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MAINSTREAMING OF DISASTER RISK ANALYSIS INTO GABALA DISTRICT DEVELOPMENT PLANNING

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BAKU 2015

Table acronyms

MoES	Ministry of Emergency Situations
MoA	Ministry of Agriculture
MoH	Ministry of Health
MCT	Ministry of Culture and Tourism
MICT	Ministry of Information and Communication Technologies
MENR	Ministry of Ecology and Natural Resources
MYC	Ministry of Youth and Sport
MEI	Ministry of Economy and Industry
AWM OJSC	Amelioration and Water Management Joint Stock Company
UNDP	United Nations Development Program
LDG	Local District Government
SSPF	State Social Protection Fund
Azerenerji	Azerenergy Open Joint Stock Company
Azersu	Azersu Open Joint Stock Company
MoT	Ministry of Transport
WUA	Water User's Associations

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Summary

Gabala district is located in a disaster prone part of Azerbaijan. Current natural and social conditions in Gabala make children very vulnerable. In addition preparedness level of schools is rather low that reduce capacity of local schools to meet hazards without human and material losses.

Mainstreaming, in the context of disaster risks is the practice of supporting communities through land planning and development. This means that regular development process should take into consideration disaster risks, reducing risk level in a particular area. “Risk informed development programming” is the approach, according to which development interventions (i.e. building new schools and hospitals, building roads, bridges and communication lines, expanding cities and communities, building factories etc.) support risk reduction measures. For example, road constructions take into account all hazards possible hazards (i.e. landslides, floods, rockfalls, etc.) and relevant measures are incorporated during the construction period to minimize possible impact in the future.

In addition, the disaster risks can be reduced implementing risk reduction activities in agriculture, food industry, school education, health, tourism and transport. Creation of early warning systems and other preparedness measures can also reduce risks.

Firstly, legal and institutional ground for DRR, roles and responsibilities of key stakeholders has been analyzed. Results show that DRR activities in Azerbaijan have rather solid legal and institutional background.

Gabala Work Group that was established as the working group of project made proposals for further development and planning that would reduce disaster risks. The group made proposals of basket of activities for the coming 2016-year, which will be included into the district budget. These proposals were approved by local government of Gabala and will be implemented in the coming 2016 year. Development activities reflected in various national programs and action plans were collected to the single “2015-2020 Gabala District Development Plan” that

include a broad palette of activities that will reduce disaster risks. This plan was analyzed in terms of DRR. According to the 2015-2020 plan, all the economic sectors, including tourism, agriculture, food industry will make their own contributions to reduce disaster risks. Additionally, Ministry of Education, Ministry of Emergency Situations, and Ministry of Health has their own plans to reduce disaster risks in schools.

Introduction

Gabala district of Azerbaijan is located in a disaster prone zone and is well known with its frequently observed hazards. The population density in the district is rather high (figure 1). Nearly 27% of total population comprised of children. Recently, most of gabala schools have rather low structural safety level. Schools are not well supplied with DRR equipment and, simultaneously, DRR preparedness of school staff is rather low. The previously conducted “Disaster Risk Analysis: Gabala district” study has identified high vulnerability of population in the region.

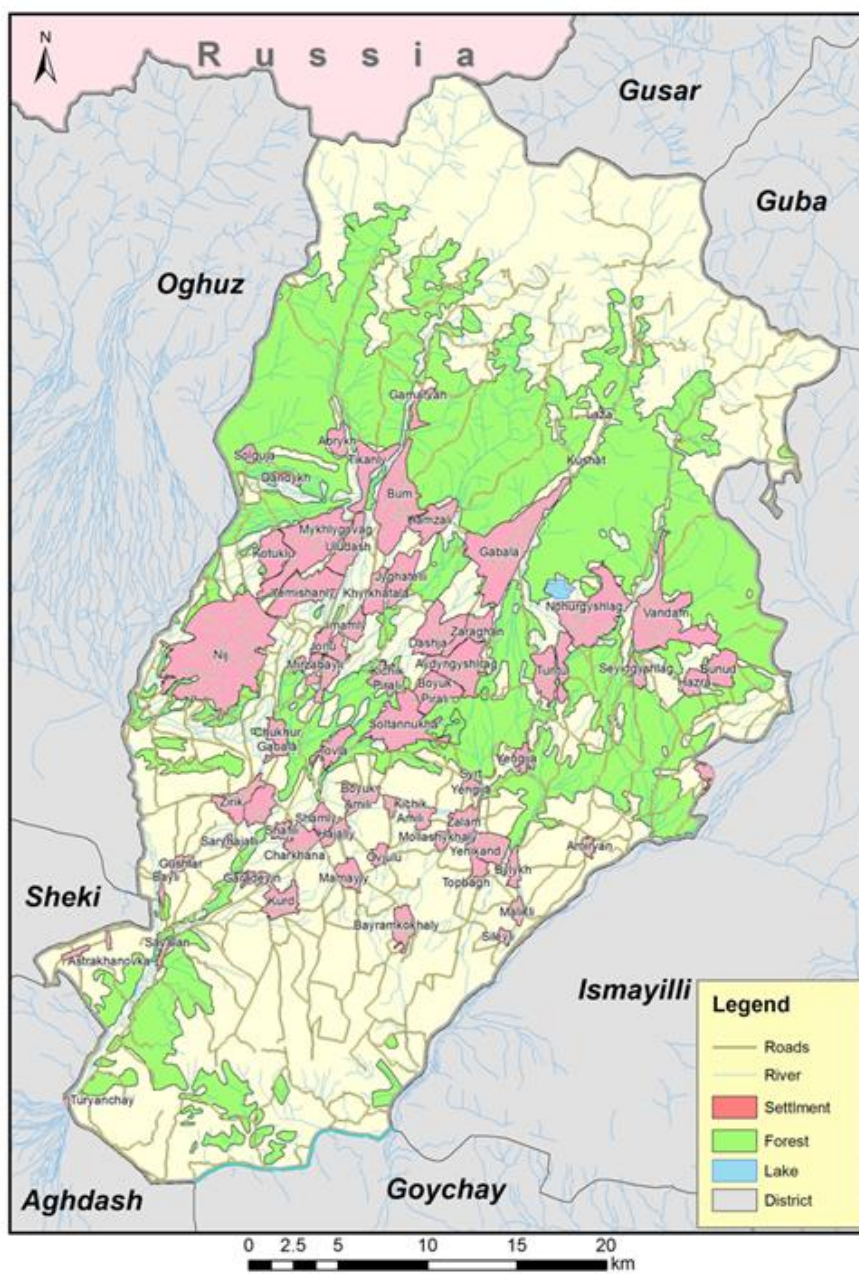
The main goal of the second stage of the project was to make child centered vulnerability assessment and to mainstream DRR activities into development process in Gabala district. DRR actions include both structural and non-structural activities. Many development processes in hazard-prone locations interact with disaster risk by either increasing or reducing exposure and vulnerability to hazards. This study includes results of the work done by DRR expert and Gabala Working Group.

