

BLACK SEA AND MIDDLE EAST REGION FLASH FLOOD GUIDANCE SYSTEM

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National Hydrometeorological Department

Tbilisi 28-30 June 2016

Main Duties of Azerbaijan NMHS

- Observations
- Forecasting
- Hydrometeorological services
- Climate
- National Water Cadastre
- Monitoring
- Researches
- International cooperation



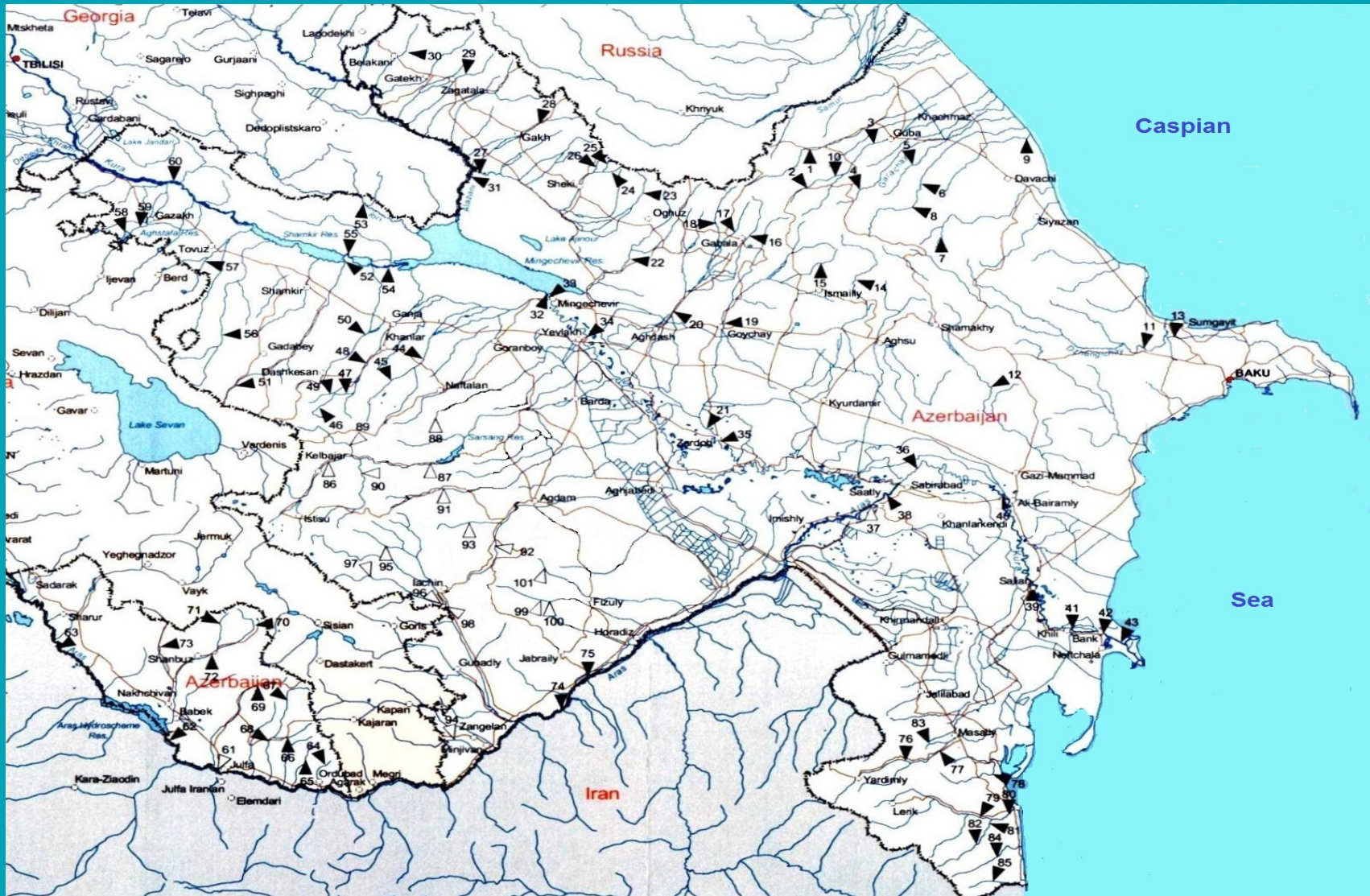
Observation network

- Meteorological stations - 83
- Radiosounding Station - 1
- Meteorological Radars - 4 (MRL-5)
- Agrometeorological posts - 12
- Meteorological posts - 22
- Marine posts - 9
- Hydrological posts - 103

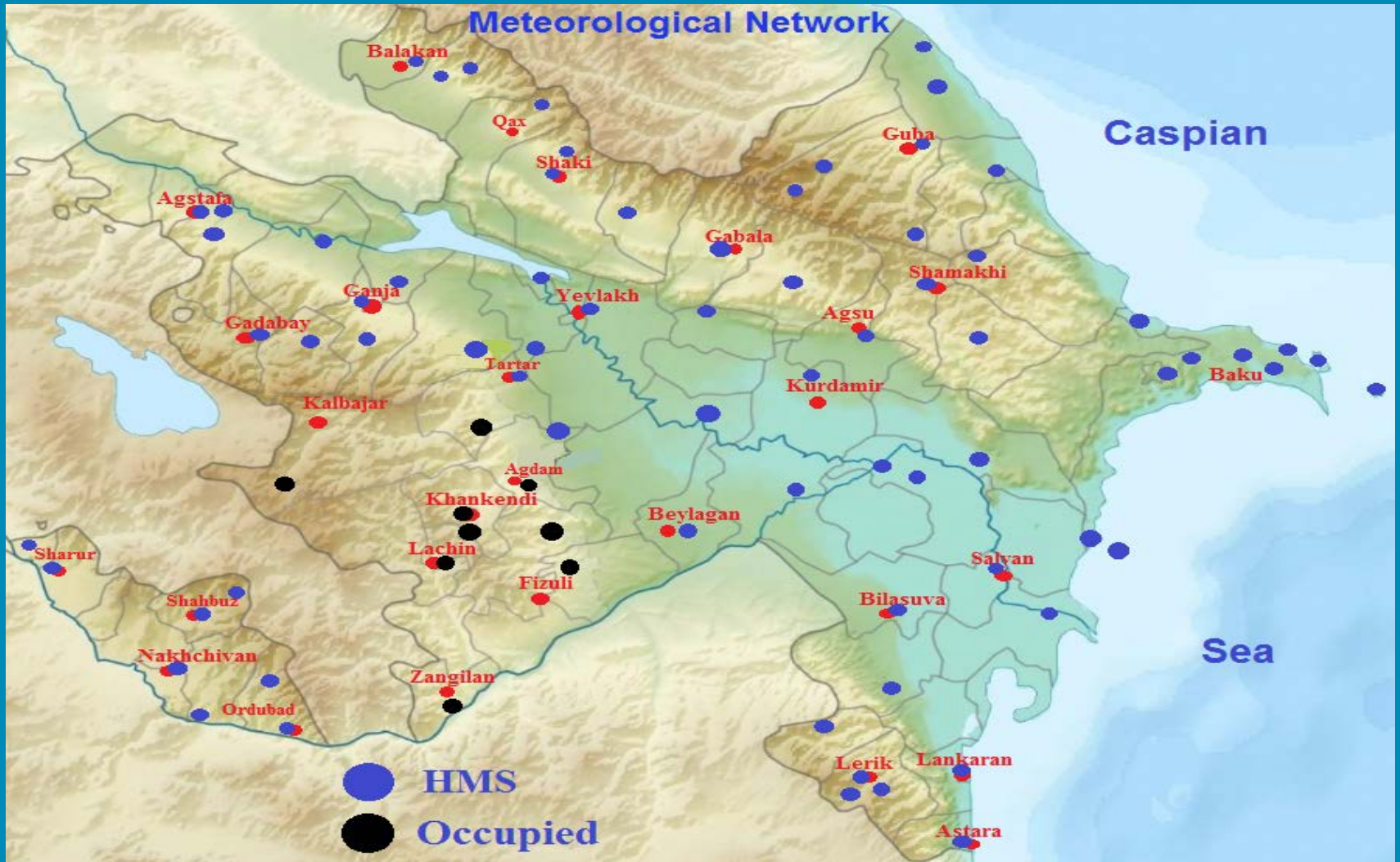
Automated Observation Network

- ❖ AWOS - 55
MAWS301 Vaisala and on base WXT520 Vaisala
Data from AWOS is available
on www.eco.gov.az
- ❖ Automatic Rain Gages - 8
- ❖ Acoustic Doppler Current Profiler (SonTec) - 2

