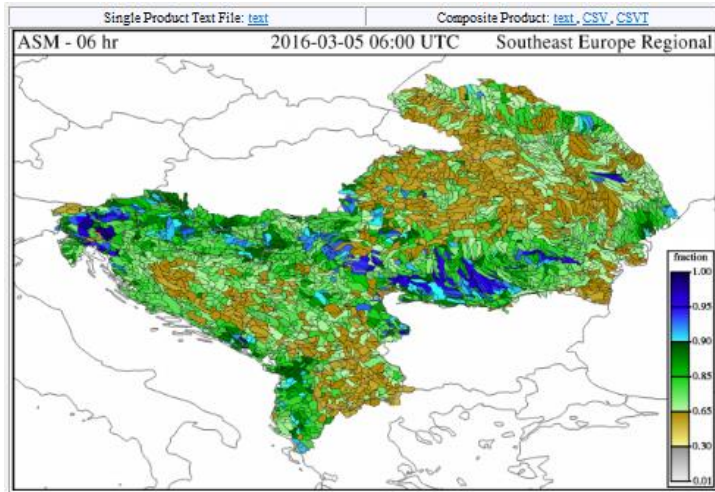
DT	MWGHE Precipitation	GHE Precipitation	Gauge MAP	Merged MAP	ASM	FFG	IFFT	PFFT	ALADIN Forecast	FMAP	FFFT
01-hr	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view		 2016-03-06 00:00 UTC Text view		 2016-03-06 00:00 UTC Text view	 2016-03-05 19:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view
03-hr	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view		 2016-03-06 00:00 UTC Text view		 2016-03-06 00:00 UTC Text view	 2016-03-05 21:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view
06-hr	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view
24-hr	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view	 2016-03-06 00:00 UTC Text view					 2016-03-06 00:00 UTC	 2016-03-06 00:00 UTC Text view	

Composite Product: [text](#), [CSV](#), [CSVT](#)

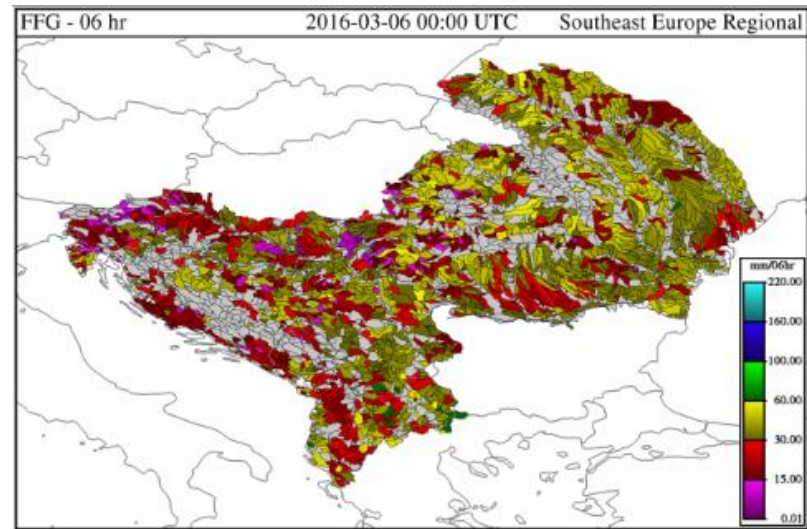
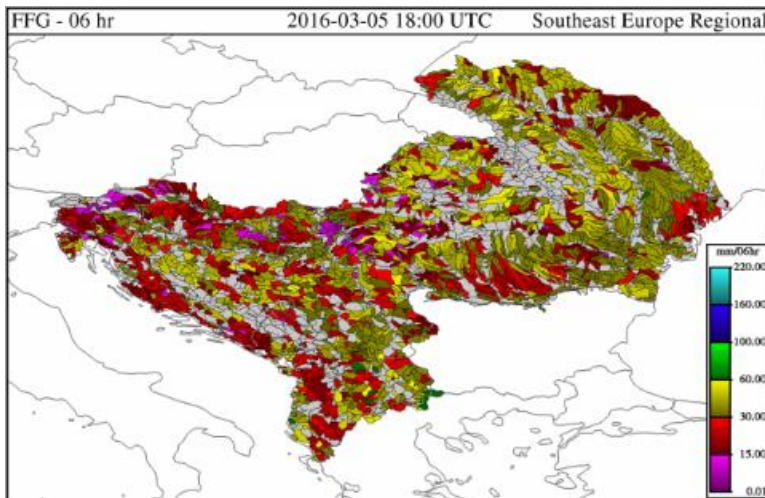
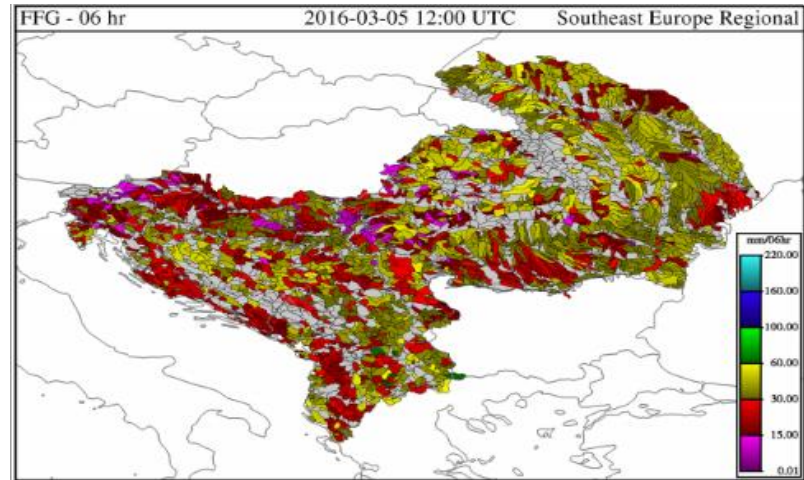
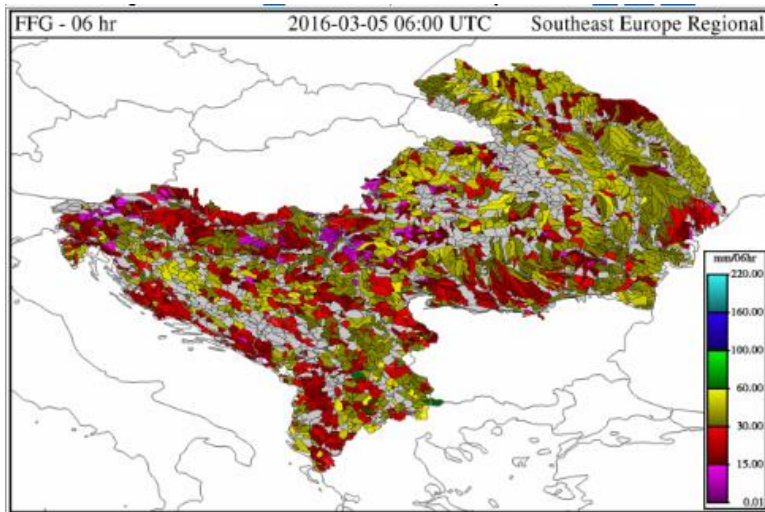
SFTP data transfer (requires SFTP Client): [EXPORTS/REGIONAL/2016/03/06](#)