Key principles for mainstreaming disaster risk reduction in development

Disaster is a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses. During the disaster, ability of the affected community is not enough to cope using its own resources. Disaster is a phenomenon that has man-made or natural origin and may cause great damage or loss of life if communities or societies has no capacity to manage situation.

Natural conditions in Azerbaijan expose the country to natural hazards. Main hazards observed in the area of Azerbaijan are floods, earthquakes, landslides and droughts. These phenomena every years cause serious damages to economy and lives of people. Over the last 20 years frequency and severity of

Figure: Gabala district map



hazards in the territory of the country has rather high and caused considerable material and life lost to communities.

Disasters can be understood as a joint contribution of hazards and susceptibility or vulnerability of communities or societies to be harmed. If community is not able to manage or cope with hazards, then disasters may be happened.

Natural Hazards that pose serious disasters can be managed through actions of people and communities. Strengthening of disaster management, institutions enable communities and people to cope with various types of disasters easily.

The development process, on the one hand may reduce risk for natural hazards, but on the other hand changes in land use planning, for instance, may increase vulnerability of the communities. Mainstreaming, in the context of disaster risks is the practice of supporting communities through risk conscious land planning and development. This means that regular development process take into consideration disaster risks, reducing level in a particular area. Political desire, correct management and strong Disaster risk reduction institutions are essential to provide mainstreaming. Any development process and land use planning should be closely integrated with disaster risk management.

The mainstreaming should be integrated into all sectors of economy. The key directions, where mainstreaming have to be penetrated are poverty reduction, industry, tourism, agriculture, infrastructure, education, environment, housing and health. Environmental management, water management, land use planning, gender issues, health issues, climate change adaptation is also main directions for mainstreaming.

Despite the permanent efforts of the government, poverty still remains as one of the main root causes of vulnerability for Gabala district population. According to the Second National Communication to UNFCCC, over the last 20 years, manifestation of climate change induced phenomena increase vulnerability even more. In several villages constricted dams and protection walls are gone due to flash floods. This makes basic living conditions in villages below the average country level.

Implementation of the State Program on Poverty Reduction and Sustainable Development in the Republic of Azerbaijan for 2008-2015 resulted in supporting

overall economic stability in the country, including Gabala district. This ensured economic growth and stability. Many types of private business has been involved to the development process. Agriculture and tourism were the main directions of development. Recently, tourism, food industry and processing of agricultural goods are being represented by several big enterprises. Newly built hotels and touristic attractions created new value for environment of Gabala, simultaneously making new employment opportunities. Recently, the area is considered one of the most important touristic destinations in Azerbaijan. Development of the tourism sector enabled to create new working places in the district and gave prospects for further development. Support of agricultural sector increased income for population, ensuring poverty reduction. However, current situation still require many efforts to reduce poverty in the district. These efforts should cover mainly processing, agricultural and tourism sectors, since they are main sources of income for local population. Hospitals, health facilities, schools and kindergartens need total improvement. Child Centered assessment confirms that condition of many schools does not enable to provide high quality education and increase risk for further disasters.

