



AZERBAIJAN



ASIAN DISASTER REDUCTION CENTER
VR PROGRAM FY2023

Habil Huseynov (VR)

The Academy of the Ministry of
Emergency Situations of the Republic of Azerbaijan



Disclaimer

This report was compiled by an ADRC visiting researcher (VR) from ADRC member countries.

The views expressed in the report do not necessarily reflect the views of the ADRC. The boundaries and names shown and the designations used on the maps in the report also do not imply official endorsement or acceptance by the ADRC.

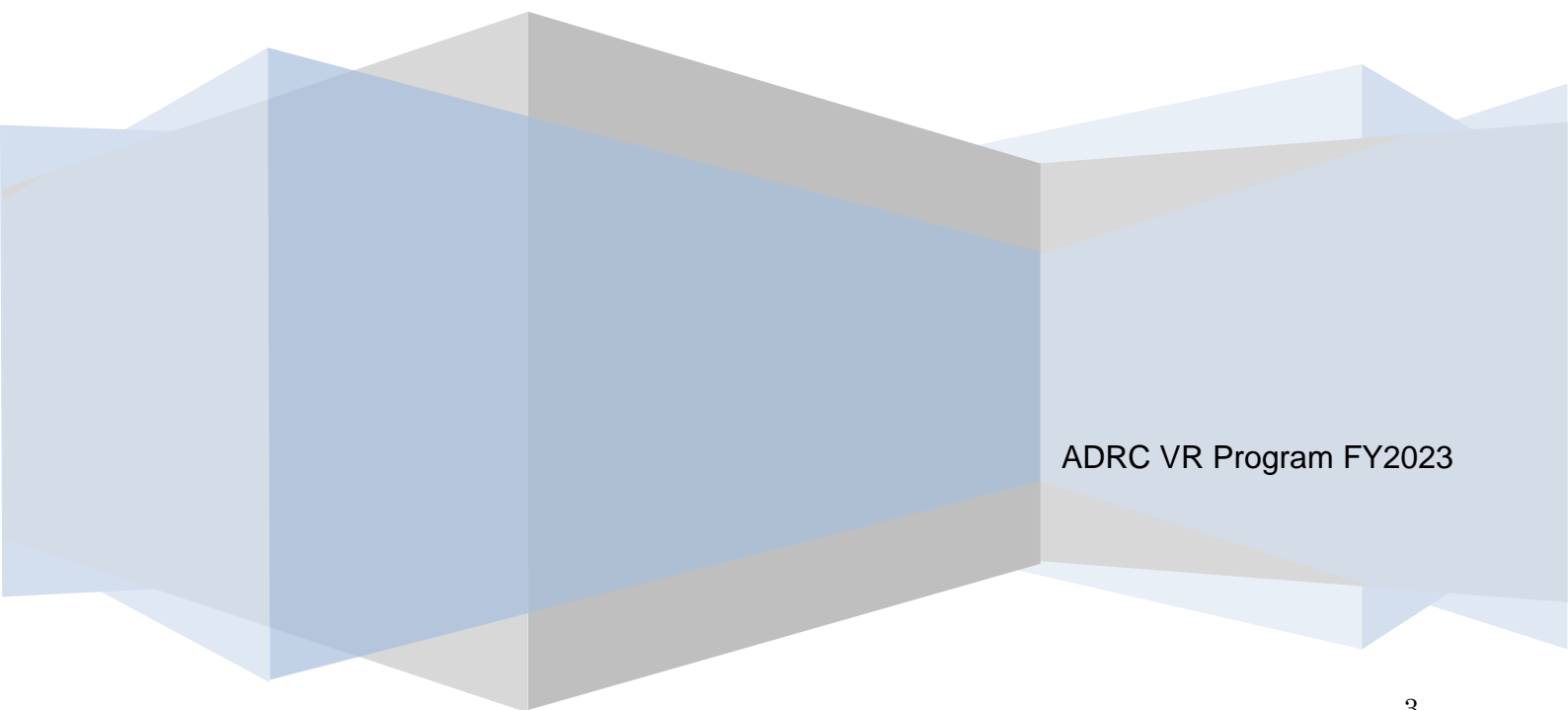
ASIAN DISASTER REDUCTION CENTER

AZERBAIJAN

COUNTRY REPORT

Visiting Researcher: Habil Huseynov

Teacher, the Academy of the Ministry of Emergency Situations of the Republic of Azerbaijan



ADRC VR Program FY2023

Contents

COUNTRY PROFILE.....	4
GEOGRAPHY.....	8
CLIMATE CHANGES AND NATURAL HAZARDS	12
FLOODS AND LANDSLIDES	13
SEISMICITY	13
RECENT DISASTERS	19
FLOODS	19
LANDSLIDES	20
MUD VOLCANO ERUPTIONS	20
EARTHQUAKES.....	21
EMERGENCY MANAGEMENT SYSTEM IN AZERBAIJAN	222
ORGANIZATIONAL STRUCTURE OF THE MES OF THE REPUBLIC OF AZERBAIJAN	23
HYOGO FRAMEWORK FOR ACTION 2005-2015.....	25
THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION	28
BIBLIOGRAPHY.....	32

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

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



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.

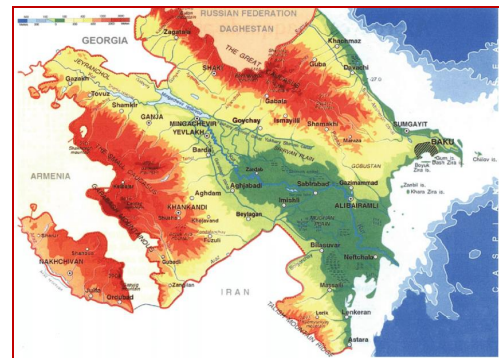
Area: 86.6 thousand square km (forests 12%, water basins 1.7%, sown area 54.9%, including 31.1% pastures and hayfields, 31.4% other lands).



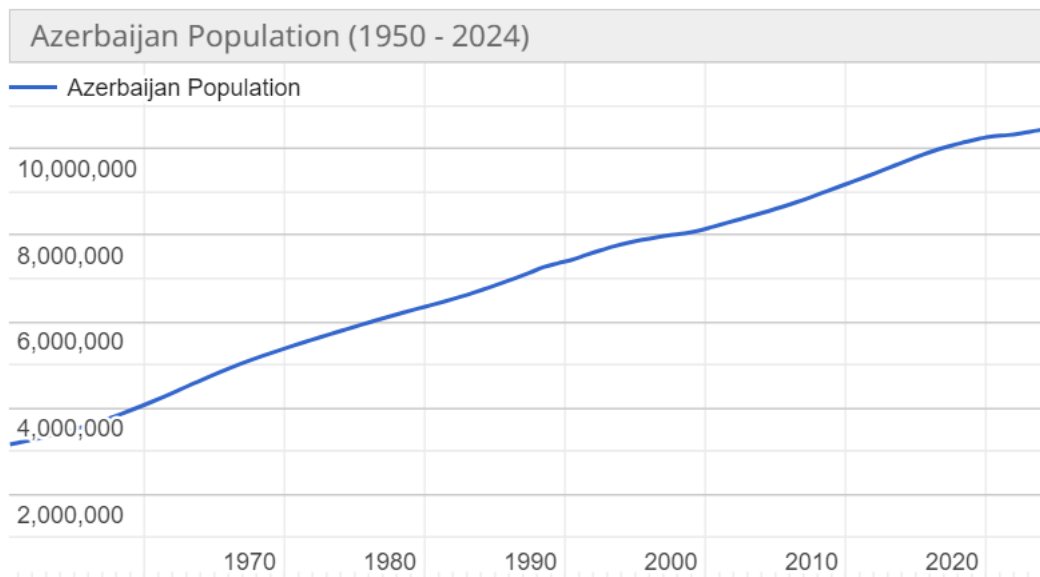
Bordering with:

- ◆ 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 January 2024, population of the Republic of Azerbaijan was estimated at **10,440,121**. About 57.1 percent of population live in towns. Men constitute 49.5% of population, while women 50.5%. 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, Turkiye 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.

