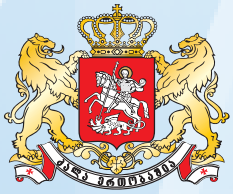
GEORGIA

DISASTER RISK REDUCTION CAPACITY ASSESSMENT REPORT

SEPTEMBER 2014



Published by the United Nations Development Programme in Georgia

Published in Georgia

Table of Contents

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, prioritisation and systematisation 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 to disaster response to a more proactive disaster risk reduction approach. Across the board, governmental and non-governmental institutions showed interest in focusing not only on responding to disasters as they occur, but on considering 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 assessments. A unified hazard mapping and risk assessment methodology, regulated through a dedicated legal framework, is lacking. Hazard data collection and mapping remain predominant, and they are 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 popularised 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 a database/portal; data is scattered across technical institutions and is not collected, systematised, customised 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 and understandable form; and certain respondents feel that available data is not sufficiently accurate or reliable.

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 specialised programmes. Similarly, institutionalised 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 respondents named frequent staff rotation as a challenge for awareness raising within institutions and among 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 localised 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 causes projects and programmes to be implemented, monitored and accounted for in a scattered manner.

Overall, disaster preparedness and response are well established in Georgia. A series of laws, including a new law on Civil Safety (2014), as well as government decisions and other normative acts, form the legal basis for the performance of disaster preparedness and response functions by the relevant mandated institutions. However, capacities for the coordination of emergency preparedness and response require improvement. Particularly, effective inter-departmental coordination, as well as coordination among line ministries and need 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 this 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 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 the 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 (in three regions), including government representatives, UN agencies, donors, NGOs, academia, and other national stakeholders. The results of the interviews were complemented by an 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 the 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. Context and Rationale of the Capacity Assessment

Georgia is characterised by the frequency and high risk of disasters that pose a significant threat to different sectors of the economy and to human development. The government of Georgia has taken a series of steps to address 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 that disaster risk reduction needs are further integrated across development strategies, plans and frameworks.

While DRR is gradually becoming one of the key priorities of 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. The government recognises 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, approached the UN Country Team, on behalf of the government, 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 comprising UNDP, UNOCHA, UNICEF, WFP, FAO and WHO, was approached by the UN Resident Coordinator, to provide technical support in conducting the capacity assessment of 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 with the development of frameworks for capacity development[3].

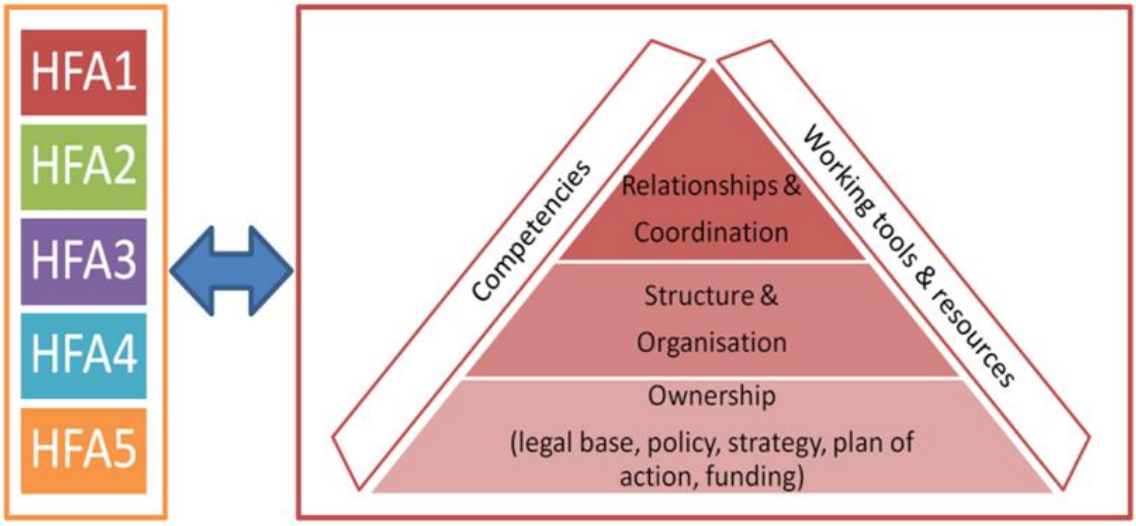
The DRR capacity assessment mission was conducted from 10 to 21 March 2014, under the leadership of the government and the UN Country Team. The deliverable of the assessment mission was the Disaster Risk Reduction Capacity Assessment Report, presented here. This report has been validated through a series of national consultations and a national workshop convened by the government in September 2014. 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 is based on a methodology developed by the Capacity for Disaster Reduction Initiative (CADRI). 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 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). A set of capacity development recommendations are proposed to address any gaps and challenges identified for each of the HFA Priority Actions. The level of the 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, the 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); Nino Antadze (UNDP Georgia); Nino Gvetadze (UNICEF Georgia); Nino Mamulashvili (WHO Georgia); Nino Shushania (IOM Georgia); Ia Mirazanashvili (FAO Georgia); Natalia Zakareishvili (UNFPA 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