The disaster risks that have to be reduced through key activities in these directions given in the next table:

Table: Sectorial directions of mainstreaming for Gabala District

Agriculture	Providing insurance cover for products New employment opportunities for local residents/parents for whom? Construction of processing enterprises for agricultural products New crop developments resistant to hazards Moving agricultural activities to less hazard-prone zones Or protection of lands from hazards
Education	Construction of new disaster resistant village schools Developing school safety programs and Disaster Management Plan Including DRR into curricula Increasing awareness of children in terms of climate changes and disasters Simulation and drills and first aid trainings for students Increasing structural and non-structural safety of schools Provision of schools with basic sanitation means
Environment	Developing integrated schemes for natural resource management (e.g. water management, forest management) Developing climate change adaptation and mitigation programs; Planting of drought resistance tree species

Infrastructure	Building roads and flood resistance bridges in a disaster prone zones Making of new power, water, internet communications
Health	Construction of new and safe hospitals Establishing mandatory disaster insurance for population (including children) Encouraging Hospital Disaster management Plans
Safer Tourism	Construction of new hotels and recreational enterprises in a disaster resistant zones Making National Parks more user friendly Create new attractions around the villages
Housing	Developing disaster resistant Land Use Plans and Building Codes Enforcing zoning and building regulations Construction of pilot disaster resistant and environment friendly houses

Legislation concerning the structural and non-structural safety in Azerbaijan

Legal ground is one of the most important features for mainstreaming. Legal ground is an official legislation that supports DRR mainstreaming. National platforms can play a role in liaising with line ministries and other actors in shaping risk reduction policies.

Azerbaijani legal ground on DRR and safety of communities includes:

- ✓ Town Planning and Building Code What is the relevance of the national platform here?
- ✓ Law on Fire Safety
- ✓ Law on Civil Defense
- ✓ Law on Emergency Situation
- ✓ Law on Education
- ✓ General education concept (National Curriculum) in Azerbaijan Republic

Town planning and Building Code of Azerbaijani Republic were adopted in 2012. This document is the legal ground that stipulates principles of all town planning and building activities in the area of Azerbaijani Republic. This is the only document that provides legal ground for structural safety of buildings, including school buildings. The document also provides a legal ground for the roles of government, municipalities and companies with respect to building activities.

Article 4 and 5 shows main directions of the government policy and authority in the field of urban planning and building. Article 6 talks about authority of municipalities. Article 9 stipulates principles of fire and environmental safety of constructions and buildings. According to article 60, all the material used in buildings must be fire-resistant and reliable to prevent fires spreading out. Walls, doors, ceilings (article 61) and floors should be constructed from fire resistant materials and provide easy fire compartmentalization. In addition, the article suggests that fire compartments should be built and is easily accessible during the fires. According to article 62, stairs should be easily accessible and usable during emergency evacuations. Article 54 requires that materials used in constructions must be certified according to relevant requirements. All the construction materials that are used during the construction have to be approved by State Fire Control Service, since it is the main executive body that control fire resiliency of materials and buildings.

Law on Fire Safety provides legal ground for non-structural and structural fire safety of schools. The current law on fire safety was adopted in 1997. The law defines legal ground and principles for state fire protection and control. The law enforced for the provision of fire protection on the territory of the Azerbaijan Republic of human life and health, national treasures, all types of property.

Article 9 of the law on Fire Safety specifies that State Fire Service is a main governmental body that guarantees fire safety of all types of buildings. Article 5 stipulates functions of relevant authorities with respect to fire safety. According to this article, related executive bodies have following functions:

- ✓ Provide the implementation of fire safety measures at enterprises and managed areas;
- ✓ Establish and support fire service teams;
- ✓ Organize implementation of fire safety propaganda and educate population in the area of fire safety;
- ✓ Provide the strict compliance with norms, standards and rules of fire safety by the management of government authorities, enterprises and organizations as well as citizens;
- ✓ Organize the development and provide the execution of the fire safety measures;
- ✓ Organize training of population in fire safety measures.

Article 16 is about implementation of firefighting propaganda and training of population in fire safety measures. The article suggests that mandatory training on fire safety for children in pre-school age facilities and in public schools is provided in accordance with specialized educational programs by relevant state executive body.

Law of Azerbaijan Republic on Civil Defense stipulates the legal grounds and principles of civil defense in Azerbaijan Republic and regulates public relations in the field of civil defense. According to Article 5, the aim of civil defense is making of preventive measures to prevent emergencies, minimizing the possible damage and losses due to emergencies and mitigation of emergencies and their consequences. Article 11 stipulates that the Ministry of Emergency Situations of Azerbaijan Republic carries out awareness rising in the field of protection of population.

Laws of Azerbaijani Republic on Municipalities (e.g. Law on Water Economy of Azerbaijan) suggest that municipalities are the main institutions in municipality lands that may carry various types of DRR activities. According to law, hazard risks can be reduced by joint efforts of municipalities, communities and governments. Law on Management of municipality lands stipulate that municipality lands should be managed effectively this management should not cause high hazard risks.

Current DRR related institutional framework, roles and responsibilities to manage school safety

In order to implement comprehensive DRR strategy, the stakeholders that are involved in disaster risk management should be actively involved into integrated disaster risk management. Integrated Disaster Risk management is the continuous process in which interests of all stakeholders are protected and long-term vision guarantee sustainable development.