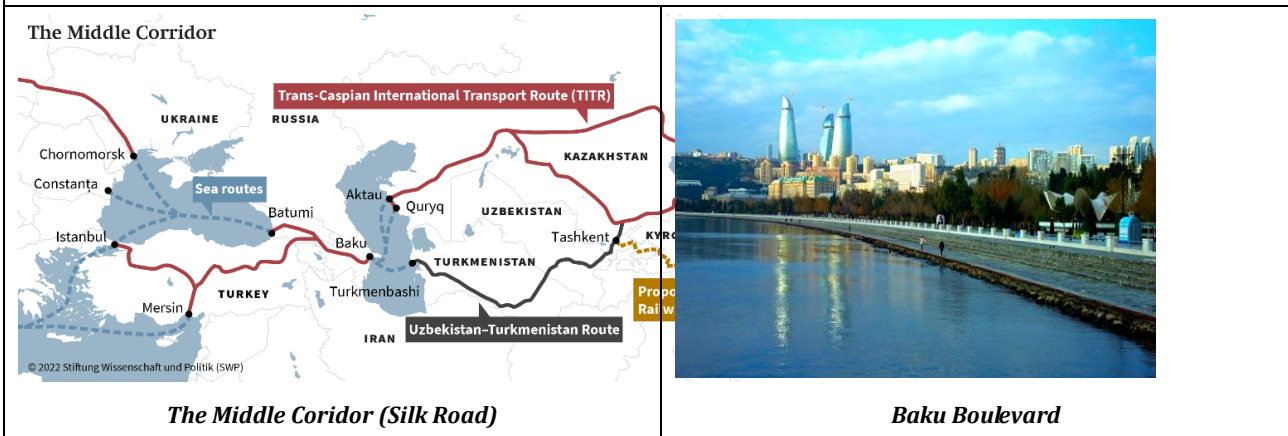
Baku is situated on the shore of the Caspian Sea in the south of the Absheron peninsula. It covers an area of 2,200 square km and has a population over 2.4 million.

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 is divided into twelve administrative regions and 48 townships. Among these are the townships on the islands of the Baku Archipelago, as well as the industrial settlement of Neft Daşları built on oil rigs 60 kilometres (37 miles) away from Baku city in the Caspian Sea. The Old City, containing the Palace of the Shirvanshahs and the Maiden Tower, was designated as a UNESCO World Heritage Site in 2000.



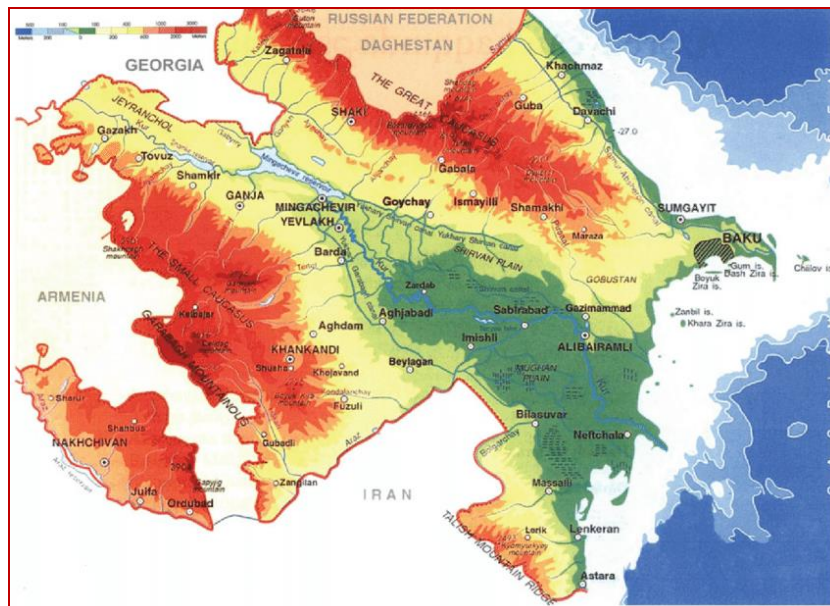
Religion: Islam (93-99%), other religious minorities: Judaism, Christianity, Albanian-Udi Church

Currency: Manat (AZN), **International dialling code:** +994, **Internet domain:** .az

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 Nakhchivan Autonomous Republic. 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 Nakhchivan, forests develop in islands due to local climatic conditions. The highest point in Nakhchivan 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 Nakhchivan is covered by grassland/steppe, totaling some 172 km², of which some 10,000 ha is salinated.



