

# 2015

## AZERBAIJAN



by RUSTAM SAFARALIYEV  
ASIAN DISASTER REDUCTION  
CENTER

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ASIAN DISASTER REDUCTION CENTER

# AZERBAIJAN

## COUNTRY REPORT

by Rustam Safaraliyev

09/2/2015

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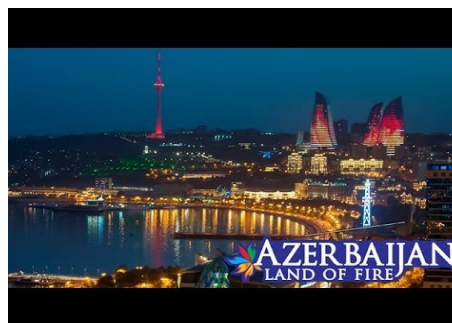
## COUNTRY PROFILE

**AZERBAIJAN – THE LAND OF FIRE.** Azerbaijan is a geographical name. On the one hand this name is linked with the population, which lived in this region for thousands of years before our era, and who were mostly fire-worshippers. Local population considered that fire was their God and so they worshipped the fire. "Azer" means fire. The Turkic name "Azer" was used for this territory for a long time. The word "Azer" consists of two parts - "az" and "er" In Turkic languages, "az" means a good intention and a fate of success. Thus, the word "Azer" means "a brave man", "a brave boy", "the fire keeper".

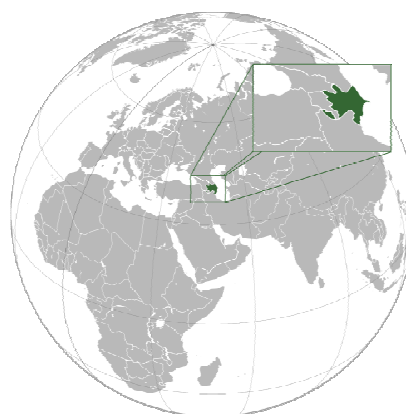
**Formal name: The Republic of Azerbaijan**

**Location:** Azerbaijan is located between the continents of Europe and Asia in the southeast of the Caucasus region and the western shores of the Caspian between 38'24" and 41'54" latitude North, and between 50'51" 44'46" longitude.

**Area:** 86.6 thousand square km (forests 12%, water basins 1.7%, sown area 54.9%, including 31.1% pastures and hayfields, 31.4% other lands).



The word "Azerbaijan" originates from the name of an ancient Turkish tribe, who resided in those territories.



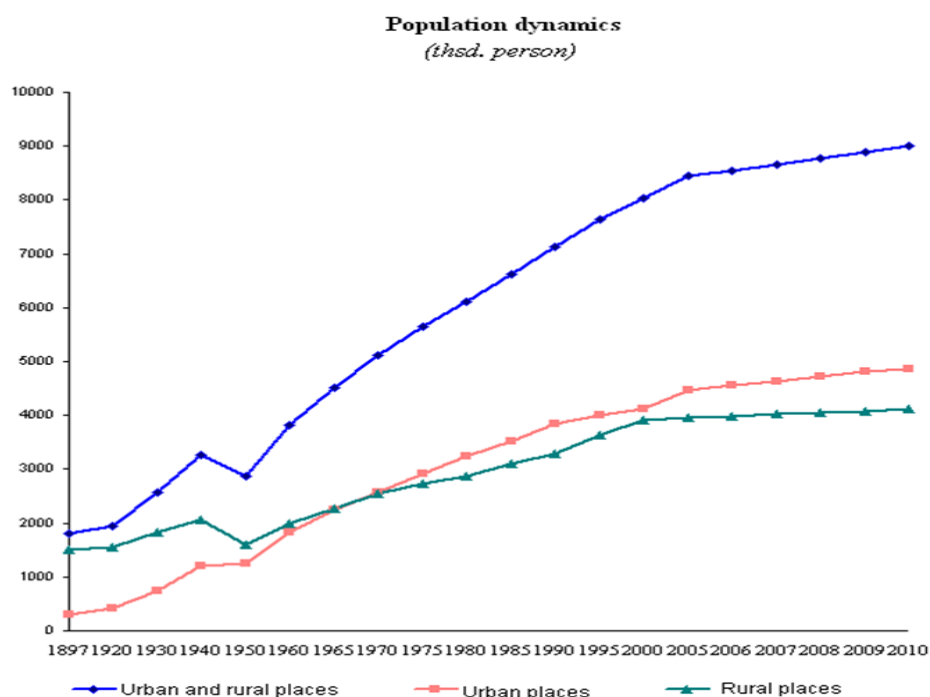
**Bordering with:**

- ◆ Russia in the north – 289 km
- ◆ Georgia in the north-west – 340 km
- ◆ Armenia in the west – 766 km
- ◆ Turkey in the west – 11 km
- ◆ Iran in the south – 432 km

There is approximately 800 km of coastline along the Caspian shore in the east.



**Population:** To July 2015, population of the Republic of Azerbaijan was estimated at **9,686,210**. About 54.1 percent of population live in towns, while 45.9% in villages. Men constitute 49% of population, while women 51%. Male–female ratio is 1000 to 1039.



**Official language:** Azerbaijani.

Azerbaijani language is the state official language of Azerbaijan and the mean of linguistic communication of the 9 million population of the country.

Besides, Azerbaijani is also spoken by 20 million Azerbaijanis residing in the Islamic Republic of Iran. Several millions of Azerbaijanis reside in Russia, USA, Turkey and Western Europe. Regardless of their current country of residence, Azerbaijanis still can understand each other easily. There are over 30 million speakers of Azerbaijani at present.

Genealogically, Azerbaijani language belongs to the Turkic group of languages and, together with closely associated Turkish, Turkmen and Gagauz languages, forms the southwestern group of Turkic languages.



### Capital City – Baku.

Baku is the capital of the Republic of Azerbaijan. It is a large scientific, cultural and industrial center. Ancient foundations, a large area and population all make Baku one of the oldest and largest cities in the East.

Baku is situated on the shore of the Caspian Sea in the south of the Absheron peninsula. It covers an area of 2,200 square km and has a population of 2 million. Nearly 500,000 refugees from Armenia as well as IDPs from the occupied territories, currently reside in Baku.

People have lived and founded their settlements in Baku city and the Absheron peninsula since ancient times. This was motivated by continuous migrations from north to south and from west to east due to the physical and geographical conditions, a favorable location in the center of trade routes that crossed Silk Road, climatic conditions, production of petroleum fuel in ancient times and the availability of large power resources.

Baku was one of the main cities in the Shirvanshakhs State in the 12th century, in the Sefevids State in the 14th century, in the Ottoman Empire in the 16th century, and became the capital of the Baku khanate in the 17th century.

Baku has 11 administrative districts and 5 settlements.