The institutional situation in Azerbaijan is characterized by independently operating ministries and entities that form a group of DRR related stakeholders with very limited coordination, mostly on an as-needed basis only. In some cases, these roles and responsibilities duplicate each other. In order to maintain

Integrated DRR management, it is necessary to study roles of these organizations more deeply and to develop new institutional DRR Management scheme in the future. Government, private sector, government, local communities, civil society are the main stakeholders in Gabala district that are interested in effective and integrated disaster risk

Roles and responsibilities of these organizations are given here:

✓ **State Commission on Emergency Situations (Coordination of assistance in Emergency Situations)**

State Commission on Emergency Situations is a derivative body of the Council of Ministries of Azerbaijani republic. This institution was established in 1992 before establishment of the ministry of Emergency Situations. Currently the commission work closely with district executive powers. The deputy Prime Minister is a chairman of the commission. The aim of the commission is coordinate activities of ministries and local government bodies during emergency situations.

✓ **District Executive Powers**

District Executive Powers is a local government body that governs territory of the districts. Every district executive power has designated local authority, which is in charge of representing districts during emergency situations. This local authority is a deputy head of the district executive power.

✓ **Ministry of Emergency Situations**

Ministry of Emergency Situation is the main legal agency in Azerbaijan that support DRR and disaster risk management. The Ministry is responsible for the following areas:

- ✓ Civil defense;
- ✓ Protection of population during natural and human made 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 imminence/occurrence of an emergency situations

The Ministry has services:

- State Fire Protection Service (Fire risk reduction and management)
- Fire Control Service (Assistance and Control over Fire safety)
- Civil Defense Troops (Rescue and evacuation in emergency situations)
- State Agency for Control over Construction Safety (Control over structural safety of public buildings during constructions, control over building standards)

○

✓ Ministry of Education

Ministry of Education is a central government body that implement national policy in education. The Ministry is responsible to include DRR related teaching materials and lesson plans into school curricula via national curriculum. Current school curricula well reflect government policy in terms of Disaster Risk Management. The Ministry of Education is also responsible for drafting future educational policies of government

✓ Ministry of Ecology and Natural Resources

The Ministry is main government body for protection of environment in Azerbaijan. Protected areas include the vast majority of all forested areas. These protected areas serve as a buffer for natural hazards and considerably reduce risks. The Ministry controls an overgrazing and logging in mountain regions of Azerbaijan that are the main causes of landslides and flash floods. In other words, the Ministry contributes to DRR through control over land use and protection of environment.

✓ Ministry of Health

The Ministry of Health is responsible to implement health policy and govern the vast majority of medical services in Azerbaijan. State Medical Emergency Service is responsible to carry out emergency health service during all types of disasters. Also, the Ministry contribute to DRR though improving health service. Low health service or its non-existence is a main driver for vulnerability.

✓ Municipalities

Municipalities is responsible to carry out land use management and development practices in all municipality lands. The laws of Azerbaijani Republic gives a rather well ground to municipalities to carry out all types of structural and non-structural activities in municipality lands. Construction of facilities, (e.g. schools, hospitals, bridges, roads) that reduces disaster risks may be carried out by municipalities. Municipalities are also in charge of initiating public control over use of natural resources.

✓ Non-Governmental Organizations and Civil Society Groups

Non-Governmental Organizations and Civil Society Groups are the independent organizations that represent public voice in disaster risk management activities. These organizations, in partnership with governments and major groups in society, have key roles to play in promoting the objective of sustaining resilient communities to avert or reduce the impact of these disasters. DRR related awareness rising, trainings, public control over the work of institutions are the main activities that is carried out by non-governmental organizations

✓ Private business

Gilan Holding and many small farming enterprises mainly represent private business. This group is mainly interested in establishing of comprehensive warden system and forecasting. Gilan Holding has a broad palette of activities that include tourism, husbandry, diary, food and juice production. The holding creates additional employment opportunities to local residents and reduces vulnerability of these people. The Gabala-Duruja highway is a big contribution not only to tourism and employment, but also serves as the main road for some mountain communities.

Gabala District Development Planning

Integrated Disaster Risk Management and mainstreaming should be an important part of national and local development plans in the regions, where disaster risks are very high. Unfortunately, in most cases state and local development plans in Azerbaijan does not take into account disaster risk reduction strategies. The state program on socio-economic development of the regions on 2014-2018 is the main document that provides ground for economic development of the regions. This

document includes economic development plans of regions, including Gabala District. The Program stipulates that socio-economic development of the country should provide sustainable and human centered development of the country. However, the program has no clear mainstreaming mode of disaster risk management activities. In addition, there is no one single document that would reflect all of the development activities for the next 4-5 years and only several documents that came from various institutions comprise these development activities.

UNICEF's Gabala Working Group that was re-established in May of 2015, started to collect these information with the aim of making one single document. This document include plans of various organizations, including ministries, private business, local executive power, and NGOs.