Physical 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

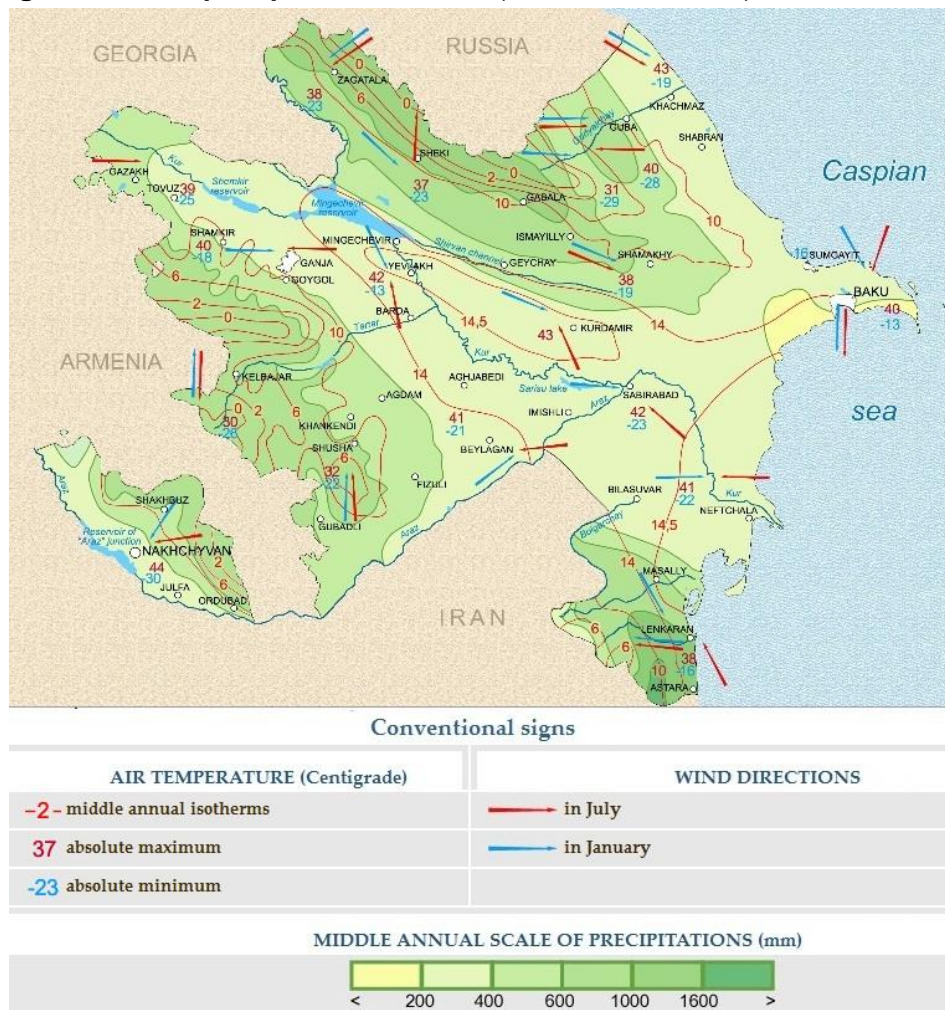
January: +1.7°C

July: +27.9°C

Max t° +44° (Julfa, Nakhchivan Autonomous Republic)

Min t° -42° (Great Caucasus Mountains)

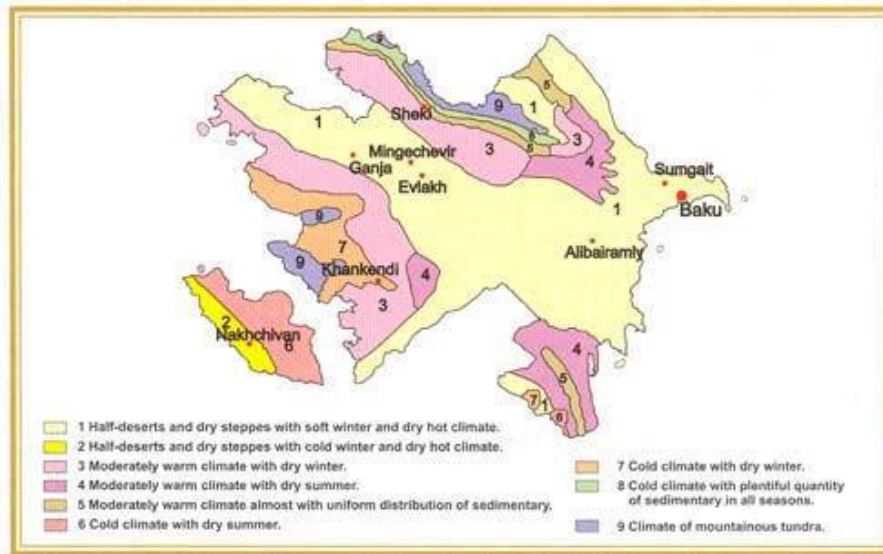
Annual average number of precipitation: 500 mm (min 200, max 2300)



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.

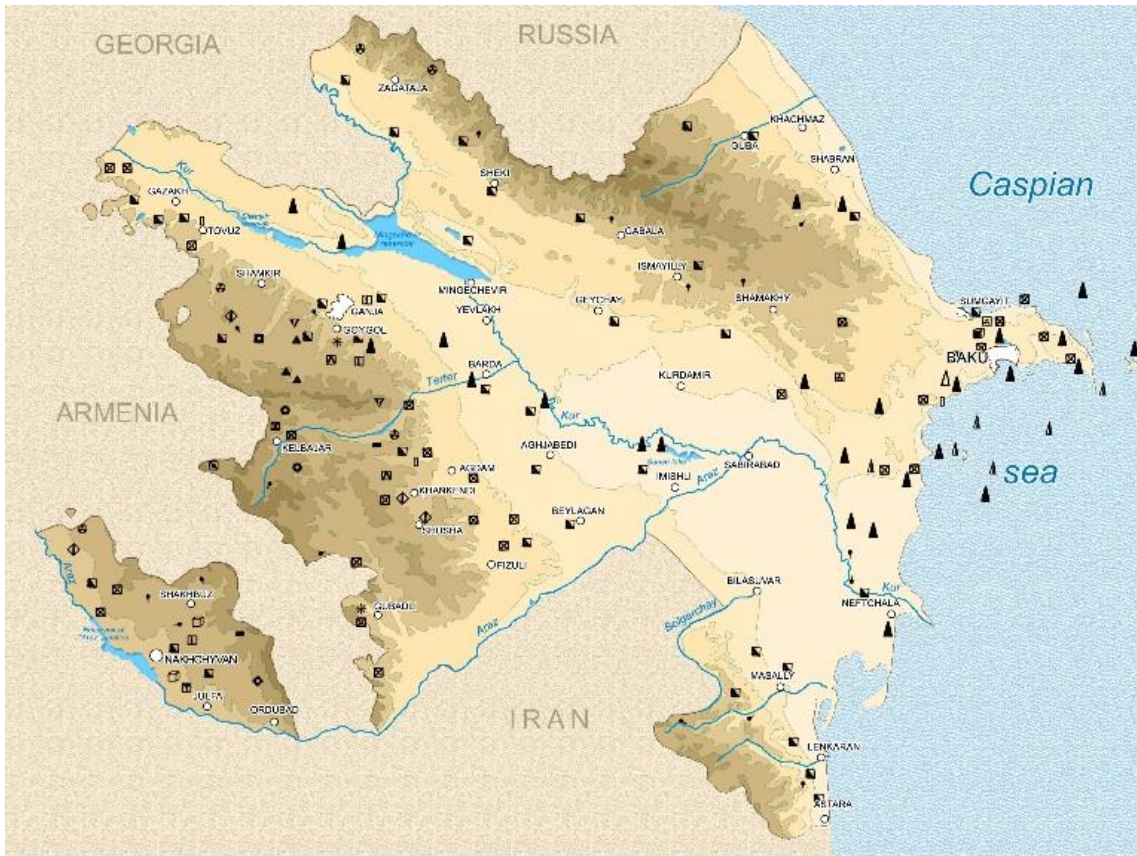
Fields in Siyazan region north to Absheron peninsula have good potential. There are oilfields to west and south-west of Absheron in Gobustan, Shirvan, Salyan plains. At present big oil fields were discovered in water area south to Absheron. Gas fields are also very important. There is unique therapeutic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

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, Shikhburnu, 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 Araz basin.

The average density of river networks is 0.39 km per km², with most of the rivers occurring in the Kura basin.