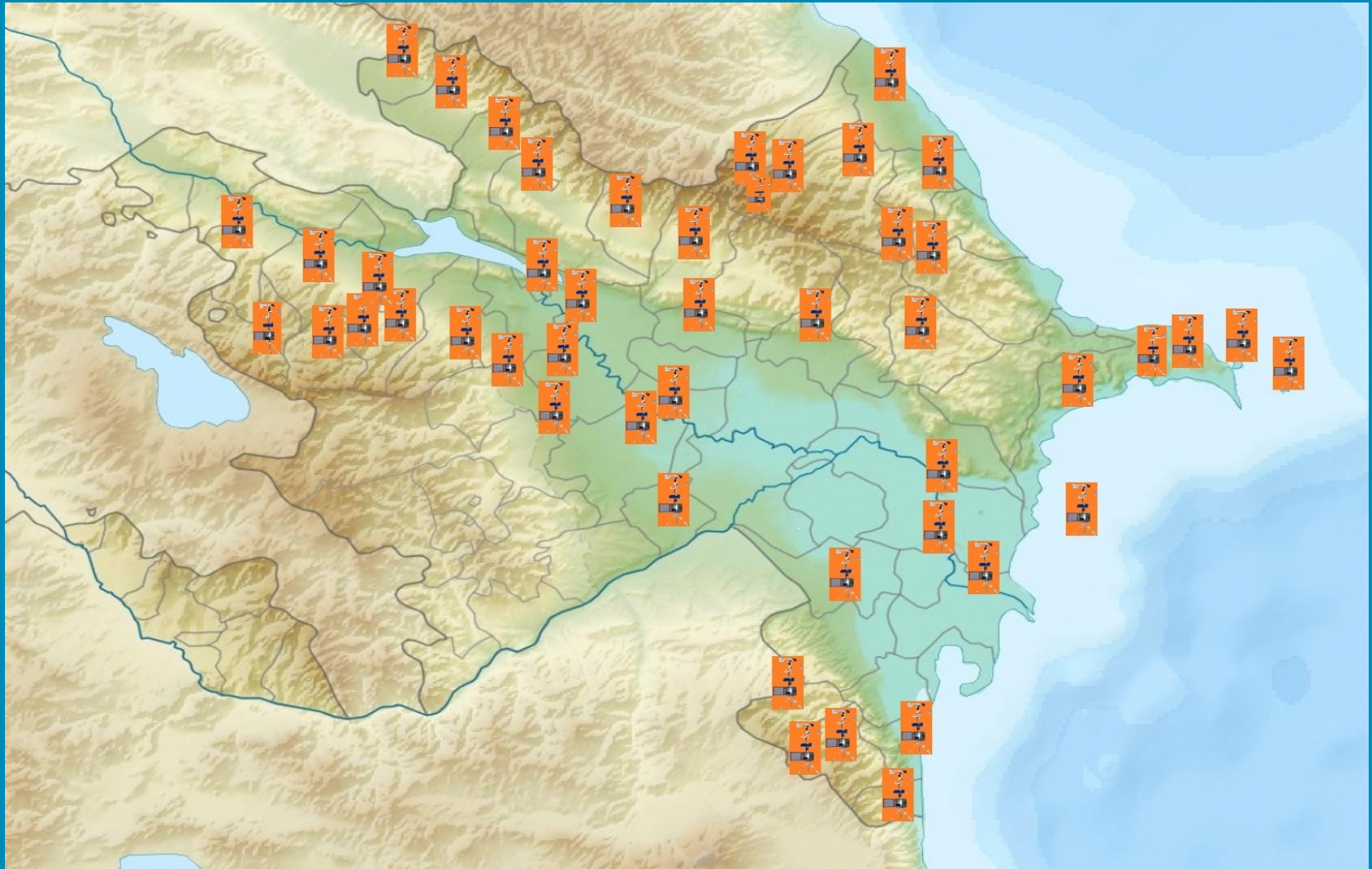
Hydrological Network



Meteorological Network



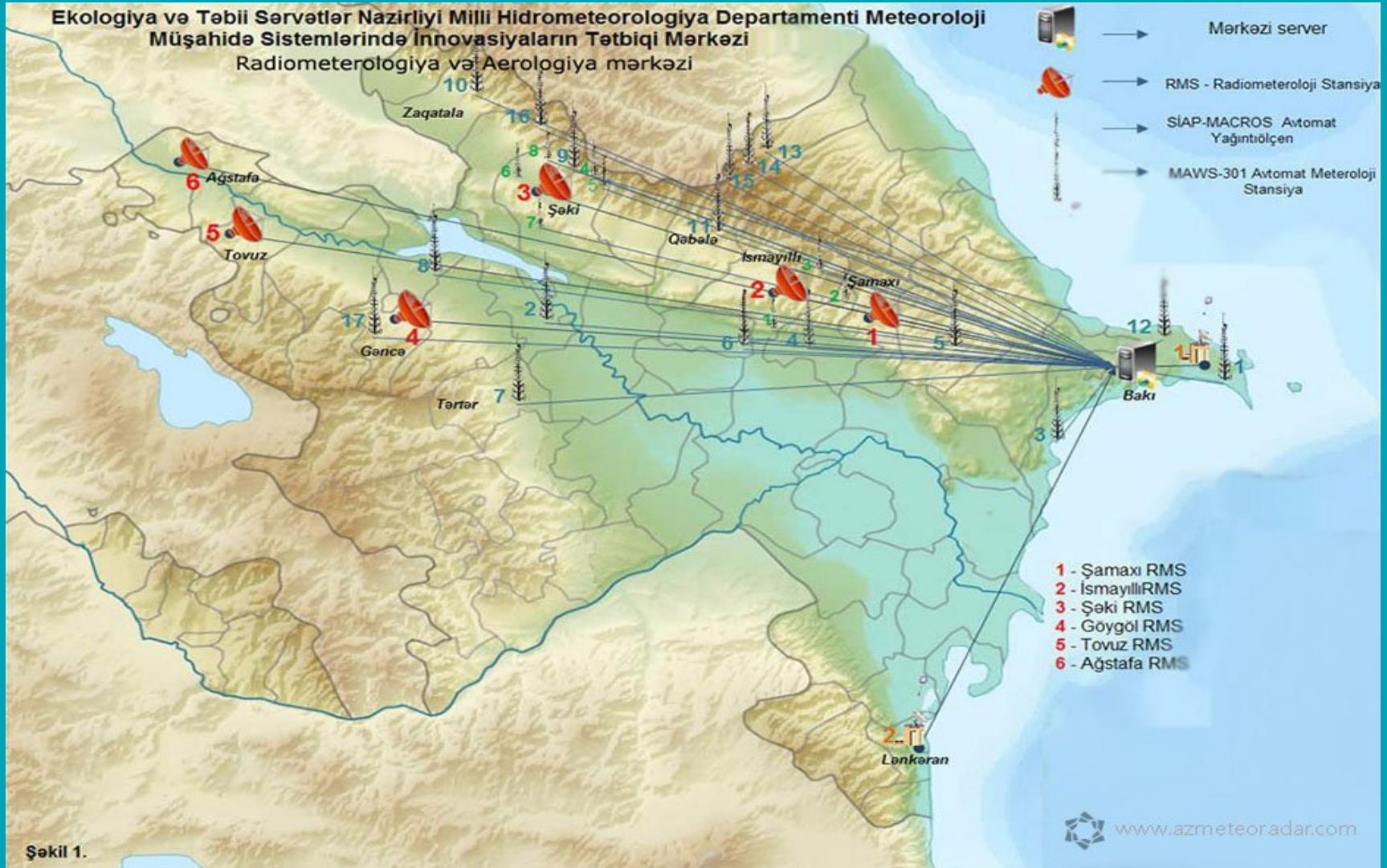
Automatic meteorological stations



The data is updated this time (09h, 12h, 15h, 18h)

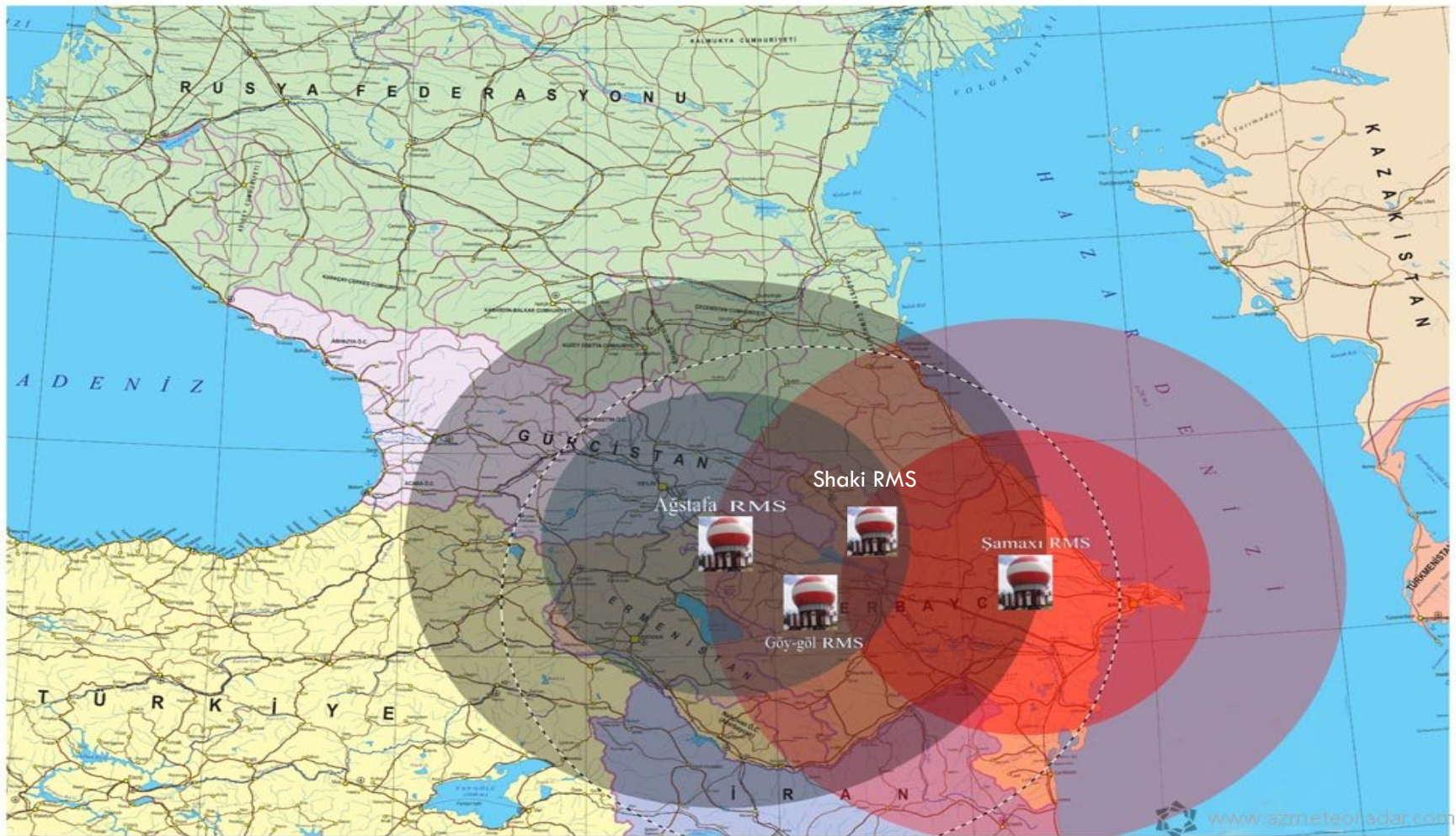
#	Stations	Temperature		Humidity %	Air pressure	WIND		
		T _f	T max			direction	average	max
1	Kabash 3700 m	+	+	+	+	+	+	+
2	Shahduzu khetem 2712m	+	+	+	+	+	+	+
3	Bdoz ams	+	+	+	+	+	+	+
4	Bina amm	+	+	+	+	+	+	+
5	Goygol hms	+	+	+	+	+	+	+
6	Ganja hms	+	+	+	+	+	+	+
7	Goychay hms	+	+	+	+	+	+	+
8	Pirallahi hms	+	+	+	+	+	+	+
9	Gabala	+	+	+	+	+	+	+
10	Gobustan hms	+	+	+	+	+	+	+
11	Guba hms	+	+	+	+	+	+	+
12	Tartar hms	+	+	+	+	+	+	+
13	Yevlakh ams	+	+	+	+	+	+	+
14	Shaki hms	+	+	+	+	+	+	+
15	Agsu hms	+	+	+	+	+	+	+
16	Zagatala hms	+	+	+	+	+	+	+
17	Tufandagh 4172 m	+	+	+	+	+	+	+
18	Chilov adasi dhms	+	+	+	+	+	+	+
19	Aghgol	+	+	+	+	+	+	+
20	Balakan hms	+	+	+	+	+	+	+
21	Altiaghaj hms	+	+	+	+	+	+	+
22	Sangi mughan dhms	+	+	+	+	+	+	+
23	Lankaran hms	+	+	+	+	+	+	+
24	Naftalan hms	+	+	+	+	+	+	+
25	Agdam hms	+	+	+	+	+	+	+
26	Mingachevir hms	+	+	+	+	+	+	+
27	Khachmaz ams	+	+	+	+	+	+	+
28	Beylagan ams	+	+	+	+	+	+	+
29	NHMS - Baku	+	+	+	+	+	+	+

Radar stations



Radar stations

Respublika ərazisində fəaliyyət göstərən Radiometeoroloji (MRL5) müşahidələrinin əhatə dairəsi.