Moreover, state program on socio-economic development only includes activities that have to be carried out during the next three years. Therefore, Gabala working group started to gather information regarding the intended development activities for the next five years. In addition to development plan, the working group collected all the information regarding the all types of activities that have DRR relevance. This collected information includes the following information (annex 2):

- Awareness raising and educational activities
- Support of Agricultural sector
- Road and bridge constructions
- Construction of hospitals and medical points
- Construction of fire fighting points
- Planting of trees along rivers that cause flood risk
- Construction of new schools or restoration of schools
- Construction of gas supply pipelines in villages
- Constructions of public buildings that could be used during emergency situations
- Creation of school DRR groups in most vulnerable villages
- Activities that may reduce vulnerability of children and communities
- Construction of new hotels and all types of public buildings

In addition to development plan, Gabala Working Group and DRR expert identified most important problems of school and communities that would reduce vulnerability of children and increase resilience.

Vulnerability of development sectors to disasters in Gabala district

Agriculture

Risk assessment shows that most of the area of the Gabala district is located in a disaster prone zones. Because agriculture is closely depend on natural resource base, natural hazards may easily reduce or totally impact agricultural production. Climate changes, floods, landslide may effect agricultural production easily. For example, after the 2015-hail phenomenon fruit production in most villages was considerably decreased. According to estimations of Tikanli municipality, total damage from hail was nearly 120.000 USD. Negative agricultural practices may also exacerbate some hazards. For example, wrong plowing in upstream villages of Gabala often cause landslides. Therefore, mainstreaming disaster risk reduction into agricultural practices should be directed to reduce impact of hazards on agriculture and also reduce negative effects of agricultural activity on disaster risks. Various state programs supported by government of Azerbaijan consider sustainable use of lands and natural resources. E.g. “National Program On Environmentally sustainable social and economic Development” (2003) stipulates that management of soil resources in Azerbaijan should be managed in a sustainable way, which is in turn, would reduce landslides and soil degradation. Second National Communication of Azerbaijan Republic to the UNFCCC suggests continued work on selection and introduction of drought resistant and highly productive wheat and vine varieties. Introduction of these plants would reduce disaster risks decreasing dependency of people on water related hazards. Development and implementation of government programs to facilitate growth in the manufacture of competitive products by processing plants in the agricultural sectors would increase capacity of local population considerably reducing poverty. Within these programs, private sector made considerable improvement in agricultural sector, simultaneously reducing people’s vulnerability to hazards

and making new employment opportunities. Considered specific activities in Gabala District for the 2015-2020 years are given in the annex 2.

Support to creation of large farmer enterprises in Gabala district is one of the main activities that is considered for the next 3 years. This activity may increase competitiveness local farmers and opening new workplaces that in turn will reduce poverty in the region. These activities are supported by aforementioned development programs. Over the years of 2014 and 2015, State Program of Socio-Economic Development of the Regions was successfully contributed to the development of Agriculture in Gabala. Official information of the Ministry of Agriculture confirm that several farming companies have successfully increased productivity in production of agricultural goods.

In order to increase resilience in agricultural sector, the government of Azerbaijan and Islamic Bank are going to invest to construction of Yengica Water Reservoir. The total usable capacity of this reservoir will be 51×10^6 m³ of water that will allow to irrigate additional 10.000 ha of land. This will definitely reduce pressure of overgrazing on mountain slopes giving new prospective for fodder production in downstream areas.

According to the development plan, during the 2016-2018 major agricultural works will be done in Dizakhli, Aydingishlagh and Garadeyin settlements, where new amelioration-irrigation works is considered. These amelioration and irrigation works include drilling of sub artesian wells in aforementioned villages. Also, Ministry of Agriculture is going to implement new pasture and land use measures to stop erosion in cultivated areas and pastures. Table 1 illustrate all activities in agriculture in Gabala District over the period of 2016-2020.

Table 1: Planned activities in Agricultural sector (2016-2020)

Action	2016	2017	2018	2019	2020	Organization	DRR element
To support the development of livestock-breeding, wheat production, grape-growing, fruit-growing (gardening) and vegetable-growing	+	+	+			MoA, LDG	Poverty reduction
To strengthen the material - technical base of the infrastructure serving the development of the production of agricultural product	+	+	+	+	+	MoA, LDG	Poverty reduction, Capacity building
Land use improvement in the Gabala city			+	+	+	IDG	Reduced hazard risks
Support involvement in entrepreneurship of vulnerable groups of population, including youth, woman, IDPs and disabled	+	+	+	+	+	MEI	Reduced poverty, increased capacity for disasters
Support to creation of large farmer enterprises						MoA, MEI	Reduced poverty, increased capacity for disasters
Continue works towards implementation of measures required for recirculation of eroded and saline lands owned by agricultural producers with implementation of technical and biological measures	+	+	+	+	+	MoA	Reduced risk for landslides

Tourism

Existing of reliable income sources makes population less vulnerable to natural hazards. 2002-2005 and 2014-2016 State Programs on development of tourism, as well as 2009-2015 State Program of Socio-Economic Development of the Regions of Azerbaijan contributed to the development of the tourism in all regions, including Gabala district. Over the last 20 years tourism became a second major income source for local population of Gabala.

As it has been noted, many hotels and touristic attractions, restaurants were built in Gabala District. House renting became very popular for local residents as it gives considerable income relative to other sectors of economy. Due to touristic developments, land prices in Gabala District increased for more than 10 times over the period of 2000-2014. According to various actions plans, tourism

potential of the district will be increased for than 2015-2020 years. This includes construction of roads and tracks, highways, skiing ways etc. E.g. construction of hotels in 2016-2020 near the Nohurqishlaq reservoir, construction of water reservpoir close to Yengica village, increase length of the mountain high ways in the district will give new values to tourism sectors, reducing poverty and vulnerability of people.