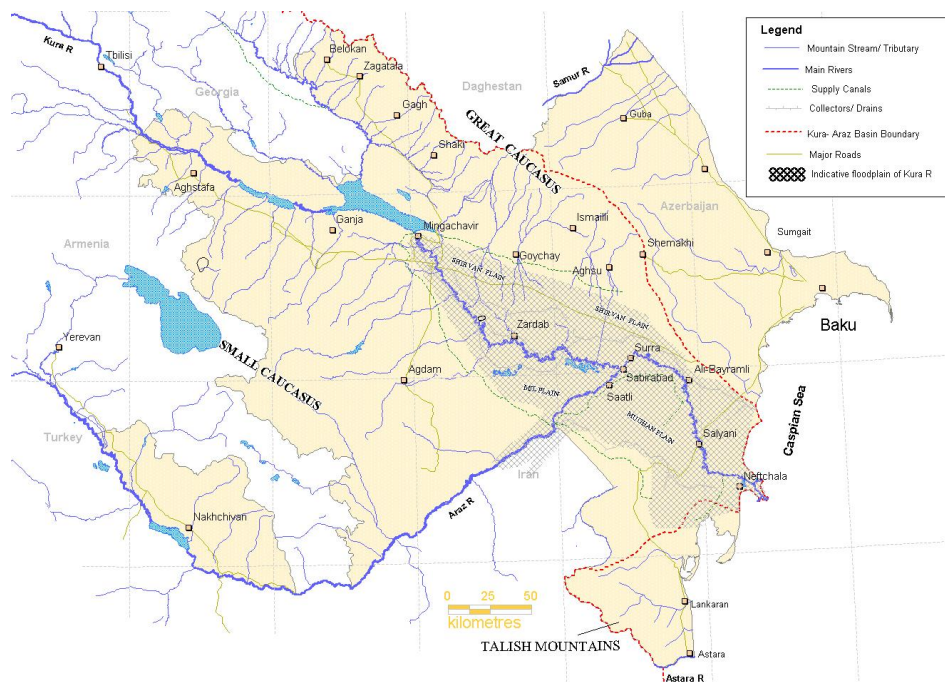
From the 300 natural lakes in Azerbaijan, only six cover more than 10 km² of land area. The total area of these six lakes makes up 83 % (250 km²) of the total lake area. The lakes of the Kura and Araz basins (in the lowlands) are affected by upstream water management, causing an increase in salinity

(5000-13000 mg/L), and a reduction in fish populations. Lakes on the Absheron Peninsula (on the shores of the Caspian) have become salivated 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 km²), 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 km². Total volume of these artificial lakes is 22.66 km³, but only 11.24 km³ is usable water. The biggest of these by far is Mingachevir Reservoir, located along the River Kura which has a total volume of 16 km³ and covers some 625 km². 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 Nakhchivan AR. The expected climate changes can cause serious difficulties in the future by increasing recurrence of floods and overflows.

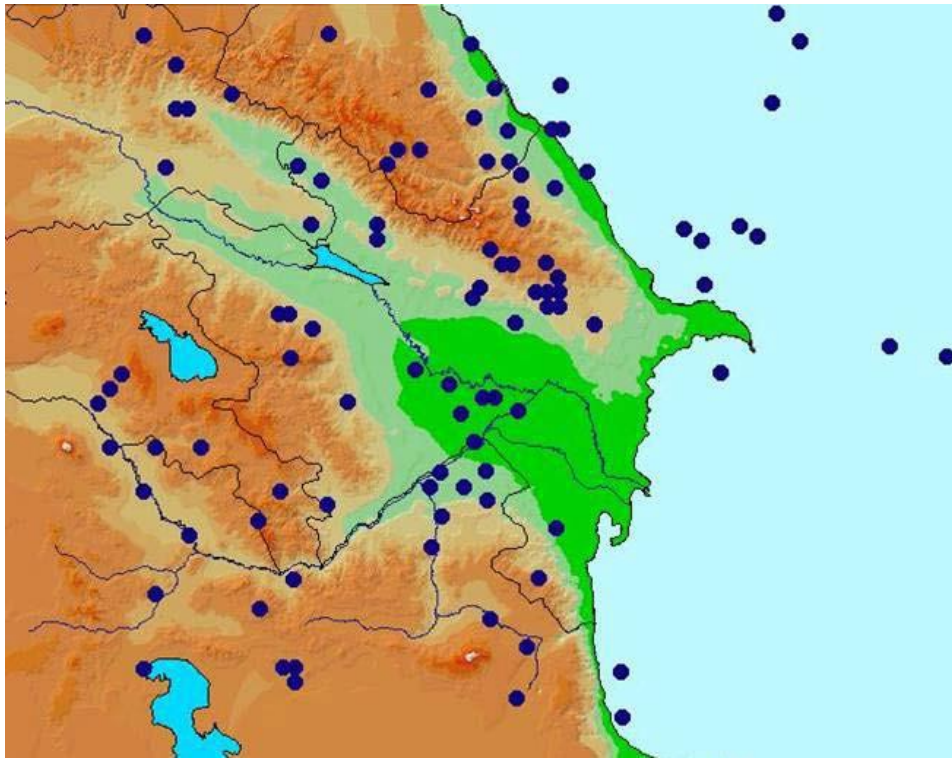
Heavy showers on the territory of Azerbaijan Republic often lead to floods with damages and human casualties. Moreover, hail fall is observed on the territory during warm periods. They cause damage to agriculture. Hail diameters sometimes are about 30–50 millimeters, which results in total destruction.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

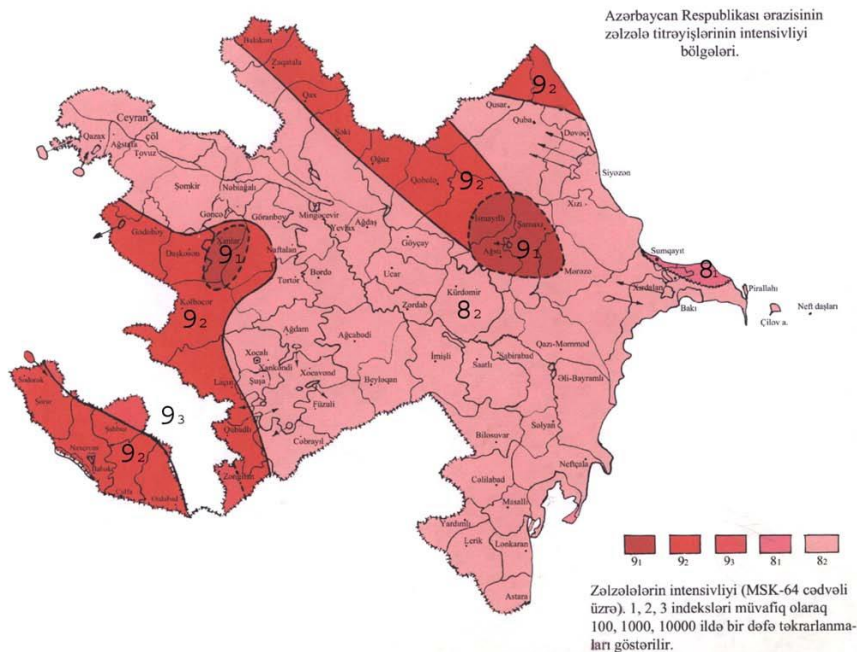
According to historical information this earthquake resulted with landslides and more than 80,000 people died.

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 ($M = 6.9$; $I_0 = 9$ points) happened in 1902.