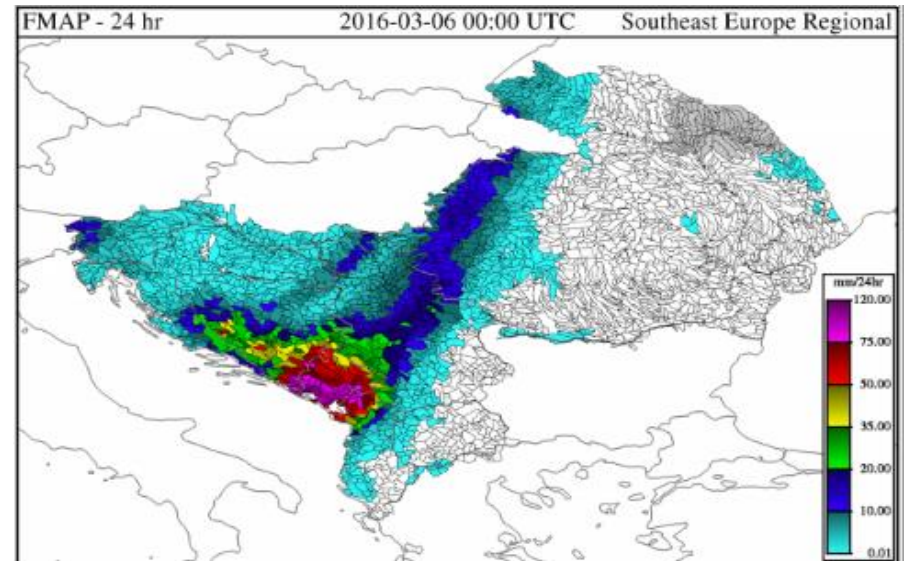
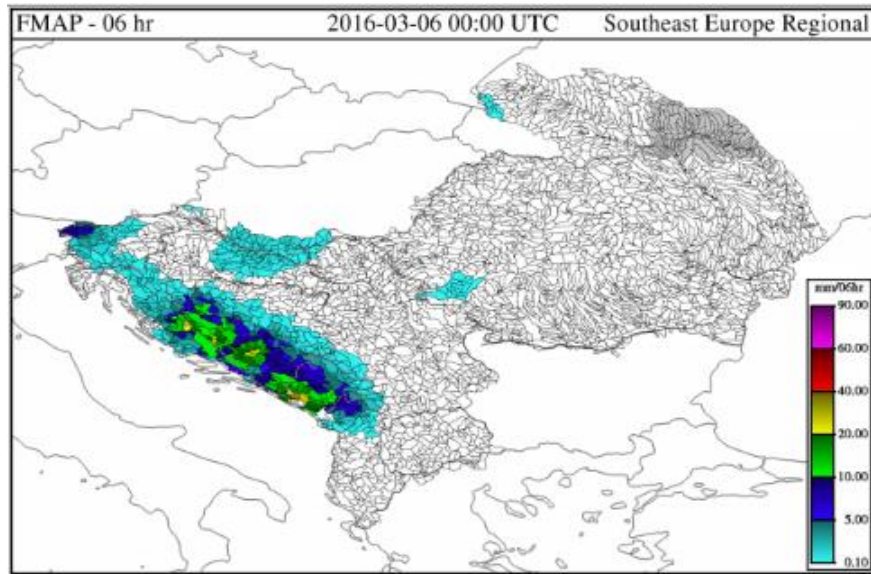
SEEFFG Products: ASM 6-hr 05-06032016



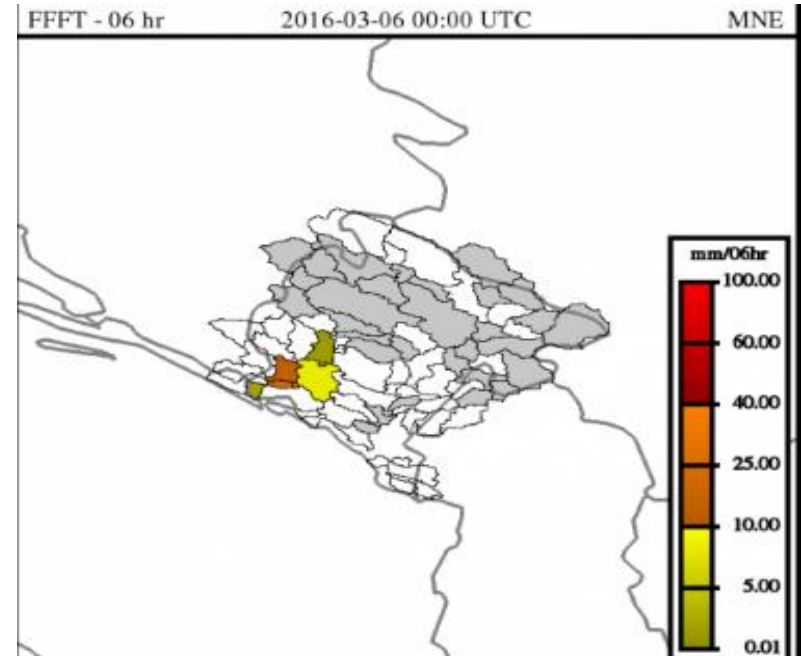
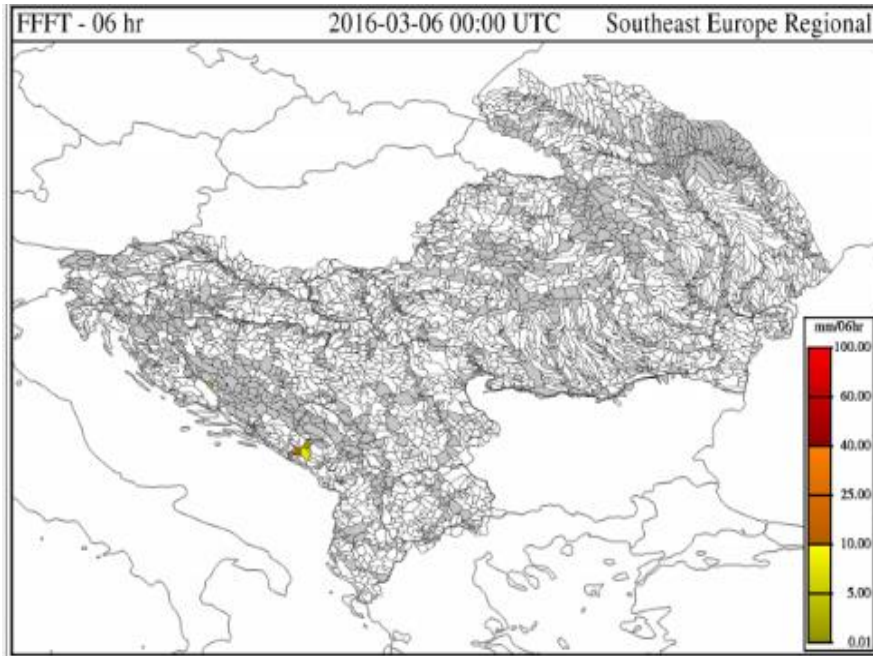
SEEFFG Products: FFG 6-hr 05-06032016