The 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 guided interviews with government representatives, UN agencies, donors and other national stakeholders.

- At central level, 37 interviews were conducted with governmental institutions, donors, international and local non-governmental organisations, 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 municipal and community levels by three assessment sub-teams: Tbilisi (central and municipal authorities); Gurjaani, Telavi, Kvareli (Kakheti region); Kutaisi (Imereti region); Ambrolauri (Racha-Lechkhumi-Kvemo-Svaneti region); and Batumi (Autonomous Republic of Adjara).

Document analysis

The results of the interviews with the stakeholders were complemented by an analysis of extensive documentation made available to the team (legislation, strategies, policies, action plans, and programme and project documents).

Preparation of the DRR Capacity Assessment report

The present report was prepared on the basis of the input and comments of the assessment team members and has been shared with national stakeholders who also participated in the assessment process. A national workshop was organised to validate the final report. The recommendations in the report will form the basis for the development of the National Plan of Action.

Figure 1. *Administrative map of Georgia illustrating the regions covered by the capacity assessment (10-21 March 2014): Tbilisi (capital city, central and municipal levels); Gurjaani, Telavi, Kvareli (Kakheti region); Kutaisi (Imereti region); Ambrolauri (Racha-Lechkhumi-Kvemo-Svaneti region); Batumi (Autonomous Republic of Adjara).*

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 the 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. An 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 103-104 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. The high level of precipitation, characteristic of the foothill rivers of the Caucasus, has a significant impact on river hydrology. 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 flows and mudslides destroy irrigation systems, agricultural facilities and road infrastructure. In 1968-2009, approximately 70% of the territory of the country was subject to geological hazards, affecting 65% of its population5.

Droughts occur most notably in the Kakheti, Shida Kartli and Imereti regions. The year 2000 drought in Kakheti and Kvemo-Kartli regions affected 696,000 people and caused an economic loss of $200 million[6]. In the recent past, the drought cycle of Georgia has changed from 15-20 years to 6 years. From 1995 to 2009, droughts touching agriculture caused an economic loss of 400 million GEL[7].

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 in Georgia can also be observed through the increased occurrence of extreme natural hazards. High mountains, the coast and the semi-deserts of East Georgia are particularly sensitive to climate change[8]. The climate change projection models used in the Second National Communication on Climate Change show an increase of extreme weather conditions, translating into a heavier and uneven seasonal distribution of precipitation[9].

A clear illustration of the increasing impact of climate change on Georgia were the severe wind and hailstorms observed in the Eastern regions in the summer of 2012. The medium-sized hazard resulted in a disproportionate socio-economic disaster: 75,000 people affected and GEL 202 million (USD 123

million) in economic losses. The 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 mountain range by 2150-2160, given the current pace of glacier degradation and the rising temperatures.

2. Vulnerability profile

Georgia is a lower-middle income country with a GDP of USD 3596.6 per capita in 2013 and ranking 75th on the Human Development Index (UNDP, 2012). The main sectors of the country's economy are trade, industry, public administration, transport and communication, and agriculture.[10] Recently, tourism has also become 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 liberalised trade. GDP per capita increased from $920 in 2003 to $3,500 in 2012[11].

The economy started to slow down in the last quarter of 2012, and GDP was registered to grow 1.7 % 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 the Georgian economy to grow 6.3% in 2014. The estimate was published in the Bank's Global Economic Prospects 2014.

Despite the impressive economic growth in recent years, a substantial part of Georgia's population still lives in poverty. Estimates for extreme poverty vary between 10% and 45% depending on the poverty threshold used. There are also 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 regions[12].