The map of Kinematics Seismic Stations

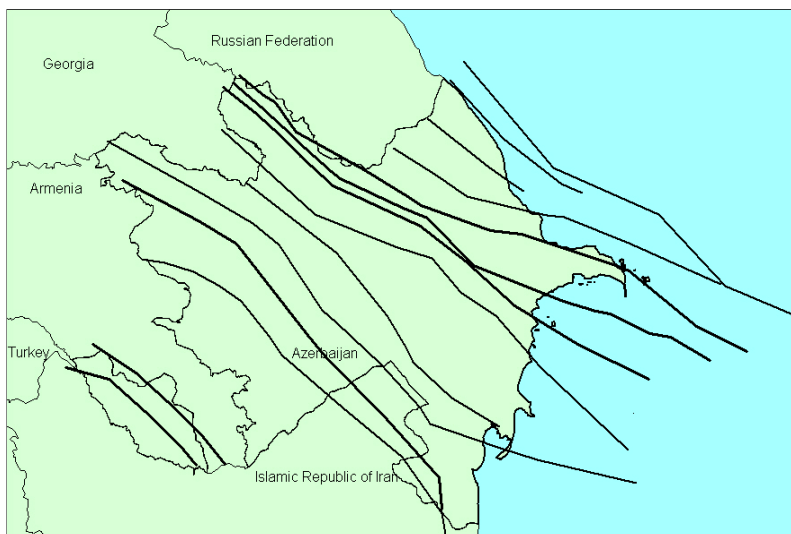
Another area where happened destructive earthquakes is Ganja region. In this area happened strong earthquakes in 427 ($M \approx 6.7$; $\dot{I}0 = 9$ points), in 1139 ($M \approx 6.8$; $\dot{I}0 = 9$ points), in 1235 ($M \approx 5.7$; $\dot{I}0 = 8$ points). After earthquake happened in 1139 because 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.



Seismic Zonation Map of Azerbaijan

Since 2003 in the Azerbaijan territory installed 30 telemetry seismic stations production of “Kinometrics”. Up to now in republican territory 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.



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 400 m, whereas base diameter may vary from 100 to 4500 m.

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, Zanbil, 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 m³ in a day (8.8 km³ in a year) being formed in foothills of Great and Little Caucasus and plain areas, Nakhchivan and Talish ranges of the country. Presently, 5 million m³ 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.

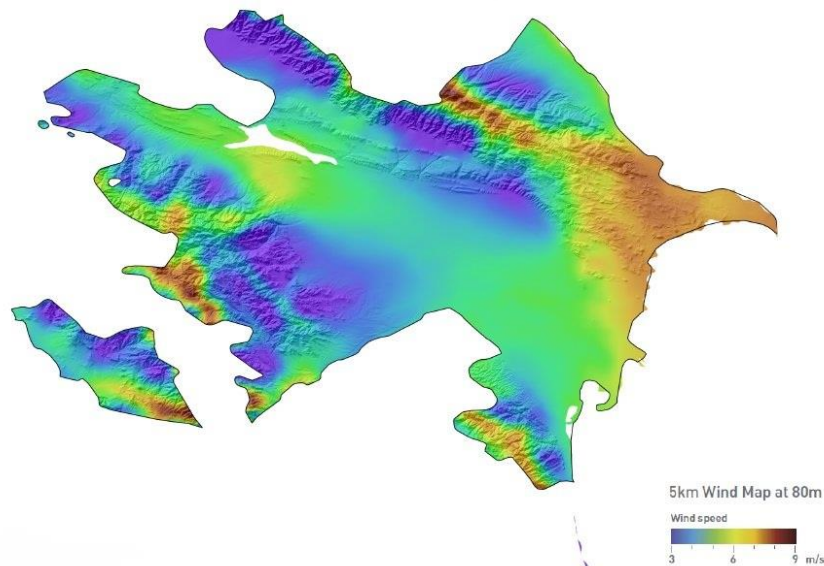
HAIL

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 Nakhchivan 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^o hot (July 2005, August 2007) in some Central Lowland regions, minimal temperature equalled to 14-17^o frost (February 2005, March 2006) in uplands. Minimum air temperature in Baku and Absheron peninsula was observed as 8.7^o frost in January 2008 that it is a record.

SURFACE FLUCTUATION OT THE CASPIAN SEA

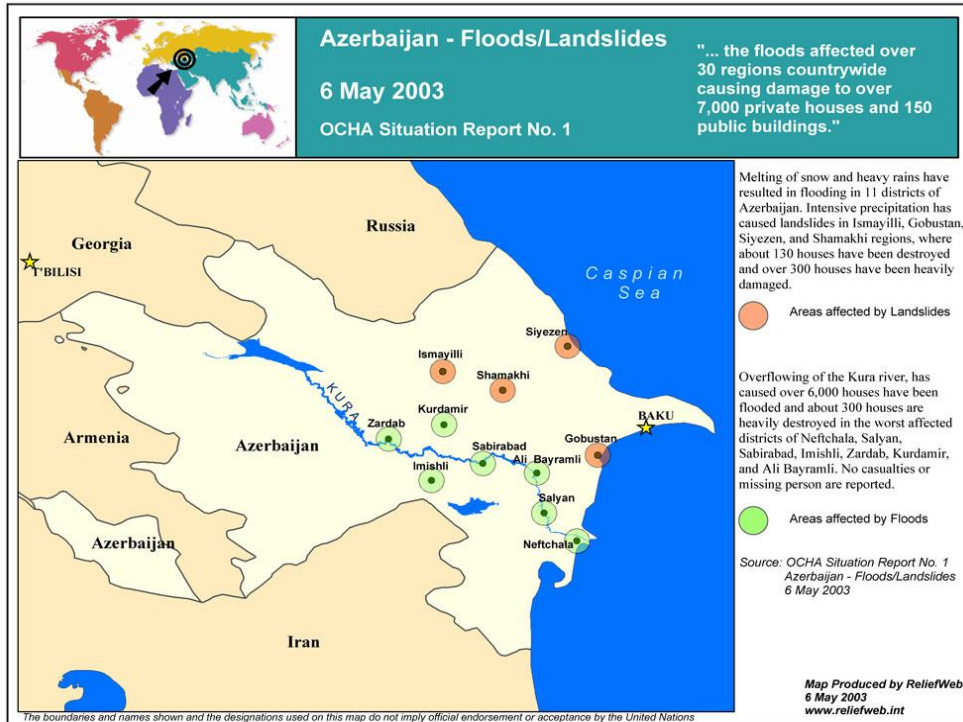
Beginning from 1978 up to 1995 485 km² coast line of Azerbaijan remained under water at the result of the growth of sea level 2.5 m in the Caspian Sea. At the result of the growth of the level in the Caspian Sea the sea is re-polluted with the oil products. Biogenic elements, organic substance, and heavy 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