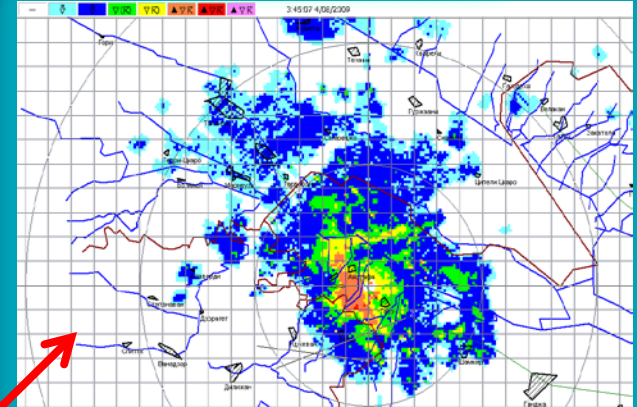
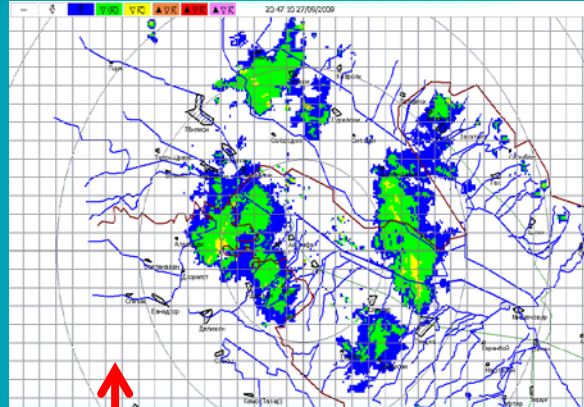
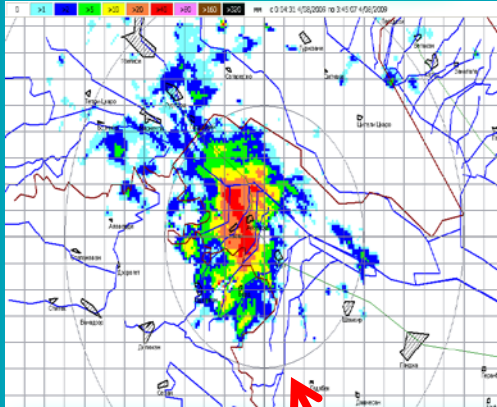


Radar informations

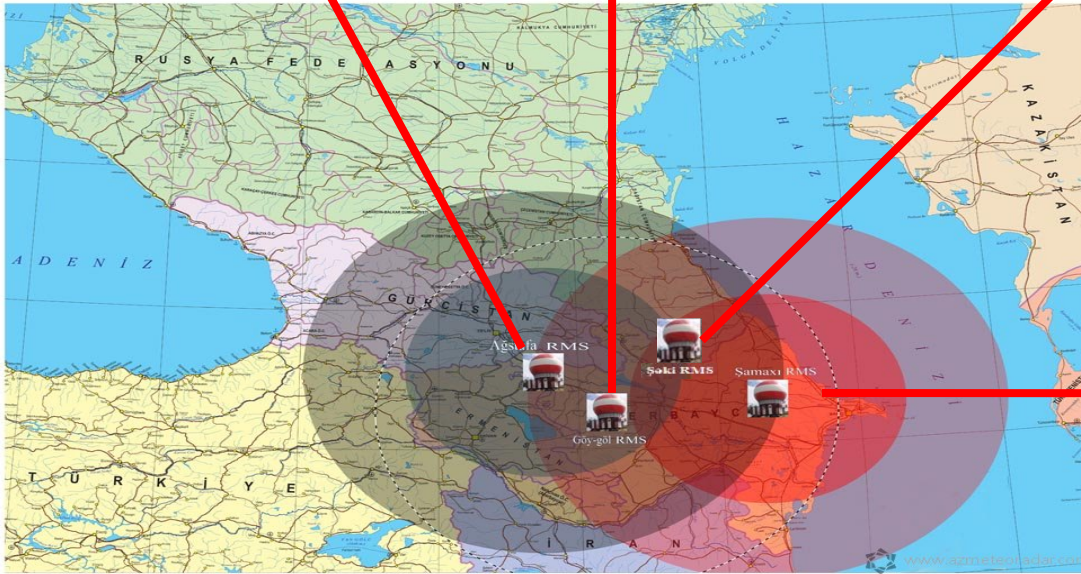
Agstafa

Goygol

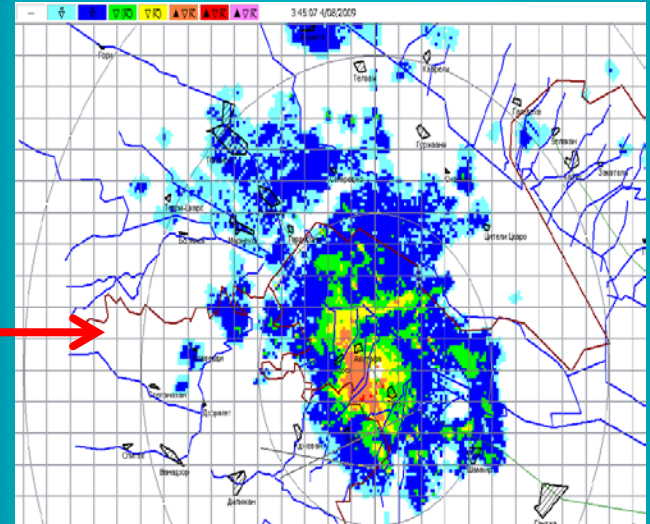
Shaki



Respublika ərazisində fəaliyyət göstərən Radiometeoroloji (MRL5) müşahidələrinin əhatə dairəsi.

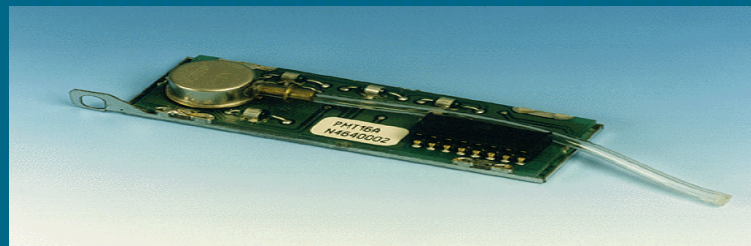
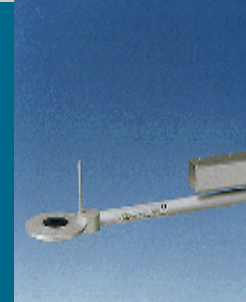
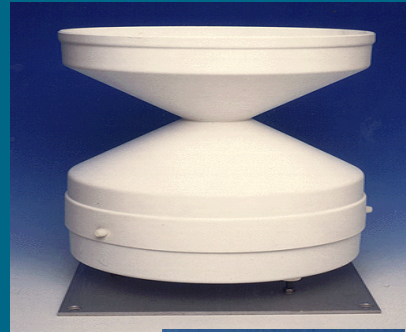


Shamakhi



Automatic meteorological stations

VISALA AWS



Automatic meteorological stations Shahdag (at the height 2712 m)



Automatic meteo stations Shahduzu (at the height 3700 m)



Automatic meteo stations Tufandag (at the height 4172 m)



Snow informations

- Snow stations - 15

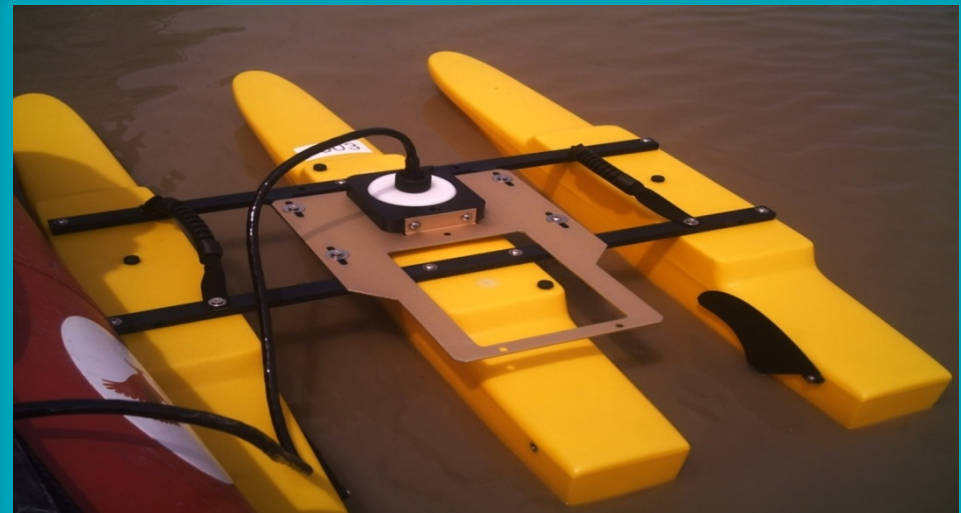
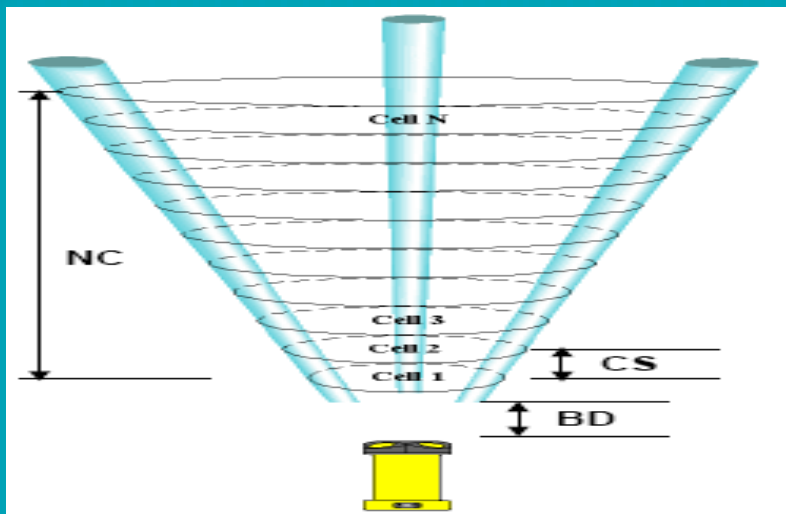
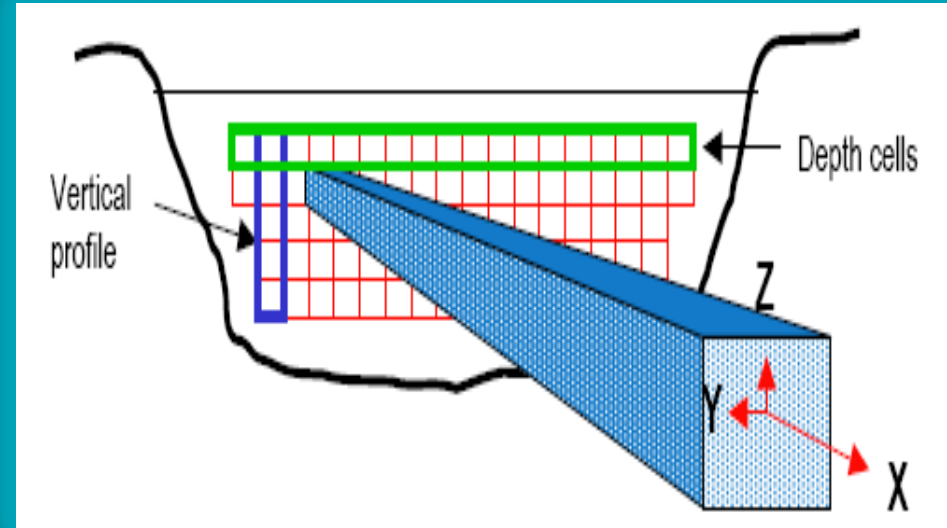
28 snow-measuring routes

- The Big Caucasus - 16
- The Lesser Caucasus - 12

Snow measuring



Measuring of water discharge (ADP SonTec)