Existing evidence suggests that some groups of the population are particularly disadvantaged regarding access to 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 unemployment[13]. Additionally, in Georgia children are at a higher risk of poverty than any other age group. Households with children are poorer than those without children, and the higher the number of children in the household, the greater 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 the 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 at 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). This sector contributed only 9.3% to the GDP in 2013, and it is characterised by family-based subsistence farming[14] with a low productivity.

IV. Results of the Disaster Risk Reduction Capacity Assessment

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 is 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 2013[15].

Disaster risk reduction gradually evolved as a priority for the government, and there has been obvious progress in addressing disaster risk issues at sectorial level. The assessment revealed that there is high government willingness for moving 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 in focusing not only on responding to disasters as they occur, but on considering 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.

The concept of risk reduction as primarily a development issue is rather new for national and local authorities in Georgia. There is a 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, prioritised and systematised across the 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.

2. Legislation

2.1. Disaster management legislation

Existing legislation is almost exclusively related to disaster management and emergency response. Several sectorial legislative acts, as well as certain sectorial policies and strategies are relevant for disaster risk reduction. However, normative documents explicitly focused on risk reduction and prevention need to be developed. Similarly, post-disaster recovery is not clearly defined and addressed in current legislation.

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.

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 of the Emergency Management Department (EMD) of the Ministry of Internal Affairs are the coordination of the nationwide prevention of emergency situations, the mitigation and liquidation of their consequences, and ensuring the implementation of civil protection tasks during the period of martial law[16].

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

An in-depth analysis of the legislative framework for disaster response is provided in the section on HFA Priority Action 5.

2.2. The EU-Georgia Association Agreement

In June 2014 the Association Agreement between EU European Atomic Energy Community and their Member States, for one part, and Georgia, for the other **(EU-Georgia Association Agreement)** was signed. The objectives 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 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 the conditions for an increasingly close cooperation in areas of mutual interest.

Among the sectors identified for cooperation between the parties are the 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 the development of the EU-Georgia Association Agreement Georgia committed to progressively align its legislation in the relevant sectors with that of the European Union, in accordance with the Agreement, and to implement it effectively within an identified timeframe.

Cooperation aimed at improving the prevention of, preparation for and response to natural and man-made disasters is mentioned in the EU-Georgia Association Agreement. The objectives of the cooperation are: 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, the improvement of the knowledge base on disasters regarding hazard and risk assessments for the purposes of disaster management, and the assessment of environmental and public health impacts of disasters.

2.3. Sectorial legislation

- **Environmental Impact Assessment (EIA) Law** was introduced in 1996, abolished in 2003, and reintroduced recently. Certain limitations still hinder its full operationalisation 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 institutions[17], 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 harmonised with relevant EU legislation and international instruments after the finalisation of the EU-Georgia Association Agreement[18].

- **Law on Protected Areas** regulates environmental management, as it ensures the protection and restoration of natural ecosystems and landscapes of Georgia. Article 1 under the law defines the objectives for establishing a protected areas system in Georgia. Paragraph “e” defines the protection of territories located in erosion, mudflow, (flash) flooding, avalanche and landslide risk zones. The paragraph also contains provisions for the protection of ground water and factors that influence its quality, such as drains and discharges from an anthropogenic origin. Furthermore, according to article 20, disaster risks are managed within the protected areas through temporary regulation for disaster and emergency management. The 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 (agricultural) land-reclamation purposes.

- **Law on Wildlife** ensures the protection and restoration of wildlife habitats, the diversity of species, and the preservation of genetic resources. Article 10, under the law, mandates relevant government entities (not specified in the law) with the restoration of the natural habitat of wildlife, deteriorated due to natural disasters, epidemics and other causes. The national legislation on wildlife protection is expected to be harmonised with separate provisions of the following EU directives: No 2009/147/EC on the conservation of wild birds, No 92/43/EC on the conservation of natural habitats and of wild fauna and flora.

- **Forest Code**. The protection, maintenance, restoration and the commercial use of forests is regulated through the Constitution of Georgia, the Forest Code, as well as other laws on environmental 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 the restoration of forests from damages due to natural disasters, epidemics and other causes. A separate chapter is dedicated to forest maintenance which is targeted to increase land fertility, prevent soil degradation caused by water and wind erosion, swamping, mudflows, snow avalanches and other hazards. Furthermore, the law defines maintenance measures.

