

Georgia

Disaster Risk Reduction Capacity Assessment Report



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List of Acronyms

ASB	Arbeiter-Samariter-Bund
BBD	Basic Data and Directions
CADRI	Capacity for Disaster Reduction Initiative
CBRN	Chemical, biological, radiological, and nuclear threat
CENN	Caucasus Environmental NGO Network
CVGs	Community Volunteer Groups
DG ECHO	European Commission's Directorate-General for Humanitarian Aid and Civil Protection
DIPECHO	Disaster Preparedness ECHO
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EIA	Environmental Impact Assessment
EMA	Emergency Management Agency
EMD	Emergency Management Department
ENP	European Neighbourhood Policy
ENPARD	European Neighbourhood Programme for Agriculture and Rural Development
ESIDA	Education and Scientific Infrastructure Development Agency
EU	European Union
EWS	Early Warning System
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GEL	Georgian National Currency Lari
GEOSTAT	National Statistics Office
GHG	Greenhouse gas
GIS	Geographic Information System
GRCS	Georgia Red Cross Society
HFA	Hyogo Framework for Action
IASC	Inter-Agency Standing Committee
ICZM	Integrated Coastal Zone Management
IDP	Internally Displaced Person
IHR	International Health Regulations
INSARAG	International Search and Rescue Advisory Group
IOM	International Organization for Migration
JNA	Joint Needs Assessment
LEPL	Legal Entity of Public Law
MCOF	Migration Crisis Operational Framework
MENRP	Ministry of Environment and Natural Resources Protection
MES	Ministry of Education and Science
MIA	Ministry of Internal Affairs
MISP	Minimum Initial Service Package
MOLHSA	Ministry of Labour, Health and Social Affairs
MRA	Ministry of IDPs from Occupied Territories of Georgia, Refugees and Accommodation
MRDI	Ministry of Regional Development and Infrastructure
NCDC	National Centre for Disease Control and Public Health
NERP	National Response Plan for Natural and Manmade Emergency Situations
NEA	National Environmental Agency
NEAP	National Environmental Action Programme of Georgia
NGO	Non-governmental organization
OC	Operations Centre
OECD	Organisation for Economic Co-operation and Development
OSOCC	On-site Operation Coordination Centre
PDO	Public Defender's Office

PFA	Psychological First Aid
PM	Prime Minister
PPRD East	Programme for the Prevention, Preparedness and Response to Man-made and Natural Disasters in the ENPI East Region
RDFG	Association Rural Development for Future Georgia
RECC	Regional Environmental Centre
SDC	Swiss Development Cooperation
SOP	Standard Operating Procedure
SSCMC	State Security and Crisis Management Council
TPDC	National Teacher Professional Development Centre
TSA	Targeted Social Assistance
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for Coordination of Humanitarian Affairs
WASH	Water, sanitation and hygiene
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

Context

In Georgia, natural hazards (floods, flash floods, landslides, mudflows, snow avalanches, earthquakes, hail, heavy rains, storm winds, and droughts), coupled with significant levels of exposure and vulnerability, have a substantial negative impact on the national economy. According to the Government, over the last 40 years 70% of the territory of the country experienced natural hazards of hydro-meteorological and geological origin; economic losses exceeded USD 14 billion¹.

Key Findings

In this context, the prevention of and preparedness for disasters gradually evolved as a priority for the Government, and progress in addressing disaster risk issues was made across various development sectors. However, traditional approaches focused on emergency response are still prevalent. The concept of disaster risk reduction (DRR), as primarily a development issue is rather new for national and local authorities in Georgia. There is limited awareness of the potential consequences of the lack of risk-informed investment and planning on the economic and human development of the country.

A dedicated legislative and policy framework for disaster risk reduction has to be substantially and consistently strengthened and enforced. Institutional arrangements and multi-stakeholder coordination mechanisms require reinforcement. Technical, human and financial capacities exist, however they need better coordination, prioritization and systematization across all relevant sectors, governance levels and institutions. Climate risk management and climate change adaptation efforts require better alignment at institutional, policy and programme implementation levels, as climate and disaster-related risks can no longer be addressed separately.

Overall, the assessment revealed that there is high Government willingness and potential to move from a reactive approach of disaster response to a more proactive disaster risk reduction approach. Across the board, governmental and non-governmental institutions showed interest to focus not only responding to disasters as they occur, but to consider risk reduction within the overall development planning of the country. However, national leadership needs to be backed up by concrete actions, dedicated capacities, enabling legislation and necessary resources aimed at reducing existing risks, avoiding creating new risks, and improving preparedness for efficient response to disasters.

In Georgia, national, local and sectorial development planning is not consistently informed by multi-hazard risk assessment. A unified hazard mapping and risk assessment methodology regulated through a dedicated legal framework is lacking. Hazard data collection and mapping remains predominant, and is being conducted in a sectorial or project-based manner. While an official updated and detailed national risk profile of Georgia does not exist, an Atlas on Natural Hazards and Risks in Georgia is available, although not sufficiently popularized and used. Decision makers seem to need improved understanding of hazard and risk concepts and their application.

The assessment indicated that several factors contribute to the sub-optimal use of existing hazard and risk data: potential users lack information about available datasets and database/portal; data is scattered across technical institutions and is not collected, systematized, customized and regularly updated in one central repository; in certain cases, data is not made available to users in a timely manner or in a usable, understandable or customized form; certain respondents feel that available data is not sufficiently accurate, reliable or updated.

A number of stakeholders are implementing education activities in schools and pre-school institutions both in terms of training teachers and students on risk reduction, and in terms of disaster preparedness. A systemic approach to these initiatives remains to be strengthened. The variety and quality of postgraduate education on DRR is rather low, with little incentives for the young generation to pursue such specialized programmes. Similarly, institutionalized and regular staff development and professional training on DRR does not exist; training programmes on hazard and risk identification and assessment are mostly externally funded and ad-hoc. Most of the responders named frequent staff rotation as a challenge for awareness raising within institutions and decision makers.

In Georgia, many sectorial policies, programmes and projects indirectly contribute to reducing underlying risk factors and building community resilience, most notably in the areas of environmental protection, climate change, and natural resource management. However, disaster risk reduction is not explicitly integrated or referenced in sectorial policies or programmes, and only a number of localized projects specifically target disaster risk reduction.

Inter-sectorial coordination among various institutions and stakeholders engaged in programmes that contribute to risk reduction is not always effective, and institutional and individual mandates, responsibilities and commitments are not always clear. There is a risk of duplication among various policies in the absence of coordination and collaboration among different government ministries, technical agencies, and other national stakeholders, which is translated into projects and programmes being implemented, monitored and accounted for in a scattered manner.

Overall, disaster preparedness and response is well established in Georgia. A series of laws, government decisions and other normative acts form the legal basis for the performance of disaster preparedness and response functions by the relevant mandated institutions, including a new law on Civil Safety (2014). However, capacities for coordination for emergency preparedness and response require improvement. Particularly, effective coordination among line ministries and inter-departmentally needs to be strengthened and established as a regular practice. There is an expressed need to develop an inclusive, participatory and well-oriented leadership to facilitate the interest and commitment of all stakeholders for preparedness. To this end it is important to strengthen the common tools and agreed processes for needs assessments, information management, planning, monitoring and evaluation and to work in a spirit of inclusivity and partnership where all stakeholders are accountable for what they do.

About the Report

The present report provides an in-depth analysis of capacity strengths and gaps related to disaster risk reduction in Georgia, based on a tested methodology developed by UN agencies members of the Capacity for Disaster Reduction Initiative (CADRI)². The findings of the assessment are structured according to the five Priorities for Action identified in the Hyogo Framework for Action (HFA): national and local ownership for DRR; risk identification, assessment, monitoring and early warning; knowledge, innovation and induction for a culture of resilience; reducing underlying risk factors; and disaster preparedness for effective response.

The analysis was based on results of semi-structured interviews based on the CADRI DRR Capacity Assessment questionnaire with 58 organizations and more than 130 individuals at central and local levels (3 regions), including Government representatives, UN agencies, donors, NGOs, academia, and other national stakeholders. The results of interviews were complemented by analysis of extensive documentation (legislation, strategies, policies, action plans, and programme and project documents).

The present report provides a set of capacity development recommendations to address gaps and challenges identified for each of the five HFA Priority Actions. The level of proposed actions

took into consideration the country's real capacity to implement them within three to five years. The recommendations will form the basis for the development of the National Plan of Action for Capacity Development in Disaster Risk Reduction.

I. Introduction: Context and Rationale of the Capacity Assessment

Georgia is characterized by high frequency and risk levels of disasters that pose significant threat to different sectors of economy as well as human development. The Government of Georgia has taken a series of steps in addressing disaster risk in the country aimed at strengthening the institutional and legislative setup of the national disaster risk reduction (DRR) system, improving disaster preparedness and coping capacities at local and central levels, and ensuring disaster risk reduction needs are further integrated across development strategies, plans and frameworks.

While DRR is gradually becoming one of the key priorities for the Government, and there has been an obvious progress in addressing prevention issues, traditional approaches focused on emergency response - rather than risk reduction - influence both policy and practice. Government recognizes the need for sound advice and guidance to enhance the national DRR system in order to define a roadmap to overcome capacity gaps, particularly in terms of prevention and risk reduction.

In this context, the Ministry of Environment and Natural Resources Protection of Georgia, on behalf of the Government, approached the UN Country Team with a request for support in conducting a capacity assessment of the national DRR system in Georgia. The Capacity for Disaster Reduction Initiative (CADRI), an inter-agency partnership composed of UNDP, UNOCHA, UNICEF, WFP, FAO and WHO, was approached by the UN Resident Coordinator to provide technical support in conducting the capacity assessment to the Government and UN Country Team. Based on a methodology applied in 17 countries to date, CADRI provides support in capacity development for disaster risk reduction including preparedness for emergency response to UN Resident Coordinators, UN Country Teams and various existing coordination mechanisms with the aim to reinforce their capacities in assisting the Governments and other national stakeholders to develop frameworks for capacity development³.

The DRR capacity assessment mission was conducted from 10 to 21 March 2014, under the leadership of the Government and the UN Country Team. The deliverable of the assessment mission was the Disaster Risk Reduction Capacity Assessment Report, presented here. The Report will inform the development of the National Plan of Action for Capacity Development in Disaster Risk Reduction in Georgia.

II. Capacity Assessment Methodology and Process

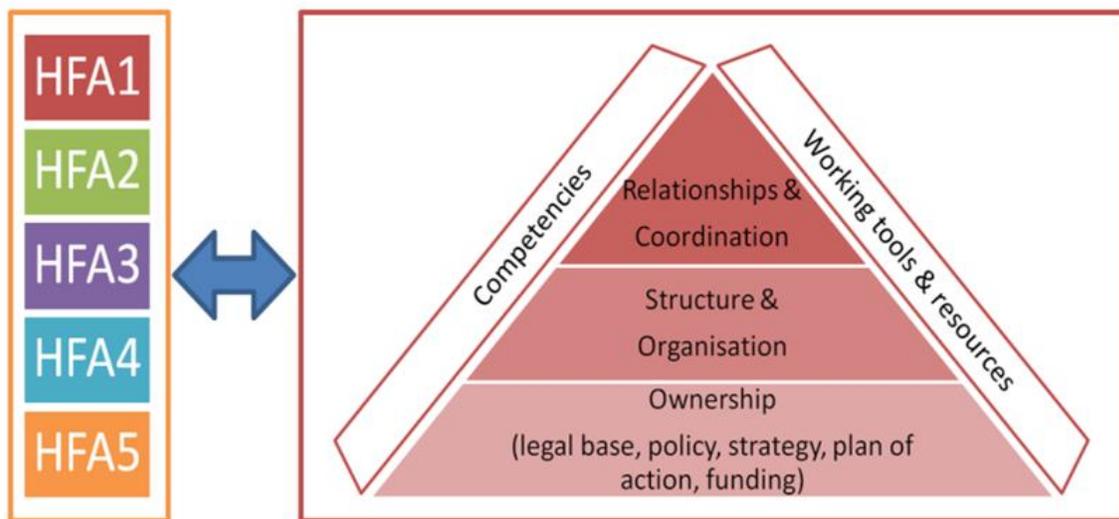
1. Methodology

The capacity assessment was carried out based on a tested methodology developed by UN agencies members of the CADRI initiative. The purpose of the capacity assessment is to identify country capacity strengths and gaps related to disaster risk reduction, understand required capacities and propose recommendations on how these capacities can be achieved.

The CADRI DRR capacity assessment was conducted with a focus on national and local capacities for DRR using the indicators set for the implementation of the HFA and the five technical areas of capacity development: ownership; institutional arrangements; competencies; working tools and resources; and relationships (see Figure below).

For the HFA Priority Action 1, the Capacity Assessment focused on national ownership, institutional arrangements and legal base for DRR as a basis for creating the enabling environment for DRR in order to guarantee the sustainability of the capacity development process. For the HFA Priority Actions 2-5, the Capacity Assessment looked at capacities related to institutional arrangements, competencies, working tools and resources, and relationships for DRR.

A set of capacity development recommendations were proposed to address any gaps and challenges identified for each of the HFA Priority Actions. The level of proposed actions took into consideration the country's real capacity to implement them within three to five years.



The CADRI Disaster Risk Reduction Capacity Assessment Tool is structured according to the Hyogo Framework for Action (HFA) Priorities, and evaluates national capacities for DRR against a set of indicators related to five technical areas of capacity development

2. Assessment team

The DRR capacity assessment team was composed of representatives of Government, UN agencies at global and regional levels, UN Country Team, NGOs and the Georgia Red Cross. The assessment mission was led by Hachim Badji, CADRI Programme Coordinator (UNDP).

Assessment team members included: Ioana Creitaru (UNDP Geneva); Armen Grigoryan (UNDP New York); Ashot Sargsyan (OCHA – Regional Office for Caucasus and Central Asia); Ute Sylvia Enderlein (WHO – Regional Office for Europe) ; Natalia Zakareishvili (UNFPA Georgia); Nino Antadze (UNDP Georgia); Nino Gvetadze (UNICEF Georgia); Nino Mamulashvili (WHO Georgia); Nino Shushania (IOM Georgia); Ia Mirazanashvili (FAO Georgia); Giorgi Gaprindashvili (NEA/MENRP); Ia Khutsishvili (EMD/MIA); Irma Gurguliani (MENRP); Olga Shashkina (MENRP); Shalva Akhvlediani (EMD/MIA); Vakhtang Gloveli (EMD/MIA); Kakha Mamuladze (GRCS); Natia Parulava (ASB); Vano Grigolashvili (RDFG/DRR Centre).

3. Data collection and analysis

Data collection and analysis were conducted using several methodological tools.

Semi-structured interviews based on the CADRI DRR Capacity Assessment questionnaire. The capacity assessment was based on a questionnaire which has guided interviews with Government representatives, UN agencies, donors and other national stakeholders, as follows:

- At central level, 37 interviews were conducted with governmental institutions, donors, international and local non-governmental organizations, and academia;
- At local level, 19 interviews were conducted with local authorities, NGOs, Red Cross representatives, academia;
- At both central and local levels, 58 organizations and more than 130 individuals were interviewed.

Field visits. Interviews were conducted at the municipal and community levels by three assessment sub- teams in: Tbilisi (central and municipal authorities); Gurjaani, Telavi, Kvareli (Kakheti region); Kutaisi (Imereti region); Ambrolauri (Racha-Lechkhumi-Kvemo-Svaneti region); Batumi (Autonomous Republic of Adjara).

Document analysis - the results of interviews with stakeholders were complemented by analysis of extensive documentation made available to the team. This documentation includes: legislation, strategies, policies, action plans, and programme and project documents.

Preparation of the DRR Capacity Assessment report - the present Report was prepared based on inputs from the assessment team members and has been shared with national stakeholders who participated in the assessment process to gather their inputs and comments. A national workshop is organized to validate the final report. The report recommendations will form the basis for the development of the National Plan of Action.

III. Disaster Risk Profile of Georgia

1. Disaster profile

Georgia is a transcontinental country, located along the dividing lines of Asia and Europe in the South Caucasus region, between the Black sea to the west and Caucasus mountains to the north; 80% of the territory is mountainous. Floods, debris flows, landslides and avalanches occur regularly, mostly in mountainous parts of the country and along the major rivers, and can severely affect local communities. Soil and vegetation are highly sensitive to degradation due to drought and overuse.

Georgia is ranked as a lower middle-income country, ranking 75th on the Human Development Index. The country experienced economic growth between 2004 and 2008, although the conflict with Russia in 2008 and the global economic crisis brought economic growth to a halt, the country's economy recovered quickly with growth rates at almost pre-crisis levels in 2010 and 2011. Despite this economic growth, a substantial part of the population is still living in poverty. Rural households headed by women with children are particularly vulnerable to poverty.

Georgia is situated in one of the most seismically active regions in the Alpine-Himalayan collision belt. Analysis of the historical and instrumental seismology of this region shows that it is still of moderate seismicity. Strong earthquakes with magnitudes up to 7 and macro-seismic intensity of 9 (MSK scale) have occurred in the region. The reoccurrence period of such events is on the order of 10^3 - 10^4 years.

Floods are also very frequent in Georgia, with recorded high water levels during the spring and summer months, when snow starts to melt. Over 50% of the national territory is prone to avalanches, which includes over 100 settled areas⁴.

Taking into account the high level of precipitation characteristic also for the foot hill rivers of the Caucasus, the impact on river hydrology is rather high. Debris flows and mudslides present a high risk to the majority of the population in mountainous areas, especially those residing along small rivers. Along with landslides, debris flow and mudslides destroy irrigation systems, agricultural facilities and road infrastructure. During the period 1968-2009, geological hazards covered about 70% of the territory of the country, affecting 65% of its population⁵.

Droughts occur most notably in the Kakheti, Shida Kartli and Imereti regions. The 2000 drought in Kakheti and Kvemo-Kartli regions affected 696,000 people and caused economic loss of \$200 million⁶. In the recent past, drought cycle for Georgia has changed from 15-20 years to 6 years. Over the period 1995 to 2009, droughts inflicted on agriculture reported economic loss of 400 million GEL⁷.

Frequent strong winds are observed in the Caucasus ridge zones, Kolkheti lowlands, Imereti, Shida Kartli, Tbilisi, Kakheti, and Samtskhe-Javakheti regions. In 1995-2006, the recurrence of strong winds varied between 1 to 4 times per year. From 2007 to 2009, the frequency of strong winds increased to 6-12 times per year.

The impacts of climate change can be observed in Georgia as well, including through the increased occurrence of extreme natural hazards. High mountains, the coast and the semi-deserts of East Georgia are particularly sensitive to climate change⁸. Climate change projection models used in the Second National Communication on Climate Change show an increase of extreme weather conditions, translating to a heavier and uneven seasonal distribution of precipitation⁹.

A clear illustration of the increasing impact of climate change on Georgia was the severe wind and hailstorms observed in Eastern regions in the summer of 2012. The medium-size hazard resulted in a disproportionate socio-economic disaster: about 75,000 people affected and GEL 202 million (USD 123 million) in economic impacts. Losses were three times higher than the damage, and the private sector suffered ten times more financial impact than the public sector.

The initial findings of the Third National Communication on Climate Change indicate an expected increase of 3.7 degrees Celsius in temperature (in comparison with the annual averages of the 1986-2010 period). In Svaneti region there are 250 glaciers, which are predicted to vanish from the Caucasus mountainous range by 2150-2160 given the current pace of glacier degradation and increasing temperature levels.

2. Vulnerability profile

Georgia is a lower-middle income country with GDP per capita 3596.6 USD in 2013 and ranking 75th on Human Development Index (UNDP, 2012). The main sectors of the country's economy consist of trade, industry, public administration, transport and communication, and agriculture.¹⁰ Recently tourism also became one of the priority sectors. Georgia achieved robust economic growth between 2003-2012, averaging 6.1% annually following structural reforms that stimulated capital inflows and investment. The reforms helped improve the business environment, strengthened public finances, upgraded infrastructure facilities and liberalized trade. GDP per capita increased from \$920 in 2003 to \$3,500 in 2012¹¹.

The economy started to slow down since the last quarter of 2012 and GDP registered 1.7 % growth in the first three quarters of 2013. Post-election policy uncertainty and weak budget execution encouraged a wait-and-see behaviour among businesses and consumers and impacted growth. However there were no adverse developments on monetary and exchange rate policies and domestic and external sustainability were maintained to facilitate quick recovery in 2014. The World Bank expects Georgia to have 6.3% economic growth in 2014. The estimate was published in the Bank's Global Economic Prospects 2014.