*Silk Road*



*Baku Boulevard*

**Religion:** Islam (93%), other religious minorities: Judaism, Christianity, Albanian-Udi Church

**Currency:** Manat

**International dialling code:** +994

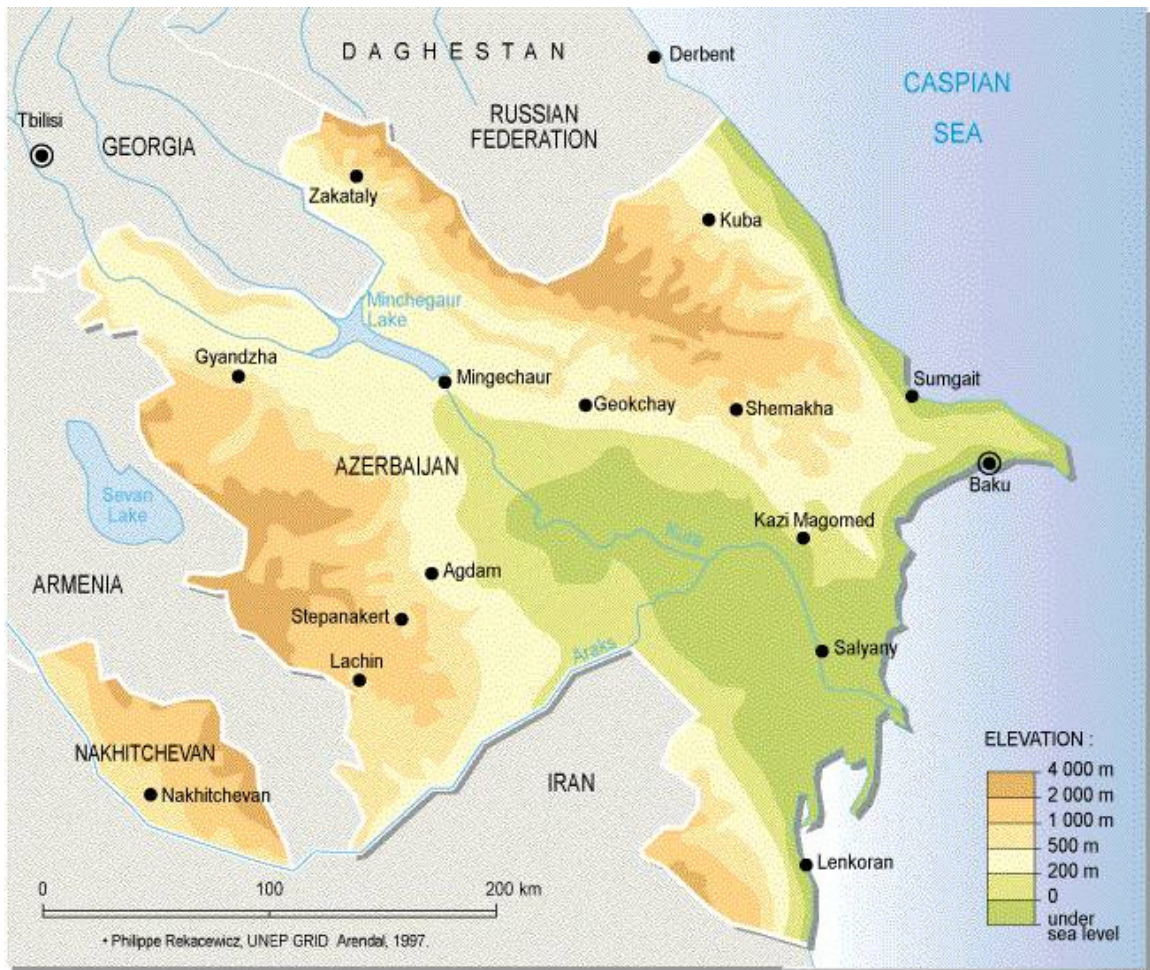
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## **GEOGRAPHY**

### **LANDSCAPE AND TOPOGRAPHY**

The Republic of Azerbaijan is situated in the Alp-Himalayan mountain belt. The three mountain ranges are the Greater and Lesser Caucasus, and the Talysh Mountains, together covering approximately 40% of the country. The highest point in the country is on Mount Bazarduzu (4,485 m above sea level) situated in the Greater Caucasus. Lowlands and plains make up the other 60% of the country. The average height of the country is 657 m above sea level, however 18% of the country is below sea level. Azerbaijan is located in an active seismic zone, with particularly high activity in the southern part of the Greater Caucasus, the Ganja region in the Lesser Caucasus, and in the Autonomous Republic of Nakhichevan. Azerbaijan does not extend over a large geographical area, and much of the differentiation of landscapes is due to the variation of altitude. Landscapes are influenced by climate, soil, and habitats that change with increasing altitude. Landscapes replace each other with height, graduating from lowland plains, semi desert, steppe, forest, alpine meadow to subnival communities at the greatest heights of the mountains, creating landscape zones at different altitudes. This altitudinal zonation is naturally disordered in the Lankoran region as a result of the Talysh mountains where semi arid landscapes replace the forest landscapes normal in the mountains. In Nakhichevan, forests develop in islands due to local climatic conditions. The highest point in Nakhichevan Autonomous Republic is Gapijig mountain (3,906 m). Other important mountain ranges include the Zangazur and Daralayaz ranges in the northeast of the region, where there are a number of peaks over 3,000 m. A third of the territory of Nakhichevan is covered by grassland/steppe, totaling some 172 km<sup>2</sup>, of which some 10,000 ha is salinated.





*Topography map of Azerbaijan*

## CLIMATE

Azerbaijan is a country of varied climates, although it is predominately subtropical. On average, there are 1900-2900 hours of sunshine annually (approximately 5-8 hours daily sunshine). In the lowlands, summers are hot, and winters are moderate, however in the mountains, the summers are cooler, and temperatures in the mountains can reach negative figures.

Humidity tends to be low, although it varies across the country.

**Annual average temperature:** +14.5°C

January: +1.7°C

July: +27.9°C

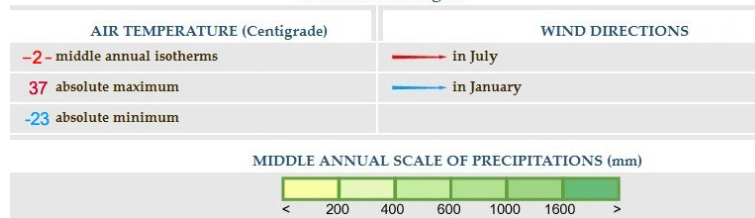
**Max t°** +44° (Julfa, Nakhchevan)

**Min t°** -42° (Great Caucasus Mountains)

**Annual average number of precipitation:** 500 mm (min 200, max 2300)



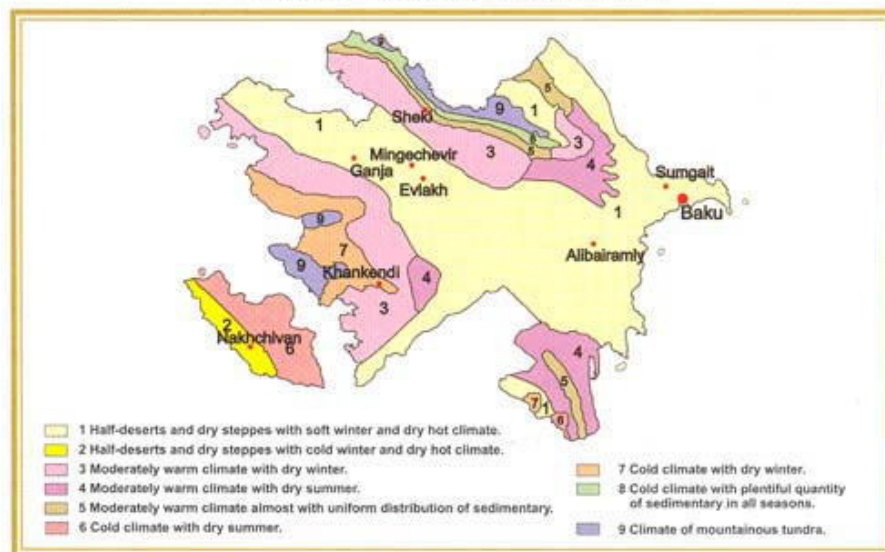
**Conventional signs**



**Climate Map of Azerbaijan**

Taking into consideration distribution and features of regime of weather temperature and atmosphere precipitations, as well as humidity circumstance in Azerbaijan Republic, 9 of 11 climate patterns of the Earth (according to V.V.Keppen) are determined here. Many of these patterns are divided into semi-types.

**CLIMATIC ZONES IN AZERBAIJAN**



## **MINERAL RESOURCES**

Azerbaijan has rich natural resources. Main natural resources are oil and natural gas. Famous oil and gas fields are in Absheron Peninsula and Caspian shelf.