SEEFFG Products: FMAP 6 & 24-hr 06032016 00UTC



SEEFFG Products: FFFT 6-hr 06032016 00UTC



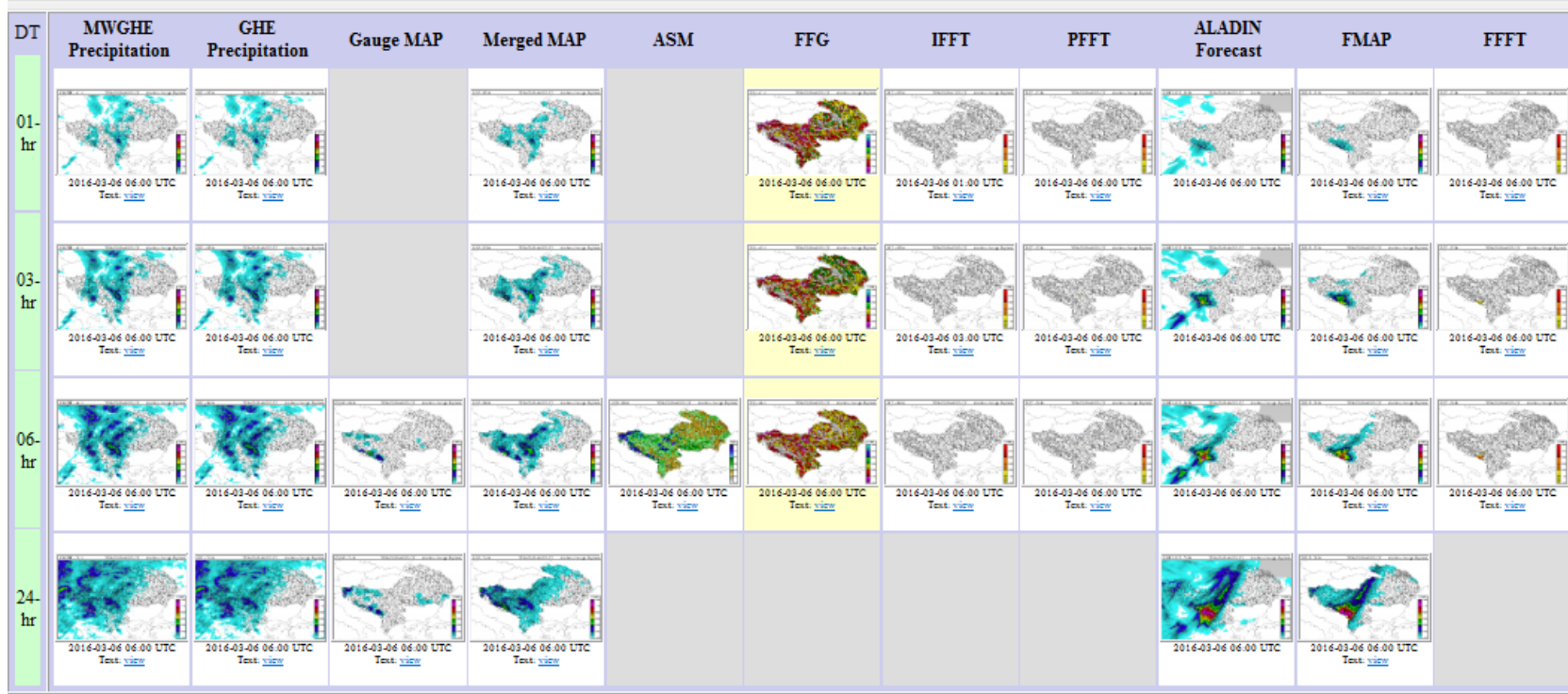
SEEFFG Products: 06032016 06UTC

SEEFFG - Southeast Europe Flash Flood Guidance System

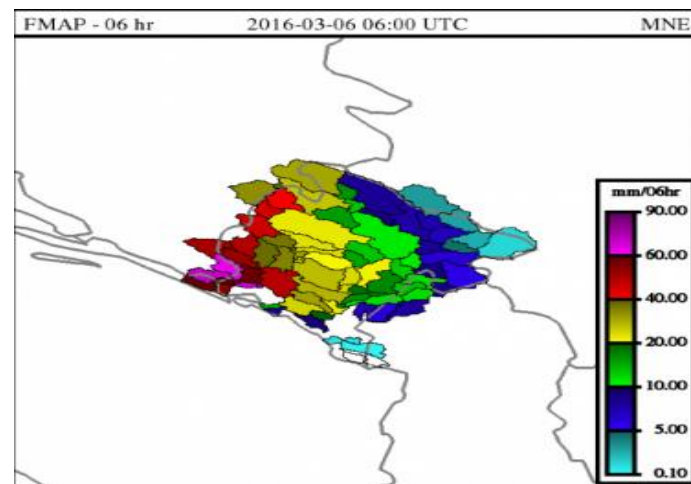
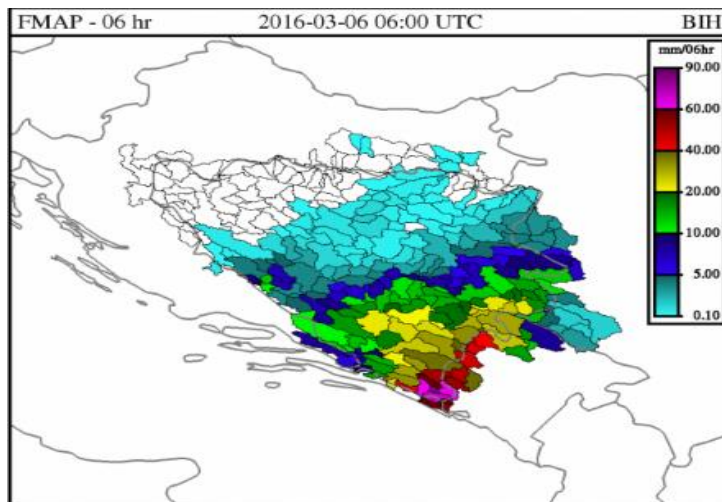
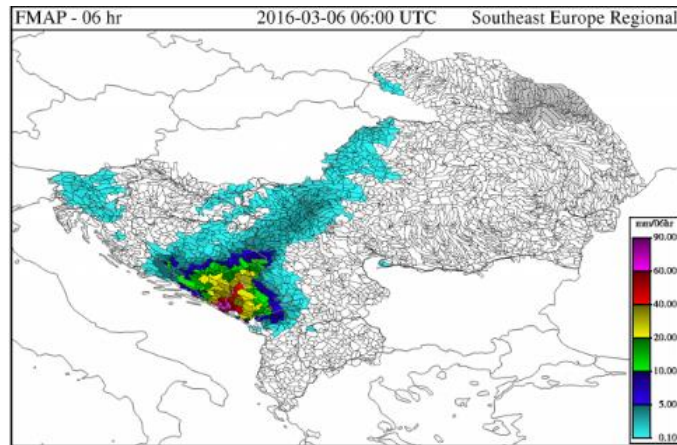
Current Date: 2016-05-07 15:10 UTC