- **Law on Mineral Resources.** In Georgia, 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 the coastline in cases where the works may lead to the deterioration of the riverbed or the hydraulic structure (dam, bridge, walls and etc.) The law also prohibits the extraction of mineral resources in the upper terrace of floodplain 50 m from the riverbed.

- **Law on Water** defines the main principles of water policy, such as the protection and rational use of water, with regard to the demands of the present and the future. The supply of drinking water is a first priority, but the law also contains provisions for the sustainability and prevention of harmful impacts, and it guarantees the security of state interests regarding water protection. Chapter II, under the law on water, makes provisions on the responsibilities related to water management on national, Autonomous Republic and local governance levels. This includes the implementation of works for the recovery of bodies of water 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: the strategy for sustainable development, NEAP and the management plan for environmental protection, as well as related laws and normative acts. The law requires water protection to be integrated in the following actions: local land-use plans; resettlement and development plans; infrastructural projects; sectorial plans; management plans of protected areas; and natural resource management plans. After the finalisation of the EU-Georgia Association Agreement, legislative reforms will be implemented in the sector of water quality and resource management, including the marine environment[19].

- **Law on Conservation of Soils and Reclamation and Improvement of Soil Fertility**, the **Law on State Control for Environmental Protection**, the **Law on Licenses and Permits**, and the **Law on Ecological Inspection** provide the legal streamlining of a number of water-related aspects (as i.e. EIA). The **Law on Public Health** provides for the establishment of sanitary and hygiene requirements, and norms and rules with regard to water quality[20].

- A new draft **Spatial Development and Construction Code** was prepared with financial and technical assistance from GIZ. The Code includes provisions on spatial and urban development planning, principles for construction and quality assurance of buildings, rules for issuing construction permits and ensuring construction supervision, among other technical measures.

- **Urban planning and construction activities** in Georgia are regulated by the following laws: the Law on Construction Activities; the Law on the 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 at promoting public health and the culture of a healthy lifestyle, ensuring a safe and healthy living environment, supporting the protection of reproductive health, and preventing communicable and non-communicable diseases. The major principles of the law lie in the provision of preventive measures: avoiding health related risks

and providing a clear distinction of functions between national and local public health institutions, as well as coordinating the 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 the Law on Civil Safety, defines the duties and responsibilities of the emergency management commission, coordinated by the Prime Minister during acute epidemics and pandemics[21].

- **Law on Gender Equality** provides major guarantees for equal rights and opportunities for women and men, as well as legal mechanisms and conditions for their implementation. The aim of the law is to ensure gender equality, equal rights and opportunities, and to protect the citizens from discrimination in the following spheres: labour relations, education and science, access to information sources, health and social protection, and election rights. The Parliament of Georgia has adopted the second Gender Equality Strategy (2014-2016) which ensures a gender balance in environmental decision making and awareness raising.

3. Policies, strategies, programmes

In Georgia, there is no national DRR policy or strategy. However, based on a local 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 digitalised hazard monitoring and flood risk assessment, the development of land use policies specific to floodplains, and the development of a 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 to achieve appreciable economic growth and territorial integrity. 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 operating a licensing system to minimize the risk of natural catastrophes pursuant to early warning".

- 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, such as the fiscal resource allocations, but it also includes detailed descriptions of the individual sectorial strategies for achieving these objectives. The latest revision of BDD (2013-2016) sets the following priority directions for disaster risk management: the establishment of a disaster forecast and early warning system; the establishment of mechanisms for the sustainable use of land resources, to reduce erosion and to prevent desertification; the protection and restoration of the Black Sea coast and river banks; the mandatory integration of environmental issues into urban development and building processes.

- The **State Strategy on Regional Development (2010-2017)** is a mid-term strategic document that defines the main principles, goals and objectives for the sustainable regional development of the country, focusing on effective regional management, the development of municipal infrastructure and services; support to innovation, new technologies and the development of business; and agriculture and ensuring environmental protection. The priority areas identified under environment protection are: the development of a system of effective water resource management; support with the rational use of ground water resources; the protection of the Black Sea coastline from global and local climate change impacts; support with the development

of renewable energy resources; improvement of land resource management, and the improvement of the disaster risk management system. The latter is planned to be achieved through the introduction of monitoring and EWS in risk zones, the development of response plans, the planning and implementation of relevant mitigation measures, the assessment of socio-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 included an assessment of the disaster risk profile and an analysis of disaster risk reduction and climate change adaptation capacities. A planned follow up action the development of action plans[22].