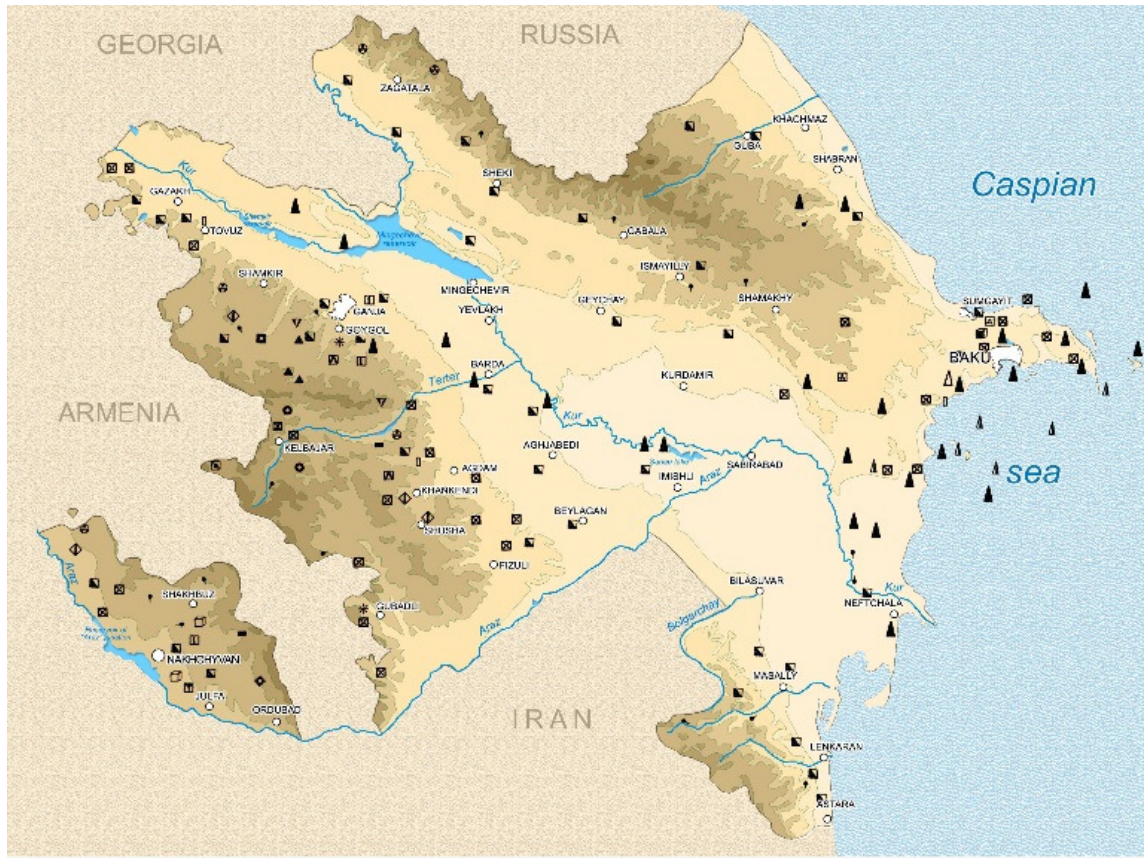
Fields in Siyazan region north to Absheron peninsula have good potential. There are oilfields to west and south-west of Absheron in Gobustan, Shyrvan, Salyan plains. At present big oil fields were discovered in water area south to Absheron. Gas fields are also very important. There is unique therapeutic oil type (Naftalan) discovered in Ganja city.

Azerbaijan has rich resources of iron ore and alunite. There are reserves of sulphurous pyrites, molybdenum and arsenic. Polymetallic ore fields in Filizchay in the upper flow of the Balakan River have industrial importance.

Main iron ore fields are in Small Caucasus Mountains (in Dashkasan). In north hills of Small Caucasus Mountains there is alunite field in Zailyk region and this field is one of the biggest alunite fields in the world. Also there are cobalt and sulphurous pyrites reserves near these regions (Dashkasan-Ganja regions). Gadabay, Tovuz, Ordubad, Kalbajar and Zangilan regions have rich gold, silver and copper reserves. Rock-salt (Nehram field has reserves of 2-2.5 billion tons), arsenic and molybdenum (in Paragachai) fields are being developed in Nakchyvan.

Azerbaijan soil has large reserves of various construction materials. Marble, which is not different from "karrar" marble, also beautiful and strong tuff is extracted within the territory of Small Caucasus Mountains. In Absheron peninsula gravel, sand, lime, fire resistant and brick clay is being produced. The Republic has resources of 300 billion tons of building stone (Guzdak, Mardakan, Dovlatyarli, Dilagard, Shakhbulag, Naftalan and Dash Salakhly) and 24 million tons of facing material (Gulbakht, Dashkasan, Shaktakhty, Gulably).

Azerbaijan has more than 1000 cold, mineral and thermal water resources. Most famous of these resources are Istisu, Turshsu, Badamly, Galalty, Shikhiburnu, Surakhany.



Conventional signs

▲ Oil	▲ Oil and natural gas	△ Natural gas
▲ Iron ore	⊠ Chromite ore	◇ Molybdenum ore
⊠ Bauxite	■ Copper ore	⊗ Complex ore
⊙ Mercuric ore	▽ Barit	⊠ Sulphury pyrites
⊠ White salt	⊠ Brackish salt	⊠ Dolomite
⊠ Gypsum	⊠ Limestone	◇ Marble
⊠ Silica sand	⊠ Gill	⊠ Cement raw material
◇ Mineral dyes	⊠ Pearlites	* Agate
† Mineral water sources		

### Mineral resources of Azerbaijan

#### WATER RESOURCES

The main sources of water in Azerbaijan are the surface waters. However, only 24 of the 8350 rivers are greater than 100 km in length. All the rivers drain into the Caspian in the east of the country, through three main river basins - the Caspian Basin, (rivers draining directly into the Caspian), the Kura basin (in western and central Azerbaijan) and the Arax basin.

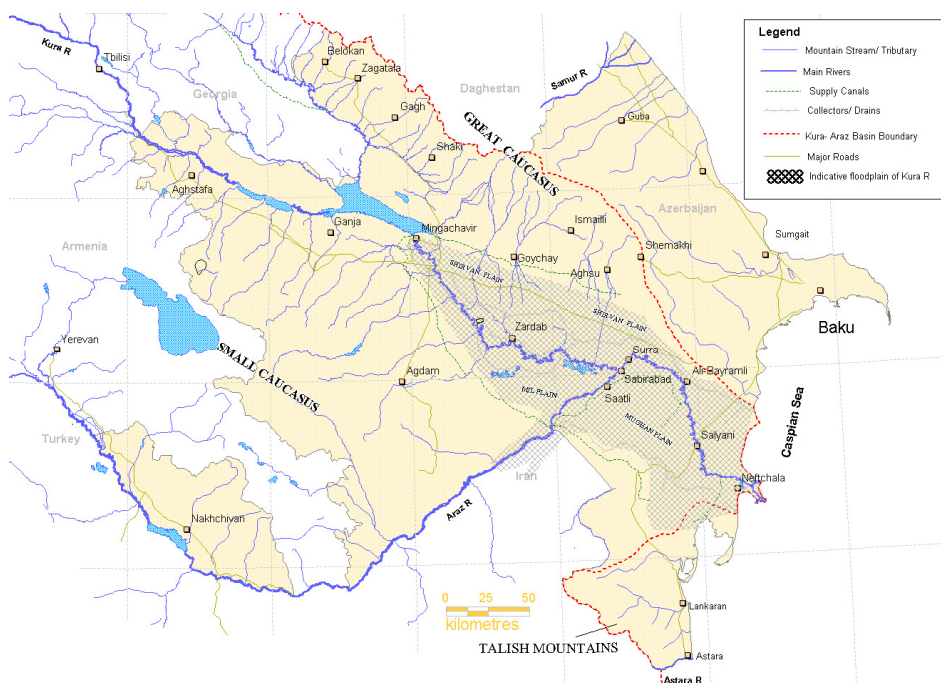
The average density of river networks is 0.39 km per km<sup>2</sup>, with most of the rivers occurring in the Kura basin.

Of the 300 natural lakes in Azerbaijan, only six cover more than 10km<sup>2</sup> of land area. The total area of these six lakes makes up 83 % (250 km<sup>2</sup>) of the total lake area. The lakes of the Kura and Araz basins (in the lowlands) are affected by upstream water management, causing an increase in salinity (5000-13000 mg/L), and a reduction in fish populations. Lakes on the Absheron Peninsula (on the shores of the Caspian) have become salinated as a result of upstream management and polluted by industrial and domestic waste (especially from oil fields). In addition, the number and size of lakes in this area are being artificially increased.

Lakes in the mountainous area tend to be small (the total area of the 90 mountain lakes is 2 km<sup>2</sup>), but face few anthropogenic threats, because of their distance from settlements and industry.

In the last 40-50 years many water reservoirs have increased five-fold, so that they now cover 1070 km<sup>2</sup>. Total volume of these artificial lakes is 22.66 km<sup>3</sup>, but only 11.24 km<sup>3</sup> is usable water. The biggest of these by far is Mingachevir Reservoir, located along the River Kura which has a total volume of 16 km<sup>3</sup> and covers some 625km<sup>2</sup>. The water in reservoirs is used primarily for electricity production and irrigation purposes. A dense network of channels irrigates more than 1300 ha of drought prone land. The channels also carry clean water to a number of settlements, although approximately 40% of fresh water in Azerbaijan is taken from subsoil reserves.