Nav Date: 2016-03-06 06:00 UTC

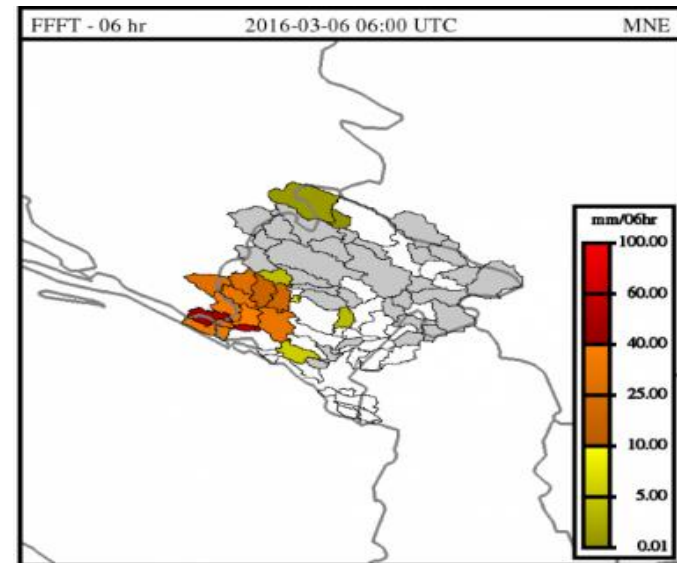
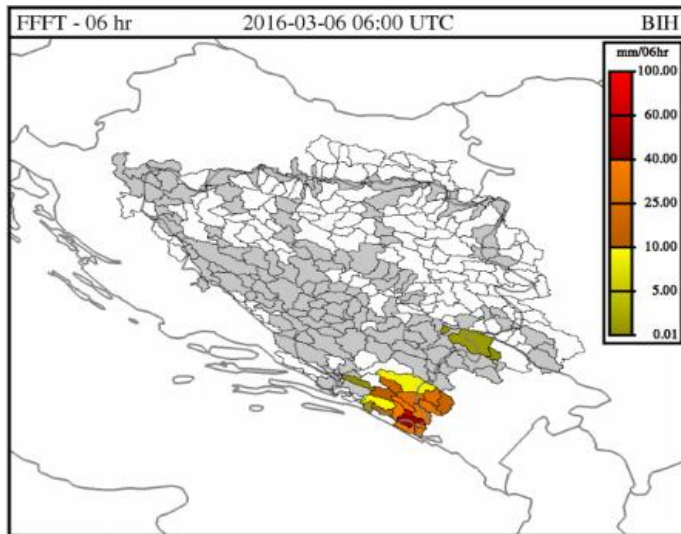
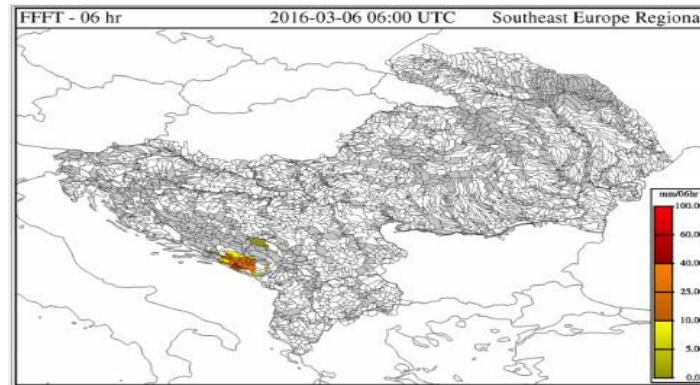
Year: 2016 Month: 03 Day: 06 Hour: 06 REGION: Southeast Europe Regional



SEEFFG Products: FMAP 06032016 06UTC



SEEFFG Products: FFFT-6 hr 06032016 06UTC



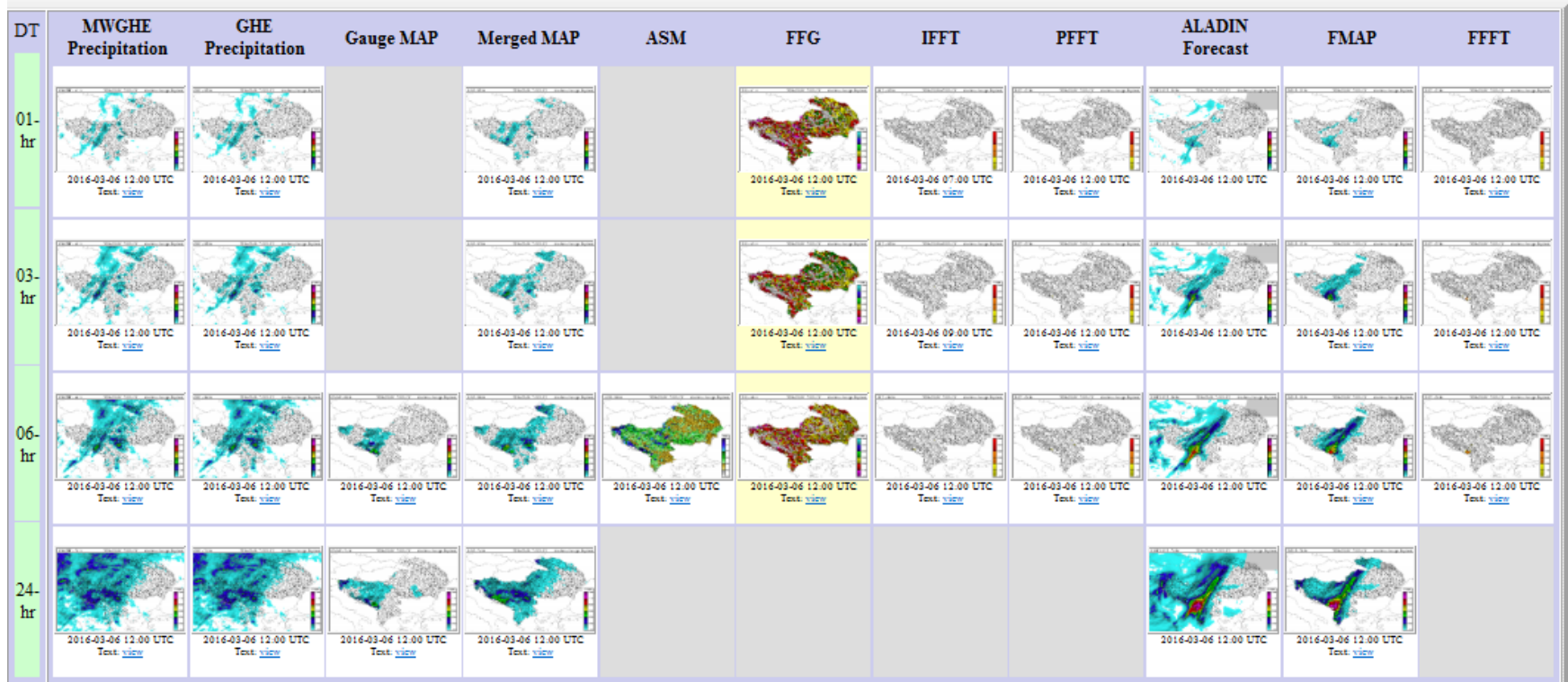
SEEFFG Products: FFFT-6 hr 06032016 12UTC