Despite of impressive economic growth in recent years, substantial part of Georgia's population is still living in poverty. Estimates vary between 10% for extreme poverty and 45% depending on the poverty threshold used. In addition there are regional disparities in poverty rates. Rural poverty rates (24.3%) are relatively higher than urban poverty rates (17.6 %), with the trend towards narrowing the gap interrupted by the 2008 crisis. According to the 2010 World Bank Report, by regions, poverty is the highest in Kakheti, Shida-Kartli and Mtskheta-Mtianeti, and the lowest in Tbilisi and Samtkhe-Javakheti. While income inequality measures have not been calculated by regions, it is clear that (income) inequality in Tbilisi is known to be much higher than in the rest of the regions¹².

Existing evidence suggests that some groups of the population are particularly disadvantaged regarding access to assets basic services, and have fewer opportunities to engage socially and politically. As a result of the wars in the 1990s in South Ossetia and Abkhazia and the 2008 Georgian-Russian conflict, Georgia currently counts 258,595 IDPs out of a total population of 4.5 million. The most pressing issues are inadequate housing conditions and high levels of unemployment¹³. Additionally, in Georgia children face a higher risk of poverty than any other age group. Households with children are poorer than those without children and as higher the number of children in the household, the greater is the poverty risk. (Source: UNICEF, Reducing child poverty 2012) According to UNICEF's 2012 Welfare Monitoring Survey, 77,000 children aged 0-16 years live in extreme poverty, below USD 1.25 per day and more than 200,000 (i.e. one fifth of total child population) consume less than 60% of medium consumption, which is approximately USD 2 per day.

Unemployment remains the most significant public policy challenge in Georgia. The capital-intensive nature of Georgia's robust growth performance was reflected in relatively high unemployment, which remained in the 12-13% range even during the pre-crisis boom. Unemployment peaked during the crisis to 17% in 2010 and then fell to 15% in 2012. The majority of the work force – more than 55% – is employed in agriculture (mostly self-employed), which contributed only 9.3% of GDP in 2013 and is characterized by family-based subsistence farming¹⁴ with low productivity.

IV. Results of the Disaster Risk Reduction Capacity Assessment at National Level

HFA Priority Action 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation

1. National ownership

In Georgia, natural hazards (floods, flash floods, landslides, mudflows, snow avalanches, earthquakes, hail, heavy rains, storm winds, and droughts), coupled with significant levels of exposure and vulnerability, have a substantial negative impact on the national economy. According to the Government, over the last 40 years 70% of the territory of the country experienced natural hazards of hydro-meteorological and geological origin; economic losses exceeded 14 billion USD.

In this context, the Government made a commitment to strengthen the DRR system, improve preparedness and coping capacities on local and central levels, and ensure disaster risk reduction are integrated across development strategies, plans and frameworks, as noted in the official statement made by the Georgian delegation at the 4th Session of the Global Platform on Disaster Risk Reduction in May 2013¹⁵.

While disaster risk reduction gradually evolved as a priority for the Government, and there has been an obvious progress in addressing disaster risk issues at sectorial level, traditional approaches focused on emergency response are still prevalent. The concept of risk reduction as primarily a development issue is rather new for national and local authorities in Georgia. There is low awareness of the potential consequences of the lack of investment and proper planning for risk reduction on the economic and human development of the country. A dedicated legislative and policy framework for disaster risk reduction is lacking. Institutional arrangements and multi-stakeholder coordination mechanisms are not fully functional and efficient. Technical, human and financial capacities exist, but are not well coordinated, prioritized and systematized across all relevant sectors, governance levels and institutions. Climate risk reduction and climate change adaptation efforts require better alignment at institutional, policy and programme implementation levels, as climate and disaster-related risks can no longer be addressed separately.

The assessment revealed that there is high Government willingness and potential to move from a reactive approach of disaster response to a more proactive disaster risk reduction approach. Across the board, governmental and non-governmental institutions showed interest to focus not only responding to disasters as they occur, but to consider risk reduction within the overall development planning of the country. However, national leadership needs to be backed up by concrete actions, dedicated capacities and necessary resources aimed at reducing existing risks, avoiding creating new risks, and improving preparedness for efficient response to disasters.

2. Legislation

2.1. Disaster management legislation

Disaster management issues are regulated by the Constitution of Georgia, numerous laws and bylaws adopted in the period of 1993-2014, such as:

- Law on Protecting the Population and Territory from Natural and Man-made Emergency Situations (abolished based on the new law on “Civil Safety” which entered in force on June 12, 2014);

- Presidential Decree on Approval of the National Response Plan to Natural and Man-made Emergencies;
- Decree of the Prime Minister on Establishment of State Security and Crisis Management Council;
- Georgian National Response Plan;
- Law on the State of Emergency;
- The Resolution of the Government of Georgia #68 of 21 March 2008 "On Approving the Rules for Classification of Emergency Situations" (regulates identification and codification of rules of emergency situations with the purpose of their prevention);
- The Resolution of the Government of Georgia #69 of 21 March 2008 "On the Approval of the statute of the State Emergency Management Commission";
- The Resolution of the Government of Georgia #153 of 4 June 2010, "On the Approval of the charter of the Emergency Response Forces";
- The Decree of the President of Georgia #707 of 2 September 2010 "On the Approval of the Threat Assessment Documents for Georgia for the Period of 2010-2013" (determines possible emergency situations in Georgia with the purpose of their prevention);
- The Decree of the Minister of Internal Affairs of Georgia #449 of 27 March 2007 "On the Approval of the Fire Safety Rules Operating in Georgia" (regulates prevention of potential fires in Georgia);
- The decree of the Minister of Education and Science of Georgia #28/N of 20 April 2010 "On the Approval of the Instruction of Safety Measures to be Implemented at educational Institutions" (regulates prevention and preparedness in the educational institutions);
- The Resolution of the Government of Georgia #154 of 4 June 2010 "On the Approval of the Instruction for Submitting the Safety Declaration" (regulates prevention and preparedness of high-risk industrial facilities);
- The Resolution of the Government of Georgia #51 of 14 January 2014 on the approval of technical regulations – "structural-technical measures for civil safety". These regulations were enacted in the form of the decree of the Minister of Construction of that time and have been operating since 2002. They regulate preventive activities for the emergency situations in the field of the construction design;
- The Resolution of the Government of Georgia #164 of 14 February 2014 "On the Approval of the National Strategy for the Reduction of Chemical, Biological, Radiological and Nuclear Threats" (the National Strategy for the Reduction of Chemical, Biological, Radiological and Nuclear Threat was prepared, it also regulates preventive measures in the field);
- The Resolution of the Government of Georgia #38 of 6 January 2014 "On the Approval of the State Security and Crisis Management Council" (the Council replaced "the Governmental Commission of the Emergency Management" established in 2008. It is an advisory body to the Prime Minister at the highest political level on the management of emergency situations;
- Law on Environment Protection and Law on Environmental Impact Assessment;
- Sub-laws on water protection; environmental permits; protected areas; forest management; mineral resources; forest fire response plan; chemical and nuclear safety; gene-modification; and biodiversity;
- Laws and codes regulating construction activities, spatial and urban planning, land protection measures;
- Statutes of the Emergency Management Department; National Environmental Agency; Ministry of Environment Protection; Ministry of Economy and Sustainable Development; Ministry of IDPs from Occupied Territories of Georgia, Refugees and Accommodation; Ministry of Agriculture.

The **Law on Protecting the Population and Territory from Natural and Man-made Emergency Situations** (2007) create the main legal basis for disaster management in Georgia. It defines the roles and responsibilities of each line ministry in case of emergency (including disasters triggered by natural hazards). As per this law, the main functions the Emergency

Management Department (EMD) of the Ministry of Internal Affairs are: coordination of the prevention of emergency situations nationwide, and mitigation and liquidation of their consequences and ensuring the implementation of civil protection tasks during the period of martial law¹⁶.

The **Civil Safety Law (2014)** predominantly addresses civil protection, defining functions and competencies of various state entities at the stages of preparedness, response, prevention of emergency situations and early recovery action as a part of immediate response stage. It introduces a common system of emergency management and centralized control of command at all levels (central/national, regional, municipal, and Autonomous Republic of Adjara). The law provides for upgrading the current Department (EMD) to Agency (EMA), under the Ministry of Internal Affairs. The law provides for municipal firefighting teams currently reporting to the local authorities (municipalities) to be reporting to the future EMA at the central level.

As outlined above, existing legislation is almost exclusively related to disaster management and emergency response. Disaster response, humanitarian aid and coordination, emergency management and coordination fall under the responsibility of EMD. An in-depth analysis of the legislative framework for disaster response is provided in the section on HFA Priority Action 5.

Several sectorial legislative acts, and certain sectorial policies and strategies are indeed relevant to disaster risk reduction (e.g.: Second National Environmental Action Programme-NEAP 2, where DRR is identified as one of the key areas); however with regard to risk reduction and prevention, detailed normative documents need to be developed. Similarly, post-disaster recovery is not clearly defined and addressed in current legislation.

A national policy, strategy and plan of action for disaster risk reduction require to be developed in line with the EU legislation and international instruments.

The assessment revealed a consensus across various governmental and non-governmental institutions, and across governance levels (central, municipal, and local) for the need for a regulatory framework and corresponding institutional setup which would spell out the mandates, roles and responsibilities of various institutions and stakeholders in disaster risk reduction.

2.2. The EU-Georgia Association Agreement

In June 2014 the Association Agreement between EU European Atomic Energy Community and their Member States, of the one part, and Georgia, of the other part (**EU-Georgia Association Agreement**) was signed. The aims of the EU-Georgia Association Agreement are to:

- promote political association and economic integration between the parties,
- provide a strengthened framework for enhanced political dialogue on all areas of mutual interest,
- contribute to the strengthening of democracy and to political economic and institutional stability in Georgia,
- promote, preserve and strengthen peace and stability in the region,
- promote cooperation aimed at the peaceful conflict resolution;
- enhance cooperation in the area of freedom, security and justice,
- support the efforts of Georgia to develop its economic potential via international cooperation,
- achieve Georgia's gradual economic integration into the EU Internal Market,
- establish conditions for an increasingly close cooperation in the areas of mutual interest.

Among the sectors identified for cooperation between the parties are environment, climate action, public health, regional development and cross-border and regional level cooperation,

agriculture and rural development, cooperation in research, technological development and demonstration and civil protection. Through development of the EU-Georgia Association Agreement Georgia committed to progressively approximate its legislation in the relevant sectors with that of the European Union, in accordance with the Agreement and to implement it effectively within identified timeframe.

Cooperation aimed at improving the prevention of, preparation for and response to natural and man-made disasters is identified in the EU-Georgia Association Agreement and the objectives include cooperating on: disaster risk reduction by addressing, inter alia, institutional linkages and advocacy; information, education and communication; best practices aiming at preventing or mitigating the impact of natural hazards, improvement knowledge base on disasters on hazard and risk assessment for disaster management, assessment of the environmental and public health impact of disasters.

2.3. Sectorial legislation

- **Environmental Impact Assessment (EIA) Law** was introduced in 1996, abolished in 2003, reintroduced recently, and certain limitations still hinder its full operationalization in terms of awareness and technical capacity to implement it at local level. While EIA is required for all infrastructure development projects, it can be conducted by government institutions¹⁷, private licensed companies, and private non-licensed companies. The licensing process and criteria for undertaking an EIA remained unclear to the assessors. The legislation is expected to be approximated with relevant EU legislation and international instruments after finalization of the EU-Georgia Association Agreement¹⁸.
- **Law on Protected Areas** regulates environmental management, as it ensures protection and restoration of natural ecosystems and landscapes of Georgia. Article 1 under the law defines the objectives for establishing, planning, and categorization and functioning of protected areas' system in Georgia. Paragraph "e" defines protection of territories located in erosion, mudflow, flash/flooding, avalanche, landslide risk zones, as well as areas where ground water is formed, drains, and discharges from anthropogenic factors as one of the objectives. Furthermore, according to article 20, disaster risks are managed within the protected areas through temporary regulation for disaster and emergency management. Law on Protected Areas provides a legal background for establishing protected area categories (including water bodies within terrestrial protected areas). The Law on Land Improvement regulates waters and water bodies used for land-reclamation (agricultural) purposes.
- **Law on Wildlife** ensures protection, restoring of wildlife habitats, diversity of species, and preservation of genetic resources. Article 10 under the law mandates relevant government entities (not specified in the law.) with restoration of wildlife's natural habitat deteriorated due to natural disasters, epidemics and other causes. National legislation on wildlife protection is expected to be harmonized with the separate provisions of the following EU directives: No 2009/147/EC on the conservation of the wild birds, No 92/43/EC on the conservation of natural habitats and of wild fauna and flora.
- **Forest Code.** Forest protection, maintenance, restoration and utilization is regulated through the Constitution of Georgia, the Forest Code, other laws on environment protection, protected areas, wildlife and water, and international treaties and agreements to which Georgia is a signatory. The Forest Code mandates relevant central, regional and local authorities with restoration of the forest from natural disasters, epidemics and other causes that damaged the forest. Separate chapter is dedicated to forest maintenance, which is defined as a system of measures that among the rest is targeted to increase land fertility, prevent soil degradation caused by water and wind erosion,

swamping, mudflow, snow avalanche, and other hazards. Furthermore the law defines the maintenance measures.

- **Law on Mineral Resources.** In Georgia, all mineral resources are the property of the state and its management is conducted through their inventory, licensing, control and supervision. Any activity connected to the exploitation of mineral resources is subject to licensing which is regulated through laws on: licenses and permits, oil and gas, mineral resources and relevant bylaws and normative acts. However, the Law on Mineral Resources prohibits licensing extraction of inert materials from riverbeds and coastline in case the works may lead to deteriorated sustainability of the riverbed or the hydraulic structure (dam, bridge, walls and etc.) the law prohibits extraction of mineral resources in the upper terrace of floodplain 50 m from the riverbed as well.
- **Law on Water** defines the main principles of water policy such as the protection and rational use of water, taking into account the demands of present and future, the supply of drinking water as a first priority, sustainability and prevention of harmful impacts, and guarantees the security of State interests in water protection. Chapter II under the law on water provides provisions on the responsibilities related to water management on national, autonomous republic and local governance levels, which includes implementation of works for recovery of water object damaged by natural disasters. According to Article 14 of the law on water, water protection actions are planned in accordance with principles of sustainable development – strategy of sustainable development, NEAP and management plan for environment protection as well as related laws and normative acts. The law requires integration of water protection actions in: local land-use plans; resettlement and development plans; infrastructural projects; sectorial plans; management plans of protected areas; and natural resource management plans. After finalization of the EU-Georgia Association Agreement the legislative reforms will be implemented in the sector of water quality and resource management including marine environment¹⁹.
- **Law on Conservation of Soils and Reclamation and Improvement of Soil Fertility, the Law on State Control for Environment Protection, the Law on Licenses and Permits, and the Law on Ecological Inspection** provide the legal streamlining in a number of water-related aspects (as i.e. EIA). The **Law on Public Health** provides for the establishment of sanitary and hygienic requirements, norms and rules with regard to water quality²⁰.
- A new draft **Spatial Development and Construction Code** was prepared with financial and technical assistance from GIZ. The Code has provisions on spatial arrangement and urban development planning, that will be based on integral and sectorial (landscape protection, seismic zoning, and etc.) plans, countrywide/autonomous republic/municipal spatial arrangement, urban development plans, major principles for construction in settlements, land alteration, urban development measures, regulation of construction works, regulations on developments on land plots, quality assurance of buildings, quality assurance of construction materials, parties engaged in construction, rules for issuing construction permits, and construction supervision, preconditions for construction permits, classification of buildings and principles of construction, construction notification, state control on construction.
- **Urban planning and construction activities** in Georgia are regulated by the following laws: the Law on Construction Activities; the Law on Principles for Spatial Planning and Urban Development, law on architectural works, the Code of Product Safety and Free Movement, and other bylaws and orders. Any additional building and construction safety regulations are adopted by the Minister of Economy and Sustainable Development of Georgia.

- **Law on Public Health (2007)** is aimed to promote public health and culture of healthy lifestyle, ensure safe health environment, support to reproductive health protection and to prevent communicable and non-communicable diseases. Major principles of the law lie in provision of the preventive measures to avoid health related risks, and provide clear distinction of functions between national and local public health institutions and their coordination during planning/implementation of health related activities. Article 12 of the law, in accordance with recommendations and proposals of the State Security and Crisis Management Council and Law on Civil Safety, defines duties and responsibilities of emergency management commission coordinated by Prime Minister during acute epidemics and pandemic²¹.
- **Law on Gender Equality** provides major guarantees for equal rights and opportunities for women and men, provides legal mechanisms and conditions for implementation. Aim of the law is to ensure gender equality, equal rights and opportunities, protect from discrimination in the following spheres: labour relations, education and science, access to information sources, health and social protection, and equal election rights. The Parliament of Georgia has adopted the second Gender Equality Strategy (2014-2016) which includes ensuring gender balance during environmental decision-making, and awareness raising on environmental issues with balanced participation of women and men.

3. Policies, strategies, programmes

In Georgia, there is no National DRR Policy or Strategy. However, based on a localized project, the authorities are developing a Policy on floodplain management based on the experience of a UNDP-supported project in the Rioni river basin. The project aims to strengthen institutional capacities for digitalized hazard monitoring and flood risk assessment, the development of land use policies specific to floodplains, and the development of community based flood insurance scheme in the Rioni river basin.

3.1. National development strategy and programme

- The objective of the Government's programme **United Georgia without Poverty (2010)** is to implement effective measures oriented on appreciable economic growth and territorial integrity of Georgia. The document notes that, "the Government of Georgia will develop the system of effective use of natural resources and protection of natural environment of Georgia through carrying out an institutional reform and operated licensing system and minimizing a risk of natural catastrophes pursuant to early notices".
- The Government's **Basic Data and Directions (BDD)** outlines the medium term reform programme of Georgia and in essence provides the mid-term macro-economic framework, including the fiscal resource allocations, and includes detailed descriptions of the individual sectorial strategies for achieving these objectives. The latest revision of BDD (2013-2016) sets the following priority directions in disaster risk management sphere: establishment of disaster forecast and early warning system; establishment of mechanisms for sustainable use of land resources to reduce erosion and prevent desertification; protection and restoration of the Black Sea coast and river banks; mandatory integration of environmental issues into urban development and building process.
- The **State Strategy on Regional Development (2010-2017)** is a mid-term strategic document that defines main principles, goals and objectives for sustainable regional development of the country, focusing on effective regional management, development of

municipal infrastructure and services; support to innovation, new technologies and development of business, agriculture and ensuring environment protection. Priority areas identified under environment protection are: development of effective water resource management; support in rational utilization of ground water resources; protection of the Black sea coastline from global and local climate change impacts; support in development of renewable energy resources; improvement of land resource management, and improvement of disaster risk management system. The latter is planned to be achieved through introduction of monitoring and EWS in risk zones, development of response plans and planning and implementation of relevant mitigation measures, assessment of social economic impacts of disasters and their integration into sustainable development plans and action plans of the regions.

- In 2012 and 2013, the Government adopted **Regional Development Plans** for all regions of Georgia covering the period 2014-2021. The objectives and priorities of the regional plans were identified based on the SWOT analysis of each region, which among rest of the sectors included assessment of disaster risk profile and analysis of disaster risk reduction and climate change adaptation capacities. Planned follow up action to ensure effectiveness of the regional development policies is elaboration of Action Plans of the Strategies that will include detailed framework of action with monitoring and evaluation tools and indicators²².
- The **Socio-economic Development Strategy (“Georgia 2020”)** defines priorities and corresponding implementation measures for social and economic development for the period of 2014-2020: improvement of business and investment enabling environment, support to innovation and new technologies, support to export growth, development of infrastructure, human resources based on labour market demands, improvement of social protection system, ensuring affordable and quality health protection, mobilization of investment resources, development of financial mediation.
- In 2010, the Government of Georgia in partnership with the UN Country Team, civil society, and other national and international partners, elaborated and endorsed the **United Nations Development Assistance Framework (UNDAF)** for 2011-2015. It is aligned with the Georgia’s national development priorities of the United Georgia without Poverty programme. The UNDAF utilizes the recommendations of the HFA, and includes one result specifically focused on effective disaster risk and environmental management at national and local levels.
- The aim of the **National Strategy for Mitigating Threats of Chemical, Biological, Radiological and Nuclear Threats** approved by the Resolution of the Government of Georgia #164 of 14 February 2014, is to reduce challenges faced by Georgia in terms of chemical, biological, radiological and nuclear threats and alleviate damage caused by such threats. The aim of the Strategy is to promote the development of a common mechanism to the CBRN threats throughout a country, which will be focused on the management components of the CBRN incidents, such as the prevention, detection, preparedness and response.