**Rivers, Channels, Collectors/Drains**



## **CLIMATE CHANGES AND NATURAL HAZARDS**

Climate change is an ecological problem on a global scale that poses a recognized threat to all ecosystems and associated biodiversity. Predictions suggest that climate change is likely to have a negative impact on ecosystems in Azerbaijan and may result in increased flooding and desertification, fragmentation of habitats, and species extinction. Over the last century the air temperature in Azerbaijan has increased on average by around half a degree Celsius, with the highest changes in temperature recorded from the Greater Caucasus and the Kura-Araz lowland (0.5 - 0.6°C) and lowest changes recorded in Minor Caucasus and along Caspian shoreline.

Based on global models of climate change, experts estimate that average temperatures in Azerbaijan could increase by as much as 2°C. Associated with this it is expected the incidence of temperature extremes will increase, as will extreme weather events. Particularly important, is a predicted decrease in humidity for much of Azerbaijan.

Such increases could affect the availability of water (particularly in arid regions), which could in turn impact on irrigation, drinking water, and power production. Biological systems would also be affected under this scenario, with predictions of changed ecosystem dynamics and degradation of forest zones. The predictions suggest that the area of deciduous forest will decrease by 20%, while coniferous woodland will increase by 12%, and scrub coverage could increase by as much as 70%. The area of oak forest could reduce by 2-3%, although areas of beech would increase by 15% and hornbeam by 19%.

The warmer climate could increase productivity for a number of plants, and this would favour increased agriculture (including vineyards, cotton and fodder production). However, the increase in evapo-transpiration from the soil could result in increased salination and erosion, ultimately leading to desertification.

### **FLOODS AND LANDSLIDES**

Territory of Azerbaijan Republic is included in the list of areas, where floods and inundations are observed mostly along the world. Appearance of floods in Great and Little Caucasus mountain ranges which cover almost half of countrywide territory, occurs more intensively. Most floods and inundations happen in uplands of South slope of Great Caucasus and Nakhichevan AR. The expected climate changes can cause serious difficulties in the future by increasing recurrence of floods and overflows.

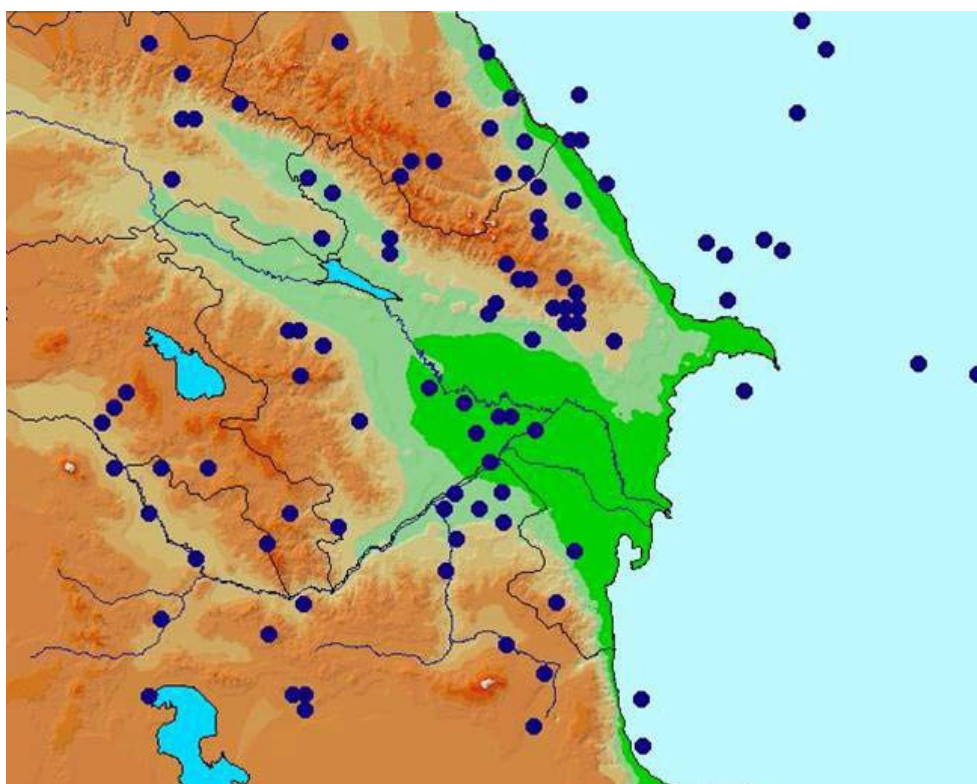
Heavy showers on the territory of Azerbaijan Republic often lead to floods with damages and human casualties. Moreover, hail fall is observed on the territory during warm periods. They cause damage to agriculture. Hail diameters sometimes are about 30–50 millimeters, which results in total destruction. A substantial part of central Azerbaijan could be flooded in case of damage to the Mingechevir water reservoir in the west.

Landslides caused by heavy rains and underground water are also common case for Azerbaijan. Besides, another reason of landslides in rural regions of Azerbaijan is semi-nomadic animal husbandry. As a result of increasing livestock in the country on the semi-nomadic principle, the land is subjected to erosion, resulting in landslides.

### **SEISMICITY**

As a part of the Alpine folded system Azerbaijan territory characterized as very high seismic activity. Strong and catastrophic earthquakes which happened several times in this area from ancient times till now caused large number of human loses and destructions.

The strongest earthquakes mainly have been registered in Shamakhi and Ganja regions. The earthquake happened in Shamakhi in 1668 ( $M \approx 7.0$ ;  $I_0 = 9-10$  points) 2 can be considered as one of the strongest earthquakes happened in the Caucasus up to now.



*Epicenters map of earthquakes ( $M \geq 5,0$ ) happened in Azerbaijan territory in 427-1930.*

According to historical information this earthquake resulted with landslides and more than 80,000 people died.

In Shamakhi region registered seismic shocks with intensity up to 8 according MSK-64 in 1828, 1859, 1869 and 1872 years. In this area the last catastrophic earthquake ( $M = 6.9$ ;  $\dot{I}0 = 9$  points) happened in 1902.

Other area where happened destructive earthquakes is Ganja region. In this area happened strong earthquakes in 427 ( $M \approx 6.7$ ;  $\dot{I}0 = 9$  points), in 1139 ( $M \approx 6.8$ ;  $\dot{I}0 = 9$  points), in 1235 ( $M \approx 5.7$ ;  $\dot{I}0 = 8$  points). After earthquake happened in 1139 because of landslide created Goy-gol Lake. In another regions of republic also were registered a number of strong earthquakes. Intensity of these earthquakes was not more than  $\dot{I}0 = 6-7$  points, but in many cases resulted with many destructions.

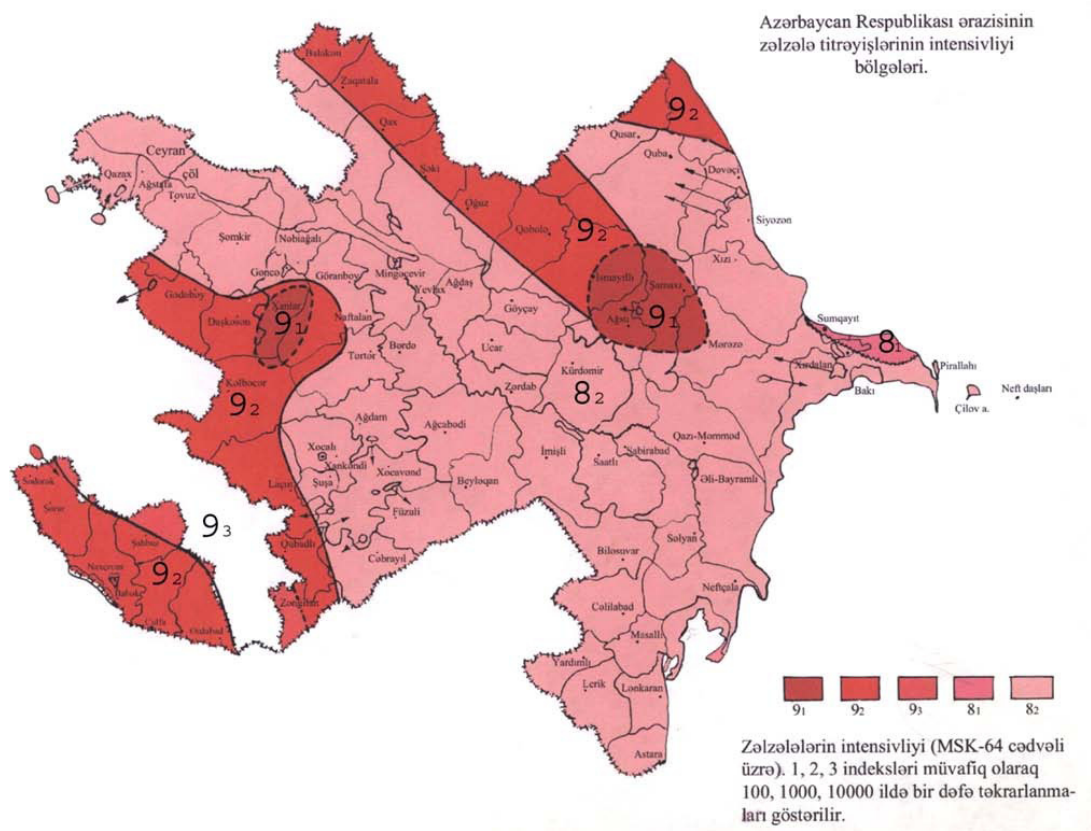
Since 2003 in the Azerbaijan territory installed 30 telemetry seismic stations production of "Kinometrics". Up to now in republican territory working analogue seismic stations also. During installation of these stations it was taking into account the level of the seismicity of selected territory.