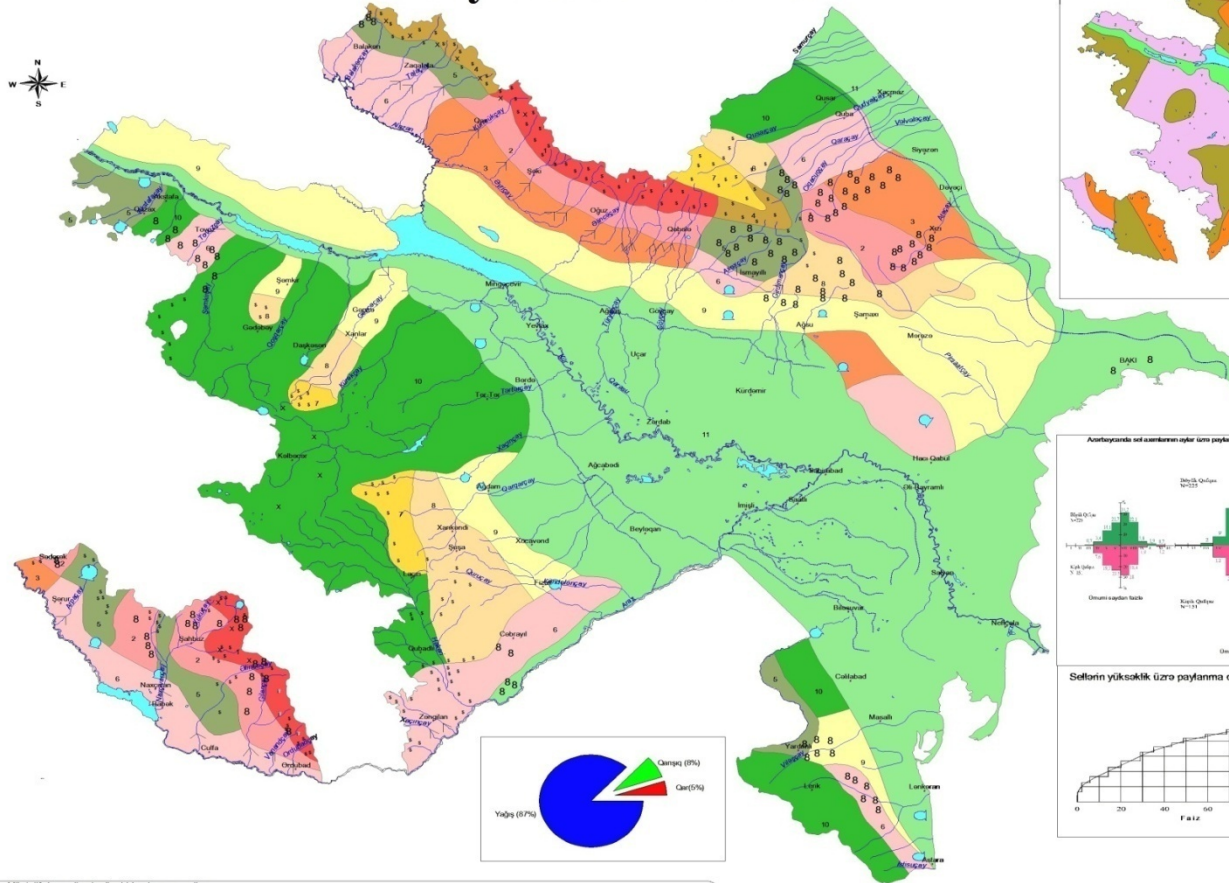


Measuring of water discharge in Kura and Araz rivers

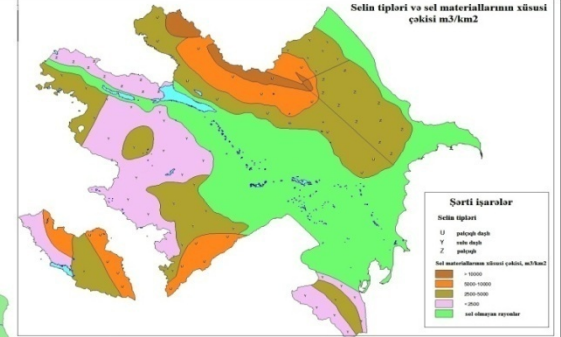


FLOOD MAP

Azərbaycanın sel xəritəsi

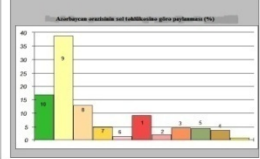
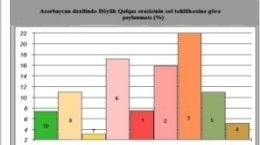
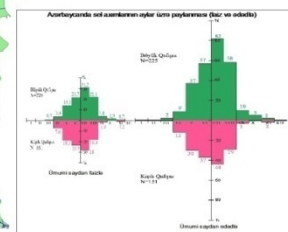
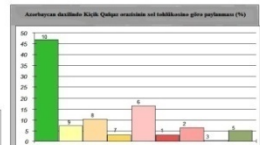
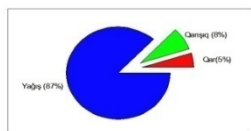


Selin tipləri və sel materiallarının xüsusi çəkisi m³/km²



Sərti işarələr

- Selin tipləri
- 1) yavaş-dəyiş
 - 2) sürətli
 - 3) sürətli
- Sel materiallarının xüsusi çəkisi, m³/km²
- 4) < 1000
 - 5) 1000-1500
 - 6) 1500-2000
 - 7) > 2000
 - 8) sel olmayan ərazilər



Müxtəlif dərəcəli sel müşahidə olunan ərazilər

Yüksəklik qrupları, metr	Selinin təhlükəlik dərəcəsi və təhlükə dərəcəsi		
	Vəhək (Bərkət 2-3.0)	Qel (Bərkət 3.4-6)	Zəif (Bərkət 6-5-10)
Yüksək dağlar: Mütləq yük > 2000 Nəbz yük > 1000-1500	1	4	7
Orta dağlar: Mütləq yük 1000-2000 Nəbz yük 500-1000	2	5	8
Aşağı dağlar: Mütləq yük < 1000 Nəbz yük < 500	3	6	9

- Potensial sel təhlükəli ərazilər
 - Sel ehtimalı olmayan ərazilər
- Sellərin qida mənbələri:
- I Qar
 - X Qarşq
 - Yağış
- Yuxarıdakı işarələrin olmadıq ərazilərdə sellərin qidalanmasında yağış suları üstünlük təşkil edir.
- Su eroziya və qrafitasiya prosesi:
- 8 Şaxlınma
 - S Şaxlınma
 - U Uğun
 - Su arınları
 - Göller
 - Çaylar
 - Kanallar
- Yerləşmə mərkəzləri:
- W İr şəhərlər
 - Rayon mərkəzləri

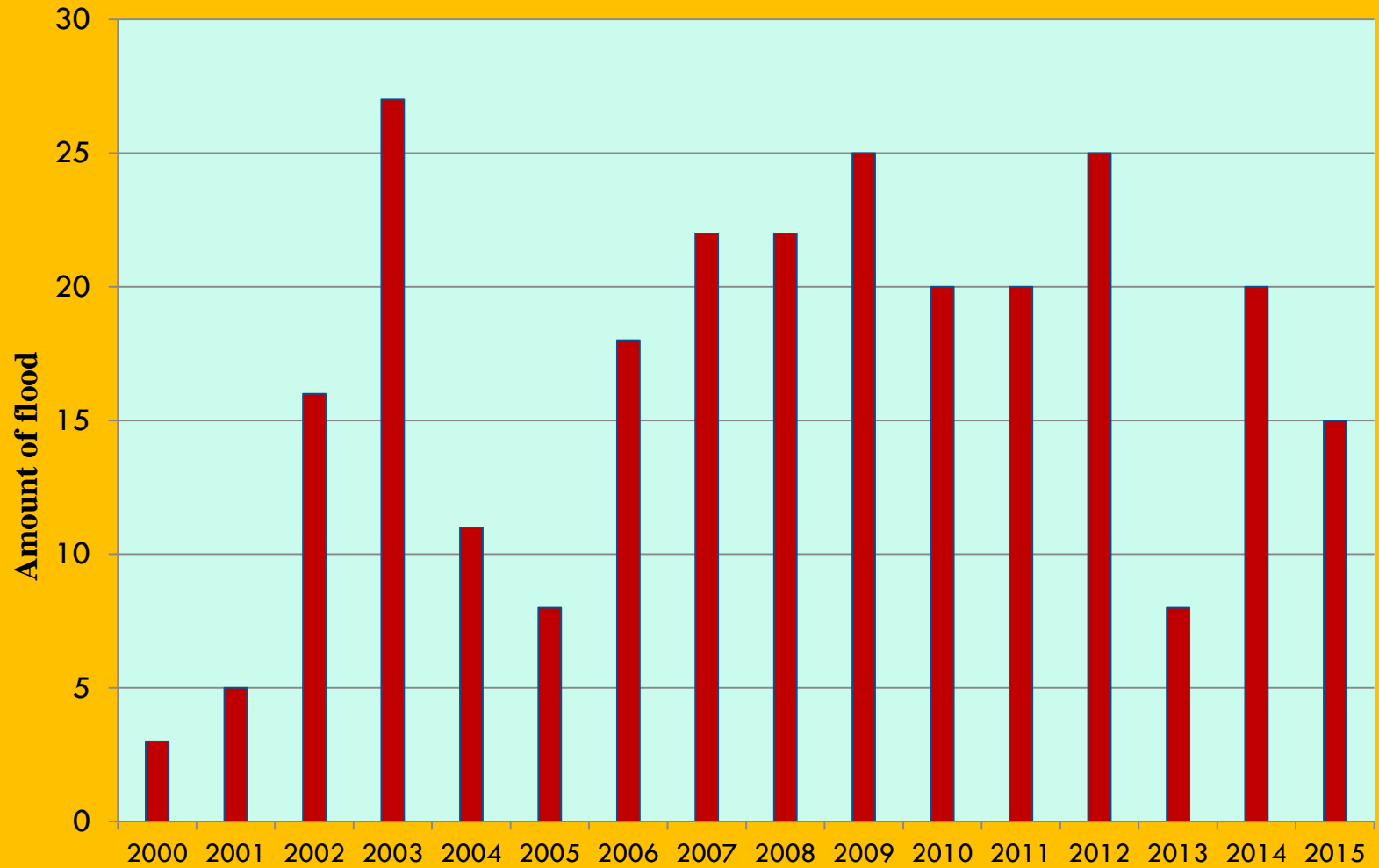
1:600000

Xəritə Ekologiya və Təbii Sərvətlər Nazirliyi Milli Hidrometeorologiya Departamenti Hidrometeorologiya Elmi-Tədqiqat İnstitutunun, Azərbaycan Milli Elmlər Akademiyasının akademik H. Əliyev adına Coğrafiya İnstitutunun məlumatları əsasında tərtib olunmuşdur. Xəritə akademik B.Ə. Budaqovun işlədiyi və ümumi redaksiya İrə Hidrometeorologiya Elmi Tədqiqat İnstitutunun direktoru, prof. R.N. Məmmədov və AMEA Coğrafiya İnstitutunun göbə müdiri, c.e.n. İ.E. Mərdanov tərəfindən hazırlanmışdır. Xəritənin GIS proqramı üzrə kompüter və digər texniki işləri Hidrometeorologiya Elmi-Tədqiqat İnstitutunun əməkdaş, V.Ç. İsmayılov tərəfindən yerinə yetirilmişdir. Ömürlük işlər: HMETI-ün əməkdaşları E. Quliyev, M. Kazımova, E. İbrahimov tərəfindən yerinə yetirilmişdir.