Health and Sanitation

Health issues, access to running water and sanitation issues are the most important features of DRR activities. Without proper sanitation conditions and environment it is not possible to provide safe living environment. Unfortunately, most of the schools in Gabala district still lack of sanitation facilities. Gabala Work group proposed local government to provide several schools with running water during the next 2016 year.

All the kindergartens in Gabala have medical staff. However, there is no qualified medical staff in schools.

Gabala working group, studying recent conditions, proposed to open medical vacancies in several schools in 2016. According to the initiative of the group medical vacancies should be opened in all schools, where more than 300 children receive education. Bum, Mikhliqovaq, Tikanli, Nic schools are the schools, where medical vacancies should be opened firstly.

Almost all the medical points in villages are rather old and need to be repaired (Annex 1). Working group identified this as the factor that increases disaster risks. However, repair of village medical points are not included to the development plans.

According to regional development plan, during the next three years construction of the new building for Gabala District Central Hospital is considered. Construction of this facility will contribute to reduce vulnerability and increase resilience of local communities to hazards. Also, during the next five years, construction of health facilities in Yengica, Tuntul and Laza villages is considered.

In addition, within the coming years, government of Azerbaijan is going to launch compulsory social insurance system in all regions that will insure local community members from natural and man made disasters as well.

Water resource and flood management

As it has been noted, waterborne hazards, mainly floods are the common factors that threaten life and property of people in the region. In addition, droughts become second major waterborne issue in the district. In order to reduce risk of these hazards, a broad palette of activities has been carried out. Within 2009-2015 State Program of Socio-Economic Development of the Regions of Azerbaijan many types of water supply networks, bridges and roads have been built in the district that considerably reduce risk of floods and droughts. Additional activities will be carried out for the next five years according to various state programs and local plans. These activities include construction of water supply networks, construction of bridges and roads, as well as implementation of integrated basin management approaches in small river basins. Early warning system, which is going to be built in 2016, will considerably reduce risk of floods¹. In addition, local government is also going to restore and make protection walls around the schools. Gabala working team proposed to increase protection of several schools in terms of floods and heavy rains.

The major expected activity that would reduce water stress is to construct flood protection dam for Gabala city. Also, in flood risky zones of Bum and Vandam villages, forestry department will plant riverine forest belts that will considerably reduce flood vulnerability.

“Integrating Climate Change Risks into Water and Flood Management by Vulnerable Mountainous Communities in the Greater Caucasus Region” project that is being implemented in Gabala by UNDP, aims at modernizing the water and flood management and reducing the impact of climate induced flooding and

¹ Rovshan Abbasov (2013) Identification Of Institutional Capacity And Needs For Flood And Water Resources Management In Azerbaijan. UNDP document. Available at: <http://wrm.az/reports.html>

water stress in the Gabala district. Through this project, launching of Flood Early warning Systems for the Oguz-Gabala region is considered. This Early warning system will considerably reduce vulnerability of local communities and schools, since these people will have information about the possible floods by 48 hour in advance.

In addition, according to new institutional framework that was developed through the aforementioned UNDP project, consider establishment of additional Water Users' Associations in villages, where local communities and schools lack of water. Several WUA'a were already established and closely work with local irrigation department.

Additional information regarding the DRR mainstreaming into water management can be found in the table 2.

Table 2: Planned activities in 2016-2010 with respect to water management

Action	2016	2017	2018	2019	2020	Organization	DRR element
To continue works on improvement of the water supply and sanitation systems of Gabala town		+	+	+	+	"Azərsu" OJSC	Improved sanitation and access to safe water
To continue amelioration-irrigation works for improvement of the water supply of the lands of the district, including drilling of sub artesian wells in Dizakhli, Aydingishlagh and Garadeyin settlements		+	+	+	+	AWM OJSC, lg	Access to running water, improved sanitation, improved irrigation in agriculture, reduced poverty
To continue flood protection works in the district.	+	+	+	+	+	AWM, LDG	Reduced flood risks
Continue plantation works along rivers in flood risky zones of Bum and Vandam villages	+	+	+	+	+	MENR	Reduced Disaster Risks, Increased preparedness
Develop and implement the "National Plan for Integrated Water Management" (Action Plan)			+	+	+	MENR, AWM,	Reduced Flood Disaster Risks, Increased preparedness
Strengthen control over use of water facilities	+	+	+	+	+	Azeren erji",	Improved access to safe water, improved sanitation