Last years seismic stations with higher sensitivity seismographs has been added to the Republican Seismic Stations Network and after this it become possible to register even lower intensity (magnitude) earthquakes in republican territory.

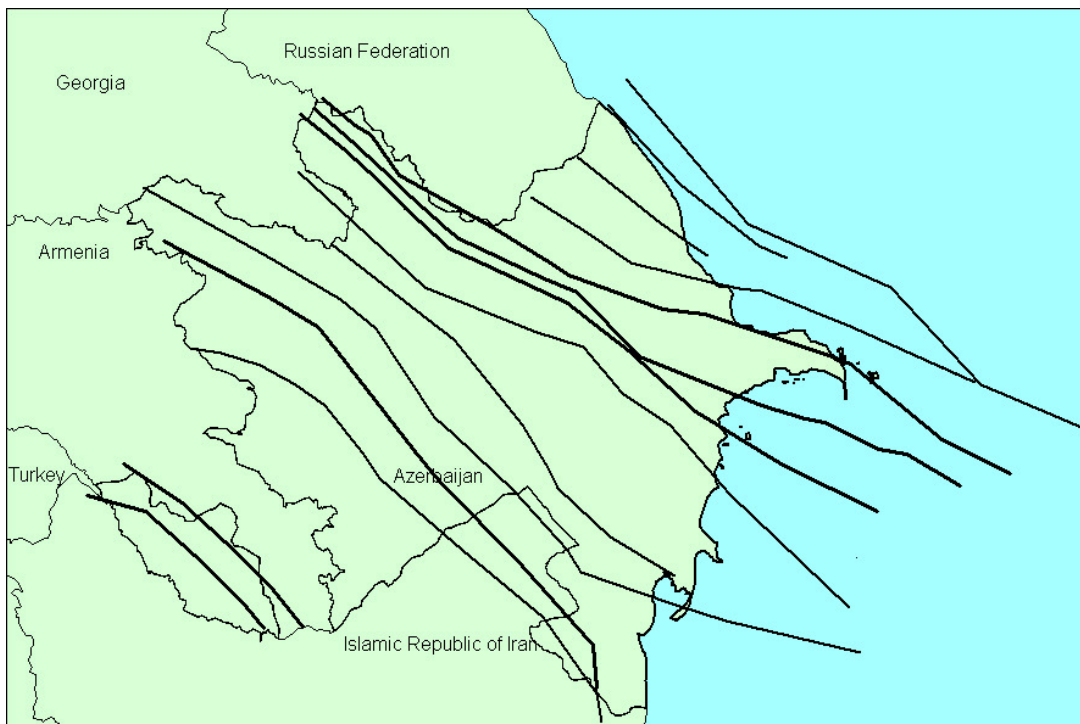


*The map of Kinometrics Seismic Stations*





**Seismic Zonation Map of Azerbaijan**



**Active tectonic faults in the territory of Azerbaijan**

## **MUD VOLCANOS**

Mud volcanoes are pervasive within the Republic of Azerbaijan. There are over 220 mud volcanoes in Azerbaijan (Absheron Peninsula, Gobustan, southeast Shirvan plain, Samur-Davachi plain terrane, both Absheron and Baku Archipelago. The biggest are Galmas, Toragay, Big Kanizadag etc. Most of them have a cone shape. Their height varies in the range from 20 to 400m, whereas base diameter may vary from 100 to 4500m.

Besides onshore mud volcanoes there are buried volcanoes and offshore mud volcanoes. There are over 140 offshore mud volcanoes within the Caspian Sea. Eight Islands within Baku archipelago were generated by mud volcanoes eruptions (Khara-Zira, Zambil, Garasu, Gil, Sangi-Mughan, Chigmil etc).

Mud volcanoes are one of the visible signs of the presence of oil and gas reserves under the land and sea in the Caspian region. Gas seeps are a related phenomenon. These occur when a pocket of gas under the ground finds a passage to the surface. These occur when a pocket of gas under the ground finds a passage to the surface. One gas seep burns continually on a hillside near Baku, ignored by the sheep but sometimes visited by curious tourists.

It is an unearthly sight, especially at dusk, and it is easy to understand how these fires that never appear to burn out became objects of worship.

The appearance of the Zoroastrian religion in Azerbaijan almost 2,000 years ago is closely connected with these geological phenomena, and, according to one theory, the name "Azerbaijan" itself was derived from the word for "fire" in Persian.

Geologists agree on some aspects of the formation and activities of mud volcanoes. They are formed when mud and sand up to several kilometres beneath the Earth's surface are squeezed upwards by compressive forces and expelled.

The origins of the volcanoes are disputed. Mud volcanoes are often formed in areas of weakness in the Earth's crust, along fault lines, and are associated with geologically young sedimentary deposits, the presence of organic gas from hydrocarbon deposits, and overlying pressure which forces this gas to the surface.

But when it comes to accounting for the differences between mud volcanoes, their varying shapes and sizes, the gases they emit and their unpredictable behaviour, there is little agreement.

Geologists describe mud volcanoes as "capricious", and are still arguing about exactly how they are formed. Some believe they are created during the sedimentary process itself, while others argue that different processes are also involved, for example, seismic activity.

To the non-geologist, the explanations can seem, well, as clear as mud. But the arguments about their origins only add to the aura of mystery that surrounds these unusual and enigmatic phenomena.

## **FIRES**

Deciduous/leaf bearing forests dominate mainly in Azerbaijan, therefore forest fires are not specific for the republic. But fires happened as a result of anthropogenous impacts can cause to extinction of various species of flora and fauna. Majority of fires occur due to burning of fields after corn reaping mainly in arid cycle. So that 7 forest fires happened in 2002 covered 46 ha area. But fire-fanging of hay, then trees appears in spring-summer seasons in Talish ranges. Six forest fires happened in 2007 covered 88.3 ha area, four forest fires in 2008 covered 25.3 ha area.

## **UNDERGROUND WATERS**

Underground waters constitute 24 million m<sup>3</sup> in a day (8.8 km<sup>3</sup> in a year) being formed in foothills of Great and Little Caucasus and plain areas, Nakhichevan and Talish ranges of the country. Presently, 5 million m<sup>3</sup> or only 20% of overall resources are used in a day. It shows possibility of widely usability of underground water potential of the country in water deficiency period.

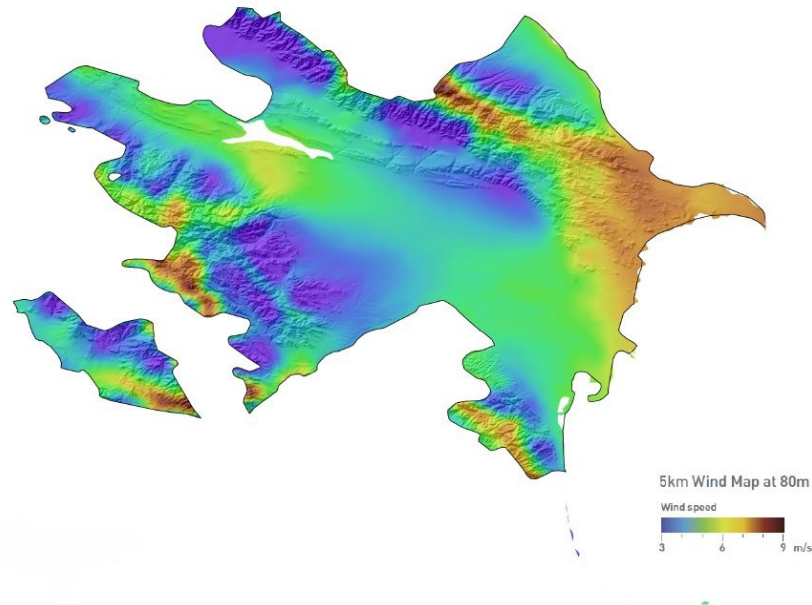
## **HAIL**

Most recurrence of hail precipitations is observed in uplands and foothills of Great and Little Caucasus. Agriculture plants mostly suffer from frequent hail-hits.