3.2. Sectorial policies, strategies, programmes

- **The Strategy for Agriculture Development in Georgia (2014-2020)** defines the vision of the government on agriculture development which is to create an environment that will increase competitiveness, promote stable growth of agricultural production, ensure food safety and eliminate rural poverty through the sustainable development of agriculture and rural areas. Recognizing the high risk to food security of Georgian population’s majority caused by droughts, shipping disruptions, fuel shortages or economic instability,

ensuring sufficient safe, and nutritious food supply is identified as one of the key strategic directions. The strategy also calls for collaboration between the Ministry of Agriculture and the Ministry of Environment and Natural Resources Protection to design and implement preventive and adaptive measures to address potentially harmful impacts of climate change.

- In terms of sectorial policies, environment protection is one of the priority areas for the government. Disaster risk reduction is one of the priorities for the Ministry of Environment and Natural Resources Protection of Georgia. The **National Environmental Action Programme of Georgia** (2012 –2016) adopted by the Government of Georgia in 2012 following thorough national consultations includes a dedicated section on disasters. Second National Environmental Programme followed recommendations from the National Environmental Performance Review (2010) and results of the State of Environment Report for 2007-2009. A set of measures are proposed with the aim to minimize the human losses and the negative impacts to human health and ecosystems, as well as minimize economic losses, along three axes: improvement/modernization of early warning system; prevention/reduction of negative impacts of floods and flash floods in river basins of Georgia; resumption of artificial influence activities on some hazardous events (hail, drought, snow avalanches); and risk reduction for industrial accidents. Since 2013, the government increased fund allocations from the state budget for monitoring, forecast and prevention measures in the sphere of environmental and disaster risk management, and created a dedicated unit within the MENRP, Natural and Technological Hazards Management Service, mandated to work on disaster risk reduction in accordance with the functions of the Ministry provided under the National Emergency Response Plan (NERP) The national focal point for the monitoring and reporting on the implementation of the Hyogo Framework for Action in Georgia is also located in the MENRP.
- Adaptation to Climate Change was acknowledged as a priority in the **National Climate Change Policy (2009)** based on the results of the **Second National Communication to the UNFCC**. A **National Climate Change Adaptation Plan** is under development and will be consolidated with the Adaptation Strategy under the **Third National Communication to the UNFCC** (undergoing since 2011). The Third National Communication provides updated information on national circumstances, greenhouse gas inventories, climate change mitigation, vulnerability to climate change, steps taken to adapt to climate change, and information on public awareness, education, training and research. At decentralized level, the **Climate Change Strategy for Autonomous Republic of Adjara** was prepared within the framework of the Third National Communication. The Strategy comprises information on the national context, greenhouse gas inventories, vulnerability to climate change, and mitigation and adaptation measures. The Strategy also assesses possible changes in climate in the nearest decades using the models elaborated in the frame of the Second National Communication. Similar strategies on climate change are being prepared for Svaneti and Kakheti regions.
- Health sector has important role in early identification of public health related risks, informing relevant authorities and methodological guidance. One of the priority objectives of the **Georgian National Health Care Strategy (2011-2015)**²³ is **disease prevention, preparedness and response to health related threats** which includes **preparedness to emergencies and disasters** (strategic initiative 4.8)²⁴. The leading agency to implement activities in health sector is the **National Centre for Disease Control and Public Health (NCDC)** in cooperation with governmental and civil organizations in health sector.

4. Institutional arrangements and coordination

4.1. Government institutions

Overall institutional arrangement for DRR is scattered and requires improvement for efficient sectorial coordination. Several state institutions are mandated to deal with risk reduction issues through their respective programmes and within their specific sector.

In Georgia, coordination and information exchange on disaster risk reduction issues takes place through number of mechanisms, such as the Expert-Advisory Council (hosted by EMD) and the DRR Think-Tank (informal forum hosted by MENRP)²⁵. However, the assessment revealed that the existing mechanisms do not cover fully the whole spectrum of DRR issues; instead only partial coverage is present (ex.: disaster management issues are well-represented under the priority areas of the Expert-Advisory Council statute; however, coordination issues related to the risk reduction area requires better elaboration). As for the DRR Think-Tank, the format of its work is limited to the information exchange between key national and international DRR stakeholders, NGOs and scientific institutions.

Hence, overall coordination on DRR needs to be improved, including developing a work plan for ensuring efficiency and accountability for coordination.

The following institutional structures currently have mandates related to disaster risk reduction (prevention), preparedness and disaster response in Georgia:

- The **Ministry of Environment and Natural Resources Protection of Georgia (MENRP)** recently established the **Natural and Technological Hazards Management Service**. Its functions include participation in coordination and implementation of: state strategy and policies, special state programmes on DRR and planning of natural and manmade disaster risk reduction activities; as well as creation of database on implemented DRR activities and support in hazard mapping and capacity development of Early Warning System under its sphere of competence. The Service aims to support a National Platform for DRR through consultations with national and international stakeholders. The Division regularly hosts an informal forum for DRR stakeholders called the **DRR Think-Tank** of Georgia that unites representatives from about 60 governmental, non-governmental, international organizations, and academia. The forum was established in 2009 under the UNDP project “Strengthening Disaster Risk Reduction System in Georgia” and in 2012 it was taken over by the MENRP. In 2012 an online database on Who Does What Where in DRR in Georgia was created with UNDP support. Discussions were held to decide whether the DRR Think-Tank could be the basis for the establishment of the National Platform for DRR; however, this idea was neither rejected nor put further, as there was no common vision on the leadership of such coordination mechanism, resulting in continuous disputes between agencies.
- The **Disaster Prevention and Planning Division** and the **Standing Secretariat of Expert-Advisory Council** are both located under EMD. The Disaster Prevention and Planning Division is mandated to coordinate risk reduction, prevention and preparedness activities across the country within its area of competency. The Expert-Advisory Council is mandated to develop a strategy for the implementation of the National Response Plan that would: (i) ensure disaster management with a strong institutional basis for implementation and relevant legal and political framework; (ii) identify, assess and monitor disaster risks and enhance early warning; (iii) ensure knowledge and education related to safety matters during emergencies; (iv) reduce the underlying risk factors of emergency situations; (v) strengthen disaster preparedness for effective response at all levels. The Expert-Advisory Council has three divisions in charge of (i) prevention of consequences of natural emergencies and reduction of loss; (ii) Prevention of consequences of manmade emergencies and reduction of loss; (iii) Coordination of

experts in the field of civil emergency planning within NATO and Partnership for Peace programs.

- According to the PM Resolution #38, in January 2014 the **State Security and Crisis Management Council** under the Prime Minister's office has been recently established to adopt the highest level political decisions to ensure state security and crisis management of all types. The Council is mandated to elaborate proposals on preventive and response measures to political, social, economic and ecological threats. The Council also manages Crisis Operations Centre, that will be activated as needed by the PM and that is equipped with necessary assets and means for functioning. The Council is being supported by the UK government and provides regular training workshops, testing as well as transfer of knowledge and expertise from the UK though focusing on most senior strategic level rather than operational. The newly established Council plans to update the existing threat assessment that also defines natural hazards as one of the risks. Based on the revised risk matrix, the Council will define required capacities and resources to develop a risk reduction strategy and 4 year strategic plan for implementation. The Council recognizes need for a very detailed and comprehensive review of existing mechanisms, capacities and plans to work on a series of legislative amendments to ensure clear delineation of roles, responsibilities and competencies of various state entities in regards to the crisis management.
- Within the Office of the Council the **National Crisis Management Centre** was created. Upon occurrence of a crisis situation (infringement of national security, attempt of internal political destabilization, natural disasters and other types of crisis) the National Crisis Management Centre is subordinated directly to the Prime Minister. The National Crisis Management Centre:
 - Addresses the Prime Minister in each event of occurrence of all types of crisis situations threatening national interests or creating a hazard of such threats;
 - Ensures elaboration of plans related to all types of crisis situations threatening national interests;
 - Coordinates prevention and risk reduction of overcoming crisis situation on the Governmental level;
 - Coordinates preparation of plans on overcoming crisis situations on the Governmental level;
 - Organizes coordinated activities of the state agencies when a crisis situation occur;
 - Creates and maintains information data bank of the National Crisis Management Centre.
- The **National Environmental Agency (NEA)** under the MENRP is mandated to monitor on-going hydro-meteorological, geodynamic and geologic processes, as well as to provide environment pollution monitoring, issue license permits for utilization of natural resources and ensure sound functioning of the respective systems. Until 2014 NEA was funded by MENRP, whereas currently the sources of funding (including for the staff salaries) are provided through service contracts between NEA and state institutions, private entities, donors, etc.
- Monitoring climate change risks lies within the mandate of **Climate Change Division** of MENRP. The unit provides assessments of climate change impacts on sectors of economy and ecosystems and prepares relevant predictions; develops national plan for adaptation to climate change of the vulnerable ecosystems and sectors of economy; coordinates development of UNFCCC climate change communications for Georgia and provides inventory of greenhouse gas GHG.
- Regional development policy, introduction of water supply systems, development of integrated state policy on development and designing of networks of secondary and

international roads and scientific-technical progress fall under the field of management of the **Ministry of Regional Development and Infrastructure (MRDI)**. The Roads Department of MRDI is primarily responsible for maintenance, rehabilitation and construction of the State owned property (7,000 km. roads). The Roads Department contains different Units, including the Units responsible for monitoring of the construction works and coastal zone protection, rehabilitation and development. MRDI is in charge of municipal planning in accordance with the State Strategy on Regional Development, which lacks consideration of DRR issues and is not based in the risk assessment. At the moment, the regional development program for 2015-2017 is being developed, where DRR issues should also be taken into account, according to the representatives of MRDI. For this purpose, MRDI plans to establish technical working groups where NEA and EMD specialists will be invited to contribute to this process. MRDI acknowledges the importance of mainstreaming DRR in the Regional Development program and requires technical expertise and capacity building in DRR in this process.

- In January 2014, the **Natural Disaster Prevention and Rapid Response Unit** within the Infrastructure Development Department of the Ministry of Regional Development and Infrastructure was established. The Unit also is mandated to ensure disaster prevention, early warning, response and post-disaster recovery are taken into account in infrastructure planning and development. Within the scope of its work, the Unit is in charge of developing proposals and projects that take into account disaster prevention issues; implementation of natural disaster prevention policies, methodologies and knowledge products related to infrastructure development; awareness raising and information exchange; effective use of early warning systems for infrastructure; rapid response to disasters as they affect infrastructure, and post-disaster damage assessment of infrastructure; systematic review of issues related to disaster prevention and response in collaboration with officials of the Infrastructure Department and the MRDI, other governmental institutions, local self-government authorities, and other experts in the field; preparation of requests for allocation of funds for disaster relief activities from the state budget; and monitoring of projects funded through state budget.
- The responsible agency for urban planning and construction regulation is **Department of Spatial Planning and Construction Policy** of the Ministry of Economy and Sustainable Development. The Department is in charge of development, implementation, coordination, management and monitoring of spatial, urban planning and construction activities, including technical regulations, and building codes. The Department is involved in the process of issuing building permits at recreational areas.
- Disaster risk-induced resettlement issues fall under the **Ministry of IDPs from Occupied Territories, Refugees and Accommodation (MRA)**. The Department of Migration, Repatriation and Refugees Issues is mandated by the Ministry to develop system for management of migration caused by natural disasters, the entity provides monitoring of migration processes and prepares predictions and implements resettlement processes induced by natural disaster risks, develops adaptation-integration programme of eco-migrants at new settlements and keeps database²⁶.
- The **Ministry of Labor, Health and Social Affairs (MOLHSA)** is in charge of defining public health policy to be implemented by the relevant public health protection services. At the local level, municipalities are responsible for prevention of public health risks through monitoring of environment and public health through the **municipal public health centres**. However, in order to enhance disease and public health risk prevention, epidemic-control, preparedness and response systems, the development of an effective mechanism for cooperation with municipal public health centres and clear definition of duties and responsibilities at local and central levels are required.

- The **National Centre for Disease Control and Public Health (NCDC)** is in charge of the protection and improvement of public health based on scientifically proven disease prevention mechanisms and preparedness and rapid response to public health related threats. NCDC develops national standards, state recommendations (guidelines), supports improvement of public health, provides epidemiological surveillance, immunization programme, laboratory works, and researches, and provides consultations and responses to public health related emergencies. NCDC is in charge of the medical surveillance of disease outbreaks, especially dangerous infections and CBRN (chemical, biological, radiological and nuclear threats). NCDC has 2 regional departments, 7 divisions and 64 public health municipal centres (funding and trainings provided by US government).
- Georgia is the signatory of the "Aarhus" Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters and accordingly has obligations for free dissemination of environmental (including disaster related) information to the population. **LEPL Environmental Information and Education Centre** was established in 2013 on the basis of the Aarhus Centre under the reorganization of the Ministry of Environmental and Natural Resources Protection with the following goals: organize and administer environmental information system in cooperation with the state organizations, academic, non-governmental, international organizations and business sector having the relevant competence; collect and share environmental information; collect the information on ongoing and completed environmental projects in Georgia, to create the data base and to ensure its publicity; collect statistical data related to the field of environmental protection; establish and maintain environmental library; facilitate the access to environmental information through the website and other information sources (internet-information network, media, etc); facilitate Environmental Education and for Sustainable Development and promote public awareness within the competence of the Ministry of Environment and Natural Resources Protection.

4.2. United Nations agencies in Georgia

Various **United Nations agencies** have been active in supporting the disaster risk reduction system in Georgia through different programmes:

- **UNDP, Strengthening the Disaster Risk Reduction System of Georgia** (2008-2010; USD 468,471 co-sponsored by the Swiss Agency for Development and Cooperation (SDC), the UN Resident Coordinator's Office, and UNDP). This project supported the integration of DRR into the United Nations Development Assistance Framework (2011-2015) and the corresponding UNDP Country Programme Document 2011-2015. Through this project a functional information sharing group for DRR was established (DRR Think Tank),
- **UNDP, Strengthening Disaster Risk Reduction System in Georgia** (2011-2012; USD 515,740 USD; the second phase of the previous project funded by SDC). DRR mainstreaming in development policies, programmes and practices was promoted, and mitigation and preparedness practices were promoted at the local level.
- **UNDP, Immediate Response to 2012 Disasters in Georgia** (2012-2014; USD 144,011.29). Following a request from the Government of Georgia, the United Nations and World Bank offices in Georgia agreed to support the Government in conducting a Joint Needs Assessment for recovery and reconstruction after severe storms that swept through Kakheti and other regions of eastern Georgia. The project provided inputs for

post-disaster multi-sector needs assessment and development of the recovery framework plans and initiated recovery activities in agriculture and disaster risk reduction sectors.

- **UNDP, Developing Climate Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia** (2012-2016; USD 5,060,000). Funded through the Adaptation Fund and UNDP, this project is supporting government and the communities of the target region of Rioni basin to develop adaptive capacities and embark on climate resilient economic development. The project is working on development of floodplain policy to incentivize long term resilience to flood and flash flood risks; designing and implementation of climate resilient practices of flood management to reduce vulnerability of highly exposed communities; and support in improvement of early warning system to enhance preparedness and adaptive capacities of the communities.
- **UNDP, Promote Sustainable Livelihood and Responsible Attitude to Environment** (2012-2015; USD 1,505,593 funded by the Government of Finland). The project focuses on sustainable livelihoods, responsible attitude to environment and disaster risk reduction in the areas affected by forest fires during 2008 armed conflict. The project is working on income generation activities related to safe environment; piloting alternative energy systems and energy efficiency measures to the selected households, schools, municipality buildings and providing informal environmental education through eco clubs, eco camps and green schools along with increasing disaster resilience of target communities through implementation of risk reduction measures and increasing community preparedness capacities.
- **UNDP, Enabling Activities for the Preparation of the Third National Communication to the UNFCCC** (2011-2014; USD 580,000). The Third National Communication of Georgia is the continuation of the work conducted under the Second National Communication to the UNFCCC.
- **UNICEF, Supporting Disaster Risk Reduction amongst Vulnerable Communities and Institutions in South Caucasus programme** (2010-2013; USD 400,000 for Georgia, funded by DIPECHO). Through this project, the Ministry of Education and Science of Georgia received support in mainstreaming disaster risk reduction in education, including on integration of DRR in the national curriculum and teacher training, development of interactive teaching and learning materials and piloting of the school-based disaster management model in selected number of schools in the high hazard prone areas of Georgia. As a result of this project, DRR education activities were planned and implemented by key stakeholders in consultation and close collaboration with the Ministry of Education and EMD, avoiding duplication of efforts and ensuring that schools and communities in hazard prone areas benefit from DRR education activities. The workshops on mainstreaming DRR in education organized through this project played an important role in increasing the DRR awareness levels of education and emergency professionals and improving understanding of key concepts and approaches to DRR. More details are provided under the HFA Priority Action 3 section.
- **FAO, Information systems to improve food security decision-making in the European Neighbourhood Policy** (ENP) East Area (2010- 2013; USD 600,000, funded by the European Union). FAO supported the Ministry of Agriculture of Georgia in improvement of food security by enhancing the design and implementation of the relevant policies and programmes. This was achieved by strengthening national capacity to generate, analyse, communicate and mainstream more relevant and credible food security related information into policies and programmes.

- **FAO, Support for achieving sustainable livelihoods through agricultural cost-shared investments in IDP settlements and constraint returnee areas in Georgia** (2013-2014; EURO 2 000 000, funded by the European Union). FAO aims to improve the food security and livelihoods of the IDPs in Georgia, in particular, to increase the food production and income generation of the IDPs through cost-shared support to agricultural investments.
- **FAO, Capacity Development of the Ministry of Agriculture of Georgia: Improved Policy Making and Effective Implementation of the Strategy for Agricultural Development** (contribution to ENPARD Georgia Programme (2013- 2015; EUR 1 200 000, financed by the Austrian Development Agency). The sustainable models for agricultural development for the households living in mountainous areas and specifically in disadvantaged areas is one of the key focuses of the this project. In May 2013, FAO started implementation of the European Union funded ENPARD Technical Assistance - Capacity Development of the Ministry of Agriculture of Georgia (EURO 2,000,000). The project aims to improve the competitiveness of the agricultural sector in Georgia through supporting improved policy making and effective implementation of the Strategy for Agricultural Development. The impact of the project will be to contribute to increased food production in Georgia and to reduce rural poverty.
- **IOM, Interagency Forum on Disaster Risk Reduction** (2014) organised with the support of the Ministry of Internal Affairs of Georgia (MIA) and the International Disaster Response Network (IDRN). The Forum aimed to raise awareness of participants representing all the ministries of Georgia as well as intergovernmental, international and local non-governmental organizations concerning the Migration Crisis Operational Framework (MCOF)²⁷ developed by IOM as an internal tool designated for managing crises with a migration dimension and Community Based Disaster Management (CBDM). In addition, IOM Georgia has been actively engaged in joint initiatives of the UN Country Team and the Government of Georgia such as the Joint Needs Assessment carried out subsequent to severe storms and flooding that took place in July 2012 in Kakheti, Mtskheta-Mtianeti and Samtskhe-Javakheti regions of Georgia; and the elaboration of the national report on preparedness of the country for the implementation of Hyogo Framework of Action Programme.

4.3. Other key stakeholders in Georgia

- **DIPECHO.** The primary objective of the Disaster Preparedness Programme of the European Commission Directorate-General Humanitarian Aid and Civil Protection (DIPECHO programme for South Caucasus) is to contribute to increased resilience and reduced vulnerability of children and communities in areas prone to natural hazards. The programme is implemented in regions and communities in Georgia highly exposed to natural hazards and disaster risks – targeting primarily community members and local institutions with special emphasis on children and youth. The importance and relevance of this project is found in its approach of combining community based activities directed to the enhancement of local capacities to better prepare for and respond to disasters with policy development work that aims to further develop and include disaster risk reduction in education and national disaster management planning. The implementing partners of DIPECHO phase III are UNICEF, Danish Red Cross in collaboration with Georgia Red Cross Society (GRCS), Oxfam, Save the Children and ASB.
- **The Georgia Red Cross Society (GRCS)** is a member of the International Red Cross Movement. The GRCS was officially recognized by the State of Georgia by adopting the Law “On Red Cross and Red Crescent Emblems” (October 2, 1997) and the Law “On the Georgia Red Cross Society” (October 16, 1997) and it acts as a voluntary,

humanitarian, non-governmental and independent organization with an auxiliary role to public authorities in humanitarian work, with a mandate to coordinate the NGO response in emergency situations. GRCS is supported by the International Federation of Red Cross/Red Crescent (IFRC) (present in country from 1995) in its capacity to strengthen organizational development, strengthening the legal base, advocating and better positioning of the GRCS and the promotion of disaster law. Over the past two years, GRCS has been supported by five separate Disaster Relief Emergency Fund (DREF) disaster relief operations in Georgia.