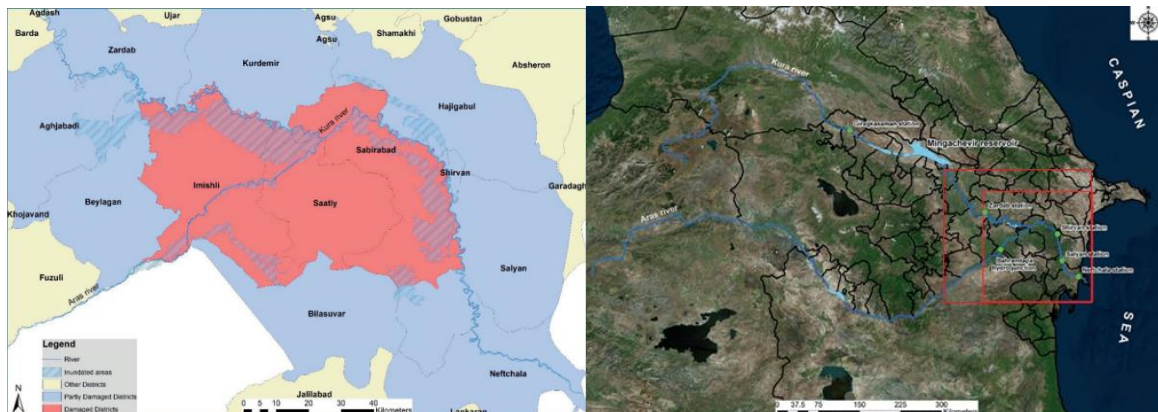
There observed heavy floods and overflows in the rivers refulted from snowmelt on mountainous areas and showery rains because of a sharp rise in temperatures over mountainy areas of Great and Little Caucasus within 2003-2008.



Due to shower rains (Guba 33 mm, Khachmaz 23 mm, Rustov 59 mm, Gusar 38 mm, Tangaalty 20 mm, Kupchal 16 mm) 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 24 mm and Goygol 22 mm) 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)

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

Baku earthquake (2000, EQ-2000-000769-AZE) Baku earthquake (2000) - One of the most powerful earthquakes took place in the last hundred years in the history of Azerbaijan on 25th November 2000. The earthquake was felt at 6.8 magnitude in Baku at 21:30. Epicenter of the earthquake was in the Caspian Sea sector of Azerbaijan. Horrible tires hit 22 seconds with two waves. According to the report, 30 people were killed. Although earthquakes hit some buildings, there were no serious damages. Former Soviet buildings in Baku have been hit by severe earthquakes. Then magnitude of earthquakes were recorded. This earthquake has created a shock effect among people.



Baku Earthquake in 2000

EMERGENCY MANAGEMENT SYSTEM IN AZERBAIJAN

LEGAL BASIS

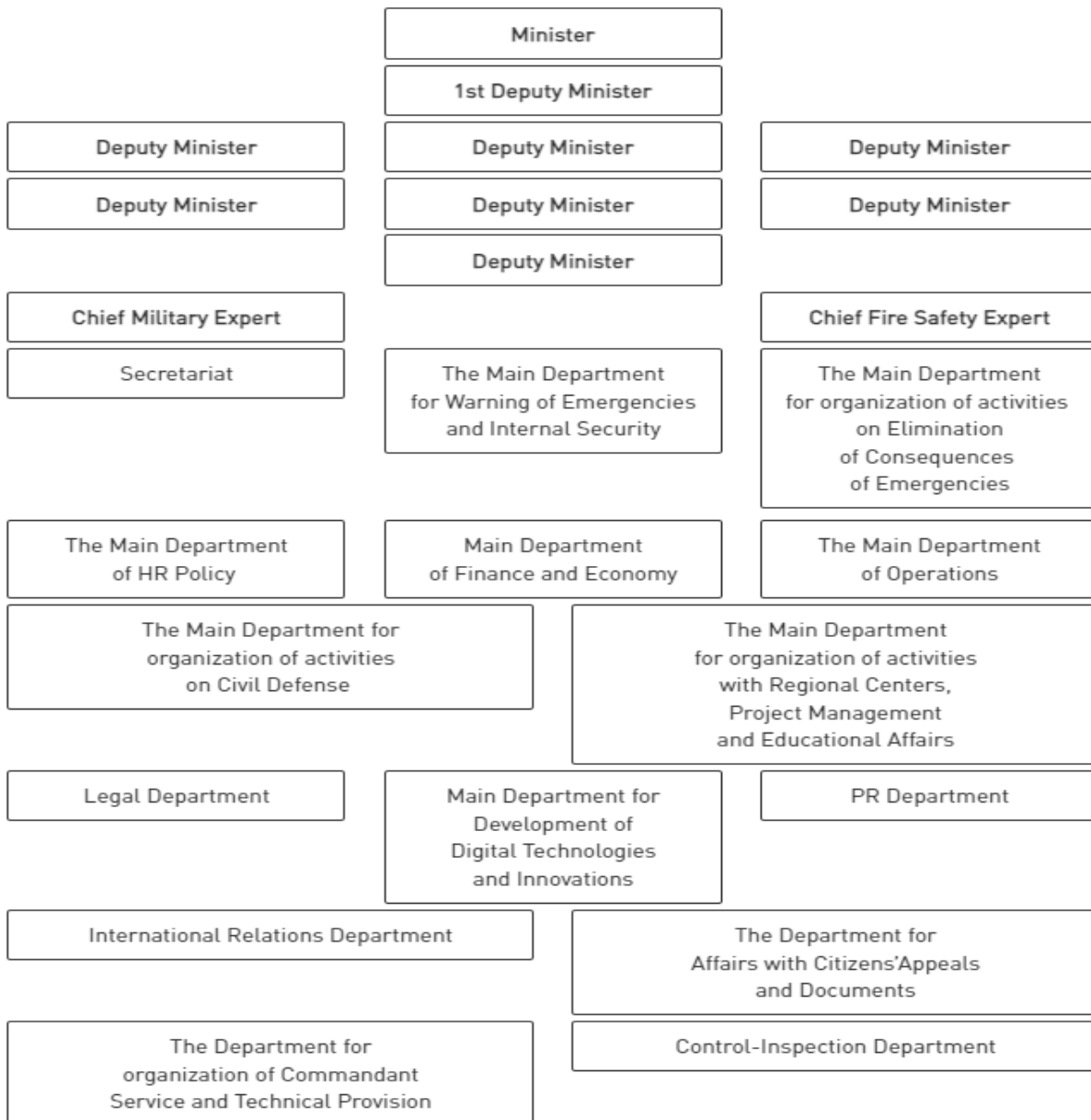
Established by the Decree of the President of the Republic of Azerbaijan, in 16 December 2005, Ministry of Emergency Situations of the Republic of Azerbaijan is the central executive body of the government, which is responsible for emergency management within the entire territory of the country. According 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