## **STRONG WINDS**

Orographic features of the area enable west winds to become stronger along Kura river basin and west coasts of the Caspian sea as well as east winds in the territory of Nakhichevan AR. An increase tendency of number of very strong windy days (more than 25 m/second) is observed in the republic within the last years according to statistic analyses carried out. So that within 2002-2008 maximum speed of wind in territory of the republic reached to 38-40 m/second in Baku and Absheron cities, Ganja-Shamakhy-Zardab-Zagatala regions (Alibay) in August 2005, in March 2006 and February, March, August, September 2007.

## Azerbaijan Wind Map at 80m



### **TEMPERATURE EXTREMUMS**

Temperature stresses adversely effects wildlife and vegetation. Exceedence of absolute maximums and minimums of air temperature were observed within past 15 years in the last century. Declining of minimum temperature in a considerable extent in winter led to damages for subtropic plants. Within 2002-2008 maximum air temperature in territory of the republic totalled to 40-43<sup>o</sup> hot (July 2005, August 2007) in some Central Lowland regions, minimal temperature equalled to 14-17<sup>o</sup> frost (February 2005, March 2006) in uplands. Minimum air temperature in Baku and Absheron peninsula was observed as 8.7<sup>o</sup> frost in January 2008 that it is a record.

### **SURFACE FLUCTUATION OT THE CASPIAN SEA**

Beginning from 1978 up to 1995 485 km<sup>2</sup> coast line of Azerbaijan remained under water at the result of the growth of sea level 2.5 m in the Caspian Sea. At the result of the growth of the level in the Caspian Sea the sea is re-polluted with the oil products. Biogenic elements, organic substance, and heavy metals amounts increase at the result of washing the areas under water or water pressure. Also there were changes in the estuary of the Kura; so in comparison with 1979 the thickness of the sludge grew 1.2-1.4 m. According to the modern research results high humidity will be kept in the Caspian Sea basin as the result of climate heating. If the level grows 150 centimeter, in the Caspian Sea 87,7 thousand ha will remain under water and it will occupy

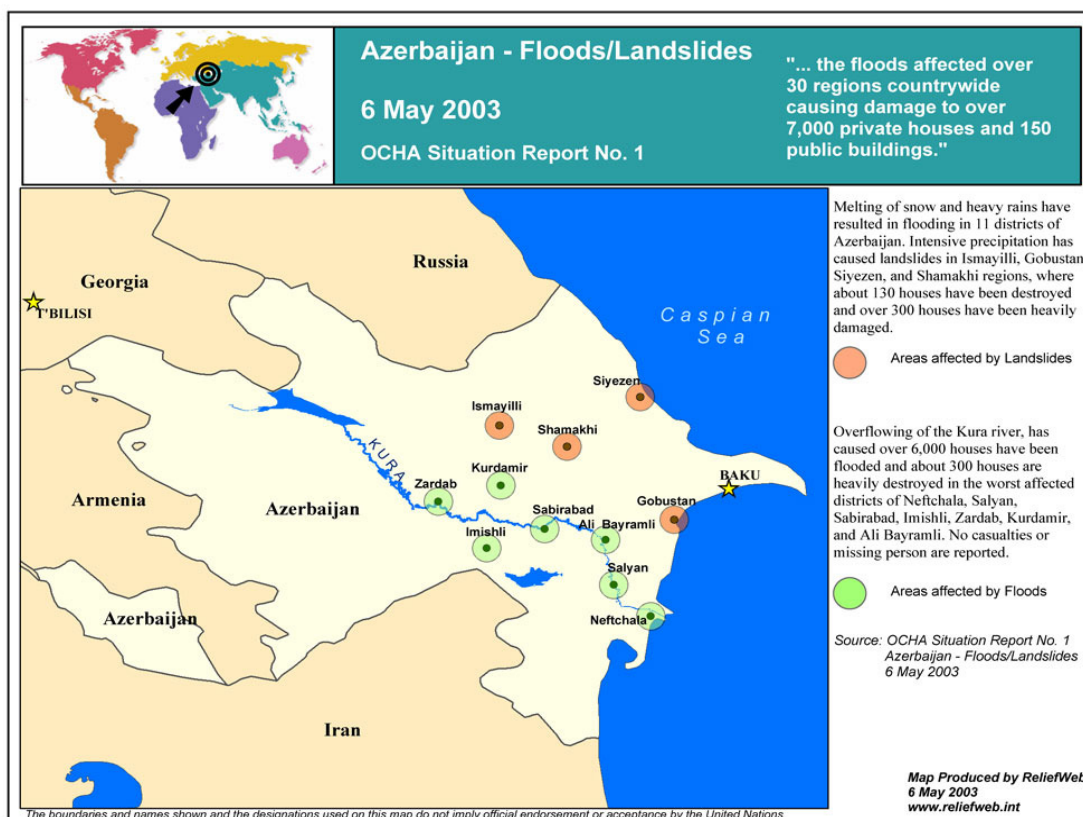
1,6% of Azerbaijan area. At the result of expected growth at the Caspian Sea level is one of the important factors to influence the multiply of mine fish. The multiply of mine fish in the river will decrease; the quality of the water on the coastline will deteriorate and the places for spawning will get to worth in shallow coastal areas because of the growth in the sea level.

Surface level of the sea equalled to -27,12 m Bsn in 2008. Surface level of the Caspian sea was remembered with large fluctuations within the history. Surface level fluctuations cause great damages to the economy of Azerbaijan Republic. According to opinions of some specialists, surface level of the Caspian can rise up as 1.2 m until 2020.

## RECENT DISASTERS

### FLOODS

There observed heavy floods and overflows in the rivers refulted from snowmelt on mountainous areas and showery rains because of a sharp rise in temperatures over mountainy areas of Great and Little Caucasus within 2003-2008.



1. Due to shower rains (Guba 33mm, Khachmaz 23mm, Rustov 59mm, Gusar 38mm, Tangaalty 20mm, Kupchal 16mm) on July 8, 2008 , floods and overflows passed through the rivers

of Gusar, Gudiyal, Valvala, Guru, Jaghajug, Gilgil. Level of water surface rised to 2 m. As a result, level meter units underwent to flooding, hydraulic works were damaged and some habitats, electric piles, roads and bridges suffered considerably, finally 1 person died in overflow. Due to shower rains (Dashkasan 24mm and Goygol 22mm) on July 8-9, floods and overflows passed through the rivers of Goshgar, Kurak, Dastafyurd and Ganja. As a result, level meter units underwent to flooding, hydraulic works were damaged, arable lands were out of use, telephone and electric piles were broken down, private cars turned over, roadways suffered and 1 military serviceman died in overflow while passing across the river. Level of water surface rised as 157 cm in Lankaran river, 105 cm in Sefidor river and 117 cm in Vasharu river due to shower rains (Dashdatuk 49.8 mm and Lankaran 25.6 mm) on October 2-3 (in the evening and at night). There emerged short-term floods in Pensar river flowing across territory of Astara region and subsequently 2 persons, i.e. mother and her child remained under floods while passing through footbridge. Horned livestock and bridges underwent to flooding in some villages.  
([www.cbd.int/doc/world/az/az-nr-04-en.doc](http://www.cbd.int/doc/world/az/az-nr-04-en.doc))

In May **2010** unusually large amounts of rain in Southern Azerbaijan caused the Kura River to rise to its highest level in over 100 years, bursting dams and overflowing onto nearby villages. This unprecedented level of flooding hit hardest in the Sabirabad, Imishli, Saatli districts, which is near the confluence of the Kura and Araz rivers. More than 24,000 people were affected with tens of thousands of homes flooded or destroyed and 50,000 hectares of farmland inundated.