- The **Socio-economic Development Strategy ("Georgia 2020")** defines the priorities and corresponding implementation measures for social and economic development for 2014-2020: creating a more enabling environment for business and investment; support to innovation and new technologies; support to growth in exports; development of infrastructure; education based on the demands of the labour market; improvement of the social protection system; ensuring affordable and high quality health care; mobilisation of investment resources; and 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 country`s national development priorities as described in the United Georgia without Poverty programme. The UNDAF complies with 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 the challenges the country faces in terms of chemical, biological, radiological and nuclear threats, and to alleviate the damage caused by such threats. The aim of the strategy is to promote the development of a common mechanism to CBRN threats throughout the country which will be focused on the management components of CBRN incidents, such as 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 competiveness, promote a stable growth in agricultural production, ensure food safety and eliminate rural poverty, to be achieved through the sustainable development of agriculture and rural areas. Ensuring a sufficient supply of safe and nutritious food is identified as one of the key strategic directions as the food security of the majority of the Georgian population is at risk, due to droughts, shipping disruptions, fuel shortages or economic instability. 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 the potentially harmful impacts of climate change.

- In terms of sectorial policies, environmental 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. 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. The Second National Environmental Programme followed the recommendations of the National Environmental Performance Review (2010) and the results of the State of Environment Report for 2007-2009. A set of measures was proposed with the aim to minimise human and economic losses, and negative effects on human health and ecosystems. The measures comprised of the following actions: the improvement/modernisation of the early warning system; the prevention/reduction of negative impacts of floods and flash floods in river basins; and risk reduction for industrial accidents. Since 2013, the government has been increasing fund allocations from the state budget for monitoring, forecasting and prevention measures in the sphere of environmental and disaster risk management, and created a dedicated unit within the MENRP, the Natural and Technological Hazards Management Service. This service is 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 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 the 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 the Autonomous Republic of Adjara** was prepared within the framework of the Third National Communication to the UNFCCC. 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 the climate in the next decades using the models elaborated in the framework of the Second National Communication. Similar strategies on climate change are being prepared for Svaneti and Kakheti regions.

- The health sector has an important role in the early identification of public health related risks, informing relevant authorities and in methodological guidance. Some of the priority objectives of **the Georgian National Health Care Strategy (2011-2015)** [23] are **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 the health sector is the **National Centre for Disease Control and Public Health (NCDC),** in cooperation with governmental and civil organisations in the health sector.

4. Institutional arrangements and coordination

4.1. Government institutions

In Georgia, the coordination and exchange of information on disaster risk reduction issues take place through a 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 fully cover the whole spectrum of DRR issues; instead, only partial coverage is present (e.g. disaster management issues are well-represented under the priority areas of the Expert-Advisory Council statute but coordination issues related to the risk reduction area require better elaboration). As for the DRR Think-Tank, the format of its work is limited to information exchange between key national and international DRR stakeholders, NGOs and scientific institutions.

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

Several state institutions are mandated to deal with risk reduction issues through their respective programmes and within their specific sector. The following institutional structures currently have mandates related to disaster risk reduction, 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**. This Service is in charge of the coordination and implementation oversight of environmental strategies and policies, planning of disaster risk reduction activities, setup of a database of DRR activities, and capacity development related to the Early Warning System. The Service hosts an informal forum for DRR stakeholders called the **DRR Think-Tank of Georgia** that unites representatives from 60 governmental, non-governmental and international organisations, as well as academia. The forum was established in 2009 under the UNDP project "Strengthening the 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, on which a decision is still pending.

- The **Disaster Prevention and Planning Division** and the **Standing Secretariat of the 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 a 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) the prevention of the consequences of natural emergencies and the reduction of loss; (ii) the prevention of the consequences of manmade emergencies and the reduction of loss; (iii) the coordination of experts in the field of civil emergency planning within NATO and Partnership for Peace programs.