						"Azersu" " OJSC	
Establish a monitoring system for water facilities and hydraulic structures	+	+	+	+	+	MoES	Improved monitoring and forecasting, reduced disaster risks
River bed clean-up from mudflow debris, bank protection, river bed regulation, reinforcement and heightening of existing protective dams	+	+	+	+	+	AWM	Reduced disaster risks, reduced vulnerability, improved protection
Determine sources of natural emergency situations for the district, prepare their hazard and risk maps	+	+	+	+	+	MoES, UNICEF	Reduced Disaster Risks, Reduced vulnerability, Improved warden, increased awareness
Launching of Flood Early warning Systems for the Oguz-Gabala region		+	+			UNDP	Reduced Flood Disaster Risks, Increased preparedness
Construction of protective dam in upper part of Gabala city	+	+				AWM	Reduced flood risk in Gabala district
Construction of water reservoir in Bum village			+	+		AWM	Reduced water stress
Construction of Water Reservoir in Yengica village		+				AWM	Reduced water stress, reduced flood vulnerability in downstream villages
Construction of flood protection dams in Tikanli and Mikhlogovaq villages		+	+	+		AWM	Reduced flood risks

Infrastructure

Well-developed Infrastructure is a most important feature that increases capacity and structural preparedness of people against disasters. Good hazard resilient infrastructure also provides people access to information during the hazards. Over the last 20 years many types of government activities supported infrastructure development in the district. Roads, connections, Internet and electric lines were constructed to the remote villages. However, the increasing size and density of infrastructure, particularly those providing important services, pose challenges for reducing disaster risks. E.g. electric and phone lines to mountain villages are very vulnerable to floods.

Various government programs and action plans that support a broad palette of activities directed to the improvement of infrastructure for the next 5 years. According to these plans electric lines will be replaced with more reliable cables and networks. More detailed information about these plans is given in annex 1.

Gabala Work Group who works closely with government agreed on several activities related to repair and maintenance of schools during the next 2016 years. These activities are going to be included into the 2016 district budget. These activities would considerably reduce child risk in given villages.

It is very important to note that some of these activities especially those related to restoration of schools are proposed by the Gabala WG.

In most of villages school buildings are old, equipment is outdated and there is an urgent need to build new schools in 41 villages (Annex 1). In order to increase resilience of schools 23 new school buildings were constructed since 2004.

The most important activities related to reduction of child vulnerability is the restoration and constructions of schools and kindergartens. For example, construction of new general Secondary School for 220 students in Ziring village will enable school children to be in more reliable environment. Studying condition of schools, Gabala Work Group also proposed to build new school buildings in Bylykh, Mamayli and Zargarli villages. This and many other construction activities are included into 2016-2020 development plans.

Other activities related to infrastructure development are given in the table 3.

Table 3 : Planned activities in 2016-2010 with respect to infrastructure

Action	2016	2017	2018	2019	2020	Organization	DRR element
School building construction in Bilix village	+	+	+			LDG	Reduced disaster risk
School building construction in Mamayli village	+	+	+			LDG	Reduced disaster risk
School building construction in Zargarli village	+	+	+			LDG	Reduced disaster risk
Construction of the town full secondary school № 5 for 360 students in the Gabala city	+	+	+	+		MoE, LDG	improved teaching environment, reduced disaster risks for schoolchildren
Construction of new kindergarten in the Gabala city	+	+	+	+		MoE, LDG	improved teaching environment, reduced disaster risks for kids
Construction of new general Secondary School for 220 students in Ziring village		+	+	+	+	MoE, LDG	improved teaching environment, reduced disaster risks for schoolchildren
Construction of general secondary school for 80 students in Yengija village	+	+	+	+		MoE, LDG	improved teaching environment, reduced disaster risks for schoolchildren
Construction of full secondary school for 180 pupils in Muskurlu village		+	+	+		MoE, LDG	improved teaching environment, reduced disaster risks for

							schoolchildren
Construction of primary school for 80 pupils in Gabala Muskurlu village, town nursery-kindergarten N 4		+	+	+		MoE, LDG	improved teaching environment, reduced disaster risks for schoolchildren
Construction of town nursery-kindergarten N 4		+	+			MoE, LDG	improved teaching environment, reduced disaster risks for schoolchildren
Construction of the road and bridghes among Nij-Mikhligovag-Uludash-Tikanli-Abrikh vilages;	+	+	+			MoT, LDG	Poverty reduction, capacity building
Construction of bridges between Bum and Tikanli villages						MoT, lg	Capacity building
Asphalt paving on inter-village road between Imamli and Xırxatala;			+	+	+	LDG	Poverty reduction, capacity building
İmproving the electric power supply of the Gabala town and all vilages, including the construction and reconstruction of the electric power supply lines.	+	+	+	+	+	"Azərenerji" OJSC	Capacity building
Construction of the centralized heating supply for the Gabala town.		+	+	+	+	"Azəristilik" OJSC	Reduced risk for landslides and floods
Construction of new gas supply pipelines for Bum, Mikhligovaq, İmamli, Mirzabayli, Uludaş and Tikanli vilages	+	+	+	+	+		Capacity building for schools, rduced risk for disasters
To continue works on improvement of the gas supply of the district	+	+	+	+	+	SOCAR	Capacity building for schools, reduced risk for disasters
To continue works on improving the communication and information services of the district	+	+	+	+	+	MCİT	Better warning capacity
To draft a comprehensive plan for Gabala City.		+	+			LDG	Reduced hazard risks
Major repair of the schools in Cigatelli, Bum, Mirzabayli, Dizakhli vilages	+	+	+	+	+	MoE	improved teaching environment, reduced risks for disasters
Continue improvement of road infrastructure in the city of Gabala	+	+	+	+	+	LDG	Improved communications, reduced vulnerability
Continue works to improve communication and information services in the city of Gabala	+	+	+	+	+	MİCT	Improved communications, reduced vulnerability, improved warden system
Launching of Flood Early warning Systems for the Oguz-Gabala region		+	+			UNDP	Reduced Flood Disaster Risks, Increased preparedness
*Restoration of Tikanli School Roof		+				LDG	Reduced child vulnerability
*Restoration of the entrance floor in Mirzabayli School		+				LDG	Reduced child vulnerability
*Fencing of mudflow road for Mirzabayli school		+				LDG	Reduced child vulnerability
*Restoration of Bum school roof		+				LDG	Reduced child vulnerability
*Restoration of Mikhliqovaq school		+				LDG	Reduced child vulnerability
*Restoration of Tiklanli Middle school		+				LDG	Reduced child vulnerability
Construction of Uludash-Tikanli-		+				MoT	Reduced flood risk