**2010 flooding area**

## **LANDSLIDES**

On 7 March 2000, a major landslide involving an area of 15 ha occurred in the Bayil zone of the Sabayil district, south of Baku city center. The landslide in the Bayil slope destroyed dozens

of shops, apartments and gas stations. After the incident, it was decided to move roughly 300 families from this territory. A total of 140 families were moved by 2003. The slope in later years also experienced few minor landslides which led Baku City Administration to examine the area and make a final decision on razing houses in this territory.

Analysis of the landslide mechanism and its causes revealed that it was a single compound slide with one slip surface, which was triggered by intense rainfall during October and November 1999 (more than the average annual precipitation occurred within two months).

Due to the low permeability of the soil, the groundwater table was slowly recharged; but the investigations after the disaster showed that the crack openings in the landslide zone had allowed a significant lowering of the water table. Some water leakage from utility lines crossing the slide may also have had a detrimental preparatory effect.

### **MUD VOLCANO ERUPTIONS**

An impressive volcanic eruption occurred in 2001 in Azerbaijan, but there were no casualties or evacuation warnings. The biggest flames burned for about five minutes. Then there was another huge explosion, and then they calmed down to about 10 or 20 metres (32 or 65 feet) high. The flames could easily be seen from 15 kilometres away on the day of the explosion, and were still burning, although at a lower level, three days later.



Shikhzayirli mud volcano erupted in Gobustan region of Azerbaijan on March 13, 2011. Witnesses heard explosions before the eruption, mud breccia erupted and then fire blazed up in the territory of the volcano. The fire had an altitude above 50 m. Experts and rescuers of the Ministry of Emergency Situations immediately arrived at the site to prevent any emergency situation. After its activation decreased and mud flows were seen in some bald peaks. Deep grikes were created around the crater. The mud volcano didn't threaten the nearby villages.

### **EARTHQUAKES**

The 2000 Baku earthquake occurred on Saturday, November 25, 2000 at 22:10 (18:10 GMT) local time, measuring 7.0 on the Richter scale in the epicentre with 6.3 in Baku, Azerbaijan, and three minutes later followed by a quake measuring 5.9. No human loss or material damage

was registered.

## **EMERGENCY MANAGEMENT SYSTEM**

### **LEGAL BASIS**

Established by the Decree of the President of the Republic of Azerbaijan, in 16 December 2005, Ministry of Emergency Situations of the Republic of Azerbaijan is the central executive body of the government, which is responsible for emergency management within the entire territory of the country. According to the decree *“for the purpose of providing prevention of natural and man-made disasters and fires, elimination of their consequences, management of activities of the relevant bodies responsible for rescue and rehabilitation works by one centralized system, organization and realization of civil defense work in the country, the Ministry of Emergency Situations of the Republic of Azerbaijan is established.”*

### **OUTLINE OF THE MAIN ACTIVITIES**

- Protection of population and territories from fires and disasters;
- Prevention of emergency situations and elimination of their consequences;
- Ensuring of safety rules water basins, building sites, industrial and mining enterprises and safe movement of small ships in state waters
- Establishment and proper management of the State Resource Fund;
- Organization of protection of strategic objects exposed to natural, man-made and terror threats, neutralization of radioactive wastes;
- Organization of quick response to emergency situations and management of humanitarian aids;
- Organization of management rescue-searching and first aid, aviation and other transport life-saving operations in case of emergency
- Organization of awareness-raising activities among population regarding life safety rules and measures, methodical guidance over respective work done in this field by state bodies and public organizations etc.



## ORGANIZATIONAL STRUCTURE OF THE MES

# MINISTRY OF EMERGENCY SITUATIONS OF THE REPUBLIC OF AZERBAIJAN

## CENTRAL ADMINISTRATION

### AGENCIES



### REGIONAL CENTERS/MES OF NAKHCHIVAN AR



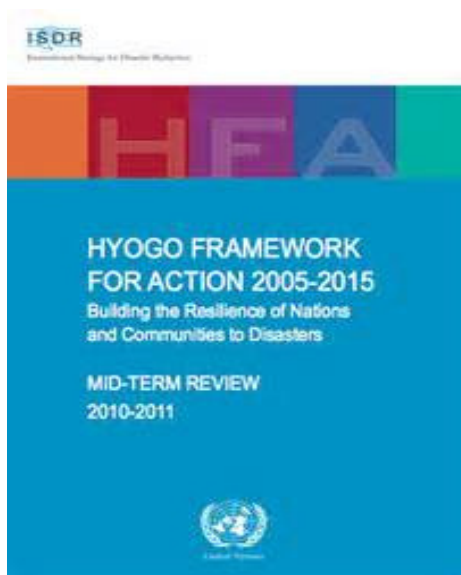
## **HYOGO FRAMEWORK FOR ACTION 2005-2015**

As a signatory of Hyogo Framework for Action 2005-2015 Azerbaijan undertook several responsibilities. Since then, which coincides with the establishment year of the Ministry of Emergency Situations set of measures towards reaching goals laid down by the Hyogo Framework for Action 2005-2015 has been taken and action report is to be prepared by the end of this year.

In this connection, in April 2011, UNICEF, in partnership with the Government of Azerbaijan, organised a one day seminar in Baku to discuss national efforts to ensure safety and protection of children against future disasters. This “Hyogo Framework for Action and Disaster Risk Reduction in Education” seminar brought together government officials from different ministries, and staff from the UN, national and international NGOs to discuss the Hyogo Framework for Action. The group also discussed the country’s progress so far and way forward for Disaster Risk Reduction (DRR) in Education in Azerbaijan. The seminar was organized in collaboration with the Ministry of Education and the Ministry of Emergency Situations under their project “Supporting Disaster Risk Reduction amongst Vulnerable Communities and Institutions in Azerbaijan”. As it was said by Asim Rehman, UNICEF Regional emergency specialist, *“The number of participants demonstrated how important DRR is for the country, and the seminar was planned to be a useful mechanism for sharing of information and experience on school safety assessment tools and curriculum integration from pre-school to secondary”*

The next conference related to Hyogo Framework commitments of the country is planned to be held in November 15, 2011, Baku, Azerbaijan by the Association of Civil Protection and Life Safety Specialists “Fovgal”, Azerbaijan Architecture and Construction University, Baku office of the European Center on Training and Information of Local and Regional Authorities and Population in the Field of Natural and Technological Disasters. Several ministries and other relevant government bodies is invited to the conference on *“The role of the local authorities and municipalities in providing protection of population, economy and environment according to Communities- Hyogo Framework for Action 2005-2015”*.

## **Progress on the Implementation of Hyogo Framework for Action and forthcoming Major Projects on Disaster Risk Reduction**



UNICEF, in partnership with the Government of Azerbaijan, organized seminar in Baku to discuss national efforts to ensure safety and protection of children against future disasters. This “Hyogo Framework for Action and Disaster Risk Reduction in Education” seminar brought together government officials from different ministries, and staff from the UN, national and international NGOs to discuss the Hyogo Framework for Action - which was endorsed by 168 governments in January 2005 and is the global blueprint for disaster risk reduction. The group also discussed the country’s progress so far and way forward for Disaster Risk Reduction (DRR) in Education in Azerbaijan.

The seminar was organized in collaboration with the Ministry of Education and the Ministry of Emergency Situations under their project “Supporting Disaster Risk Reduction amongst Vulnerable Communities and Institutions in Azerbaijan”. This EU-funded initiative emphasizes the need for a systematic approach to disaster risk reduction and advocates for mainstreaming a child-focused DRR policy and strategic framework into existing policies, planning and programs for education or in some other way related to disaster preparedness.

UNICEF will continue preparing children and vulnerable communities to respond to future disasters, and that everyone present will be active in advocating for and implementing measures that will help reduce the disastrous consequences of natural hazards on children and women in Azerbaijan. The seminar should also lay an important foundation for improving existing

governmental strategies and documents on disaster risk reduction in Azerbaijan with a particular focus on education,” he said.

UNICEF’s approach to DRR in education is at two levels - policy level dialogue on curriculum and disaster management, coupled with school based interventions reaching, in particular, teachers and schoolchildren. Children are important first because they are the most vulnerable in a disaster, but also because they possess unique abilities to contribute to the creation of a culture of safety and prevention.

Concluding remarks of the seminar included:

It is important to spread information and knowledge on the Hyogo Framework and DRR in education at national and local levels. The idea of having similar events at district level was suggested by UNICEF.