SEEFFG - Southeast Europe Flash Flood Guidance System

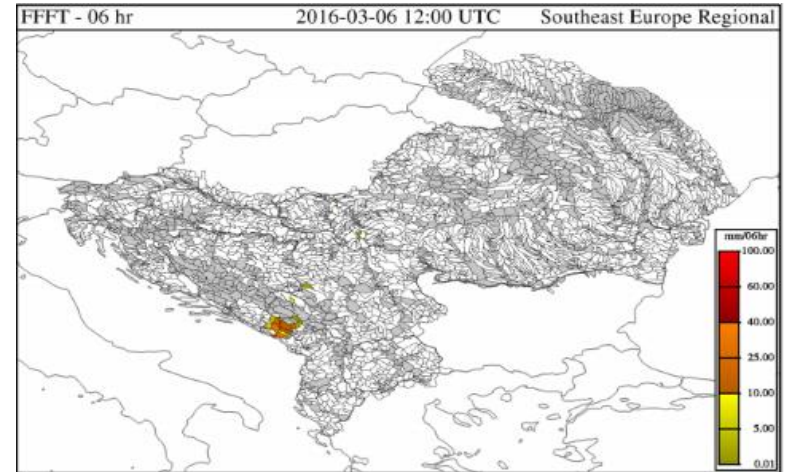
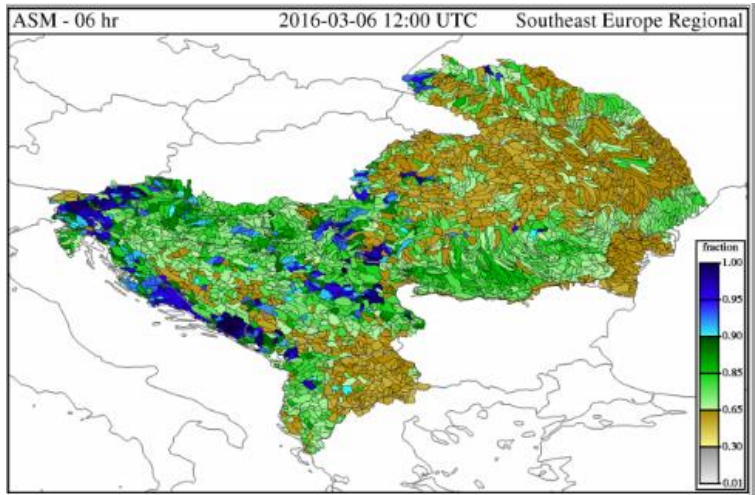
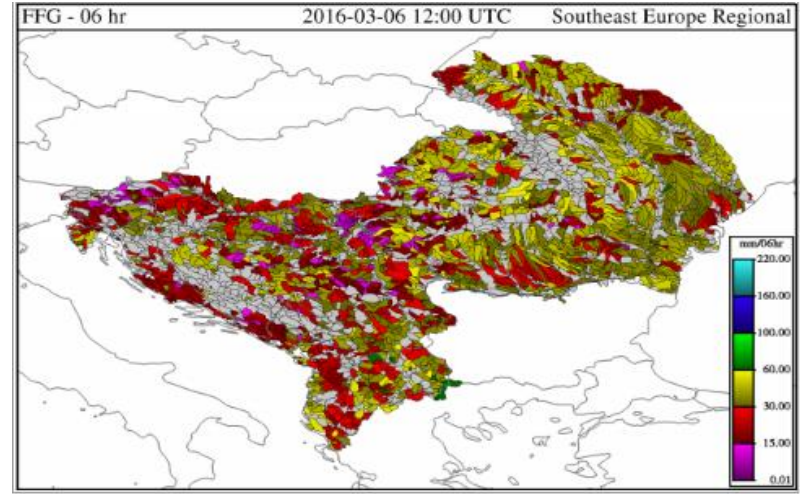
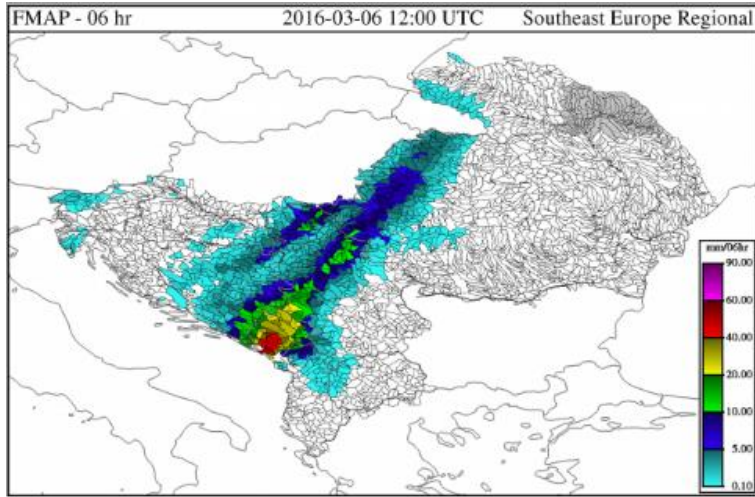
Current Date: 2016-05-07 15:42 UTC

Nav Date: 2016-03-06 12:00 UTC

Year: 2016 Month: 03 Day: 06 Hour: 12 REGION: Southeast Europe Regional



SEEFFG Products: FFFT-6 hr 06032016 12UTC



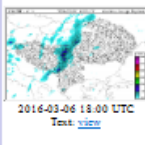
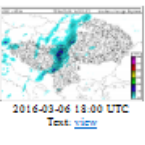
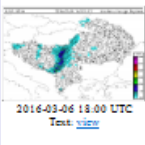
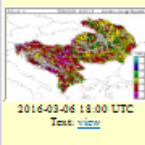
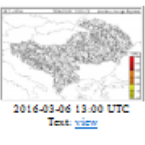
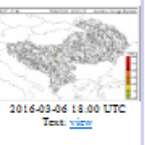
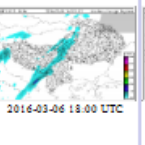
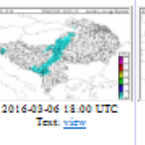
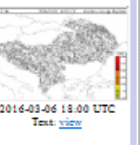
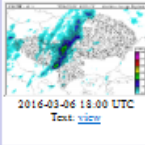
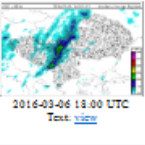
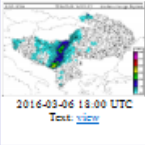
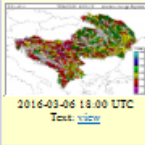
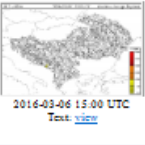
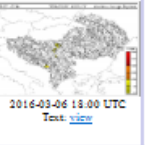
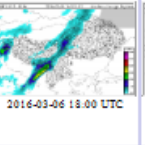
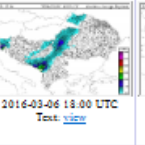
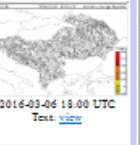
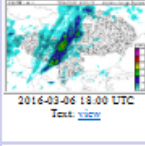
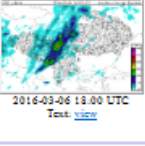
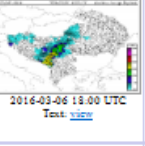
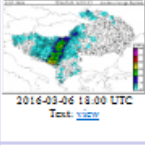
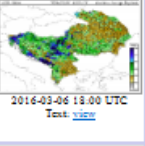
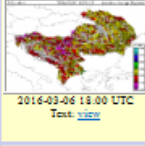
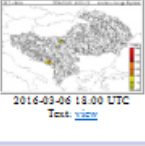
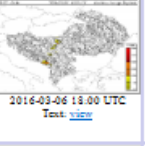
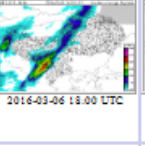
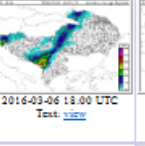
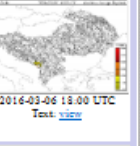
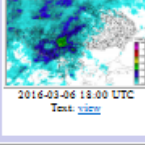
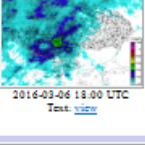
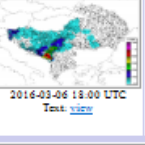
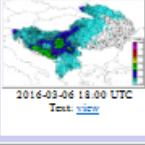
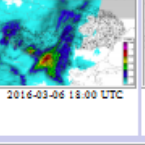
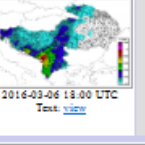
SEEFFG Products: 06032016 18UTC