Mikhligovaq road							
Improvement of electric lines for İmamli village		+				Azerenerji	Reduced flood risk
Construction of internet line for Uludash village		+				MoT	Reduced flood risk
Construction of flood protection dam in Gabala town							Reduced flood risk

*Proposed by Gabala Working group

Conclusion

Mainstreaming of DRR into Gabala District Development plan is high priority for local government. Legal and institutional aspects of DRR have been analyzed. The analysis shows that DRR mainstreaming in Azerbaijan has rather solid and legal ground. Many types of National programs implemented over the last 20 years show high desire of government to reduce child related risks in the region. Over the last 20 years huge efforts were made to reduce vulnerability of children and improve living conditions in villages.

Various government programs related to rural development and poverty reduction has been analyzed. The information related to economic development of the next 5 years (2016-2010) has been collected and brought into one single document. Additionally, Gabala Work Group who works closely with government agreed on several activities related to repair and maintenance of schools during the next 2016 years. These activities are going to be included into the 2016 district budget. These activities would considerably reduce child risk in a given villages.

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Annex: Main priorities for DRR in residential areas of Gabala district

Residential area	Needs			
	School	Roads	Medical point	Administrative buildings
Abrykh		Construction	Repair	Repair
Amirvan		Repair of internal roads	Repair	Repair
Aydyngyshlag	Construction	Repair of internal roads	Repair	Repair
Bayli	Construction	Repair of internal roads	Repair	Repair
Bayramkokhaly	Construction	Repair of internal roads	Repair	Repair
Boyuk Amili	Repair	Repair of internal roads	Repair	Repair
Boyuk Pirali	Construction		Repair	Repair
Bum	Construction		Repair	Repair
Bunud	Construction	Repair of internal roads	Repair	Repair
Bylykh	Construction		Repair	Repair
Charkhana			Repair	Repair
Chukhur Gabala	Repair		Repair	Repair
Corlu	Construction		Repair	Repair
Dandykh	Construction	Construction of a new road	Repair	Repair
Dashja		Repair of internal roads	Repair	Repair
Dizakhly			Repair	Repair
Gabala			Repair	Repair
Gamarvan			Repair	Repair
Garadeyin	Repair		Repair	Repair
Gushlar	Construction	Repair of internal roads	Repair	Repair
Hajally	Repair		Repair	Repair
Hamzali	Construction		Repair	Repair
Hazra	Construction	Repair of internal roads	Repair	Repair
Imamly			Repair	Repair
Jyghatelli	Construction		Repair	Repair
Khyrkhatala	Construction	Construction of a new road	Repair	Repair
Kichik Pirali		-	Repair	Repair
Kotuklu			Repair	Repair
Kurd			Repair	Repair
Laza	Construction		Repair	Repair
Malikli	Repair	-	Repair	Repair
Mamayly	Construction	-	Repair	Repair
Mammadaghaly	Construction		Repair	Repair
Mirzebeyli	Construction		Repair	Repair
Mollashykhaly	Construction		Repair	Repair

Mykhlygovag	Construction	---	Repair	Repair
Nij			Repair	Repair
Nohurgyshlag			Repair	Repair
Ovjulu			Repair	Repair
Saryhajalli	Repair		Repair	Repair
Savalan			Repair	Repair
Seyidgyshlag	Repair		Repair	Repair
Shafili		-	Repair	Repair
Shamly	Construction		Repair	Repair
Sileyli	Construction	--	Repair	Repair
Solguja		--	Repair	Repair
Soltannukha			Repair	Repair
Syrt Yengija	Repair		Repair	Repair
Tikanly	Construction	---	Repair	Repair
Topbagh		-	Repair	Repair
Tovla			Repair	Repair
Tuntul			Repair	Repair
Uludash		---	Repair	Repair
Vandam			Repair	Repair
Yemishanly		-	Repair	Repair
Yengija	Repair		Repair	Repair
Yeni Dizakhly	Repair	-	Repair	Repair
Yenikand			Repair	Repair
Zalam	Construction		Repair	Repair
Zaraghan	Construction		Repair	Repair
Zergerli	Construction		Repair	Repair
Zirik		-	Repair	Repair