- **GRCS, the Regional Programme for Building Safer Local Communities in South Caucasus** implemented from March 2010 to November 2013 with support from DIPECHO is a continuation of an earlier programme. The programme has been implemented in selected areas in Armenia and Georgia by the respective Red Cross national societies with operational support provided by the Danish Red Cross which represents the co-financing partners of the Austrian Red Cross and Icelandic Red Cross. The objective of the programme is to reduce vulnerability of the local population in South Caucasus living in areas most prone to and affected by natural disasters, by increasing awareness, preparedness and response capacities of local communities and partners' and the specific objective of the programme was to have: enhanced resilience of targeted vulnerable communities in Georgia and Armenia to plan/prepare, mitigate and respond to disasters through consolidation and validation of Georgia and Armenian Red Cross Societies' Community Based Disaster Risk Reduction model which included Seven specific results. The programme has commenced its third phase of action as of May 2014.
- **GRCS, Building Safe and Resilient Communities programme (Dec 2012- Nov 2015):** Funded by the Austrian Development Agency and the Austrian Red Cross, the BSRC project aims to reduce the vulnerabilities of rural and urban communities in Georgia, Armenia and Azerbaijan to natural and manmade hazards. In Georgia, the GRCS implements the project in communities in the Kakheti region, training disaster preparedness teams, conducting simulation exercises, raising community awareness of disaster risks, and implementing small-scale disaster mitigation projects with the support of local authorities.
- **GRCS Emergency Preparedness and Response (EPR) programme** supported by International Committee of the Red Cross (ICRC) Reception (Operational) centres will be established in Senaki, Kutaisi, Gori and Tbilisi. Main purpose of these centres is to assist affected population within the 72 hours after disaster (e.g. First Aid, Psychosocial Support, Restoring Family Links, etc.).
- **GRCS, Climate Forum East** EU funded project aims to build the capacity of civil society in the Eastern Partnership region to engage with policy dialogue on climate-related issues. In Georgia a national network of civil society organizations concerned with climate change adaptation is coordinated by the GRCS, to build their capacity to advocate on climate change, environmental and DRR issues and engage in youth and community actions in this area. As part of the project, the network has developed a national climate vulnerability assessment focusing on health and water resources, with recommendations for decision makers and civil societies on adaptation measures.
- **Oxfam** works on increasing the self-financing part of municipalities out of these funds for DRR measures, but a high personnel turn-over in village emergency groups complicates the implementation. Emergency workers in villages are volunteers, with no budget or incentives, and no special state training and no travel costs, so motivation is low. Oxfam works in DRR education of women in Adjara, where people were eager to learn about DRR. It was remarked that through decentralization (work with the Autonomous Republic

of Adjara) it was easier to convince and influence the local government and municipalities to use their emergency funds for DRR, integrated into municipal development plans. A health component was included on first aid and fire-fighters training, which was outsourced to Red Cross. Emergency simulation exercises were carried out at community level and in schools, jointly funded by Oxfam and the municipalities.

- **Save the Children** in collaboration with **Arbeiter-Samariter-Bund (ASB)** works in partnership with government on a range of disaster risk reduction initiatives, including DRR policy and planning; community-based and preschool-based DRR; capacity development and media outreach, including development of practical DRR solutions for children, and uses simple, practical and non-technical DRR information in its education programs. Keeping DRR information simple, practical, and relevant allows us to deliver such critical information to all children.
- **PPRD East** (EU-funded Programme on Prevention, Preparedness and Response to man-made and natural Disasters in the ENPI East Region): the purpose of the programme is to contribute to the development of the Partner Countries' civil protection capacities for disaster prevention, preparedness and response through regional cooperation. The program contributes to the development of the Electronic Regional Risk Atlas and increase of DRR awareness among the key stakeholders. In Georgia the programme is coordinated by REC Caucasus.
- **TWINNING** Project "Support the Emergency Management Department in Development of Emergency Services in Georgia". The project is funded by EU and the total budget is 800 000 Euro. The project contains 4 key components/objectives (1) to enhance risk mapping and response capacities of EMD, (2) improve legislation and regulations on civil protection/disaster management in Georgia, (3) strengthen prevention activities and capacities of the Emergency Management Department at national level and (4) improve EMD capacities to run awareness programs on risk exposure, prevention and response, targeted to Georgia's population.
- **World Vision** works mainly on emergency preparedness through communities and in schools. That includes development of emergency plans, purchase of equipment and execution of drills. World Vision assisted communities to develop a "community disaster preparedness plan", which was partly financed by community funds and is now top priority including clean water and DRR. World Vision also improved decision making power and advocacy, as municipalities could decide on existing gaps and started planning for the next four years.
- In 2011 within the framework of the project implemented by **Mercy Corps** in Samtskhe-Javakheti, the regional emergency management service was equipped with search and rescue equipment, tents, computer and car. The total value of the equipment was 65,000 GEL. In addition, the staff of the regional emergency management service was trained in the delivery of advanced first aid.
- **Rural Development for Future Georgia (RDFG)**. The Disaster Risk Reduction Centre was established by RDFG in 2011 to enhance local communities' resilience to natural hazards and promote culture of prevention through provision of coordinated and systematic approaches in disaster management on regional and central levels of the country. The DRR Centre has implemented several projects focusing on school based disaster risk reduction, local communities' disaster management capacity building and strengthening national emergency management system. In the framework of school based disaster risk reduction, the DRR Centre as a partner of DIPECHO implementing organizations (namely ACF, Oxfam and UNICEF) through its interventions has covered

27 schools in Samtskhe-Javakheti, Imereti, Kakheti, Samegrelo, Zemo Svaneti and Gali District of Abkhazia. Representatives of 33 communities were involved in disaster management capacity building activities conducted by the DRR Centre in Adjara, Zemo Svaneti and Gali District of Abkhazia. The DRR Centre closely partners with the Emergency Management Department (EMD) of the Ministry of Internal Affairs and other stakeholders to facilitate the enhancement of emergency management system at the central and local levels in the country. As one of the initiators of common tools development process in Georgia for hazard, vulnerability and risk assessment, the DRR Centre actively works and participates in design and revision activities of different types of guidelines, standards and templates and is promoting commonly agreed DRR terminology.

- **Caucasus Environmental NGO Network (CENN).** CENN is a non-governmental, regional organization established in 1998 and specialized in the fields of civil society development and institutional strengthening, environmental research and policy, resources management, compliance management and communication and environment. CENN provides advisory services on DRR policy, community based disaster mitigation, response and recovery projects, and educational programs. Prevention and Preparedness at Local Level (Phase I) project funded and implemented by SDC with partner organizations, including CENN, in 6 municipalities of Racha-Lechkhumi and Samegrelo-Upper Svaneti regions of Georgia. The project aims at saving lives and reducing economic losses due to natural disasters by supporting the prevention and preparedness efforts on the local level. In 2012, CENN and NEA jointly developed an Atlas on Natural Hazards and Risks in Georgia (see HFA Priority Action 2).
- **Greens Movement of Georgia** is non-profit grassroots organization that deals with a broad range of environmental issues. The organization implements its mission through campaigns and projects, public information and involvement, policy making and lobbying. The focus areas include: climate change issues related to mitigation and adaptation, including advocacy of climate change policy in Georgia; water resources protection and introduction of Integrated Water Resource Management, water supply and sanitation; conservation of biodiversity and protection of eco-systems, combating deforestation, forest protection; lobbying and advocacy of legal instrument referring to principals of sustainable development at local and state level; education for sustainable development (resource for teachers “Green Manual” was developed, trainings on sustainable energy, Aarhus convention, waste management, environment protection – a few certifies trainers); large volunteer network in all Municipalities and around 2000 members.
- **Regional Environmental Centre for the Caucasus (REC Caucasus)** is an independent, not-for-profit organization, established in 1999 within the framework of the “Environment for Europe Process” by the governments of Azerbaijan, Armenia, Georgia and the European Union. REC Caucasus promotes disaster risk reduction activities in the South Caucasus countries through systematic efforts to analyse and reduce the causal factors of disasters, reduce exposure to hazards, lessening vulnerability of people and property and improving preparedness and early warning for adverse events. Since 2011 RECC as a member of GNDR (The Global Network for Disaster Reduction) through mobilization of local stakeholders assess progress made toward the HFA implementation at the local level based on different indicators, identified the priority concerns and established local partnerships. As one of implementers of regional project” Prevention, Preparedness and Response to man-made and natural disasters in the ENPI East Region (PPRD East) “RECC contributed a lot in creation of the Better knowledge of risk exposure and available resources for enhanced preparedness and response capacities in the region though enhanced legislative, administrative and

operational civil protection capacities of the Partner Countries in the field of prevention, preparedness and response.

5. Technical, financial and human resources

Technical skills and competencies exist in governmental and non-governmental institutions in areas that contribute to risk reduction. Similarly, technical expertise and experience in disaster management and emergency response is extensive, both at central and decentralized levels. There are sound capacities to elaborate long-term development policies, strategies and plans in various sectors. This, however, is mostly the case at central level, rather than at decentralized levels (regional, municipal, local).

While technical expertise exists in various sectors and for specific technical areas, awareness and knowledge of disaster risk reduction concepts and practices has been identified as an area for improvement. Technical capacities related to prevention, risk reduction, risk mitigation, risk identification and assessment, risk transfer, preparedness, climate risk management and climate change adaptation are rather weak across institutions and governance levels. Across the board, there is low awareness that disaster risk reduction is primarily a development issue which goes far beyond emergency response, and which requires strong cross-sectorial collaboration and coordination. A wide consensus among responders was reached in terms of the need of a government-owned, inclusive and coordinated effort to build the necessary technical capacities and improve the understanding of DRR, if the national DRR agenda is to be effective.

In certain sectors, there are insufficient human resources; in many cases, incentives for specialized education or training are lacking, and qualified staff turnover is high.

In terms of human and technical capacities of the UN Country Team, the assessment exercise revealed strong technical knowledge and skills on DRR, and particularly on sectorial aspects of DRR (education, health, etc.), in all UN agencies having taken part of the assessment team. However, only UNDP and UNICEF have full-time dedicated capacity on DRR, while other UN agencies have focal points covering DRR for each of their focus area (e.g. IOM, UNFPA, FAO, WHO). In some cases, technical capacities that exist at UNCT level are linked to projects, and are therefore not always sustainable / predictable on the long term. In terms of financial resources made available for programming related to DRR across different UN agencies, an overview of past and current programme, projects and initiatives are presented in section 4.2 above.

There is evident government willingness to make financial resources available for sectors that contribute to risk reduction (such as environmental sustainability, climate change adaptation, etc.). However, there is no evidence that the State budget has a specific DRR annual allocation. Resources allocated throughout different sectors are not coordinated, prioritized, systematized or regularized. Similarly, there is no specific annual recovery allocation in the State budget. Disaster response allocations are made through the specific requests to the Ministry of Finance based on damage and loss assessment and calculation of costs. According to the Ministry of Finance, allocation of extra funds has to be approved by the Parliament. The Ministry of Finance also possesses Reserve Fund for Regional Development, one of three areas of which is disaster response and humanitarian aid.

Several international cooperation partners provide funding through various programmes, projects and initiatives at national and local levels. However, their efforts are not coordinated, and the government does not have an overall view of development aid received through various donor contributions, at various levels, and for various thematic issues of relevance for risk reduction. Currently, a Donor Coordination Council is being established under the Prime

Minister's office. It has the potential to ensure proper coordination of all donor funded activities in the country.

HFA Priority Action 1: Recommendations

- 1. Enhance political commitment, responsibility and accountability for DRR through advocacy/sensitization of decision and policy-makers to strengthen national and local leadership and ownership of the agenda, and to support resource allocation for DRR through different sectors. Establish a regular awareness and sensitization programme for decision-makers at national and local levels.**
- 2. Clearly define roles and responsibilities of local and regional government structures in DRR.**
- 3. Enforce and/or improve legislative framework and subsequent regulations related to disaster risk reduction, ensuring a proper reflection of disaster risk reduction elements, including prevention, mandatory identification of risks in the sectorial development plans, regular risk assessment and monitoring, disaster preparedness and post-disaster recovery, with clear definition of functions and obligations of responsible institutions.**
- 4. Develop National DRR Policy, National DRR Strategy and National DRR Plan of Action. In the process, take necessary steps to align the policy, strategy and plan with other existing relevant policies, strategies and plans, e.g. environmental protection and climate change adaptation (and vice-versa, if the latter are to be reviewed/ developed).**
- 5. Appoint at least one permanent staff member as disaster risk reduction (DRR) focal point in every municipality; determine minimum qualifications and competences (requirements specification). Clearly determine roles and responsibilities of DRR focal point at municipality level by Terms of Reference, including coordination of DRR issues at municipality level and awareness raising.**
- 6. Provide technical support, tools and resources to staff involved in national and sectorial planning in order to integrate DRR into relevant national development programmes and frameworks, such as the Regional Development Programme (2015-2017), Economic Development Strategy 2020, next UNDAF, and sectorial programmes and frameworks.**
- 7. Align the DRR coordination mechanism based on the national legislative framework to international standards and requirements (i.e. Hyogo Framework for Action) taking into account available best practice in order to facilitate coordination across sectors and institutions (governmental, non-governmental, IOs, academia, etc.), promote national dialogue on DRR priorities, contribute to improved awareness and knowledge of DRR across sectors and governance levels, and facilitate the integration of DRR into national and sectorial development programmes. Respectively, ensure provision of adequate human, technical and financial resources.**
- 8. Conduct a resource mapping exercise in order to identify the DRR funding opportunities for both direct funding and through sectorial and local budgets, including access to climate funding sources.**

HFA Priority Action 2: Identify, assess and monitor disaster risks and enhance early warning

1. Capacities for data collection and analysis

Hazard monitoring and mapping is undertaken by various technical institutions for various sectors based on sector-specific methodologies (hydro-meteorological hazards, geological hazards, seismological hazards, epidemics). There are various vulnerability assessment methodologies used to prepare and implement specific projects and programmes, mostly at the local level. A unified hazard mapping and risk assessment methodology regulated through a dedicated legal framework is lacking. As a consequence, hazard data collection and mapping remains predominant (although mistakenly named as “risk assessment”), and is being conducted in a sectorial or project-based manner.

Overall, the assessment found that several factors contribute to the sub-optimal use of existing data: potential users lack information about available datasets and database/ portal; data is scattered across technical institutions and is not collected, systematized, customized and regularly updated in one central repository; in certain cases, data is not made available to users in a timely manner or in a usable, understandable or customized form; certain respondents feel that available data is not sufficiently accurate, reliable or updated.

While an official updated and detailed national risk profile of Georgia does not exist, in 2012, the Caucasus Environmental NGO Network (CENN) and NEA, with participation and coordination with EMD, jointly developed an Atlas on Natural Hazards and Risks in Georgia (at a scale of 1:10000). It has been developed through the project “Institutional building for natural disaster risk reduction in Georgia” implemented from 2009 to 2012 by CENN and Faculty of Geo Information Science and Earth Observation, University of Twente (ITC), the Netherlands, and was financed by the Social Transformation Programme of the Netherlands Ministry of Foreign Affairs. The Risk Atlas is available online (Geoportal of Natural Hazards and Risks in Georgia)²⁸ and as a separate publication²⁹. The Risk Atlas contains maps and explanatory text related to natural hazards, exposure, vulnerability and risk in Georgia. The Atlas also shows the baseline maps, related to natural conditions and human conditions in the country. Maps show various types of vulnerabilities (physical, social, ecological, economic) and risks typical to Georgia’s territory. The assessment revealed that further popularization of the Atlas is required, especially at the local level. The Atlas also needs to be periodically revised/updated.

While NEA is well positioned to conduct hazard mapping and risk assessment for most of hazards and risks, specialized institutions such as Institute of Geophysics and Institute of Earth Movement are under different management structures and there is no binding requirement for any of these institutions to unify their methodologies and share information. For example, while the Ministry of Defence is tasked with anti-hail function, using canons, there is no clear evidence of regular information exchange from Hydro Meteorological service.

Decision-makers seem to need improved understanding of hazard and risk concepts and their application. Roles and responsibilities of national institutions on hazard mapping and risk assessment are not clear. The following institutions are mandated to collect, analyse and disseminate data and information on natural hazards in Georgia:

- The **National Environmental Agency (NEA)**, comprising of 343 staff members nationwide, is responsible for preparation of normative and informational documents, forecasts, warnings regarding existing and expected hydro-meteorological and geodynamic processes, engineer-geo-ecological conditions of geological environment and environment pollution conditions; permanent mapping of the territory, risk zoning and forecasting of coastline developments; management of coast forming processes

using engineer activities; creation of environmental databases, metadata and ensuring its organizational management. NEA is divided into the Departments of Hydrometeorology, Geology, Environment Pollution Monitoring and Licensing.

- The **Department of Hydrometeorology**, consisting of 197 staff nationwide (60 staff in Tbilisi, the remaining staff spread in four areas in the East and West Georgia), is primarily responsible for hydro-meteorological data collection and dissemination (including short and medium-term weather forecasts, prognosis on spring flooding parameters and water discharge), early warning and prognosis of hydro-meteorological risks (e.g. over-short term special forecasts and warning of snow avalanche threats), based on information gathered from the observation stations.
- The primary responsibilities of the **Department of Geology** of NEA comprising of 44 staff members are as follows: elaboration of hazardous geological risk zoning maps (with the scale of 1:50000); permanent monitoring over hazardous geological processes and prediction; provision of recommendations for population living in hazard-prone areas and preparation of relevant conclusions for immediate measures in case of geological processes' extreme activation in the settlements; implementation of all scales of engineer-geological, engineer-geodynamic and geo-ecological studies; zoning of the territory of Georgia in accordance with frequency and intensity of hazardous geological processes; engineer-geological and geo-ecological examination of projects of big industrial objects to define the scale of possible impact over changes in environment on the whole territory of Georgia; participation in preparation of hydro-geological conclusions on the land intended for civil-industrial purposes, in the frames of its competence.
- The primary functions of the **Department of Environment Pollution Monitoring** of NEA are to determine the level of environment pollution caused by various natural and anthropogenic factors; establishment of the data systems collection and control; provision of information about environmental issues to the State entities and interested stakeholders; participation in the assessment of the impact of the ecological situations within the framework of its competence (no defined set of indicators/standards is provided by the mandates/regulations of NEA Departments which would describe what the respective 'level of competence' means); participation in ecological risk assessments.
- A dedicated unit working on **coastal zone monitoring and protection** of NEA was dissolved in 2011. A new division was established under the Roads Department of the Ministry of Regional Development and Infrastructure (MRDI). Currently NEA has only 8 people responsible for prognosis, monitoring and provision of recommendations for planning the infrastructure development in coastal zones.
- Seismic data is collected and processed by the **Institute of Earth Science - Seismic Monitoring Centre** of the **Ilia State University**. The Centre has its own seismic monitoring network (25 stations). The centre's responsibilities include: seismic data processing and development of earthquake catalogues; rapid estimation of earthquake parameters in time and space such as location (hypocentre, epicentre, magnitude, intensity); data exchange with international data centres such as EMSC, ISC and providing quick information to several organizations having responsibilities in case of emergency situation, provide updated information through webpage <http://seismo.iliauni.edu.ge>; Customized seismic information is not provided by the Institute for free. The Institute does not produce risk data, only hazard data.
- Similar or same map of seismic hazards of Georgia is developed by the **LEPL Institute of Geophysics**, which has also developed Disaster Deficit Index. Observation was

made on the interchangeable use of hazard and risk, as well as hazard and risk maps. Most of responders highlighted the need for unified risk assessment methodology in Georgia. The Institute of Geophysics also stated that seismic zoning map of Georgia was developed by them in 1999 and approved by the Ministry of Economy in 2010. While different zones require different construction norms, this does not seem to be the case in visited municipalities.

- **Emergency Management Department (EMD)** of the Ministry of Internal Affairs receives hazard maps from NEA for specific hazards (excluding seismic), and seismic hazard maps from the Institute of Geophysics. EMD develops GIS maps based on the information received from the State Registry (including Cadastre) of the Ministry of Justice and other sources, mentioned above.