DRR is everybody’s responsibility. All line ministries implementing state programs and work plans should integrate DRR into their planning. Inclusion of children with disabilities into all school-based activities and improving early warning and detection in the area of flooding are important.

The key to success in implementing the HFA and indeed any DRR intervention is coordination between all respective parties and ministries not just in education. By starting and in some cases maintaining co-operation between all key stakeholders and if possible using existing co-ordination mechanisms, the issue will be remain a high priority.

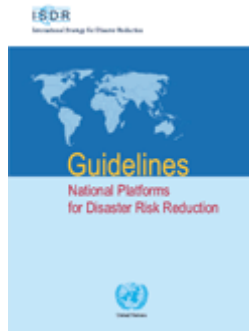
Whilst what UN is currently doing is a pilot project, it provides a good opportunity to learn lessons and good practices which can be used in the future for Azerbaijan and in other countries.



A conference held on 10<sup>th</sup> August 2010 to sum up the “Supporting Disaster Risk Reduction amongst Vulnerable Communities and Institutions in Azerbaijan” project co-implemented by the UNICEF, Ministries of Education and Emergency Situations. The project is part of the Disaster Risk Reduction in education program financed by the DIPECHO, the Disaster preparedness branch of the European Commission’s Humanitarian Aid Department.

UNICEF Deputy Representative in Azerbaijan Rashed Mustafa told of the aims of the project realized since 2010. Speaking at the meeting, UNICEF Coordinator for DIPECHO Aisloing Falconer pointed out disaster response monitoring had been carried out in 10 pilot schools in six regions of Azerbaijan over preparation and emphasized the importance of disaster response education at schools.

The conference discussed mechanisms of national coordination for disaster risk education in education and future projects.



Sub-Regional Office of the United Nations International Strategy for Disaster Reduction (UNISDR) for Central Asia and the Caucasus and the Ministry of Emergency Situations of the Republic of Azerbaijan, with support from UNDP, hold a workshop on National Platform for Disaster Risk Reduction on 20 October 2010 in Baku.

The workshop will brought together representatives of the relevant Government ministries including the Ministry of Emergency Situations, Ministry of Ecology and Natural Resources, Ministry of Health and Ministry of Industry and Energy, bilateral donors, international and national NGOs and media. Ms. Goulsara Pulatova, Regional Coordinator of UNISDR Central Asia & Caucasus office and Mr. Abdurahim Muhidov, HFA Coordinator facilitated the Workshop.

The overall purpose of the meeting was to bring together all stakeholders in the area of disaster risk reduction (DRR) and potential partners of the National Platform to discuss ways to improving national coordination in disaster risk management and risk reduction, as well as reporting on the progress achieved in the country. The UNISDR officers will make presentations on UNISDR, the activities in the region of Central Asia and Caucasus, the Hyogo Framework for Action, the structure and the contents of the national report on HFA.

The country reports are used in compilation of the regional progress reports, and in the Global Assessment Report which is published every two years, at the Global Platform for Disaster Risk Reduction. The sessions of the Global Platform were held in 2007 and 2009, and the next one is planned for May of 2011 in Geneva.

The idea of the workshop was first discussed and agreed with the Government of Azerbaijan in December 2009 when UNISDR sent a mission to Baku to introduce its mandate to the Government and establish contacts with the relevant governmental and non-governmental organizations, UN agencies and international NGOs working in the country.

As part of the development of a post-2015 framework for disaster risk reduction, the second regional consultation meeting for the Central Asia and South Caucasus countries met in Almaty, Kazakhstan on 1-2 April 2014.

The Governments of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan attended along with disaster risk reduction experts from other stakeholders including international organizations, donors, UN Resident Coordinators, NGOs and civil society. More than 160 representatives attended the consultation. UNISDR and the Government of Kazakhstan co-hosted the consultation. Central Asia and South Caucasus countries experience many hazards and are particularly susceptible to floods and earthquakes. Over a 30-year period from 1980, 14 million people were hit by 131 major disaster events with economic losses of an estimated USD3.8 billion.

The major hazards are of regional character, which requires strengthening cross-border coordination and exchange of information on sub-regional and regional level. The countries share the need in education, training, technologies and methodologies in risk and loss assessment, inclusion of all sectors and all population groups and sectors of economy in disaster risk reduction, as well as their protection and building their resilience. Addressing these and other needs and gaps is crucial for ensuring sustainable development of the region and of each of the countries.

A post-2015 framework for disaster risk reduction to be considered at the 3<sup>rd</sup> UN World Conference on Disaster Risk Reduction in Sendai, Japan on 14-18 March 2015 will help to refocus regional efforts and provide guidance, actions and commitments to reduce risks and build resilience. The consultations for the countries in the Central Asia and South Caucasus region reflected on the existing Hyogo Framework of Action and developed recommendations for consideration as well as volunteer commitments to assist in the implementation of a post-2015 framework for disaster risk reduction. The two day consultation included one day of thematic and stakeholder consultations that have been prioritized over the last few years in Central Asia and South Caucasus countries including: local governments; risk information; education and training; NGOs and civil society; gender; safe schools and hospitals; regional cooperation; water-related disaster cooperation. The second day focused on statements and commitments from Governments, the thematic groups and the stakeholders.

Within the two days of consultations a number of results and some overarching messages; ten general recommendations for a post-2015 framework for disaster risk reduction; and a number of specific recommendations on thematic and cross-cutting areas were developed. The recommendations reflect the current priorities of the Central Asia and South Caucasus countries on reducing the risk of disasters and protecting their populations.

#### A. Overarching Messages

Future generations must have a safer and resilient planet. Disaster risk reduction is

development that builds a safer and more resilient planet. The integration of disaster risk reduction into the post-2015 development agenda and climate agreements is therefore fundamental for a sustainable future.

#### B. General Recommendations

1. Develop long term disaster risk reduction and climate adaptation programs at national and local level. Ensure inclusion of disaster risk reduction approach to overall development programs and plans.

2. Local level risk management and development of resilient cities should be linked to and harmonized with the national development plans.

3. Risk assessment and the governing of risk should be integral to development planning.

4. Formulate and implement national level policy on disaster risk reduction.

5. Ensure greater coordination of roles and efforts between ministries of emergency situations with other ministries, public authorities, private sector and NGOs at the national and local level.

6. Ensure connection between national level planning, monitoring and review and a post-2015 framework for disaster risk reduction and other relevant international agreements.

7. Further improve and strengthen policies, legal regulations and law in disaster risk reduction.

8. Disseminate knowledge and experience on disaster risk reduction gained from HFA implementation.

9. Engage stakeholders and make special efforts to include media, the business sector and vulnerable families and groups in disaster risk management planning and partnerships.

10. Recognize that recovery is an opportunity to build back better and reduce the vulnerabilities of countries. An internationally agreed framework for cooperation that covers recovery will be useful in assisting disaster-affected nations both in guidance and to help build more capacity

#### C. Specific Recommendations

The thematic and stakeholder groups' consultations also provided a number of specific recommendations for consideration for a post-2015 framework for disaster risk reduction. They reflect the work and priorities of disaster risk reduction in Central Asia and South Caucasus. In the Summary Report, these have been grouped on the specific themes of: information and risk assessment; education and training; safe schools and hospitals. Then there were also a set of cross-cutting recommendations which were evident in many of the consultation reports and statements including around: capacity building; inclusiveness; gender and the role of women; measures for success and accountability (monitoring and indicators); and, regional cooperation.



(i) Information and risk assessment

- Provide access to timely, reliable and objective information on risks and hazards ahead of disasters, as well as life-saving information during and after disasters.

- Take measures for targeted development of coordinated methods/approaches on risk assessment and simulation, application of remote monitoring methods and disasters forecasts, damage and loss analysis with the aim of effective disasters risk management.

- Create specialized programs for risk assessment and information management.

- Promote and ensure collection, analysis and dissemination of sex and age disaggregated data on disaster risks, occurrence, impact and losses at all levels (including in line with the new indicator system on disaster risk reduction).

- Risk and vulnerability assessments to be gender-based and include gender-analysis.

- Use modern technologies for hazard monitoring and early warning of population.

- Provide technical and financial support from the specialized agencies of the United Nations and from the developed countries in the field of remote sensing.

- Establish platforms for information generation and exchange between countries of the Central Asia and South Caucasus region. Promote and build partnership with academia and research institutions, to generate solid evidence on climate change and potential disasters and their socio-economic impact.



14-18 March 2015  
Sendai, Japan

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