SEEFFG - Southeast Europe Flash Flood Guidance System

Current Date: 2016-05-07 16:25 UTC

Nav Date: 2016-03-06 18:00 UTC

Year: 2016 Month: 03 Day: 06 Hour: 18 REGION: Southeast Europe Regional

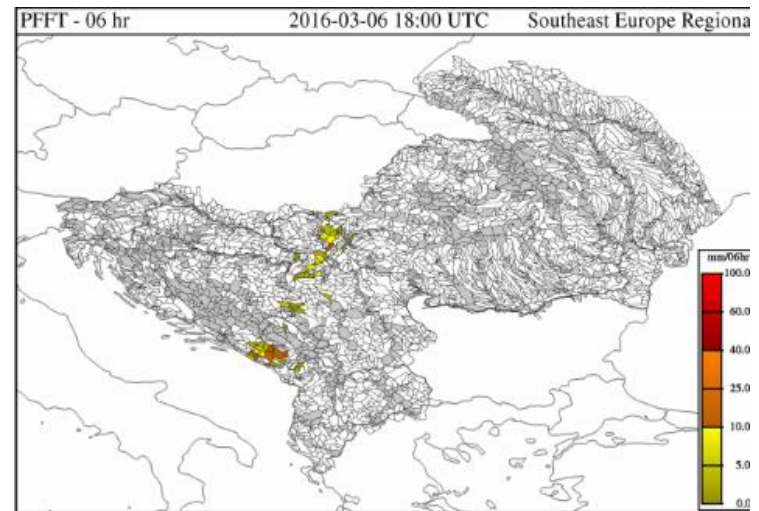
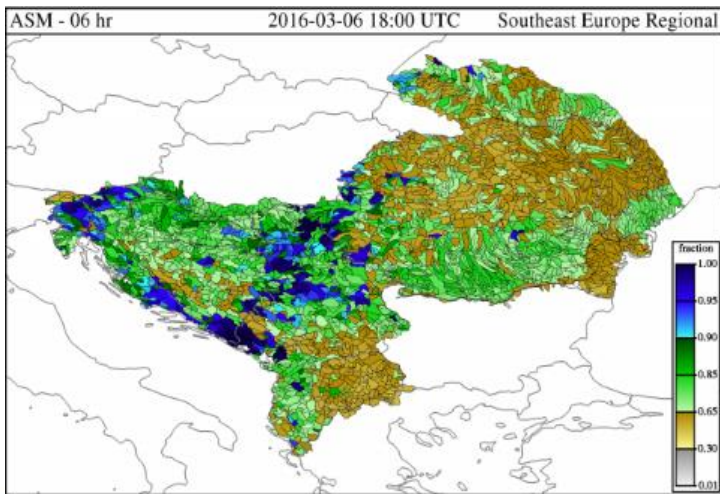
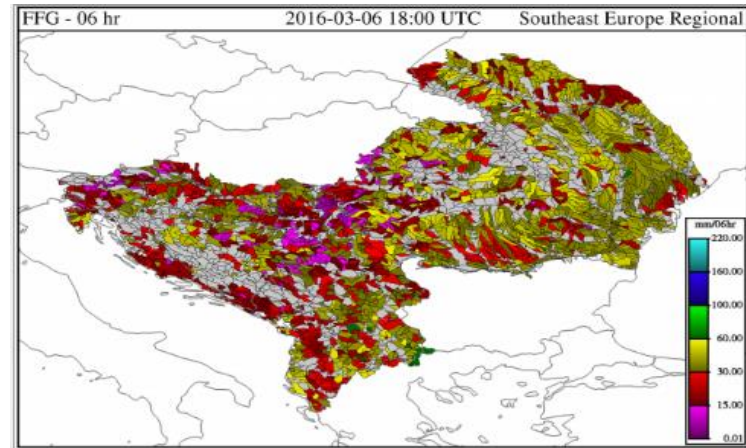
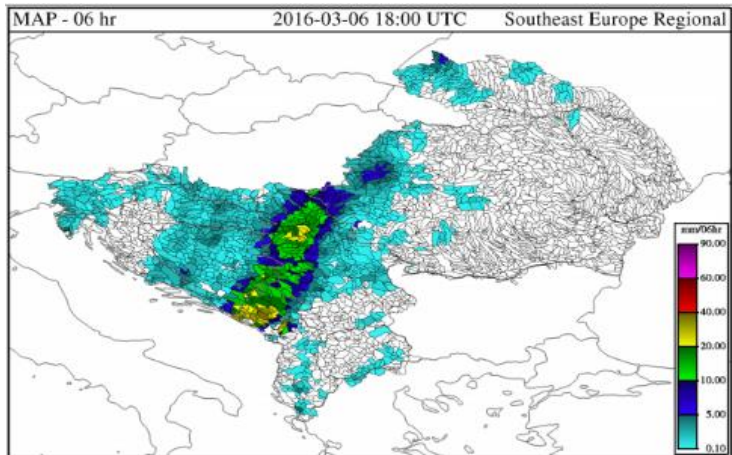
DT	MWGHE Precipitation	GHE Precipitation	Gauge MAP	Merged MAP	ASM	FFG	IFFT	PFFT	ALADIN Forecast	FMAP	FFFT
01-hr	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view		 2016-03-06 18:00 UTC Text view		 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view
03-hr	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view		 2016-03-06 18:00 UTC Text view		 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view
06-hr	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view
24-hr	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view	 2016-03-06 18:00 UTC Text view					 2016-03-06 18:00 UTC	 2016-03-06 18:00 UTC Text view	

Composite Product: [text](#), [CSV](#), [CSV1](#)

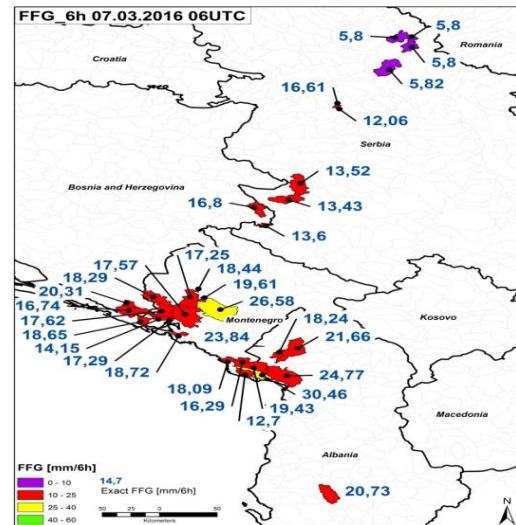
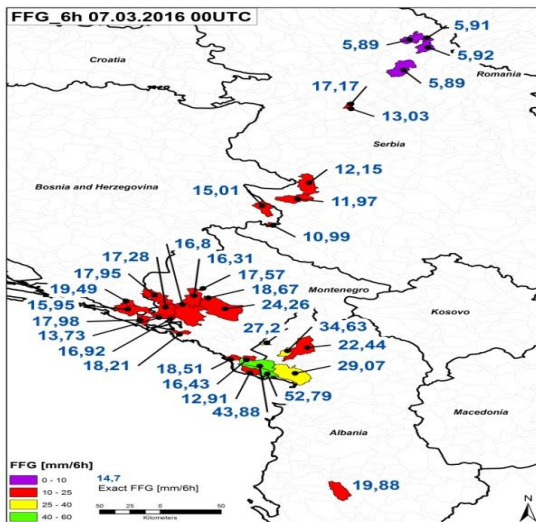
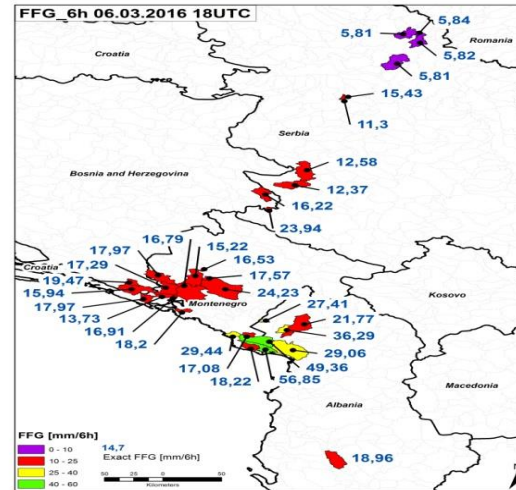
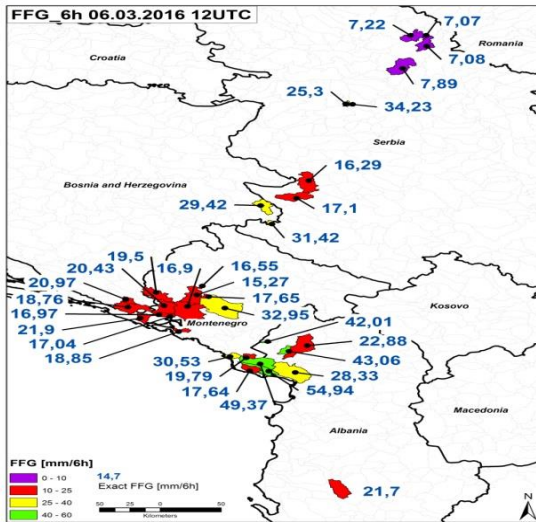
SFTP data transfer (requires SFTP Client): [EXPORTS_REGIONAL/2016/03/06](#)