Proper equipment to undertake hazard mapping and risk identification is also lacking. For instance, after the dissolution of the USSR, out of the 400 hydro-meteorological observation stations, only 40 are operational, some of which have been recently upgraded or established based on donor funding. This results in generation of less reliable longer-term weather forecasts, and only short-term, 6-hour forecasts of expected hazardous events are made, without indication of specific locations. Since 2000, no long-term prognosis has been made for geological hazards, whereas previous prognosis covered a period of 20 years. Similarly, climate change modelling is not fully operationalized at the national level.

Based on the EU-Georgia association agreement, Georgia has committed to gradually harmonize its legislation with EU legislation and international instruments for improving the assessment and management of flood risks. The following provisions of the Directive No 2007/60/EC on the assessment and management of flood risk need to be implemented (within a span of 4 to 9 years from the entry into force of the EU-Georgia Association Agreement): adoption of national legislation and designation of competent authority/ies; undertaking preliminary flood assessment; preparation of flood hazard maps and flood risks maps; and establishment of flood risk management plans.

2. Access to and dissemination of information

The Disaster Database hosted on the Geoportal allows the user to make queries regarding historical disaster events that have occurred in Georgia. The database can be visualized as points and the user can analyse the distribution of the different types of events, by district and by period, and then generate a map with the number of events location. However, the assessment found that the portal is not known, used or referenced widely by various stakeholders at central and local levels. Other datasets for specific hazards (seismology, geology, hydrometeorology) exist in various institutions, however not all data has been digitalized and thus is not available online.

Most of the data on hazards and risks collected by different institutions is “available”, but not necessarily disseminated in a systematic and formalized way. The information is also not customized for the needs of end-user. For example, the technical condition of buildings and respective technical passports are not broadly disseminated and used for construction and monitoring. Access to the existing data is difficult also because of data incompatibility issues.

An access to initial databases (primary information on events, instrumental or descriptive records, bulletins and catalogues) plays an important role in the disaster risk assessment and reduction. Meanwhile all the initial data produced through projects funded by international organizations were identified as easily accessible, some of the respondents identified problems regarding data accessibility from government institutions to the scientific community that was

considered as one of the major obstacles for development of science particularly in disaster risk assessment.

The National Environmental Agency (NEA) publishes an annual hazard assessment bulletin (Informational bulletin on outcomes of the development of natural-geological processes in Georgia and the next year's prognosis), which is sent to local municipalities, the EMD, the MRDI, non-governmental organizations and other interested parties. The bulletin, which is also publicly available, contains information on hazardous geological processes obtained through monitoring and surveys during the extreme activation of disasters; also on dangerous geological processes in settlements and territories of engineering facilities within the monitoring area. It includes information distributed according to municipalities on particular danger regions prone to natural disasters with short-term forecasts and negative consequences caused by hazardous geological processes and planning of relevant preventive measures. Maps are attached to the bulletin containing information on all types of geological processes and risk areas for the activation of geological disasters. EMD develops additional recommendations and communicates them to regions and municipalities based on the analysis of the information in the Bulletin.

If the identified issues require urgent action, respective funding is allocated by the local Municipality reserve fund. The currently available information on recent geological hazardous events is covering the period of past 50 years.

The Departments of Hydrometeorology and Geology still rely on paper-based data recording in the regions, which gets transferred into digital format by NEA at the central level, however, only for areas covered by different ongoing infrastructural projects.

The Department of Hydrometeorology, in collaboration with Hydrometeorology Institute of the Georgian Technical University, issues and disseminates regular weather forecasts and information/ prognosis on hydro-meteorological hazardous events. The Department of Environment Pollution Monitoring of NEA also produces environmental pollution monitoring monthly bulletins, which are made publicly available and shared with the interested stakeholders. NEA also cooperates with the National Statistics Office (GEOSTAT) based on the Memorandum of Understanding for regular information/data exchange according to the commonly agreed classifiers.

3. Early warning

Regarding early warning, various institutions have good technical capacities to conduct studies on various types of developing trends. Most of these institutions have access to international data and possibilities to share various risk elements that can impact the country, and there is a certain degree of interest from donors to offer technical and financial support to access information and conduct studies that provide information on risk trends.

However, the studies that are produced are not systematically shared in a reader-friendly format by the technical institutions with national and local authorities as a basis for risk-informed decision making on long-term development investments by sector. Often, the nature of the early warning information from the studies is too technical.

HFA Priority Action 2: Recommendations

- 1. Develop a unified, multi-hazard nation-wide risk mapping, risk identification, risk assessment and risk-monitoring methodology, comprehensive training programme, tools and equipment. Ensure that this process is based on good practices in the country or in the region, and builds on existing proved methodologies, tools, modern equipment and software. Ensure systematic monitoring of hazardous zones.**
- 2. Conduct proper risk assessment in all regions of Georgia in order to compile a comprehensive and unified national risk profile. The risk profile should serve as guidance to influence risk-informed decision-making for national, local and sectorial development processes. Store and update the data and information in one central repository / National Disaster Risk Observatory (based, for instance, on the Geoportal). Introduce procedures and regulations ensuring open access to the repository / observatory to all relevant stakeholders at all levels.**
- 3. Establish systematic and mandatory information exchange protocols among generators of hazard and risk data, and end-users. This should include provisions for data analysis, interpretation, disaggregation and customization so that the information can be understood and used by non-technical personnel at decision-making level. Ensure that data availability related to natural hazards is made legally binding.**
- 4. Revise / develop regional and municipality development plans based on accurate risk information.**
- 5. Establish multi-hazard early warning systems in order to inform national authorities on developing trends to support long-term planning. Establish a mechanism for systematic dissemination on disaster (and climate) risk information through radio, TV, ICT, and other forms of EWS at national and local levels, including civil society and the GRCS where appropriate, to ensure that communities are informed of potential risks, are aware of preventive and preparedness measures that they can take. Ensure education services and facilities are linked with these early warning systems.**

HFA Priority Action 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

1. Formal education system

In Georgia, a number of stakeholders are implementing DRR education activities in schools and pre-school institutions both in terms of training teachers and students, as well as in terms of disaster preparedness (e.g. supporting schools and pre-schools in developing disaster management plans, procurement of basic fire safety equipment, etc.). In 2013 an interagency working group on DRR education was set up by the Ministry of Education and Science of Georgia (MES) with support of UNICEF, in order to coordinate several DRR related activities, with the aim to ensure coordinated DRR education embracing awareness raising and prevention. The members of the group met several times within the framework of the DIPECHO programme organized by UNICEF in close collaboration with MOES and EMD. However, there is a need for regular coordination meetings, particularly due to increasing number of DRR education activities carried out by various stakeholders throughout the country.

1.1. *Preschool education*

The Law on General Education determines the role of the MES promoting development of preschool education through creating preschool curricula, preschool education teacher professional standard and training programmes. The MES actively participates in elaboration of preschool law. For this purpose, a Preschool Education Development Unit was established in December 2012 within the National Curriculum Department of MES. This Unit is also responsible for developing and approving preschool education curriculum and supporting its implementation. Presently, UNICEF supports the Ministry of Education and Science of Georgia in revision of the national curriculum. It also assists the MES in development of preschool law and new curriculum.

Although currently available preschool curriculum and methodological guidelines contain some elements of age specific information on safe behaviour, DRR as such is not integrated in these documents. The inclusive DRR teaching and learning materials for preschool children developed and tested by Save the Children in partnership with ASB in coordination with the Emergency Management Department (EMD) of the Ministry of Internal Affairs, within the framework of the DIPECHO program could potentially be integrated by MES within the preschool education curriculum, currently under development.

1.2. *Primary and secondary education*

Within the framework of the first phase of the UNICEF-DIPECHO programme focused on mainstreaming Disaster Risk Reduction in Education, DRR was incorporated in the national curriculum within the subjects of 'Civil Protection and Safety' for grades IV and VIII and the mandatory 'Head Teacher' program for grades V-IX. The 'Civil Protection and Safety' subject is taught for one hour per week during the one schooling semester in the respective grades. As for the 'Head Teacher' program, at least one hour per week should be allocated by Head Teachers for teaching DRR with interactive methods throughout the academic year. The abovementioned DRR curriculum was developed in coordination with and participation of EMD based on extensive consultations with specialists from different relevant sectors.

In 2013, the National Curriculum Department of the MES with support from UNICEF developed DRR electronic games for the primary schoolchildren, covering five thematic areas (landslides, earthquakes, fires, floods/flash floods and strong winds). The information about availability of the electronic games was disseminated by the MES to appropriate educational resource centres; large-scale presentation of electronic games was provided to teachers and students

from different regions of Georgia. The games were also uploaded on the website of the Ministry of Education and Science of Georgia (www.buki.ge). However, despite efforts to support popularization of the games, the random indirect monitoring (including through the CADRI assessment) demonstrated that schoolchildren and teachers, especially in the regions, were mostly unaware of this interactive educational resource,

Despite the fact that DRR is now formally integrated in the national curriculum, the monitoring of the teaching process does not take place. MES is currently developing classroom monitoring system for the core subject areas and intends to also look into the quality and periodicity of DRR teaching in schools nationwide. As a result of informal monitoring of the process, also revealed during the field trips to Kakheti, Adjara and Racha-Lechkhumi Kvemo Svaneti regions, DRR is taught in schools on a rather sporadic basis. EMD trained approximately 3000 teachers throughout Georgia in civil defence and safety. The trainings were organized with an ongoing support from the local education resource centres.

Recently interviewed heads of local Municipalities and representatives of the education resource centres and Municipal disaster management services were not aware that DRR is part of the curriculum. The challenge still remains in moving from the perception of DRR in curriculum as an isolated and one-off or pilot initiative towards more sustainable mainstreaming.

The consolidated strategy on education system for 2014-2024 in Georgia is underway, where the safe school is one of the priorities. The strategy has a systemic approach to DRR issues and embraces systemic vision of education at all levels: preschool, primary and secondary, vocational and high education. Based on the Strategy, its Action Plan will be elaborated with concrete activities for risk management, in which specific DRR instructions for schools will be developed as well as Education in Emergencies concept will be introduced to ensure access to educational opportunities/schooling to children in case of emergencies.

1.3. Teacher capacity development

As part of UNICEF's support to mainstreaming Disaster Risk Reduction into the education system of Georgia (UNICEF-DIPECHO programme) which resulted in the formal incorporation of DRR into the National Curriculum, in 2013 the National Centre for Teacher Professional Development (TPDC) implemented a project aimed at supporting effective teaching of the new DRR curriculum at schools.

In order to ensure the capacity development of teachers, under the second phase of the UNICEF-DIPECHO programme, a special 20-hour DRR training of trainers (ToT) and teacher training program was developed by TPDC in collaboration with EMD and piloted in December 2013. In addition, a core group of 5 trainers was formed who were specially trained by EMD and TPDC specialists.

The 20-hour training module which targets Head Teachers for grades V-IX, and teachers of the subject Civil Protection and Safety for grades IV and VIII, includes the following topics:

- Natural hazard profile of the region and Georgia;
- Understanding the role of education system for disaster risk reduction;
- Interactive methods of teaching;
- Overview of available teaching materials on DRR;
- Understanding key concepts of disaster risk reduction: hazard, vulnerability, disaster risk, prevention, mitigations, preparedness, etc.;
- Causes and consequences of disasters;
- Pre, during and post disaster behaviour rules;
- Teachers' role in disaster risk reduction.

As of September, 2014 the National Centre for Teacher Professional Development will offer this training course that aims to increase knowledge and skills in teaching disaster risk reduction with child-friendly approaches; interested teachers will be able to register on TPDC's web-page for the trainings. The courses are free of charge for the public school teachers.

In addition, the Head Teacher's Guide on "Teaching Disaster Risk Reduction with Interactive Methods" were printed by MES and disseminated to all 2,084 public schools countrywide. Approximately 3,000 teachers responsible for teaching the 'Civil Protection and Safety' subject were trained by TPDC and EMD in 2011.

1.4. School safety and school-based disaster risk reduction

In Georgia the following legislation defines the basis for school disaster management: Georgian Law on "Protection of the Population and Territory from Natural and Technological Emergency Situations" (8 June 2007); "National Response Plan for Natural and Man-Made Emergency Situations-NERP" (Presidential Decree #415, 26 August 2008); "Instruction for the Activities to be carried out for Safety of Educational Institutions" (Order of the Minister of Education and Science of Georgia #28/N, 20 April 2010). Based on the aforementioned legislation, several years ago EMD developed special guidance/templates for schools for establishing disaster response boards, preparing evacuation plans and organizing school disaster preparedness activities. Currently, UNICEF in collaboration with the DRR Centre of RDFG is supporting EMD in the revision of the existing guidance and shifting the methodology from preparedness for response to a more comprehensive, school based disaster management model and advocating with MES to formalize this model for all schools in Georgia.

The national legislative framework provides the basis for compliance of schools with basic safety measures, including maintenance of evacuation and school disaster preparedness plans. However, very few schools are compliant with these regulations and great majority of schools either do not have school disaster preparedness plans or they are out-dated and not functional. In most instances even when they exist, disaster preparedness plans and evacuation routes are not adapted to the special needs of children with disabilities. Same applies to the safety of school/preschool buildings and no national school safety assessment has been conducted based on which reconstruction/retrofitting of the educational facilities would later on take place. In various cases, the existing plans are revitalized through pilot projects implemented by NGOs or GRCS. However, once the projects are finalised, the uptake and follow-up by local authorities or the community remains rather limited.

The results of the nationwide survey conducted in 600 schools in Georgia within the framework of UNICEF-MES project on improving water, sanitation and hygiene conditions, revealed that 70% of schools do not have water facilities in school building, in 85% of schools in the villages the water source is located outside the schools building and only 35% of the observed schools have sanitation facilities inside school building. The location of outside facilities varies within 10-200 meters from the school buildings. In 2013, UNICEF supported development of the WASH standards in schools and teacher's guide; however the regulatory part of the water and sanitation facilities still needs to be adopted by the Government. WASH monitoring framework has also been developed for incorporation into the Education Management Information System (EMIS) as of 2014 academic year.

The out-dated construction codes used nationally further exacerbate the issue of school safety. However, LEPL Education and Scientific Infrastructure Development Agency (ESIDA) commits itself to start elaboration of the new construction standards for schools, also taking into account DRR specificities, as soon as the Ministry of Economy and Sustainable Development of Georgia completes the process of revising/introduction of the new national construction codes in accordance with the EU standards (by end 2014).

ESIDA was established in 2009 within the structure of MES and is responsible for supporting education quality assurance in line with the international standards, as well as for improving school infrastructure and introduction of modern technologies in the learning process.

According to the ESIDA representatives, they will require technical support/expertise in the development of sustainable multi-hazard resistant standards and designs for reconstruction of schools.

Protection of public order and safety on the territory of educational institutions is one of the main tasks of LEPL Office of Resource Officers of Educational Institutions under the Ministry of Education and Science of Georgia. The protection of public order, first of all, implies ensuring physical safety of pupils/students of educational institution and its personnel.

Implementation of the duties assigned to the LEPL Office of Resource Officers of Educational Institutions is exercised by Resource Officers of Educational Institutions. Since 2011 the Resource Officers are trained through different programs and activities that give them an opportunity to understand situation in critical moments and carry out appropriate measures, based on the agreement signed between LEPL Office of Resource Officers of Educational Institutions and the Academy of the Ministry of Internal Affairs. The training course offered within the framework of the agreement for "Preparation of Resource officers for acting in Emergency Situations" contained key issues related to disaster risk management³⁰.

LEPL Office of Resource Officers of Educational Institutions, within the scopes of its competence, is tasked to implement the specific part of the Safe School Project of the Ministry of Education and Science of Georgia, which plans to undertake certain measures to reduce disaster risks in educational facilities.

1.5. Postgraduate education

Tbilisi State University Department of Exact and Natural Sciences offers teaching of such subjects as hydro-meteorology, physical geography, geomorphology, cartography/geo-informatics and geo-ecology, as cross-cutting areas. The Private Agrarian University has agrarian and veterinary faculties and serves as a basis for new recruitments for the Ministry of Agriculture staff. The Technical University of Georgia offers bachelor, master and doctoral programs in Emergency Management and Work Safety, as well as a master degree program in Emergency Management, Design and Safety. A Bachelor's programme on geophysics and seismology exists at Technical University of Georgia, as well as faculty of melioration. The Aviation University offers an undergraduate program in Emergency Management.

As of October 2012 Iliia State University offers MA Programme in Mental Health. One of the courses taught within the framework of this programme is "Disaster Management". It implies 35 hours of teaching and 115 hours of independent learning. The course covers such topics as systems of stressors in natural and man-made disasters, analysis of stakeholders, assessment of needs and resources subsequent to disasters, crisis management, Inter-Agency Standing Committee (IASC) guidelines, multidisciplinary approach to disaster management, early intervention among children, adolescents and elderly, psychological first aid (PFA), etc. Iliia State University School of Engineering offers teaching of several subjects related to disasters, especially about DRR.

Overall, the quality of specialized postgraduate education is rather low, as well as the interest of young generation to pursue existing programmes. As an example, currently there are only 5 students studying geology.

There is no systemic approach/coordination with the education system. Only sporadic lectures are conducted by invited NEA specialists and there is no engagement in development of educational programs/curriculum from their side with MES.

No postgraduate programme in Disaster Management or Disaster Risk reduction is available.

2. Non-formal education

From 2010 Georgia Red Cross Society has supported informal education on disaster preparedness and safety in the local communities across Georgia. With the support from Ministry of Education and Science of Georgia and municipal resource centres in 10 communities GRCS conducted after school training sessions for school teachers in Family Emergency Planning (Red Cross tool) to enable them to conduct training sessions for students. The aim is for students to sensitize their family members, relatives and neighbours on the importance of being prepared for disasters.

3. Research and development

As a result of the 2010-2011 reform, the scientific research institutes have been linked to formal higher education institutions. Aim of the reform was to support integration of scientific knowledge and practice into education process that will enhance effectiveness of scientific-researches and support development of applied science.

The Institute of Earth Science conducts research on seismic risk in country and region. It has 20 professional staff, with specific plan for involvement of young scientists – graduates of Ilia and other Universities. University staff bases their research on regular teaching practices in higher educational institutions of Georgia, such as Ilia State University.

The M. Nodia Institute of Geophysics under Iv. Javakhishvili Tbilisi State University took part in two major international projects related to seismic hazard assessment (NATO and the Global Earthquake Model). The seismic hazard map of the Baku-Tbilisi-Ceyhan pipeline was updated based on new data and modern software.

State funding of the scientific researches is provided through the Rustaveli National Science Foundation, which is mandated to ensure rational spending of financial resources intended for development of the science, through the unified science funding system.

Currently there are two scientific academies in Georgia: National Scientific Academia of Georgia and Agricultural Science Academia of Georgia, both organizations are state-funded legal entities of public law. The latter was established by the Ministry of Agriculture in 2014, and will have 121 staff based in Tbilisi and in 3 other regions of the country. Several responders noted that the Institute of Construction Mechanics was recently dissolved. Many respondents highlighted the importance of multidisciplinary scientific research for evidence-based policy and decision-making. The EU-Georgia Association Agreement determines cooperation in the field of research, technology, development and demonstration, which is directed towards the facilitation of cooperation in the fields of academic research, technological development and demonstration.

4. Professional training

Most of the responding institutions noted that there is no formal staff development and professional training on DRR, which is institutionalized and regularly funded through institutional or state budget sources. There is no risk assessment training programme in Georgia, and training on hazard identification and mapping is mostly externally funded and ad hoc. Most of

the responders named frequent staff rotation as a challenge for awareness raising within institutions and decision makers.

The Ministry of Economy and Sustainable Development has dedicated department for land-use planning. The Department is responsible for development and dissemination of new standards, circulated through mail and ad hoc field visits with associated training. It was noted that lack of resources is the main reason for not being able to provide professional training to 64 municipalities and relevant sectorial Ministries at central level. At the same time, the assessment team was informed that Ministry has a specific budget for training of its own staff. Most of the professional development, though, done through external financing by donors and overall process is not systematized.

The Institute of Geophysics mainly receives new staff from the Technical University and does not have specific staff development professional programme.

The Ministry of Agriculture has established Information Centres of the Ministry in all municipalities in 2013 with the purpose of training the municipalities. Each centre consists of 4-6 professionals. Frequency and curricula of trainings varies among municipalities.

5. Public awareness and sensitization of decision-makers

Overall, DRR public awareness is scattered and not regular. Mostly, DRR public awareness initiatives are extra budgetary with external source of funding. EMD noted that there used to be a weekly TV programme on basic risks and safe behaviour, but it is no longer the case as the programme was considered to be ineffective. At the same time, there was no indication of criteria for effectiveness (number of viewers, interviews and impact measurement, etc.).