AFTER FLOOD



Tendence of flood



Definitions of maximal discharge water after flood



Regional and international exchange of information

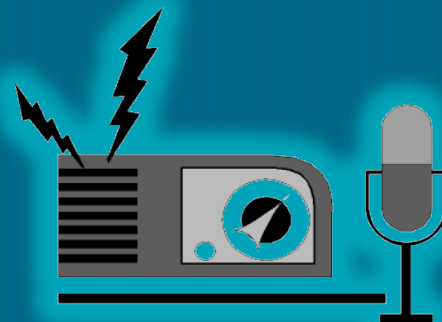
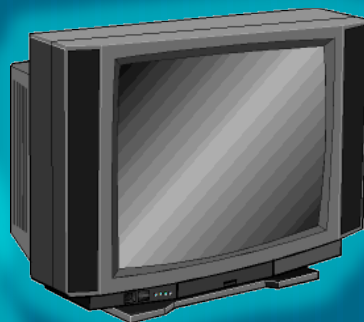
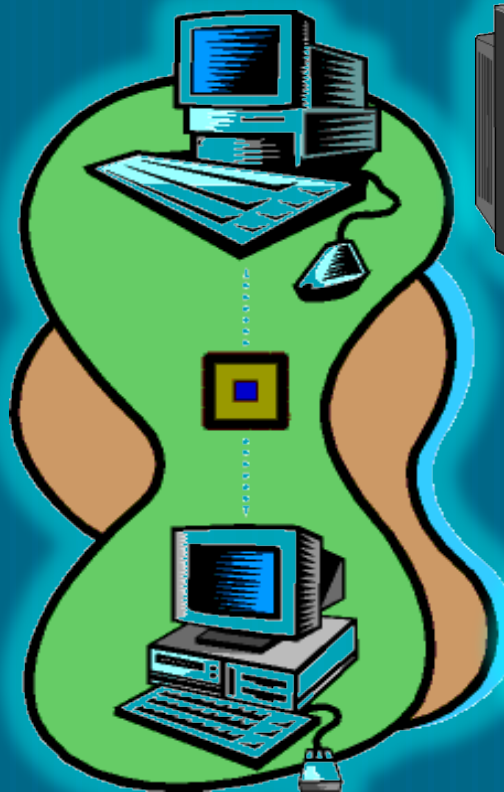
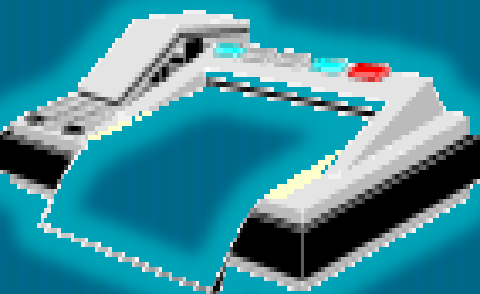
№	Indeks	Stations	International			Regional		
			Sinoptic	Climate (month decade)	Radiosonde	Sinoptic	Climate (month decade)	Radiosonde
1	37864	Bina AMS	+					
2	37985	Lankaran HMS	+					
3	37575	Zagatala HMS	+					
4	37735	Ganja HMS	+	+			+	
5	37851	Baku HMS				+		
6	37740	Gabala HMS				+		
7	37661	Shaki HMS		+		+	+	
8	37675	Guba HMS		+		+		
9	37747	Yevlakh HMS		+		+	+	
10	37749	Goychay HMS	+					
11	37756	Maraza HMS	+					
12	37844	Kurdamir HMS				+		
13	37759	Shamakhi HMS		+		+	+	
14	37860	Mashtaga HMS			+			+
15	37860	Mashtaga AS				+		
16	37925	Neftchala HMS						
17	37989	Astara HMS		+		+	+	
18	37936	Nakhchivan HMS		+		+	+	

The weather forecast supply of new information systems

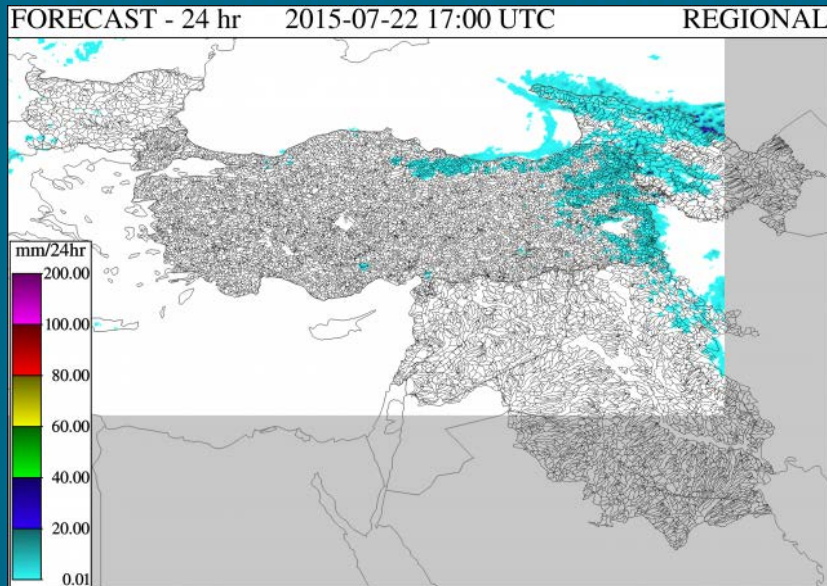
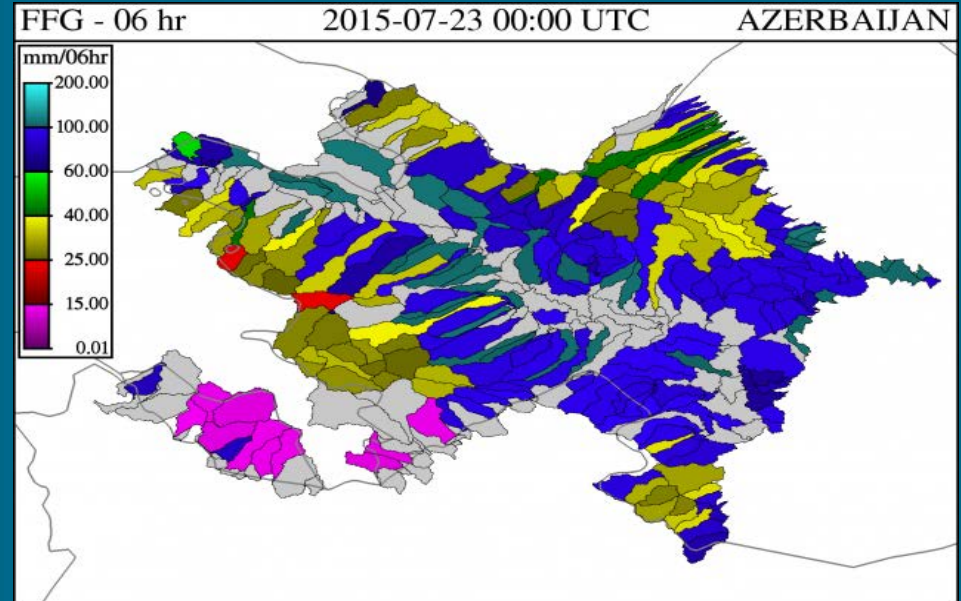
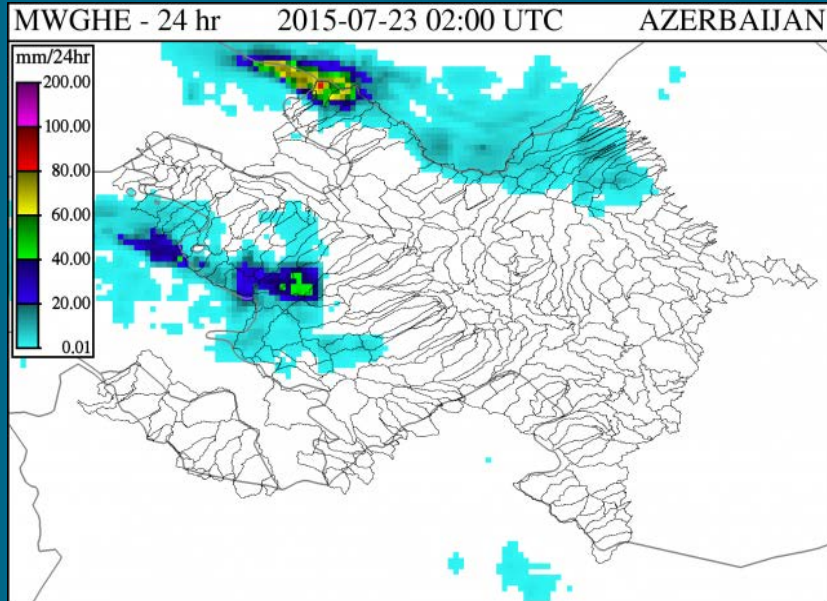
- TURKMETCAP VSAT
- MetcapPlus
- EUMETSAT DAWBEE

Distribution of the forecast

www.eco.gov.az



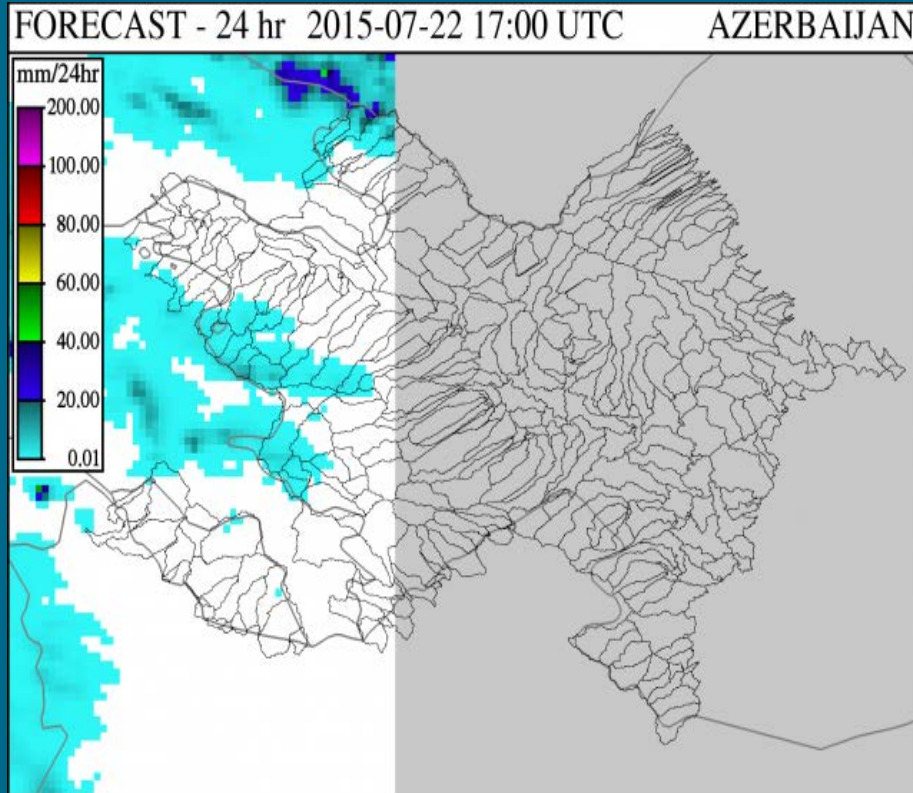
22 July 2015 flood in river Bumchay



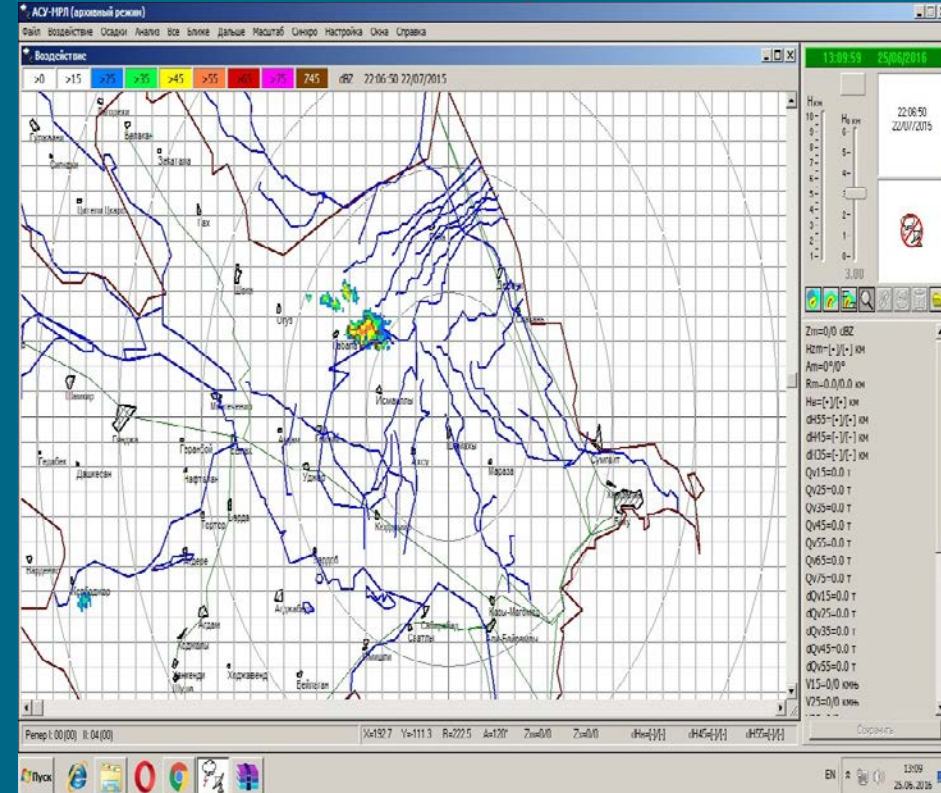
Warning about flood
21.07.2015
On July 21-23 in the
rivers it is expected
short-term flood