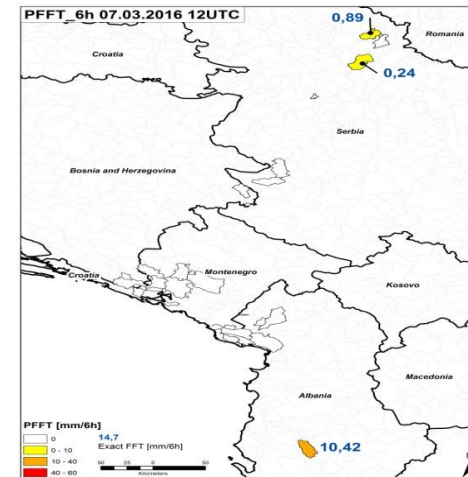
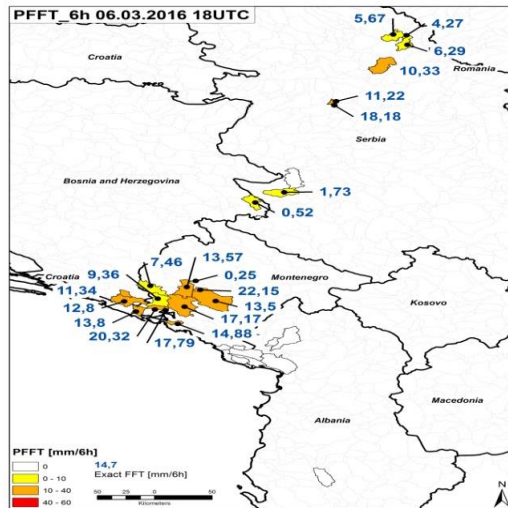
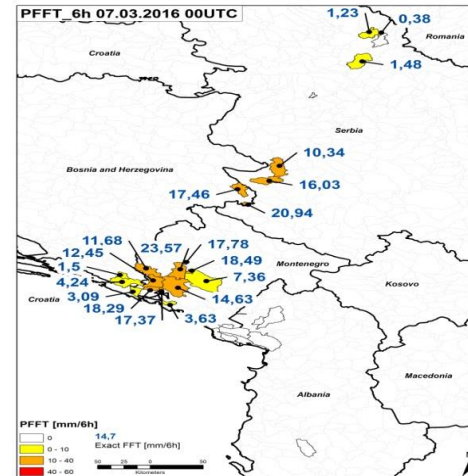
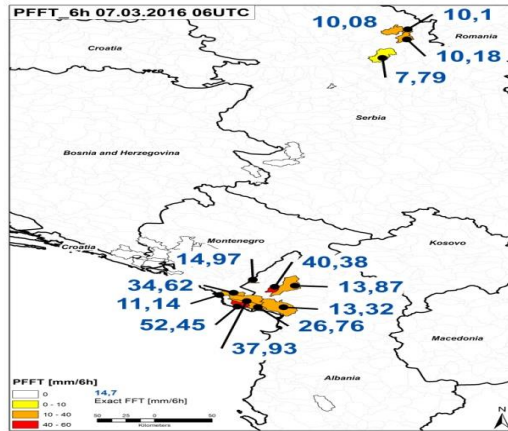
SEEFFG Products: 06032016 18UTC



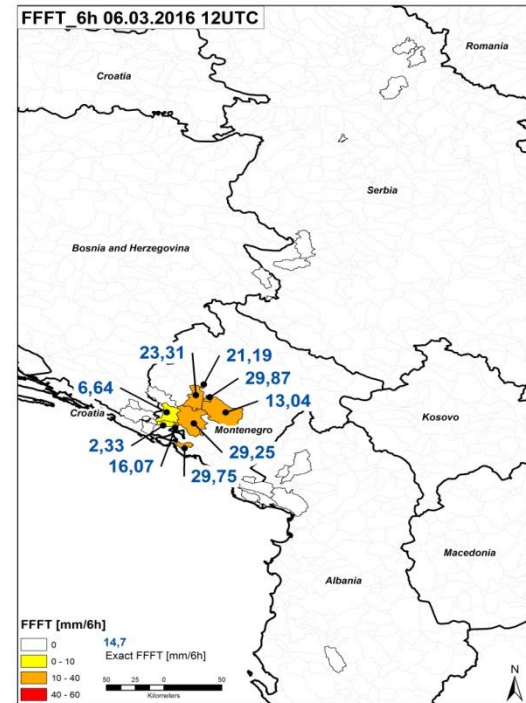
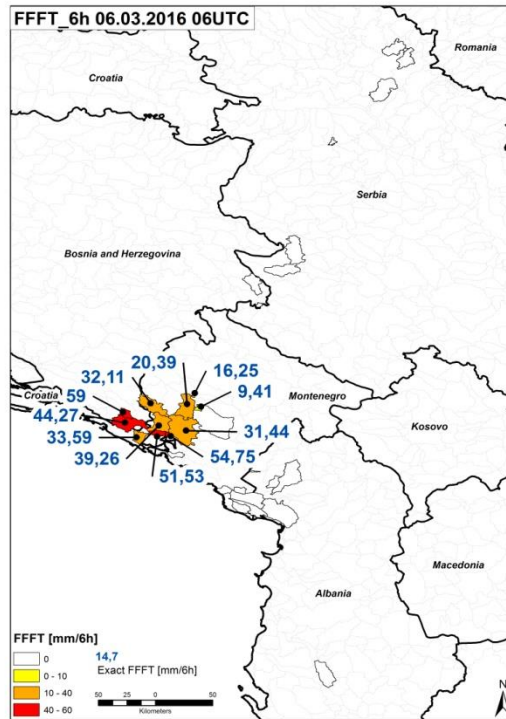
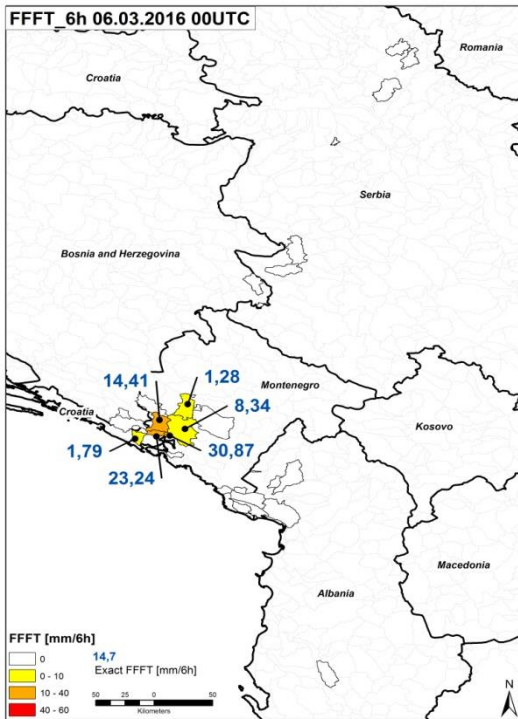
FFG 6-hr 06032016 12UTC+6 hr