Low awareness levels of decision-makers on DRR issues are mainly due to the lack of regular information and sensitization campaigns, high staff turnout and lack of resources. For instance, the awareness level of decision-makers in the Ministry of Agriculture on the links between DRR and agriculture, including food security, crop and plant diversification, climate change, etc. seemed very low. Special consideration needs to be given to decision makers at municipal level, as awareness level at municipal level is said to be even lower compared to the capital city.

HFA Priority Action 3: Recommendations

- 1. Strengthen the capacity of the Ministry of Education and Science to regularly monitor teaching of existing DRR and preparedness-related curricula, and expand teacher training on DRR nationwide.**
- 2. Strengthen the capacity of the LEPL Environmental Information and Education Centre of the Ministry of Environment and Natural Resources Protection to promote public awareness on natural hazards, support training, re-training of relevant professionals and target groups (public servants, including judges, also journalists, representatives of business sector, etc.), facilitate access to information and promote public participation in decision-making.**
- 3. Ensure integration of DRR into pre-school curriculum based on available good practice in Georgia, and ensure its implementation.**
- 4. Include DRR content in pre-service training for teachers and preschool caregivers; provide in-service training for school principals and technical and administrative staff responsible for management of education facilities on a regional, national and local level in disaster risk reduction criteria.**
- 5. Strengthen the capacity of the Ministry of Education and Science to organize regular national events and coordination meetings of key stakeholders to share and disseminate best practices, tools and materials on DRR.**
- 6. Explore options for establishing postgraduate programmes and/ or modules (B.A., M.A., Ph.D.) in disaster risk reduction/ disaster risk management and climate risk management, particularly through experience exchange with other universities having such programmes.**
- 7. Develop regular and inclusive staff development and vocational training programme for government officials at all levels, in collaboration with various technical institutions, NGOs and international experts. Design and conduct various training programmes at national and local levels, with a focus on women's participation.**
- 8. Develop and implement a systematic public risk awareness campaign in partnership with the media involving all stakeholders, especially civil society, at national and local levels, including through the celebration of "international days" (e.g. International Day for Disaster Reduction, International Environment Day, etc.). Integrate disaster risk issues into advocacy campaigns related to environmental sustainability and protection, climate change, water resource management, etc. and allocate funding for small scale non-structural mitigation activities.**
- 9. Establish collaboration mechanisms with NGOs and the media for systematic community-based awareness and outreach programmes at local level. Support NGOs and the media to build their capacity to deliver targeted information, including early warning messages for slow-onset disasters (e.g.: heat waves), to the public, as well as to ensure proper coverage of risk reduction and preparedness topics in the media.**

10. Promote youth empowerment and participation in DRR initiatives through capacity building of informal youth groups and networks, based in schools, and through guidance on how to integrate DRR into their activities (including extra-curriculum activities, popularization of family emergency planning, organization of local and regional camps, etc.); engage in the development of child-centred disaster risk assessment for schools as a means to raise awareness of disaster risks among students, and to strengthen the voice of children in the school environment and the communities.

HFA Priority Action 4: Reduce underlying risk factors

In Georgia, many sectorial policies, programmes and projects indirectly contribute to reducing underlying risk factors and building community resilience, most notably in the areas of environment protection, climate change, and natural resource management, among others. However, disaster risk reduction is not explicitly integrated or referenced in sectorial policy frameworks, and only a number of localized and disparate projects specifically target disaster risk reduction activities. Inter-sectorial coordination among various institutions and stakeholders engaged in programmes that contribute to risk reduction is not always effective, and properly defined institutional and individual mandates, responsibilities and commitments are lacking. There is a risk of duplication among various policies in the absence of coordination and collaboration among different ministries, technical agencies, and other national stakeholders, which is translated into projects and programmes being implemented, monitored and accounted for in a scattered manner.

A key area of concern regarding underlying risk factors is proper management, regulation and control of land use planning practices, and in particular urban planning. The Capital City General Development Plan was revised in 2009; however this was not based on a proper risk mapping and assessment of geological and hydrological specificities which play significant role in urban forming processes. Building codes and regulations from the Soviet era are still valid in Georgia. In 2013, the Government adopted a decree to recognize technical regulations enacted in the OECD countries. The government is, however, working towards developing a unified national set of building regulations, including setting up enforcement, monitoring and control mechanisms.

Spatial planning process is decentralized: the central government is responsible for development of country-wide spatial territorial plans, whereas municipalities are responsible for development of their respective spatial-territorial plans. Construction permits are issued by the municipalities based on compulsory geological, seismological, geomorphological, and other types of assessments. However, such assessment can be conducted by both state and private companies. This results in risk-laden constructions and refurbishments.

The assessment found that both at capital city level and at municipal levels (including in the Autonomous Republic of Adjara), the lack of modern and unified national land-use and spatial planning policies, laws and regulations is complemented by inadequate human and technical capacities, and inadequate funding.

1. Climate change and environmental sustainability

According to the Second National Communication to the UNFCCC, statistical analysis revealed an increased tendency for both mean annual air temperature and annual precipitation in Georgia. The increment of temperature and precipitation in West Georgia appeared to vary in the range of 0.2–0.40C and 8-13% respectively, while in East Georgia the relevant values were found to be 0.60C and 6%. Georgia's coastal zone is affected by a variety of geophysical processes (tectonic movements, rising sea levels, tidal waves, floods, underwater currents, river sedimentation, etc.), some of which are being intensified by current climate change.

Adaptation to climate change was acknowledged as a priority in the National Climate Change Policy (2009) based on the results of the Second National Communication to the UNFCCC. A National Climate Change Adaptation Plan is under development and will be consolidated with the Adaptation Strategy under the Third National Communication to the UNFCCC (undergoing since 2011). At decentralized level, the Climate Change Strategy for Autonomous Republic of Adjara was prepared within the framework of the Third National Communication.

The Second National Environmental Action Programme also integrates references to measures for climate change adaptation and mitigation.

Regarding climate modelling, under the Second National Communication two tools for climate change were used to forecast the possible changes of climate elements in the future: the Regional Climate Model PRECIS (with a resolution of 25 km x 25 km) and the statistical software MAGICC/SCENGEN (with a resolution of 600 km x 600 km). This process was directed online by the Hadley Centre, with two runs of the model were implemented by Georgia for the B2 scenario of global socio-economic development. For other scenarios, other models were run in Azerbaijan and in Armenia, and results were transferred to Georgia.

The EU-Georgia Association Agreement provides for cooperation mechanisms related to climate change adaptation and mitigation; research and development and mainstreaming of climate consideration into sector policies. According to the Agreement the cooperation shall cover, among others the development and implementation of: a national Adaptation Plan of Action (NAPA), low Emissions Development Strategy (LEDS) including Nationally Appropriate Mitigation Actions; measures to promote technology transfer on the basis of technology needs assessment; and measures related to ozone-depleting substances and fluorinate greenhouse gases. Georgia is expected to harmonize its climate change related legislation with the following EU regulations: Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases, and the Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

The EU-Georgia Association Agreement also provides for the harmonization of Georgia's national legislation on environment to EU standards, with a focus on: environmental governance and integration of environment into other policy areas; air quality, water quality and resource management including marine environment, waste management, nature protection, industrial pollution and industrial hazards, chemicals management.

The Greens Movement of Georgia is implementing the "Clean up Georgia" programme to support solving waste management problem in the country through Society Awareness Campaigns, introducing 3R systems and modern methods and cleaning up rivers and river banks nationwide. Interactive maps of hotspots developed / cadastre of water resources. The major hazards on which the Greens Movement works on is: flash floods, landslides, and forest fires. According to the Director, Nino Chkhobadze, there are fewer problems with the legislation; however, capacity (high staff turnover) is definitely an issue. The coordination and flow of information also need to be strengthened.

2. Natural and water resource management

Overall, the use of natural resources and particularly water management requires more systematic flow of resources to upgrade existing systems and infrastructure, develop technical capacities, and re-define policies and approaches. Water resource management in Georgia is regulated through legislation on environment protection, law on water, law on public health, law on regulation and structural protection of sea, reservoirs and river banks, and other bylaws of the MENRP (see HFA Priority Area 1).

According to the Water Management Institute, traditional flooding areas change and increase in size, velocity and frequency. However, there is no systematic approach from the Government to address the changing nature and scope of floods. A regional water management approach, involving Armenia, Georgia and Azerbaijan is needed as flooding is not an isolated phenomenon. Good experience of Kura-Aras river basin cross border management between Armenia and Georgia is an example to follow.

The Regional Environmental Centre (RECC) has developed Atlas of land degradation in Kakheti region (1:200000 scales). GEF funding is expected to support development of similar Atlas for the whole country in partnership with PPRD East.

A national programme to address soil erosion was developed by the Water management Institute of Georgia. Within this programme, a number of riverbanks were reinforced.

Coastal zone development in Georgia is not based on the concept of integrated coastal zone management (ICZM), as a result of which there is no general development plan of the Georgian coastal zone (including for construction), nor is monitoring and prognosis carried out systematically.

3. Agriculture

The agriculture sector plays an important role in the social and economic development of Georgia. Agriculture is the dominant source of financial and non-financial income of the rural population. According to official statistics, 52% of workforce is employed in agriculture sector out of which 83% are self-employed³¹. There are two types of farmers in Georgia: the small-scale or subsistence farmers that make overwhelming majority and market oriented investor-driven farming. While large farmers have sufficient resources and expertise and the ability to protect themselves from the various risks, subsistence farmers due to limited knowledge and abilities are more vulnerable to natural disaster risks and animal diseases. The agriculture sector provided 9.3% of GDP in 2013³². The agriculture sector suffers from low productivity, high segmentation, lack of financing, underdeveloped value chains and food safety. Inadequate irrigation system in Georgia creates additional vulnerability to the agriculture sector. The current irrigation system lacks regular maintenance and proper system management.

The Ministry of Agriculture is the entity responsible for the development and oversight of the implementation of the national policy on agriculture. The Ministry of Agriculture has set up information services at the local territorial units of the Ministry in order to provide farmers with specialized services related to modern agricultural methodologies and technology. The information services also collect information on agricultural and rural activities at the local level.

With support from USAID, the Ministry has undertaken capacity development programmes for its staff on new agricultural technologies.

Similarly, in 2014, a Scientific Centre was established by the Ministry of Agriculture for long term prognosis for crop diversification, climate change and desertification among others. It is planned that the Centre is equipped with 121 staff in 3 regions of the country.

“State Programme for Soil Protection and Increasing Fertility” focused on the implementation of activities for improvement of the land quality, among others. It was developed under the N2-93 05.05.2014 decree of the Minister of Agriculture of Georgia.

The Amelioration Systems Company of Georgia LTD is an entity responsible for land reclamation and irrigation systems to improve land fertility and food security. The long-term goals of the Amelioration Systems Company to be achieved by 2030 include fighting impacts of climate change through rehabilitation and construction of new water reservoirs to provide with irrigation during summer periods when water level in rivers reduces due to increased temperatures and reduced rainfall as predicted by climate change models; design and implement measures against desertification, to protect and promote sustainable use of terrestrial ecosystems, halt desertification, land degradation and biodiversity loss; ensure availability and sustainable use of water and sanitation for all that includes integrated water resources management at all levels and through trans boundary cooperation as applicable;

ensure food security, ensure sustainable energy supply; ensure development of infrastructure and promote innovations in the field.

The Food and Agriculture Organisation (FAO) supported the Ministry of Agriculture in the improvement of food security by enhancing the design and implementation of the relevant policies and programmes. This was achieved by strengthening national capacity to generate, analyse, communicate and mainstream more relevant and credible food security related information into policies and programmes. In 2013, FAO launched the implementation of EU funded ENPARD Technical Assistance programme “Capacity Development of the Ministry of Agriculture of Georgia”. The project aims to improve the competitiveness of the agricultural sector in Georgia and to reduce rural poverty.

Another FAO project financed by EU focused on the improvement of the food security and livelihoods of the IDPs in Georgia, in particular, to increase the food production and income generation of the IDPs through cost-shared support to agricultural investment.

Cooperation in agriculture and rural development is considered under the EU-Georgia Association Agreement, focusing on facilitating the mutual understanding of agriculture and rural development policies, enhancing administrative capacities at all levels to plan, evaluate, implement and enforce policies in accordance with EU regulations and best practices, promoting the modernisation and the sustainability of the agriculture production, sharing knowledge and practices of rural development, improving competitiveness of agriculture sector, promote quality policies and their control mechanisms, disseminating knowledge and promoting extension services, striving for harmonisation of issues dealt within the framework of international organizations, and etc.

Local insurance companies started offering agro-insurance to Georgian farmers in 1996. However, limited awareness about agro-insurance, inadequate risk management of agribusiness companies, insufficient statistical information and the absence of a government programme supporting agro-insurance development affected agro-insurance sector as well as Georgia’s agriculture sector as a whole.

As of 1 September 2014 the Government introduced the agro-insurance subsidy, which will enable farmers to ensure agricultural crops from natural hazards, such as hail, flooding, wind storms, frost. Within the framework of the programme only registered agricultural plots will be ensured (namely, those that have a cadastre code and GPS coordinate).

Initially the new agro-insurance programme will operate as a pilot scheme that would finance part of a farmers insurance premium in the first year of the program (70%-95% will be covered by the Government), while the remaining costs would be covered by the farmer. The outcomes of the experimental program should give Government the opportunity to create a legislative basis for a future national agro-insurance law.

4. Land-use and urban planning

The urban planning process in Georgia is decentralized. Central government is responsible for development of legislation regarding spatial-territorial planning and construction as well as its implementation, coordination, management and monitoring.

The Tbilisi City Hall Architecture office is responsible for the elaboration of the capital city development plan, conducting research in support of spatial-territorial planning of the city, and issuing construction permits. The Capital City General Development Plan³³ was updated in 2009 (since 1974) based on the available information, without taking into consideration of existing geological and hydrological specificities and hazards mainly related to small surface and

underground rivers, which play significant role in urban forming processes. Between 2010 and 2012 the Seismic Monitoring Centre of Ilia State University worked on the development of Tbilisi Seismic-tectonic Model and upon completion of the process, Tbilisi Architecture plans to update the Capital City General Development Plan accordingly.

According to the representatives of Tbilisi Architecture office the Capital City General Development Plan generally lacks proper analysis of endogenic (underground) and exogenous (surface) factors. The identification of hazard zones is not a direct responsibility of the Tbilisi Architecture office. However, the staff of the Tbilisi Architecture conducted detailed research describing Tbilisi River net and its influence on urban forming processes. The integration of the hydrological hazard map into the City General Development Plan revealed that certain residential areas are built in hazardous zones. Currently, there are no provisions or resources allocated for detailed assessment and resettlement of the population, in case of a disaster. The hydrological hazard map is now taken into account while issuing construction permits for planned public and private construction in Tbilisi.

The #59 Resolution of the Government of Georgia from 15 January 2014 on the “Rules of Use of Settlements and Regulation of their Development” defines urban development and construction parameters to be applied by central and local governments when issuing construction permits in the settlements.

In Georgia, there is no national building code. In 2013 the Government adopted a decree that recognizes technical regulations enacted in the OECD countries as applicable on the territory of Georgia. This means that insofar as a certain construction project is in line with building regulations of one of the OECD countries, the permit can be issued. The EU-Georgia Association Agreement signed on 27 June 2014, requires bringing land-use planning standards in line with the requirements of the European Bureau of Standardization. Interviewees noted that a new governmental agency is likely to be established once the Association Agreement comes into force.

Construction permits are issued by the local municipalities, which also undertake monitoring activities. In certain municipalities visited during the assessment mission, there is limited technical capacity and expertise to undertake these tasks. In the absence of systematized monitoring and control, illegal construction and renovation occurs frequently. Construction permits are based on the geological, seismological, geomorphological, and other types of assessments that are conducted before the issuance of permit. The construction of buildings with low, moderate and high risk levels (II, III IV categories) require construction permits issued by relevant services of local government. During and after construction, buildings of IV and V category are subjected to technical inspection that includes review of engineer-geological assessments along with other activities.

Construction permits for infrastructure of critical importance (V category) are issued and controlled in line with the compliance with the permit requirements provided by LEPL Technical and Constructions Supervision Agency (TASCA) under the Ministry of Economy and Sustainable Development. TASCA also conducts technical inspection of objects with extreme risk level.

The electronic cadastre system of the National Public Registry of the Ministry of Justice compiles information on land plots per region and ownership type. However, there is no information on types of soil, elevation, and exposed hazards.

At the same time, the Ministry of Justice is actively working on the development of the National Spatial Data Information (NSDI) system, which is the EU requirement towards the member states (EU Parliament and Council Directive INSPIRE-2007/2/EC). The INSPIRE Directive calls

for harmonization of the geo-information system, legislative base and administrative matters with the European standards, NSDI provides opportunity for effective usage and sharing of the geospatial information, which will contribute to a more effective regulation of the agriculture, environment protection, transportation, logistics and disaster management sectors.

5. Technological hazards and identification of hazardous activities

Industrial sites and infrastructure, particularly those producing and processing oil products, chemicals, plastic, mineral and construction materials, metallurgical and mining products can pose risks in the event of an accident or leak. A number of industrial sites that produced or used oil products and chemicals are now abandoned with limited or no safety measures in place. Industrial waste products are often kept on the site without proper containment, control and supervision. The risk of pollution from these sites is particularly serious in the event of a disaster.

Data collection takes place in an ad-hoc manner and is scattered across institutions.

The Ministry of Environment and Natural Resources Protection is working on ratification/joining the UNECE Convention on Trans-boundary Effects of Industrial Accidents. The ratification of this convention will enable Georgia to introduce methods for the prevention of industrial accidents at the national level and will increase cooperation in regards to possible trans-boundary effects of industrial accidents.³⁴

6. Health

Coordination for disease prevention and protection of population from adverse impacts on public health is provided by MOLHSA through delegating some of the functions to the NCDC. NCDC is mandated to identify the emergencies and develop the recommendations to different structures for the prevention and control of epidemics. Furthermore, NCDC according to International Health Regulations is responsible for immediate informing of international structures in case of identification of international scale emergencies³⁵. NCDC operates an electronic disease surveillance system covering all 64 municipalities and conducts epidemiological surveillance of 74 diseases. NCDC does not work at community level directly, but trains medical staff at community level on health promotion, disease surveillance, immunization monitoring, hygiene standards and preparedness for epidemiological situations. Awareness raising and non-formal education on hygiene and health promotion is done by local health promotion centres, where NCDC provides the methodology and hygienic norms.

Within a WHO-led program on Safe Hospitals, 17 key hospitals in disaster-prone areas were assessed on structural, non-structural and functional safety by a national expert team. The recommendations were provided to MOLHSA that led to certain improvements. Most of the assessed hospitals were later closed and newly built were based on the recommendations provided by the expert team. Training on public health and emergency management for health decision-makers was undertaken over the last five years in close collaboration with WHO. Several modules/ training packages are to be institutionalized for medical students of higher grades.

The Emergency Situations Coordination Department of MOLHSA is in charge of mobilizing relevant resources to ensure healthcare services to the population in case of emergency. The "Emergency Response Plan of the Ministry of Labour, Health and Social Affairs, updated every two years, contains required preparedness and response measures in case of natural, man-made and other types of emergency situations.

More details on health in emergencies are provided in the section on the HFA Priority Action 5.

7. Social protection

The Social Service Agency (SSA) administers a number of social and health protection programmes aimed at supporting the most socially vulnerable groups and improving the quality of services rendered to the citizens. The SSA covers pension, social assistance, and health insurance, assistance to persons with disabilities (PWD), guardianship and custody of children deprived of care. DRR related indicators are not considered while defining vulnerability and providing targeted social assistance to socially vulnerable families (ex.: the families, who are poor and, at the same time, live in particularly high hazard-prone areas, do not receive any additional support except the TSA).