22 July 2015 flood in river Bumchay

ALADIN Forecast



Shamakhi Radar

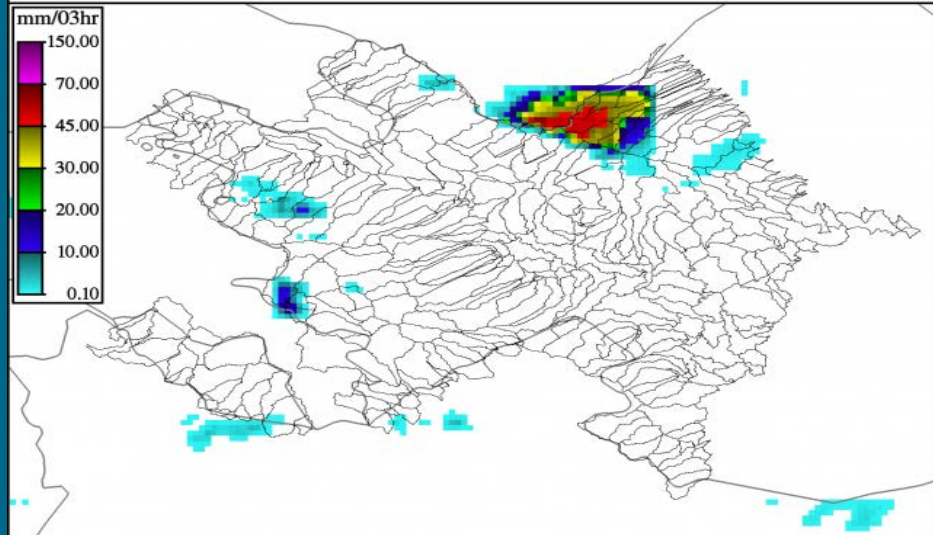


22 July 2015 flood in river Bumchay

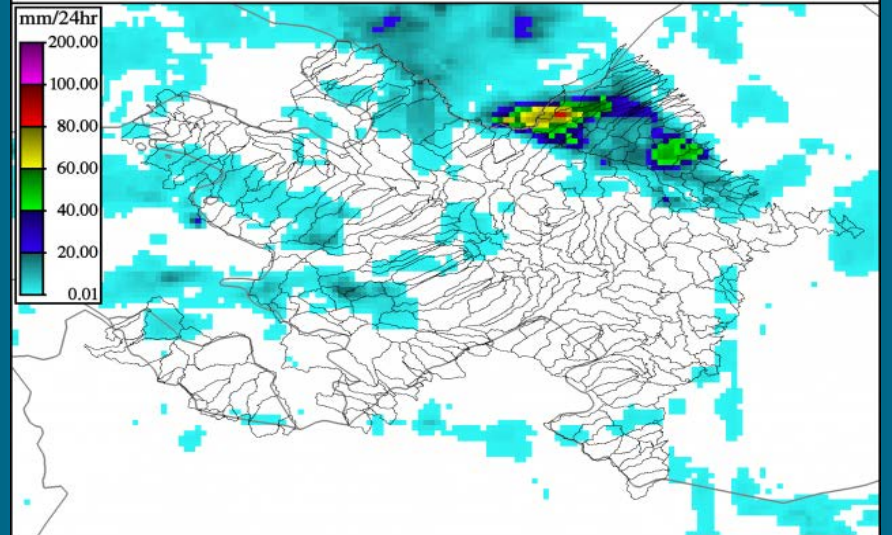


09 May 2016 flood in river Girdimanchay

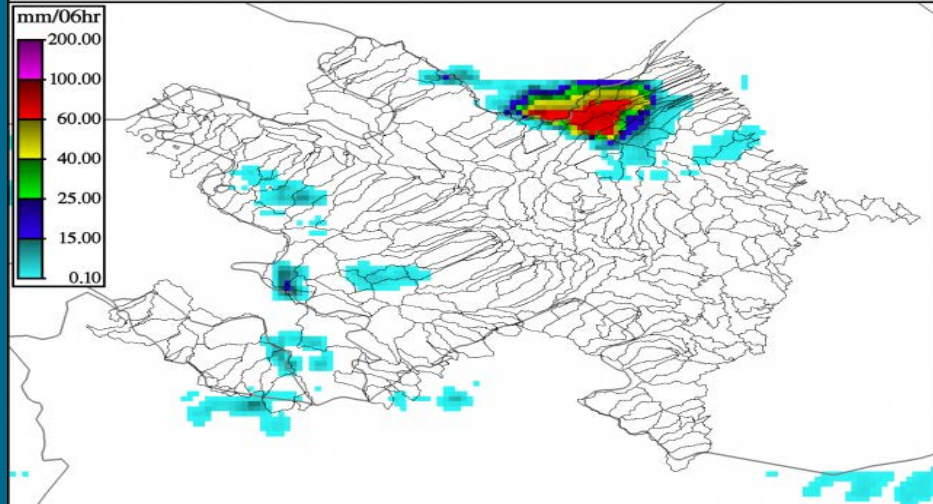
MWGHE - 03 hr 2016-05-08 23:00 UTC AZERBAIJAN



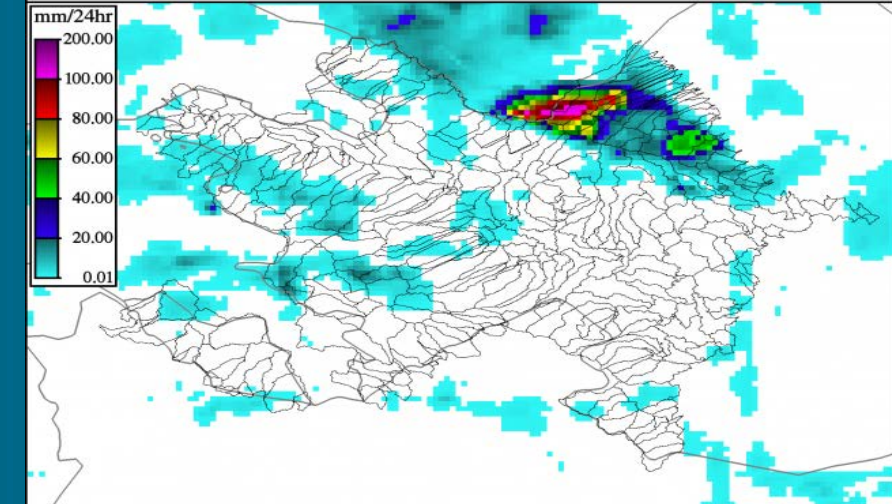
MWGHE - 24 hr 2016-05-08 21:00 UTC AZERBAIJAN