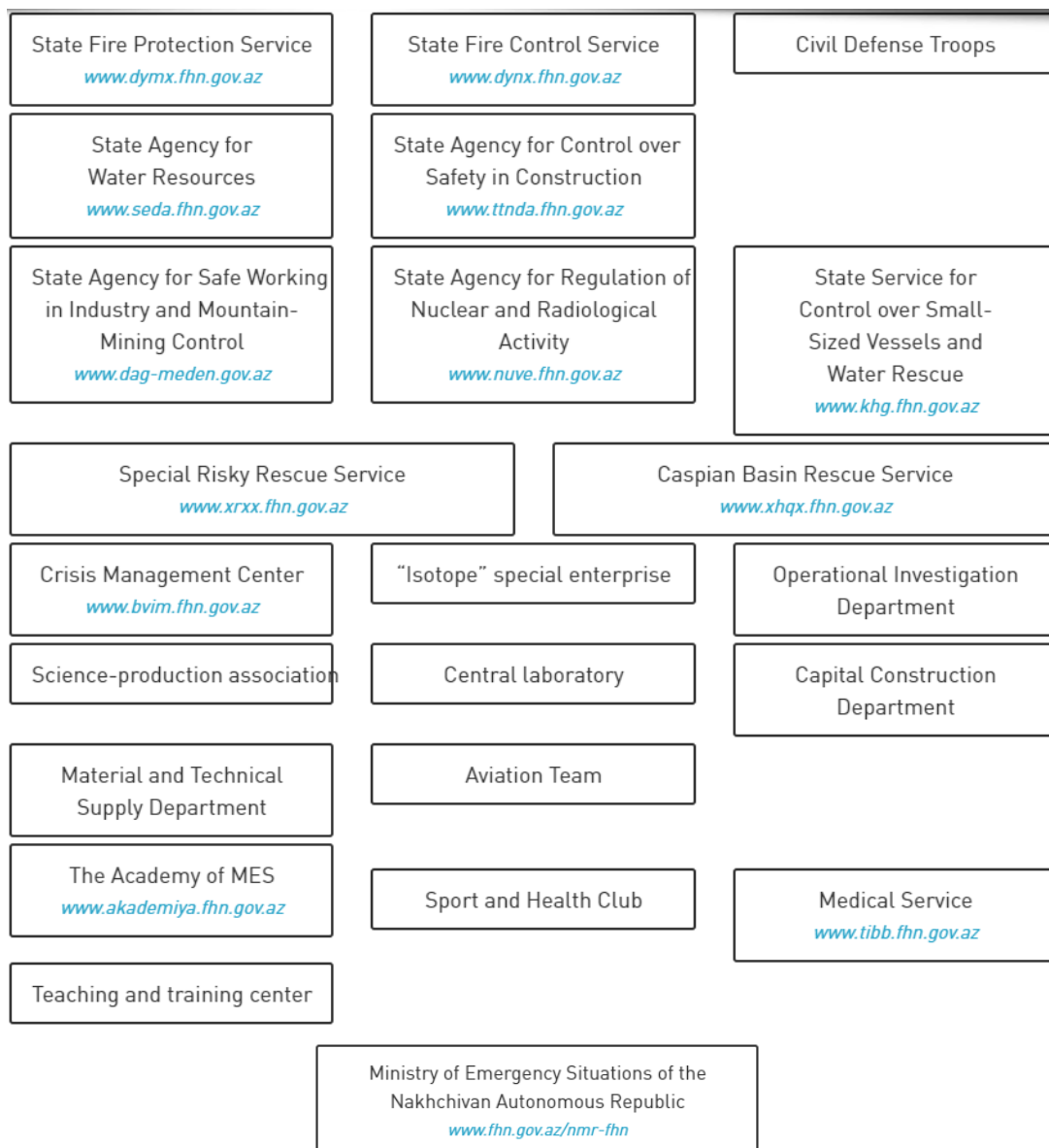
- - civil defense;
 - protection of the population from natural (geophysical, geological, meteorological, hydrological, maritime hydrological contingencies, natural fires, etc.) and man-made (arsons, explosions, collapse of buildings and constructions, chemical, biological and radiological hazards, accidents in electric power supply system, vital utilities, waste treatment facilities, breakdowns in hydrodynamic installations, oil and gas production units, main pipelines, transportation and traffic accidents, etc.) disasters:
- - prevention of emergency situations and elimination of their consequences;
- - fire security;
 - safety of people in water basins;
 - security of smaller vessels' operations;
 - technical safety in industry and mountain-mine works
- - safety in construction;
 - drafting of government policy and regulations on the state material reserves funds;
 - management, coordination and supervision on the areas mentioned above;
 - protection of strategic facilities, objects and installations in cases of occurrence of an emergency situations
- 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 OF THE REPUBLIC OF AZERBAIJAN

Structure of the Ministry (Apparatus of the Ministry of Emergency Situations)



Subordinated agencies of MES



Regional Centers



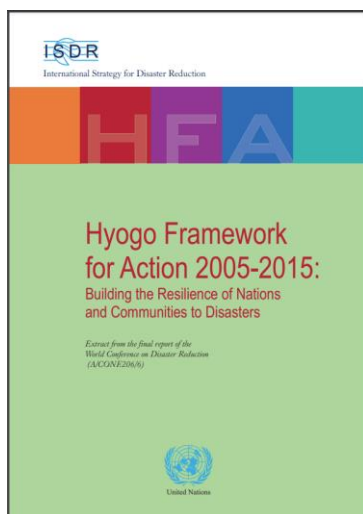
HYOGO FRAMEWORK FOR ACTION 2005-2015

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.

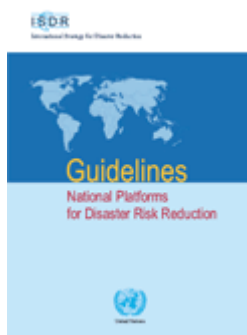
Whilst what UN is currently doing is a pilot project, it provides a good opportunity to learn lessons and good practices which can be used in the future for Azerbaijan and in other countries.



A conference held on 10th 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 Aisling 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 SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION is the global plan for reducing disaster losses adopted by UN Member States on March 18, 2015. In February 2017, the UN General Assembly adopted 38 indicators for measuring progress against the Sendai Framework's seven targets including reductions in mortality, numbers of people affected, economic losses and damage to critical infrastructure.

The workshop, supported by the European Commission (ECHO - European Civil Protection and Humanitarian Aid Operations), and organized together with the Center for Emergency Situation and Disaster Risk Reduction focused on technical support, training and capacity development on disaster loss data.

Implementations of Sendai Framework in Azerbaijan

The Government of Azerbaijan has been actively engaged in strengthening national capacities for disaster preparedness and risk reduction. Efforts are underway to ensure a systematic approach in identifying and assessing the risks and minimizing the socio-economic impacts of disasters.

Legal and policy framework for disaster risk reduction in our country has been reflected in the laws and regulation of the Ministry of Emergency Situations of the Republic of Azerbaijan. The Ministry covers the main fields with regard to the prevention of disasters and reduction of such risks, namely crisis management, fire control and protection, civil defense, state material reserves, water resources, search and rescue teams, safety control in construction, industrial safety, medical services, aviation

teams, and control over nuclear and radiological activity. The regional centers have been set up recently in order to ensure the implementation of the activity of the Ministry all over the country.

The main objectives of the successful activity in the field of disaster risk reduction are - the integration of risk reduction in national reconstruction efforts, policy development and capacity development to improve preventive measures, risk awareness and assessment including hazard analysis and vulnerability, knowledge development, including education, training and research, integration of disaster risk reduction in emergency response management, development of early warning systems including forecasting, preparedness measures and response capacities, improvement of communications.

The official institutionalization of activities and the introduction of informal settings in the field of Disaster Risk Reduction among the relevant national stakeholders have been necessary already from the early national attempts to act in line with the strategic approach and the goals set by the Hyogo Framework of Action 2005-2015 and Sendai Framework 2015-2030.