According to the 2012 report of the Public Defender's Office (PDO) on the Situation of Human Rights and Freedoms in Georgia, the staff and beneficiaries of the boarding schools have practically no information about dangers caused by natural disasters and about the means of preventing or reducing disaster risks. The majority of the institutions do not have an evacuation plan, or their evacuation plans are out-dated. The staff and beneficiaries have never taken theoretical and/or practical training on these issues. The majority of the staff was not able to tell the difference between the actions that should be taken at the time of a fire and an earthquake. The staffs does not know in what form and by what means they should inform beneficiaries (persons with visual impairment, those using a wheelchair or other subsidiary means, and those with hearing impairment, restricted mobility, or mental restriction) in case of disasters with what procedure, sequence, and means they should be evacuated from the building. The majority of the institutions (four boarding schools out of six) are not equipped with fire safety equipment either.³⁶ A similar situation has been revealed during the PDO monitoring of the small group homes for children³⁷ in 2013.³⁸

HFA Priority Action 4: Recommendations

- 1. Review sectorial development plans and programmes (agriculture, environment, climate change, natural resource management, water management, coastal zone management, etc.) in order to evaluate their contribution to reducing underlying risk factors and their level of implementation. Whenever possible, re-orient programmes to better address the reduction of underlying risk factors.**
- 2. Make consideration of DRR and environmental impact issues prior to approving spatial and urban development plans legally binding, improve integration of DRR issues in environmental impact assessment reports, include disaster prevention and reduction measures into licensing.**
- 3. Provide technical support and tools to sectorial planners for integrating disaster risk reduction elements into their sectorial planning processes, and establish a regular training programme for technical staff from various line ministries and technical agencies on disaster risk reduction as an essential component of development and sectorial planning.**
- 4. In partnership with NGOs and in selected communities, undertake a sensitization programme for local authorities and communities on disaster risks and impacts on vulnerable groups, including IDPs in order to increase their understanding of and voice in contributing to risk-informed local planning.**
- 5. Ensure that future National DRR Policy and Plan of Action are linked to/ supportive of the national climate change adaptation policy, strategy and action plan, and vice versa, so that climate change and risk reduction activities in the country are better coordinated, consolidated, and accounted for, especially at local level.**
- 6. Ensure stronger links between water resource management programmes and the overall development planning.**
- 7. Develop and regularly update the floodplain management policy, flood risk management plans (e.g. based on available pilot projects such as Rioni river basin project), and strengthen and maintain flood mitigation infrastructure in areas that are at high risk of recurring floods and flash floods.**
- 8. Establish consistent, unified and hazard-specific construction norms and license procedures, and communicate these to sectorial ministries, regional and municipal authorities (e.g. in line with EU standards). Ensure that institutions in charge of issuing construction permits have the necessary human, technical and financial resources to fulfil their role and to undertake proper monitoring and control of construction activities under their administrative coverage.**
- 9. Undertake a thorough assessment of structural safety and technical conditions of critical facilities, particularly schools, hospitals, and other communal buildings, identify retrofitting measures required and establish a legally binding order for regular monitoring.**
- 10. Support the development and endorsement of school-based disaster management model and sustainable multi-hazard resistant building codes and standards for school construction/reconstruction in line with international standards, as well as introduction of mechanisms for ensuring adherence to them; ensure provision of**

safe school environments, including selection of suitable location and construction of education facilities, carrying out nationwide school safety assessments and incorporation of school safety indicators in the Education Management Information System (EMIS).

- 11. Support the development of water, sanitation and hygiene (WASH) standards, technical regulations and norms for schools and preschool institutions and improvement of water supply and sanitation infrastructure for schools and preschools with focus on rural, mountainous areas.**
- 12. Increase the involvement of the private sector (including insurance companies) in activities aimed at reducing disaster and climate) risks and promoting public private partnerships.**

HFA Priority Action 5: Strengthen disaster preparedness for effective response at all levels

1. National Ownership

Overall, the analysis of the disaster management system revealed that preparedness and response is better established and managed compared to the other HFA priority areas. The disaster response system is based on a number of laws and regulations, and is underpinned by an institutional framework that is decentralized from the national to the municipal and local levels. The Government focused efforts on the capacity development of the response structures and personnel, including the maintenance and upgrade of existing human, financial and technical capacities of emergency management units (professional training, equipment, emergency stocks, shelters, transport and communication means) as well as elaboration and application of response management and coordination procedures.

The assessment identified a number of challenges regarding the national preparedness and response, particularly: lack of a clear mechanism and standard operating procedures for regular update of national, regional and local response based on current risks; capacities for proper information management and crisis communication; multi-hazard early warning systems. The decentralization of emergency response system impedes upon the seamless communication between the national, regional and local emergency response services. Financial decentralization – structures at different levels depend on different funding sources, and most local services depend on limited local budget resources – also contribute to this situation.

The assessment also revealed that awareness and capacities for pre-disaster recovery planning and post-disaster recovery are extremely limited. No unified methodology for post-disaster needs assessment is used in the country, but it is rather a surveying method that primarily relies on anecdotal observations, i.e. identify damaged structures of interest (mainly public infrastructure).

2. Legislation for disaster preparedness and emergency response

A series of laws, government decisions and other normative acts form the legal basis for the performance of disaster preparedness and response functions by the relevant state institutions. A new Law on “Civil Safety” was approved in 2014 and it represents the umbrella law for regulating the disaster management field in Georgia. The new Law on “Civil Safety” was developed within the framework of the TWINNING project: "Support to the Emergency Management Department with a purpose of improving an environment and safety of the population of Georgia in emergencies", as well as the PPRD (Prevention, Preparedness and Response to Natural and Manmade Disasters) East project implemented at the Ministry of Internal Affairs of Georgia with the aim of bringing Georgia closer to EU's civil safety mechanisms. Also, based on recommendations provided by European experts and the International Civil Defence Organization (ICDO), experiences of leading European countries, including France and the Baltic countries were studied and analysed.

The **Civil Safety Law (2014)** predominantly addresses civil protection, defining functions and competencies of various state entities at the stages of preparedness, response, prevention of emergency situations and early recovery action as a part of immediate response stage. It introduces a common system of emergency management and centralized control of command at all levels (central/national, regional, municipal, and Autonomous Republic of Adjara). The law provides for upgrading the current Department (EMD) to Agency (EMA). The law mentions State Security and Crisis Management Council under the PM's office as the main responsible body for managing crisis on a senior political level and advising PM accordingly, as well as activating and managing the Crisis Operations Centre, as /when needed. However, when describing roles of

state entities on various levels (national, regional, municipal), the future EMA would coordinate emergency response at national level (Article 13). EMA will ensure emergency prevention, preparedness of the unified system, organization of emergency response and recovery activities and implementation of the Civilian Safety National Plan for solving issues related to civilian safety (Paragraph 8, Article 5).

The new law is certainly a positive step towards uniting number of existing laws related to protection of population and fire safety thus enabling more effective management of emergency preparedness and response and ensuring safety of civil population. However, issues related to natural hazard mitigation, risk assessment, and integration of risk reduction in sectorial development plans and programmes are to be regulated by the normative and legislative acts to be adopted based on the new law (e.g.: the risk management plan, safety passports and supervisory instructions over prevention and response activities).

Four government decisions provide specific provisions in support of disaster management activities, namely: #68 on classification of emergencies, #69 on the adoption of emergency management governmental commission, #153 on emergency response forces and #154 on safety declaration. The most recent legal act clarifying the roles and responsibilities of the state and non-state actors engaged in disaster management was the Presidential Decree #15, 2008, "National Response Plan for Natural and Manmade Emergency Situations (NERP)". The Decree defines 17 areas of disaster response management and coordination. It assigns responsibilities to the members of state.

On May 13, 2014 Government resolution #345 was made on "Approval of the Response Plan for Especially Hazardous Pathogens".

The Unified System for Prevention of Emergencies, Mitigation and Elimination of their consequences³⁹ providing legal basis for 17 emergency management and coordination functions to different authorized state agencies/ ministries. The overall disaster response management function is performed by the EMD, which plays a central role along with the unified system of ministries, their subordinate bodies and legal entities of Public Law in response to emergency situations at the national and regional levels.

The remaining 12 functions are divided between 9 ministries: Ministry of Refugees & Resettlement (evacuation), Ministry of Regional Development (transport, engineering and infrastructure sustainment), Ministry of Health (medical assistance), Ministry of Foreign Affairs (protocol and international assistance), Ministry of Environment and Natural Resources Protection (forest fire fighting and CBRN protection), Ministry of Energy (energy provision), Ministry of Agriculture (livestock and crops protection, provision of water and food), Ministry of Culture and Monument Protection (protection of cultural heritage). The precise sectorial response plans aligned by functional areas as described are existing in the respective ministries. However the content of some of the plans are confidential and are accessible only to the government employees with the respective authorization and two Ministries have not developed these plans. Furthermore, comparison of the response plans of the ministries revealed that the plans were developed differently structurally and content wise.

Recent political changes and the revision of the constitution shifting from the presidential to the parliamentary republic resulted in the stronger position of the Prime Minister assigning to it a full executive power. This change reflected the overall country legislation redirecting many of presidential functions towards the PM.

In terms of disaster preparedness, the EU-Georgia Association Agreement defines specific actions for cooperation in disaster risk management and envisages exchange and regular update of contact details in order to ensure continuity of dialogue and in order to be able to contact each other on 24-hour basis, facilitation of mutual assistance in case of major

emergencies; exchange of early warning and updated information on large scale emergencies on 24-hours basis; exchange information on the provision of assistance by Parties to third countries for emergencies where the EU civil Protection Mechanism is activated; inviting experts to specific technical workshops and symposia on civil protection; inviting on a case by case basis, observers to specific exercises and trainings organized by the EU and/or Georgia and strengthening cooperation on the most effective use of available civil protection capabilities.

3. Institutional framework and coordination for emergency response

The enactment of new model of the Constitution of Georgia required certain reshuffling of the security sector, including establishment of new institutions, development of relevant capacities and mechanisms for interaction within the government system. According to the government's resolution #38 of January 6, 2014, **State Security and Crisis Management Council** was established within the structure of the Government of Georgia.

The goal of the State Security and Crises Management Council is to identify and prevent any threats at both strategic and tactical levels and take the coordination role. The duties of the Council inter alia include: assessment of internal and external threats; domestic and foreign policy issues directly related to state security; state strategy on foreign policy and security areas; development of proposals for Georgia's co-operation with the collective security system; elaboration and presentation of necessary steps for detecting, preventing and neutralizing the country's internal and external threats; development of suggestions for preventing severe political, social, economic, ecological and other consequences, and above all management of crisis at the highest political level.

For the time being the Council has almost the same composition, objectives and authority as the **National Security Council** under the President. Nevertheless, the overlapping of the functions in the legislation between the two Councils is meant to be resolved and the functions aligned by revising and amending several legislative acts, leaving the National Security Council in charge of the component related to the military issues. The creation of the new Council was prompted by the amendments to the Constitution effective from 17 November 2013, reducing the powers of the President in favour of the Prime Minister.

According to current legislation, the **National Emergency Response System** in Georgia consists of 3 layers corresponding to the scale of a disaster:

- Local small scale disasters: Responsibility of municipality and its local Emergency Management Department/ unit. In certain municipalities, an emergency fund exists (2% of the total municipal budget to respond) to an 'unexpected events', which is released to cover the immediate needs. It is obvious that the allocated fund is very limited and usually is far not enough to address the needs;
- Disasters which exceed the municipality capacities become the responsibility of the regional government, which establishes an ad-hoc Emergency Response Regional Taskforce (ERRT) which is responsible for the response management and coordination;
- Disasters of national scale are responsibility of the central government (EMD).

At the operational level, crisis management is ensured by the Ministry of Internal Affairs, through **Emergency Management Department (EMD)**. The main functions of the Department include: inter-agency coordination of emergency management activities; development of Civil Protection Plan at national level; implementation of civil protection tasks in peace as well hostilities; development of National Response Plan; training of relevant municipal level personnel on development of municipal Emergency plans, implementation of emergency preventive measures, preparedness to manage emergencies more effectively; training of regional emergency management services, volunteers and school teachers; provide arrangements for receiving international rescue forces and humanitarian assistance and ensure their distribution on the ground; organize civil-military cooperation in the case of emergency.

At present, the EMD is decentralized at **municipal level**. Local EMDs are under the authority of the municipalities and are funded through regional or municipal budgets. Many EMDs have insufficient or obsolete technical capacities, including rescue and firefighting equipment, limited opportunities for professional development both for rescuers (regional level) and fire-rescuers (municipal level), who need professional training including on first aid, and limited awareness of prevention or mitigation measures. The Tbilisi EMD, however, is better equipped with cars and technical means, and staffed with 1170 employees. According to the law, the EM Agency (currently EMD) will absorb 4000 fire-fighters/ rescuers from municipalities into its territorial structures. Alongside with heavy organizational issues it will require re-training of fire-fighters into fire-fighter/ rescuers.

The **Georgian National Response Plan-NERP** (2008) identifies roles of central and municipal authorities, and provides for cooperation among relevant national institutions in its implementation. The Plan identifies a two-layer structure at national level: Emergency Situations Management Governmental Commission and Interagency Operative Centre of Crisis Management created within the Emergency Situations Management Department of the Ministry of Internal Affairs of Georgia. While the first body is the supreme decision making authority in emergencies, the second one operates at operation level and provides recommendations to the State Security and Crisis Management Council. The operational centre is tasked with assessment of damages after disasters, however, no reference made to the methodology used. The Plan refers to the role of non-governmental centre of Georgia, coordinated by the Georgia Red Cross. Emergency Management Department of the Ministry of Internal Affairs is identified as the main responsible body for the implementation of the Plan. Sectorial Ministries in Georgia tasked with supportive roles for the implementation of the plan. One of the functions of the Ministry of Defence is identified as search and rescue. In total 17 functions are identified in the plan for its implementation, which are mainly structure around functions of sectorial Ministries. According to the EMD, the NERP will be updated incoming months in coordination with relevant line ministries as the existing one is already out-dated.

In 2012, a **Disaster Management Team (DMT)** and technical working group were re-established and a series of meetings to formulate an updated UN contingency plan with participation of UNDP, UNICEF, FAO, WHO, WFP, UNHCR, IOM and UNFPA were conducted. Upon the request of the UN Resident Coordinator and in collaboration with the UNOCHA regional office in Almaty, a workshop was conducted on Inter Agency Contingency Planning and in follow up the project had consultations with a large group of organizations interested to be part of the Humanitarian Country Team and technical working group. As a result an Inter-Agency Contingency Plan was drafted.

Another important component of the national response system is the **112 service**, which is a legal entity with its own budget, however performing under the authority of the Ministry of Internal Affairs. It is based in Tbilisi though covering the whole country, including Autonomous Republic of Adjara. The service unites the operation of ambulance, police and fire-fighters services. The service is equipped with trained personnel and technical capacities allowing monitoring of the traffic situation, getting real time online information on the location and movement of ambulances and fire fighting brigades.

The **Ministry of Agriculture** is responsible for protection of plants and animals in emergencies, in line with the National Response Plan signed by the President of Georgia in 2008. At the same time, the **National Response Plan for the Ministry of Agriculture** is considered to be a classified document, which makes it irrelevant for information/coordination purposes. The Ministry maintains a reserve of food and water for 225,000 people for up to 1 month. However, the daily rations seem to require update, as daily water ratio for an adult is 3 litres, while in summer (can be up to +40 C, in a camp under the sun, 3 etc. is clearly not enough) this will need to be used only for drinking, and not cooking, cleaning, washing, etc. While Ministry staff

identified desertification among main hazards for Georgia, there is no evidence that the Ministry or the Government at large are addressing the issue in a systematic manner.

Since 2008, the GRCS, as the only non-state institution, has been assigned the specific tasks in the State National Response Plan on Natural and Man-made Emergency Situations (in accordance with the Presidential Decree #415, August 26, 2008). The GRCS participates in search and rescue activities in the zones of emergencies; under the coordination of the Emergency Management Department of the Ministry of Internal Affairs of Georgia, coordinates the activities of non-governmental organizations involved in emergencies results liquidation activities. The GRCS is auxiliary body to the Ministry of Labour, Health and Social Affairs of Georgia in provision of primary medical care for injured and arranges field hospital. As well, the GRCS is auxiliary to the Ministry of Agriculture of Georgia in provision of food and water during emergencies.

4. Competencies, tools and resources for emergency response

According to the current National Emergency Response System there are three-tiered emergency response forces in Georgia:

- Municipality fire and rescue units (become under the subordination of EMD according to the new law on Civil Safety); ;
- Regional Emergency Response Taskforce, responsible for the regional emergency response management and coordination (become under the subordination of EMD according to the new law); and
- Emergency Management Department at central level for national scale disaster response management and coordination

The assessment identified varying levels of capacities between national and local emergency response services, the latter of which are under the authority of the municipalities and funded through regional or municipal budgets. Many Emergency Services have insufficient or obsolete technical capacities, including rescue and firefighting equipment, limited opportunities for professional development both for rescuers and fire-rescuers who need professional training including on first aid, and limited awareness of prevention or mitigation measures. The response capacities of the central Emergency Management Service are far better equipped with cars and technical means, and staffed with up to 211 employees.

The Fire-Rescue Faculty is operating at the Academy of the Ministry of Internal Affairs, where professional firefighters-rescuers are prepared and certification through special vocational training programs is offered.

4.1. Community Volunteer Groups (CVGs)

With the support of EMD and its actual participation, NGOs and the Red Cross have established , equipped and trained CVGs in a number of communities across Georgia. The teams of approximately 20 male and female team members are established with the support of the local authorities and EMD. As the first responders to community disasters, the established teams have been the first to respond to a number of localised events either independently or in support of the professional response agencies.

4.2. Satellite image interpretation and analysis

There are different institutions which have and use GIS maps for assessment and analysis. Among them Ministry of Internal Affairs, Ministry of Environment and Natural Resources Protection (MEPNR) and National Environmental Agency (NEA), Institute of Geophysics and Institute of Earth Science, which also develop GIS maps. Same was announced by the EMD,

which confirmed that they have GIS maps with several layers of hazards and risks. The satellite images and GIS maps will be used by the CMOC for the situation monitoring and analysis. There are two special GIS departments in the EMD which are in charge with application of GIS maps in the programs and for supporting the operations management service.

4.3. Response plans and contingency planning

The existence and level of sophistication of contingency planning in sectors at central level varies. At regional and municipal level visited, they do not exist. Preparedness is mostly based on common historical knowledge. For example, cleaning water channel beds in flood prone areas is not mandatory and normally done only after floods occur. Furthermore, according to the #153 Governmental Resolution, instructions for risk and emergency assessment is adopted by the Minister of Internal Affairs.

Response plans exist at municipal level, as well as in the schools (Civil Defence and Evacuation Plans). However, these plans are not regularly updated, and simulation exercises are not carried out systematically in all locations. As a matter of fact, the contingency planning and school preparedness activities including drills and simulation exercises are getting intensified if the given municipality is selected for the implementation of certain pilot project. For example, emergency simulation exercises were carried out at community level and in schools, jointly funded by Oxfam and the municipalities.

The same refers to the municipalities or communities where the DP&DR activities are carried out through projects that support community/ school contingency planning and emergency response preparedness. In Racha-Lechkhumi and Kvemo-Svaneti region, Ambrolauri municipality and in Kakheti, Georgia Red Cross Society projects have assisted stakeholders including schools, local authorities, rescuers, and the local community to undertake contingency planning activities and simulation exercises.

4.4. Civil-military coordination

The military are involved based on the recommendation of the EMD of the Ministry of Internal Affairs and decision of President. For the time being there is a Department of Humanitarian Affairs and Civil-Military Coordination within the frames of Civil Protection division which performs under the supervision of EMD Deputy Director. There is a particular relationship with NATO, including on civil-military coordination in emergencies. In some cases, international and local militaries were involved in simulation exercises ('Viking 14', NATO EADRCC, etc.).

4.5. Emergency health

Emergency health activities are the responsibility of the Ministry of Labour, Health and Social Affairs (MOLHSA) assigned by the National Response Plan. The MOLHSA elaborates its own emergency plan, and a special emergency reserve fund can be released by the government decision. Out of 250 operational hospitals, up to 85% of hospitals are private, are mainly newly build or renovated in order to get licensed. In emergencies the private hospitals are under the command of the Ministry, including associated services like blood banks, distribution of intensive care unit (ICU) bed and general bed capacities. During emergencies medicines are provided free of charge being paid by the state budget. The Ministry of Labour, Health and Social Affairs is following the hospitals' emergency plans to be updated on an annual basis. Hospital drills are also carried out regularly under supervision of the Ministry.

Ambulances are currently private and state-owned. It is planned to shift to the fully state run ambulance service which will guarantee equal access and required quality of emergency health services. Ambulance calls, referrals and dispatch of patients to hospitals is efficiently done 24/7 using the 112 service and managing the whole process by the means of specially designed

computer based programs ensuring effective transfer of the patients to the nearest or required hospital within the shortest period of time.

The Ministry of Health integral structure, NCDC has also well-defined responsibilities during the emergencies, particularly the outbreaks. It acts in the frames of International Health Regulations (IHR) requirements being responsible for epidemiological surveillance and biosafety. NCDC takes part in setting hygienic and sanitarian norms (e.g. for schools) while it has not a direct curatorial function for schools. Public Health Regional Centres are responsible for reporting on health-related statistical information, immunization data, etc. while the Regional Resource Centres which are under the Ministry of Education and Science are tasked for monitoring of schools compliance to existing sanitary-hygienic norms.