MWGHE - 06 hr 2016-05-09 01:00 UTC AZERBAIJAN

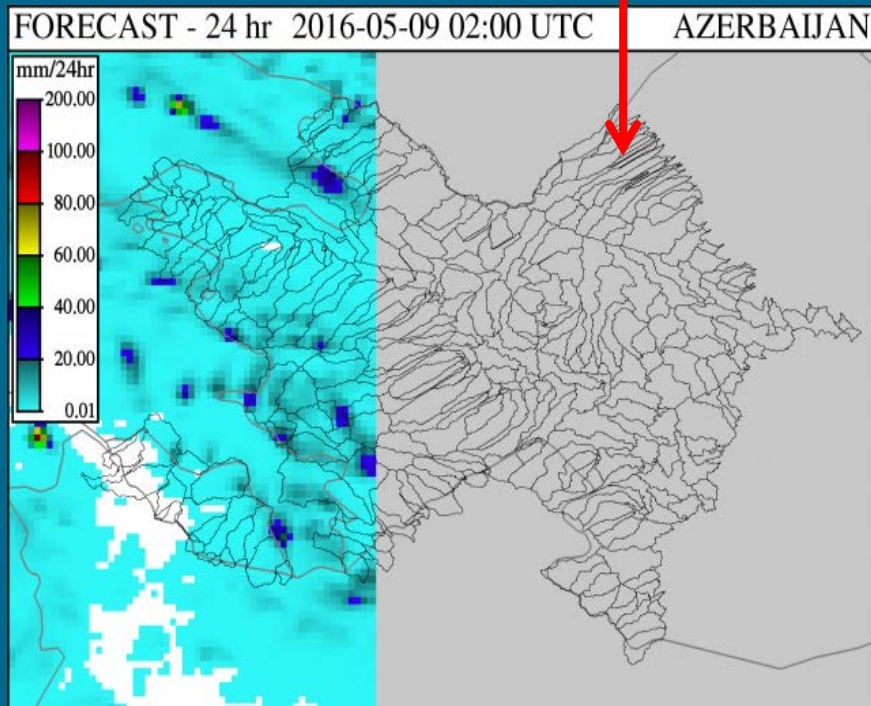


MWGHE - 24 hr 2016-05-08 23:00 UTC AZERBAIJAN

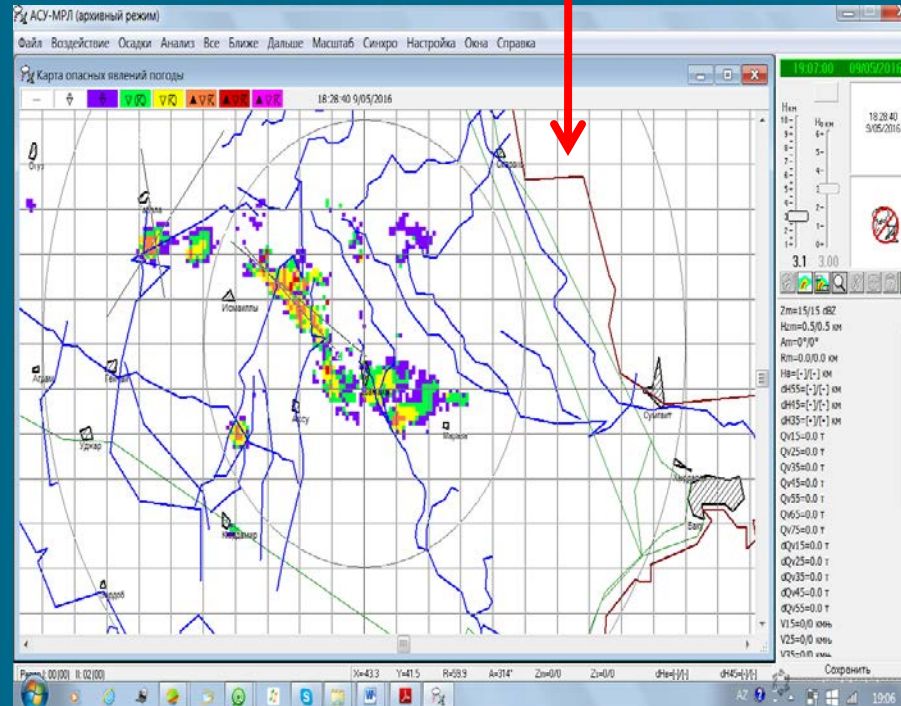


09 May 2016 flood in river Girdimanchay

ALADIN Forecast



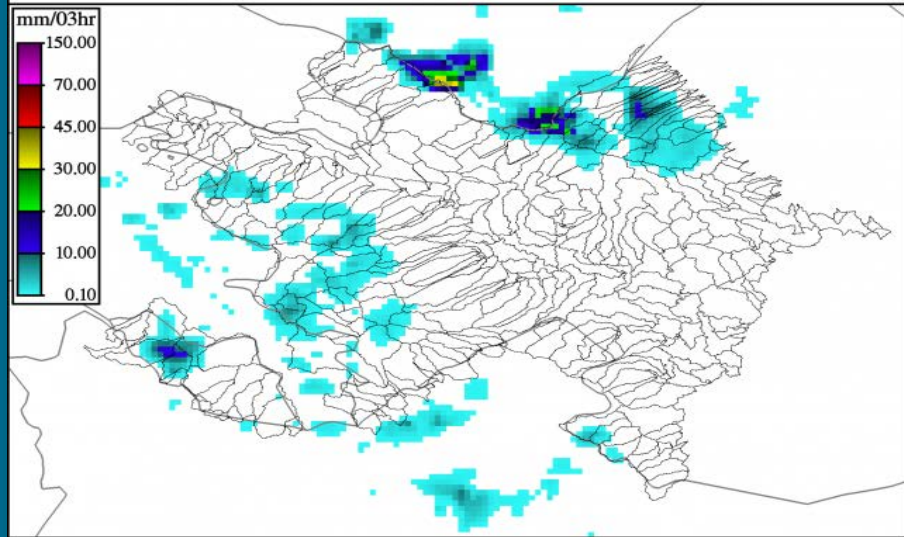
Shamakhi Radar



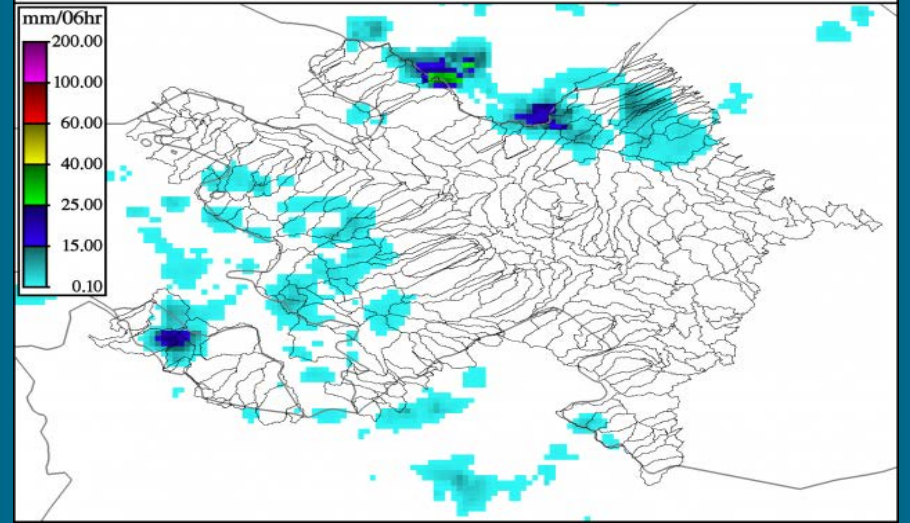
Warning about flood 05.06.2016
On June 06-10 in the rivers it is expected short-term
flood

12 June 2016 flood in river Goychay

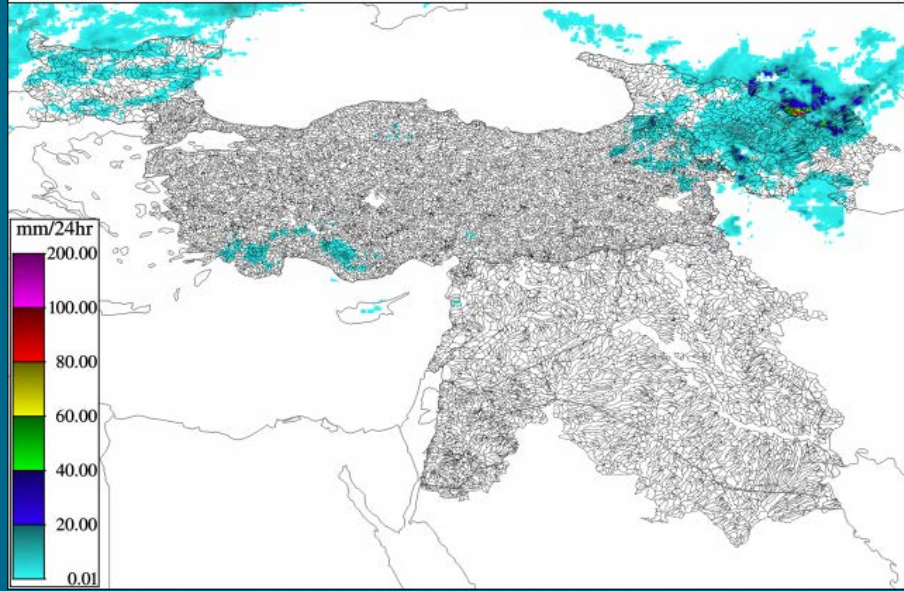
MWGHE - 03 hr 2016-06-12 09:00 UTC AZERBAIJAN



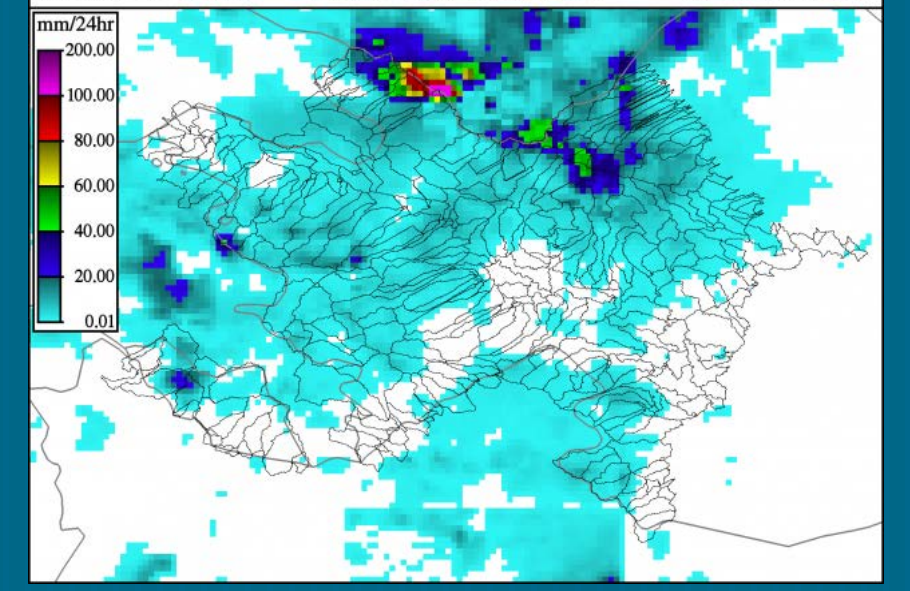
MWGHE - 06 hr 2016-06-12 09:00 UTC AZERBAIJAN



MWGHE - 24 hr 2016-06-12 12:00 UTC REGIONAL

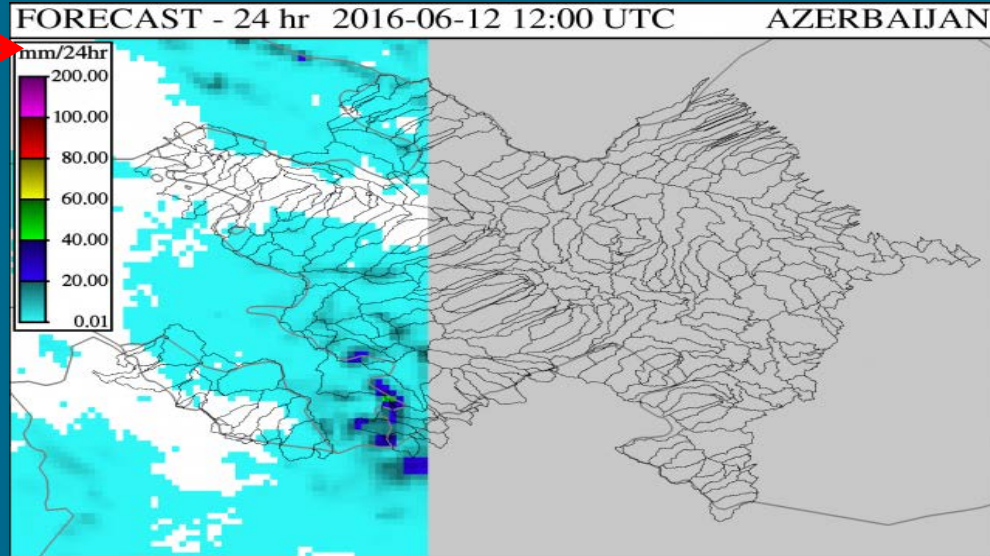
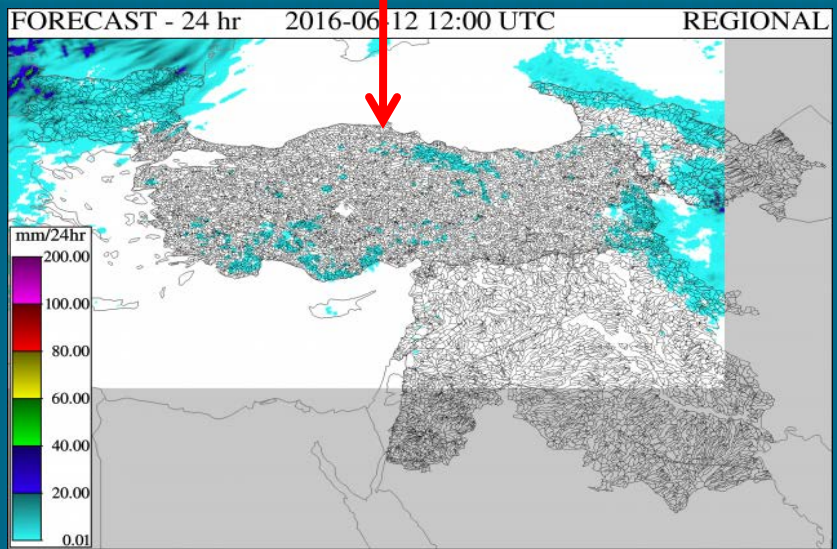