Today, our authorities are actively working on a draft laws of the Azerbaijan Republic on population and territories protection in emergency situations which will take on an official level for creating the National Platform.

The objective of the Law mentioned above will work for the all stakeholders and by extension it target groups at the central, regional and local levels, to gain:

- an increased awareness of other actors' activities in this area
- better coordination for the development and dissemination of knowledge, methods and data in this area
- a more efficient use of resources in this area
- greater opportunities for national and international collaboration
- tangible benefits of a strong national network

Now according to the principal national legislation for civil protection the basic goals of the civil protection system (protection of life, health and property of citizens from natural and manmade disasters) are met through working out prevention plans and programmes for all kinds of risks (natural and manmade), taking appropriate measures of preparedness and undertaking prevention, preparedness, response and recovery actions.

These plans and programmes are elaborated with all the component authorities in national, regional and local level. In a wider perspective, Azerbaijan, takes actively part on a wider policy and strategy planning for disaster risk reduction. In the past years, the idea of a coherent policy for Disaster Risk Reduction, as determined by its UN definition, has been diffused to a number of governmental policies and sectoral plans, under the responsibility of the relevant Ministries. The multi-sectoral co-ordination of public authorities in disaster prevention and mitigation measures, as part of the wider DDR management, has been one of the main responsibilities of the Ministry of Emergency Situations of the Republic of Azerbaijan from the beginning. Coordination activities engage a number of actors included in the forces and means of civil protection, such as: a) Specialized executives for civil protection at national, regional and local level who are assigned with the supervision of development and

application of plans, programs and measures of civil protection and co-ordination of all necessary actions, b) all governmental, regional and local agencies and public companies that are in charge at operational level for concrete actions of preparedness and response to disasters, c) Volunteer Organizations as well as specialized volunteers at national, regional or local level included in the planning made by the Ministry of Emergency Situations of Azerbaijan and assigned with the support of plans and actions of prevention, preparedness and response.

It is very important for Azerbaijan to understand the National capacity of the disaster management system strengthened to reduce unacceptable risks and improve response and recovery activities by adopting a comprehensive risk management CULTURE for governmental agencies and communities.

The main activities of the Government are in compliance with the Sendai Framework strategic goals and priorities for action and include the following:

1. To propose and to coordinate the national policy and the applying of good practices in the field of disaster protection;
2. To develop an Annual Working Program for its activities, priorities and tasks in compliance with the strategic goals in the field of disaster protection and disaster risk reduction;
3. To organize the development of a Disaster Risk Reduction Strategy;
4. To organize the preparation of the Sendai Progress reports and to send them to the UNISDR Secretariat;
5. To support the stakeholders in developing and integrating monitoring systems;
6. To support the development of methodologies for disaster risk analysis, assessment and mapping;
7. To support the Cabinet of Ministers in planning of financial resources for disaster protection and disaster risk reduction;
8. To analyze and give opinion to international documents in the field of disaster risk reduction and disaster protection;
9. To organize the development of guidelines for education and training in the field of disaster protection;
10. To organize and support information campaigns for different types of risks and how to react in case of disasters.

Another IMPORTANT goal of Azerbaijan national platform is also to pull together different actors and utilize the work that already has been done and coordinate better the work that is going to be done as far as natural disasters are concerned.

Management in emergency situations - the theory and practice:

- Science in reducing disaster risk - the theoretical foundations and developments in practice
- Climate change, extreme weather conditions and the necessary adjustments
- Raising awareness on the hazards and safety culture development (education, role of media, promotional activities)
- Early warning and capacity development for response to emergency situations and disasters

- International cooperation in disaster risk reduction

For the purposes of incorporating disaster risk reduction in educational policy and educational system “integrating education and DRR” project has been carried out. Four main cities and two regions along the Kur and Araz rivers have been identified due to the likelihood of earthquake, floods and landslides. During the project the government officials addressed the needs and concerns of children and the ways of incorporating aspects of disaster preparedness and risk reduction in the national educational curriculum and policies have been explored, specific guides have been elaborated and distributed to schools, sector managers and teachers in target communities have been trained, 8.100 children obtained the required knowledge and skills in disaster preparedness and risk reduction, Emergency School Committee and Sub-Committees were created with the direct participation of schoolchildren, special exercises on disaster simulations have been held.

Today we can officially talk about the benefits of all this story for Azerbaijan. Regarding the revised point of view from various experts we can emphasize the three main points:

Established a better common understanding of the Hyogo and Sendai Frameworks and NDRR on which lie the foundations of preparedness, response and recovery as integral to disaster risk reduction

Illustrated the role of different stakeholders in DRR, the integrated nature between the sectors in DRR and the importance of coordination between stakeholders.

Presented and discussed the concepts and guidances of Hyogo Framework and Sendai Frameworks for Action as well as the implementation and follow-up to the strategic goals and priorities for upcoming HFA 2

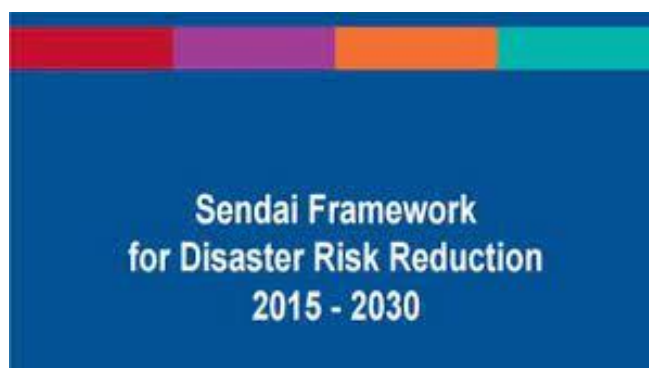
Also we should mark the points we need to update.

To propose the roadmaps for adapting the national legislations in the field of disaster protection;

Describe a pragmatic view on the mechanisms and objectives of the common border states during rescue operations

To support the stakeholders in forming the policy for further development of the National System for Early Warning and Notification of the Executive Bodies and the Population in case of Disasters and its integration with other systems.

We are looking forward to the interactive dialogue and fruitful discussions today.





14-18 March 2015
Sendai, Japan

BIBLIOGRAPHY

- ◆ Official web-page of the Ministry of Emergency Situations of the Republic of Azerbaijan.
Available at: www.fhn.gov.az
- ◆ Official web-page of Ministry of Ecology and Natural Resources of the Republic of Azerbaijan.
Available at: www.eco.gov.az/en
- ◆ www.azerbaijan.az
- ◆ <https://genprosecutor.gov.az/en/>
- ◆ Official web-page of the Republican Seismic Survey Center
Available at: www.seismology.az
- ◆ Official web-page of the Fund of Monitoring of Ecological Standards of Azerbaijan
Available at: www.azecology.az
- ◆ Country Study on Biodiversity of Azerbaijan Republic. Fourth National Report to Convention of Biological Diversity.
Available at: www.cbd.int/doc/world/az/az-nr-04-en.docSimilar
- ◆ NATO Seismic Hazard Assessment for Azerbaijan
Available at: http://presentations.copernicus.org/EGU2011-2738_presentation.pdf