Certain number of changes in legislation related to public health is envisaged under the EU-Georgia Association Agreement, particularly among the rest are indicated regulations covering communicable diseases that Georgia has to approximate its national legislation, the EC decisions on setting up a network for epidemiological surveillance and control of communicable diseases in the Community, laying down case definitions for reporting communicable diseases to the Community network and on early warning and response system for the prevention and control of communicable diseases.

UNFPA is advocating with the Ministry of Labour, Health and Social Affairs the integration of the Minimum Initial Service Package (MISP) for Reproductive Health into their portfolio. The MISP is a priority set of life saving activities to be implemented at the onset of every humanitarian crisis. It forms the starting point for sexual and reproductive health programming and should be sustained and built upon with comprehensive sexual and reproductive health services throughout protracted crises and recovery. The MISP saves lives and prevents illness, trauma and disability, especially among women and girls. Neglecting the MISP in humanitarian settings has serious consequences: preventable maternal and new-born deaths; sexual violence and subsequent trauma; sexually transmitted infections; unwanted pregnancies and unsafe abortions; and the possible spread of HIV.

4.6. Early warning systems (72/48/24)

There is no systematized approach towards Early Warning (EW) in Georgia, although certain institutions have their own EW systems. There is a need for the establishment of unified and standardized EW system which is seen as a precondition for timely initiation of effective preventive / preparedness measures.

Also there is a need for a heat wave early warning system, particularly in Tbilisi, where GRCS could have potential role in dissemination of warnings using volunteers, especially at community level.

The EMD regularly collects information from different sources (seismic security service, hydro-meteorological service, national environmental agency, ministries, etc.). There is no specific regulation on how, from whom, how often and in which format this information should be obtained. The EMD informs regional authorities on possible hazards that may develop into disasters; regional authorities are responsible for informing the municipalities and provide guidance on the level of readiness. Municipalities have the responsibility to communicate the alert to the population and initiate preparedness and response measures. Early notification is broadcasted through the national television channel and the national radio communication network; also, via patrol car speakerphones.

The Hydro-Meteorological service of the Ministry of Environment and Natural Resources Protection provides early warning, however with limited technical and human capacities. Due to the limited number of functioning ground stations and the lack of special radar systems, no

upper air measurements are conducted. The Ministry of Agriculture noted that early warning information on floods and droughts affecting agricultural lands is not systematically received. The Ministry of Agriculture also confirmed that they do not receive any mid or long term early warning for developing climate risk and climate change trends.

To prevent trans-boundary industrial accidents, international early warning centres have been established for the Kura River basin in Armenia, Azerbaijan and Georgia. In Georgia, this centre is located at the National Environmental Agency/MENRP. Agreements have been signed among the governments of Armenia, Azerbaijan and Georgia on “Cooperation in the Field of Prevention and Mitigation of Natural and Technical Emergency Situations” which covers trans-boundary accident prevention and response issues.

According to EMD representatives there is a need for a unified approach towards early warning which can consolidate and transfer relevant information to the population on the regular and ad hoc basis.

4.7. Information management and monitoring and evaluation systems

The EMD has an internal chain of reporting procedures linked with government. Similar procedures, as an integral part of overall reporting procedure exist in other ministries as well. However, there is no common information management system or framework ensuring agreed standards and formats among the stakeholders involved on the collection, storage and sharing the information. Development of common information management SOPs and formats, as well as standards for reporting, monitoring and evaluation functions is seen as one of the main challenges of the newly established emergency management system.

4.8. International humanitarian assistance

International humanitarian assistance is requested only by central Government. With current restructuring of the Government new Law on disaster preparedness and response, and formation of new structures, such as Crisis Management Centre under the Office of Prime Minister, it seems that the Prime Minister’s Office will be the institution to provide the final estimation of the losses and needs and make decisions on requesting international humanitarian aid. There is a readiness in the government to follow the internationally recognized standards and rules for international disaster relief which is also reflected in relevant legislation.

4.9. Post disaster damage and loss assessment

Most of the responders noted that there is no formal damage and loss assessment methodology used after disasters. Normally, a commission represented by officials from sectorial departments of the municipality (i.e. agriculture, construction, health, etc.) visits the disaster affected area and using the current market prices of affected infrastructure or lost agricultural cultures, provide estimation of losses. Percentage of reimbursed amount in comparison to the loss can vary. There are two funds where the reimbursement funding can be allocated from: President’s Fund and Prime Minister’s Fund. There is no limit on amount that can be requested for reimbursement from these funds.

There is also no initial needs assessment methodology in place to inform the scale and content of the required immediate humanitarian relief assistance. Weakness of the national insurance system is seen to be another cause of insufficient loss and damage assessment system. The assessment noted a consensus among all stakeholders that such methodology is needed and the lead should be taken by EMD along with elaboration and introduction of effective insurance system by the relevant government structures.

In this context the Post Disaster Joint Needs Assessment (JNA) conducted in 2012 after the July 19 extreme weather events in Eastern Georgia may serve as a best evidence of changing attitude in the government towards establishment of comprehensive post disaster needs assessment system which will inform and direct the government short- and long-term recovery plans.

In 19 July, 2012 heavy rains and hailstorms led to flash floods and strong winds which severely hit the southern and eastern parts of Georgia badly affecting over thousands of families and households in 8 municipalities.⁴⁰ This medium-size hazard resulted in a disproportionate socio-economic disaster: about 75,000 people were affected and 202 Million GEL (USD 123 million)⁴¹ in economic impact. Georgia's Minister of Finance requested the World Bank and UN to support the conduction of government-led Joint Needs Assessment (JNA) of the disaster impact. In response to the request, a team consisting of international and national consultants from UN agencies, World Bank and GFDRR in close cooperation with government representatives from central and regional levels conducted a mission on a Joint Needs Assessment, during the period 06-17 August, 2012.

4.10. Recovery and rehabilitation

Based on the JNA, a Recovery Framework (RF) was developed, consisting of short- and medium-to-long-term priorities and actions for the period 2013-2017. The recovery and reconstruction program was guided by a strategy that focused on accelerating progress towards the government's priorities, which were a high growth economy with more and higher paid jobs and improving the social status of citizens. Within these strategies, six pillars were identified:

1. Maximizing on opportunity when implementing disaster recovery plans in order to create a more resilient agriculture sector capable of stimulating modernization and competitiveness;
2. Ensuring disaster affected children and youth have continues access to high quality education, including learning materials and safe educational infrastructure;
3. Guaranteeing disaster affected vulnerable groups, IDPs and women in particular are protected and measures needed for their full recovery are in place;
4. Providing accessible, high quality, modernized, and affordable healthcare and social services to all impacted by disaster
5. Revitalizing the municipal infrastructure to support economic growth and living conditions
6. The effective use of natural resources and protection of the natural environment of Georgia, thus minimizing a risk of natural disasters when possible.

Some responders noted that certain sectorial Ministries have contingency plans and associated budgets, which include provision for recovery. However, the legislation leaves in many cases room for interpretation on what is considered to be recovery. Furthermore, the recovery is not based on the result of actual needs required for 'building back better' since there is no unified post disaster needs assessment in place. Often Government conducts damage and loss estimation, requests funds to cover these costs from the central Government and if utilization of these funds goes beyond cash reimbursement immediate distribution, then this can qualify as a recovery program. Example is post storm renovation of house roofs in Kakheti region (where JNA was conducted). Another example is weak integration of recovery into the regional development plan for Kakheti region (financed by the World Bank) of which neither regional, nor municipal authorities were aware of.

One of the best evidence of ineffective rehabilitation/ recovery policy is the situation with people affected by environmental/ technological accidents (potential IDPs or eco-migrants). Currently there are about 37,000 families registered in the Ministry of IDPs from Occupied Territories of Georgia, Refugees and Accommodation (MRA) affected by mentioned types of disasters (150,000 people). The special commission of the MRA conducted the in depth assessment of damaged houses classifying them by four categories: completely ruined; partially ruined but

cannot be recovered; can be recovered, but no sufficient living conditions (e.g. water and power system cut); agricultural lands damaged.

The Special Report of the Public Defender's Office (2013) describes in details the human rights situation of eco-migrants in Georgia and identifies the following key issues requiring immediate attention from the Government: absence of the legislative framework defining status of 'eco-migrants' and lack of legal protection mechanisms; absence of the post-resettlement adaptation and integration strategy for the eco-migrants.⁴² The report also provides set of recommendations for improving the situation of eco-migrants in Georgia and preventing future cases of displacement.

HFA Priority Action 5: Recommendations

- 1. Develop a national strategy for disaster preparedness for response and mainstream it into sectorial, regional and municipal development plans. Introduce changes in the local self-governance legislation if required to enable development planning.**
- 2. Fully operationalize the newly established Crisis Management Operational Centre.**
- 3. Elaborate a comprehensive multi-hazard early warning system for short term warning, redefine standard operating procedures accordingly, and provide relevant training for the staff involved in EWS. Improve the technical and institutional capacities of the agencies providing forecasts on various hazards (hydro-meteorological, seismic, environmental, biological, chemical, radiological, etc.), including the coordination/communication between these agencies and other government departments and NGOs.**
- 4. Use the current revision process of the National Emergency Response Plan (NERP) to clarify and strengthen the roles and responsibilities of the Ministries responsible for the 17 functional areas under the NERP. Revise the NERP and respective sectorial plans of relevant Ministries annually and/or develop new ones where necessary (e.g.: National Environmental Emergencies Contingency Plan); ensure that each Ministry appoints at least one staff member as a DRR focal point with clearly defined Terms of Reference.**
- 5. Revive the Disaster Management Team (DMT), align the UN Inter-Agency Contingency Plan and wider humanitarian community response plans to the National Emergency Response Plan and conduct regular simulation exercises with the wide participation of the Government, UN, international and national NGOs and other key stakeholders at the national and regional levels.**
- 6. Integrate the Minimum Initial Service Package (MISP) into the Ministry of Labour, Health and Social Affairs Sectorial Response Plan to Disaster and Emergency Situations.**
- 7. Develop health sector disaster risk management public awareness strategy, including guidelines/protocols for all health related public information announcements during disasters and regular dissemination of information on communicable diseases, healthy water drinking, hygiene and sanitation practices and basic safety information with regards to various disasters, particularly in rural settings and high hazard-prone areas. Ensure establishment of effective mechanisms for cooperation with the municipal public health centres in order to improve capacities of disease and public health risk prevention, epidemiological surveillance, preparedness and response systems.**
- 8. In order to improve capacities for preparedness and response to public health related emergencies, NCDC should establish strong links with international alert, surveillance and response systems (elaboration, training and institutionalization of relevant standards and Standard Operating Procedures, development of methodology for response to separate cases and outbreaks, development of effective coordination mechanism for the key stakeholders engaged in the process).**

- 9. Train and provide technical support to local emergency services and authorities to prepare local response plans, based on local level risk assessment. Ensure development and testing of disaster preparedness and contingency plans for hospitals, school and pre-school institutions and other public institutions.**
- 10. Ensure required professional capacities of fire-fighters/rescuers through provision of regular training and timely upgrading of technical equipment and machinery.**
- 11. Identify arrangements for rapid acquisition of relief items or establish central/regional emergency stocks, as appropriate.**
- 12. Enhance the EMD capacities in provision of logistics and communication services during the large scale emergency operations; strengthen disaster management information systems ensuring international standards for data collection, storage and sharing; improve mechanisms for inter-agency coordinated needs assessment.**
- 13. Undertake required preparatory actions for becoming part of international relief operations (e.g. International Search and Rescue Advisory Group-INSARAG). Improve application of emergency response international coordination mechanisms (UNDAC, OSOCC, MCOF, cluster system) and alignment of national standards and norms with the international humanitarian standards (e.g. humanitarian charter and minimum standards in humanitarian response) as required.**
- 14. Introduce Post Disaster Needs Assessment methodology in order to set up recovery frameworks; and train relevant sectorial staff involved in the process. Mainstream the business continuity, recovery and rehabilitation issues throughout the development of emergency management policies and strategies ensuring the need of their consideration in the relevant legislative acts.**

Endnotes

- ¹ Source: Official Statement of the Government of Georgia at the Fourth Session of the Global Platform for Disaster Risk Reduction, 19-23 May 2013, Geneva, available at: <http://www.preventionweb.net/globalplatform/2013/programme/statements>
- ² The Capacity for Disaster Reduction Initiative (CADRI), an inter-agency partnership composed of UNDP, UNOCHA, UNICEF, WFP, FAO and WHO provides support in capacity development for disaster risk reduction including preparedness for emergency response to UN Resident Coordinators, UN Country Teams and various existing coordination mechanisms with the aim to reinforce their capacities in assisting the Governments and other national stakeholders to develop frameworks for capacity development. More on CADRI can be found at www.cadri.net.
- ³ More on CADRI can be found at www.cadri.net
- ⁴ Report on State of Environment, Ministry of Environment and Natural Resources Protection, 2011
- ⁵ Environmental Performance Review, UNECE 2009
- ⁶ Ibid p 134
- ⁷ Report on State of Environment, Ministry of Environment and Natural Resources Protection, 2011
- ⁸ Ibid pp 88-92
- ⁹ The Second National Communication on Climate Change in Georgia
- ¹⁰ National Statistics Office of Georgia (GEOSTAT), Gross Domestic Product of Georgia in 2013 http://geostat.ge/cms/site_images/files/english/nad/pres-relizi_2013_ENG.pdf
- ¹¹ World Bank, Georgia overview, available at: <http://www.worldbank.org/en/country/georgia/overview>
- ¹² Joint Needs Assessment, Severe Storms and Flooding, Georgia 2012
- ¹³ Economic and Social Vulnerability in Georgia, UNDP 2012
- ¹⁴ World Bank, Georgia overview
- ¹⁵ Source: Official Statement of the Government of Georgia at the Fourth Session of the Global Platform for Disaster Risk Reduction, 19-23 May 2013, Geneva, available at: <http://www.preventionweb.net/globalplatform/2013/programme/statements>
- ¹⁶ Cited from the Regulations/Statute of the Emergency Management Department, Paragraph 1
- ¹⁷ The Department of Licensing of NEA is responsible for coordination of the process of issuing license permits for utilization of natural resources based on the review of the environmental impact assessment, environmental social impact assessment and other relevant documentation received from the Ministry of Environment and Natural Resource Protection of Georgia (MENRP). Upon review of all corresponding documentation, NEA specialists provide comments and recommendations for further decision making (approval or denial of specific cases) which rests under the responsibility of MENRP.
- ¹⁸ The following provisions of the Directive No 2001/42/EC on the assessment of the effects of certain plans and programmes on environment shall apply: adoption of a national legislation and designation of competent authorities, establishment of a procedure to decide which plans or programmes require strategic environmental assessment and of requirements that plans or programmes for which strategic environmental assessment is mandatory are subject to such an assessment; establishment of a procedure for consultation with environmental authorities and a public consultation procedure. Separate provision from Directives: No2003/4/EC on public access to environmental information and repealing Directive No 90/313/EEC; No 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice, No 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage shall apply as well.
- ¹⁹ Particularly, Georgian government has committed to approximate its national legislation with Directive No 2000/60/EC establishing a framework for Community action in the field of water policy as amended by Decision No 2455/2001/EC and the following provisions shall apply: adoption of national legislation and designation of competent authority/ies, identification of river basin districts and establishment of administrative arrangements for international rivers, lakes, and coastal waters, analysis of the characteristics of river basin districts, establishment of programmes for monitoring water quality, preparation of river basin management plans, consultations with the public and publication of the plans. Other required changes in the water related legislation are regulations on assessment and management of flood risks, urban waste water treatment, monitoring of water quality intended for human consumption, protection of waters against pollution from nitrates from agriculture sources, establishment of a framework for Community action in the field of marine environmental policy.
- ²⁰ Environmental Performance Review, 2009
- ²¹ Georgian Law on Public Health www.nsc.gov.ge/res/docs/2014060915592973398.pdf
- ²² Regional development 2013, Brief review of current situation, existing gaps, and priorities, Ministry of Regional Development and Infrastructure, <http://static.mrdi.gov.ge/52b1ba050cf27286d7af38dc.pdf>
- ²³ According to this strategy, by 2015 the Government is expected to develop and enhance the following functions: a) early warning system, operational not only for biological but other threats like chemical, nuclear, etc.; b) development and introduction of relevant Standard Operating Procedures (SOPs); c) constant monitoring over global and regional epidemiological situation; d) identification of need and supplying with remedies/vaccines; e) implementation of adequate communication campaign; f) monitoring and correction of response actions.
- ²⁴ Georgian National Health Care Strategy (2011-2015). www.mindbank.info/item/2932

²⁵ While coordination for DRR activities in Georgia remains challenging given the current institutional setup, a successful example of a sectorial coordination mechanism is the Forestry Platform, which has 6 working groups, owned by the Government and approved by the Parliament.

²⁶ Statute of the Ministry of IDPs from Occupied Territories of Georgia, Refugees and Accommodation

²⁷ The Migration Crisis Operational Framework (MCOF) is a practical, operational and institution-wide tool to improve and systematize the way in which IOM supports its Member States and partners to better prepare for and respond to migration crises. More on MCOF can be found at <https://www.iom.int/cms/mcof>

²⁸ Can be accessed here: <http://drm.cenn.org/index.php/en/>

²⁹ The online version of the Atlas is available here: <http://drm.cenn.org/index.php/en/background-information/paper-atlas>

³⁰ The training course included: Emergency situations, their classification by different characteristics and parameters; Civil Defense system, 'safe zones' and informing population in case of emergency situation; Learning evacuation plans of the schools, their analysis and usage in case of emergency for effective evacuation; Arrangement and implementation of evacuation rules, usage of resources for collective defense (shelter), usage of means of individual defense; Rules of behavior/primary reactions during different emergencies; Mechanism and principles of the alarm system; The correct identification of problems connected to exact radio stations, the correct implementation of radio exchange, transmission and formulation with the legally correct form; Provision of first aid, medical triage, and requesting medical assistance. The persons who are appointed on the position of Resource Officers have to be trained in special courses that alongside with other crucial disciplines include the following: a. The usage of force and special means; b. Civil Defense; c. Primary Medical Assistance.

³¹ Strategy for Agricultural Development in Georgia 2014-2020

³² National Statistics Office, http://geostat.ge/index.php?action=page&p_id=119&lang=eng

³³ Available at www.tas.ge

³⁴ National progress report on the implementation of the Hyogo Framework for Action (2011-2013) http://www.preventionweb.net/files/28745_geo_NationalHFAprogress_2011-13.pdf

³⁵ Strategy of the National Centre for Disease Control and Public Health ncdc.ge/index.php?do=fullmod&mid=126&lang=geo

³⁶ The Situation of Human Rights and Freedoms in Georgia 2012, <http://www.ombudsman.ge/uploads/other/1/1350.pdf>

³⁷ Since 2011, children who used to live in state-run institutions, and those who subsequently entered state care, were reunited with their families or placed in foster care families. Where children's reunification with the family or placement in foster care was not possible, small group/family-like homes that house no more than 8-10 children have replaced large state-run institutions. Approximately 350 boys and girls are currently living in small group/family-like homes.

³⁸ The Situation of Human Rights and Freedoms in Georgia 2013, <http://www.ombudsman.ge/uploads/other/1/1563.pdf>

³⁹ The unity of ministries, their subordinate bodies and legal entities of Public Law designated by the Government of Georgia to prevent emergencies, as well as to eliminate them – in case of arising, to ensure the safety of population, protection of economic objects, reduction of material damage and damage to the environment (Georgian Law on Protecting the Population and Territory from Natural and Manmade Emergency Situations).

⁴⁰ Gurjaani, Lagodekhi and Telavi municipalities of Kakheti Region, Akhaltsikhe, Adigeni, Aspindza and Vale municipalities of the Samtskhe-Javakheti Region and Bulachauri village of the Mtskheta-Mtianeti Region

⁴¹ The projections of a World Bank Country report on climate change and agriculture suggest that over the next 38 years, Georgia will experience mean temperature increases (by 3.5oC in West Georgia and 4.1oC in the East), reduced rainfall, increased variability of precipitation, and increased such as likelihood of flooding and length of flooding.

⁴² The Special Report of the Public Defender's Office: Human Rights Situation of Persons Affected by and Displaced as a Result of Natural Disasters / Eco-migrants in Georgia (2013) <http://www.ombudsman.ge/uploads/other/1/1322.pdf>