MWGHE - 24 hr 2016-06-12 15:00 UTC AZERBAIJAN

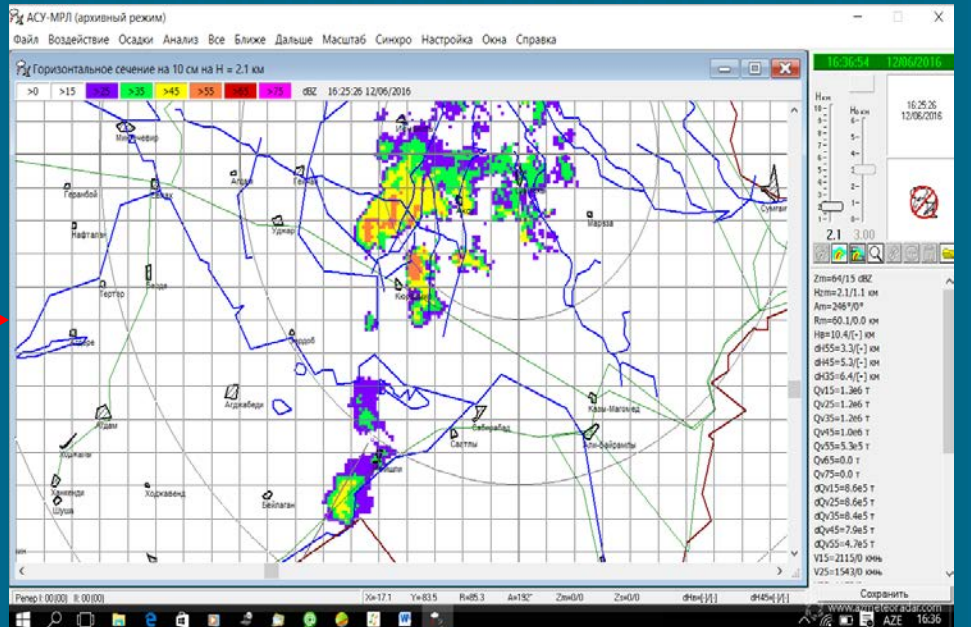


12 June 2016 flood in river Goychay

ALADIN Forecast



Shamakhi Radar

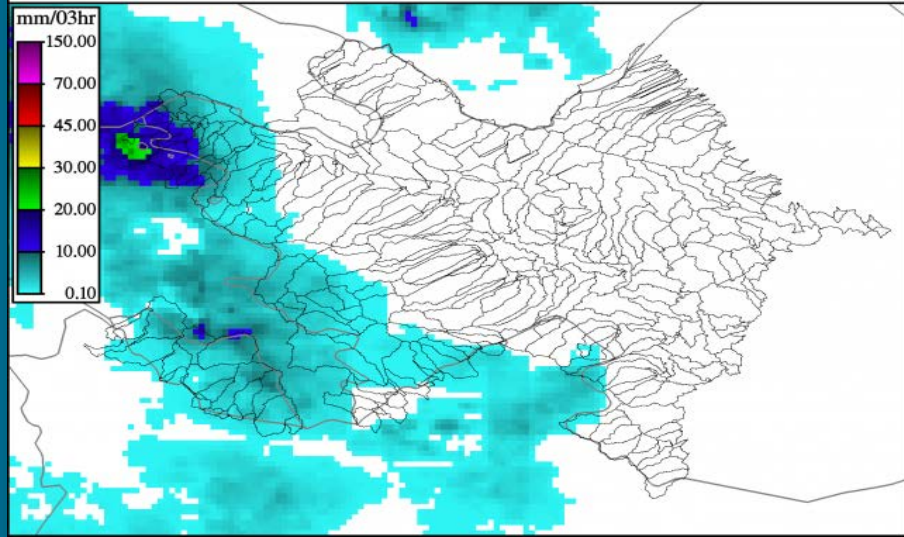


12 June 2016 flood in river Goychay

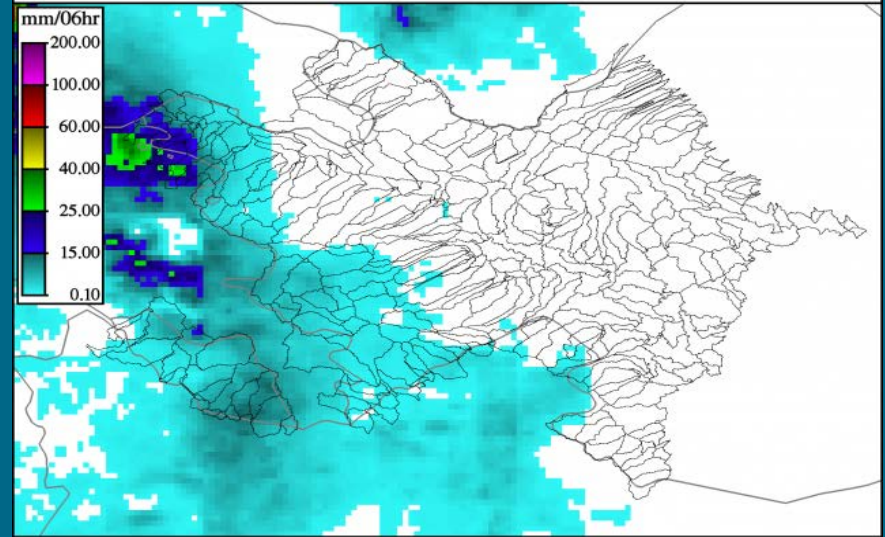


16 June 2016 flood in river Zayamchay

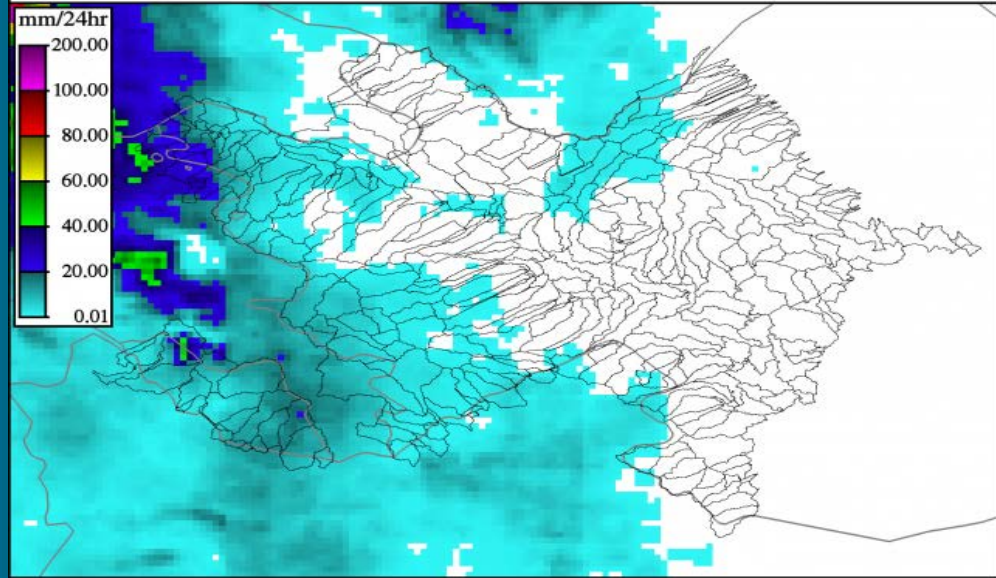
MWGHE - 03 hr 2016-06-16 14:00 UTC AZERBAIJAN



MWGHE - 06 hr 2016-06-16 16:00 UTC AZERBAIJAN

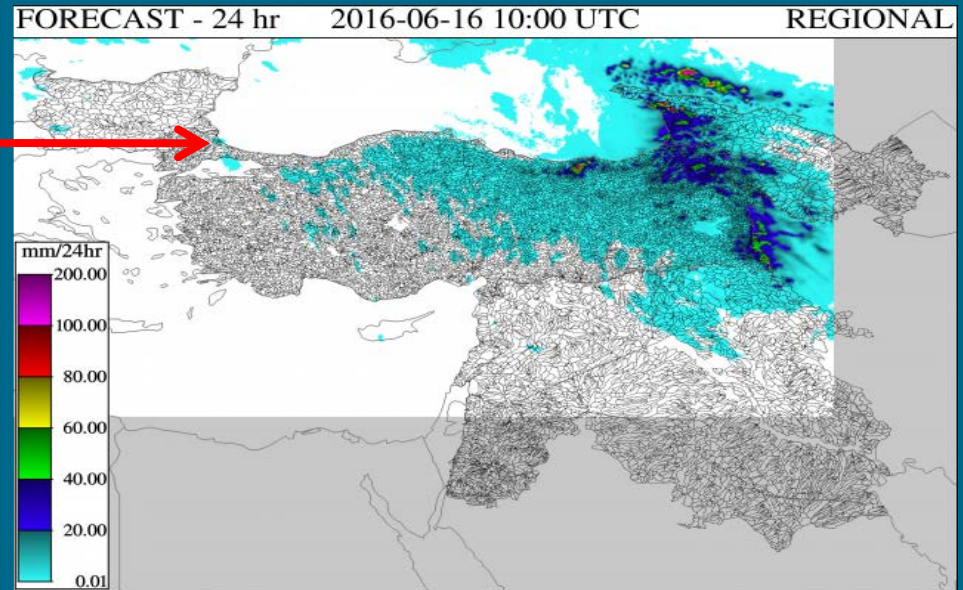
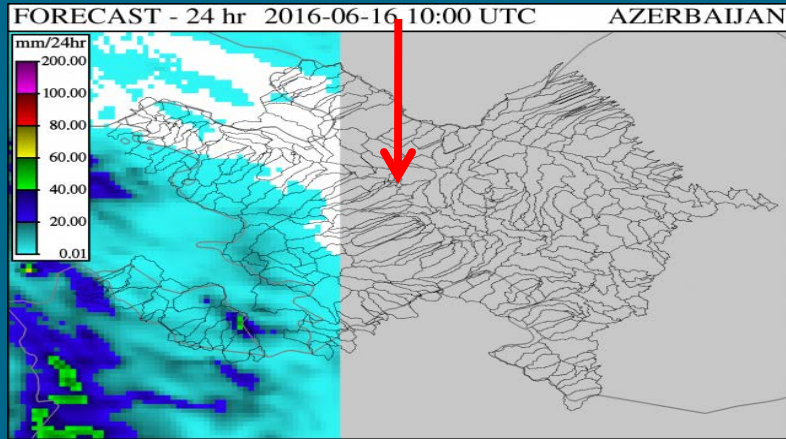


MWGHE - 24 hr 2016-06-16 19:00 UTC AZERBAIJAN

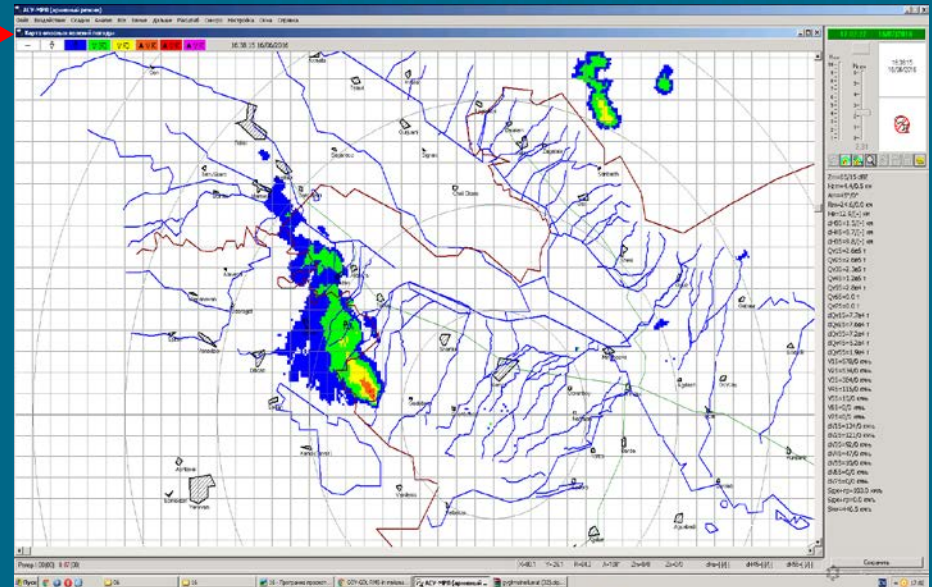
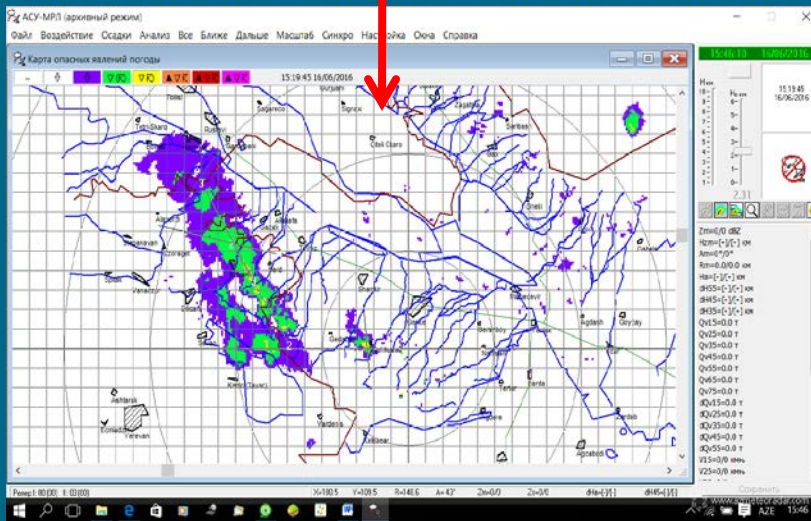


16 June 2016 flood in river Zayamchay

ALADIN Forecast



Goygol Radar



16 June 2016 flood in river Zayamchay



THANK YOU!