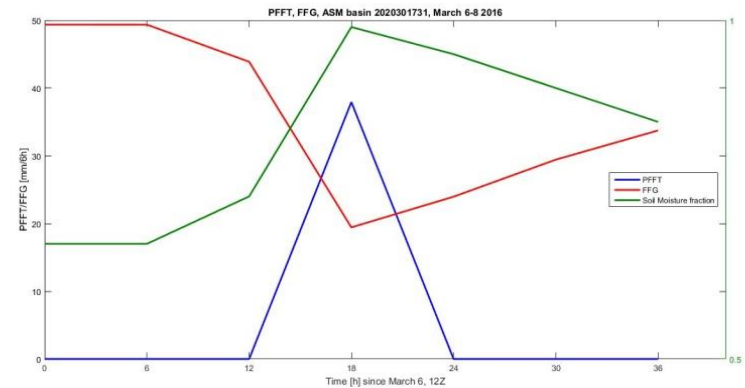
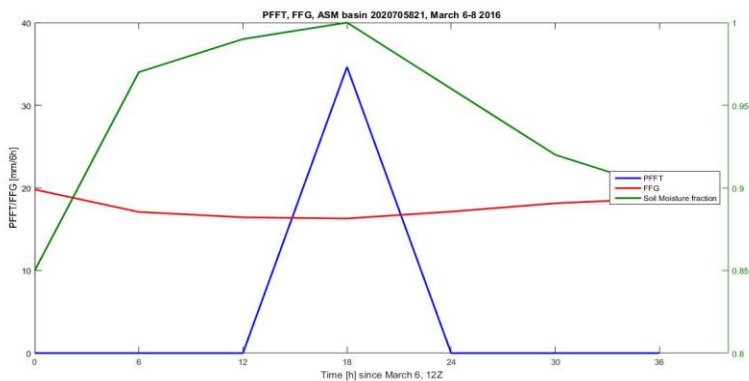
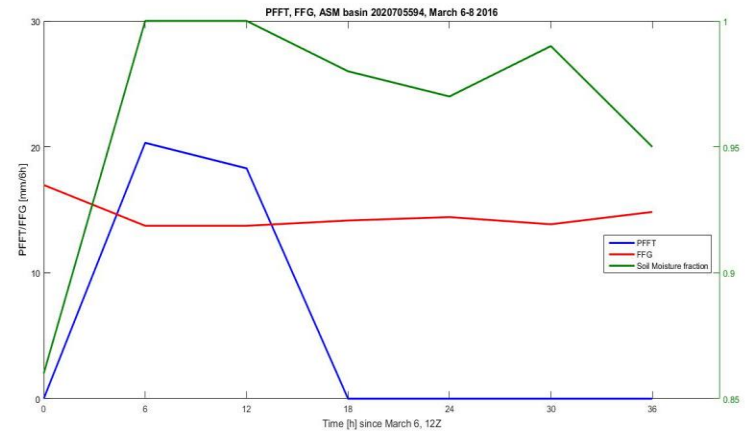
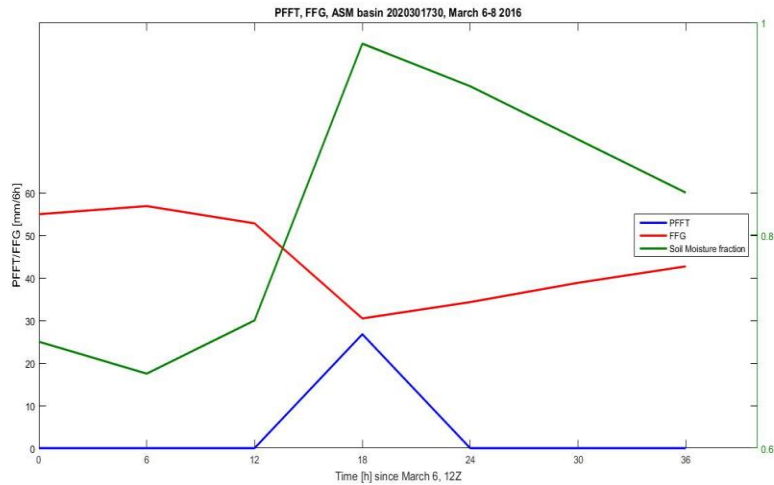
PFFT 6-hr 06032016 18UTC (top left) 07032016 00UTC, 06UTC, 12UTC



FFFT 6-hr 06032016 00UTC +6-hr



Comparison of FFG&PFFT and ASM For Selected Catchments



Flash Flood Warning

Flash Flood Warnings	
Issued:	6 March 2016 at 00 UTC
Valid	06 UTC
Warning	Flash floods are expected for regions and towns and villages due to heavy rainfall associated with north Pacific depression.



Verification

Serbia – Emergency Declared after Floods Force Hundreds to Evacuate

7 MARCH, 2016 BY RICHARD DAVIES IN EUROPE, NEWS



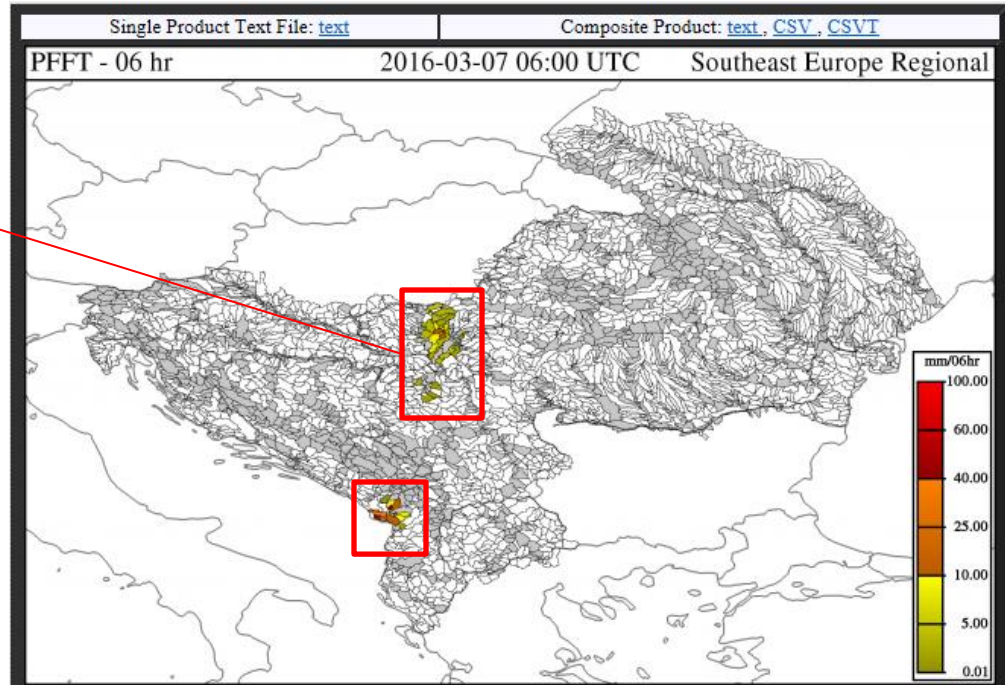
The Serbian Interior Ministry declared an emergency situation on Monday 7 March 2016, after floods hit the municipalities of Čačak, Lucani and Anije in central and eastern Serbia.

Areas of the country recorded heavy rainfall that began late on Sunday. The Cernica river broke its banks early on 07 March and flooded around 500 houses in the villages of Konjevici and Preljina. The Serbian government said that 420 people were evacuated.

Serbian Prime Minister Aleksandar Vucic visited Preljina in Čačak, one of the worst hit areas, earlier today.

The heavy rain also caused a landslide in the Bajina Basta municipality, damaging homes and roads in the

Local and national government authorities will start making assessments of the damage and sending aid tomorrow.





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Thank you for your attention

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