- Following the PM Resolution #38, in January 2014 the **State Security and Crisis Management Council** under the Prime Minister's office has recently been established to adopt political decisions of the highest level to ensure state security and crisis management. The Council is mandated to elaborate proposals on preventive and response measures against political, social,

economic and ecological threats. The Council will also manage the **Crisis Operations Centre** that will be activated as needed by the Prime Minister, and that is equipped with the necessary assets and means for its functioning. The setup of the Crisis Operations Center is supported by the UK government and receives regular training workshops, testing, as well as transfer of knowledge and expertise from the UK, though focusing on the most senior strategic level rather than the operational. The newly established Council plans to update the existing threat assessment that defines natural hazards as one of the risks. Based on the revised risk matrix, the Council will define the required capacities and resources to develop a risk reduction strategy and a four-year strategic plan for implementation. The Council recognises the need for a very detailed and comprehensive review of existing mechanisms, capacities and plans, to be able to work on a series of legislative amendments that are required to ensure a clear delineation of roles, responsibilities and competencies of the various state entities concerned with crisis management.

- The **National Crisis Management Centre** was created within the Office of the Council. Upon occurrence of a crisis (i.e. infringement of national security, attempt of internal political destabilisation, natural disasters and other types of crises), the National Crisis Management Centre is subordinated directly to the Prime Minister. The National Crisis Management Centre:
  - Addresses the Prime Minister in the incidence of a crisis situation threatening national interests or creating a hazard of such threats;
  - Ensures the elaboration of plans for all types of crisis situations threatening national interests;
  - Coordinates the prevention and risk reduction of crisis situations on governmental level;
  - Coordinates the preparation of plans for occurring crisis situations on governmental level;
  - Coordinates the activities of state agencies when a crisis situation occurs;
  - Creates and maintains an information database.

- The **National Environmental Agency (NEA),** under the MENRP, is mandated to monitor ongoing hydro-meteorological, geodynamic and geological events, as well as to provide monitoring of environmental pollution, to issue license permits for the exploitation of natural resources, and to ensure the sound functioning of monitoring 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.

- The **Climate Change Division** of MENRP provides assessments of climate change impacts on the sectors of economy and ecosystems and prepares relevant predictions, develops the national plan for adaptation to climate change, coordinates the national communications to the UNFCCC and provides an inventory of greenhouse gas emissions (GHG).

- The **Ministry of Regional Development and Infrastructure** (MRDI) is in charge of the regional development policy, the introduction of water supply systems, the development of an integrated state policy on the development and design of networks of secondary and international roads. MRDI is in charge of municipal planning, in accordance with the State Strategy on Regional Development. 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 programme and requires technical expertise and capacity building in DRR in this process.

- The **Natural Disaster Prevention and Rapid Response Unit** established in 2014 under MRDI is mandated to integrate disaster prevention, early warning, response and post-disaster recovery in infrastructure planning and development. Within the scope of its work, the unit is in charge of developing proposals and projects that consider disaster prevention issues: the implementation of natural disaster prevention policies, methodologies and knowledge products related to infrastructure development; awareness raising and information exchange; the effective use of early warning systems for infrastructure; rapid response to disasters affecting infrastructure; post-disaster damage assessments of infrastructure; the 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; the preparation of requests for the allocation of funds for disaster relief activities from the state budget; and monitoring of projects funded through the state budget.

- The **Department of Spatial Planning and Construction Policy** of the Ministry of Economy and Sustainable Development is in charge of the 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.

- The Department of Migration, Repatriation and Refugee Issues of the **Ministry of IDPs from Occupied Territories, Refugees and Accommodation** (MRA) is mandated to develop a system for the management of migration caused by natural disasters ("eco-migration"). The entity provides monitoring of migration processes, prepares predictions, and implements resettlement processes induced by natural disaster risks. It also develops an adaptation-integration programme of eco-migrants in new settlements and maintains a database[26].

- The **Ministry of Labor, Health and Social Affairs (MOLHSA)** is in charge of defining the public health policy. At the local level, municipalities are responsible for the prevention of public health risks by monitoring the environment and public health though municipal public health centres. However, in order to enhance the prevention of disease and public health risks, epidemic-control, preparedness and response systems, the development of an effective mechanism for cooperating with municipal public health centres and a 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, as well as rapid response to public health related threats. NCDC develops national standards and state recommendations (guidelines), it supports the improvement of public health, provides epidemiological surveillance, immunisation programmes, laboratory works, and research, and it 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 two regional departments, seven divisions and 64 public municipal health centres (funding and training provided by the US government).

- The **Environmental Information and Education Centre** was established in 2013 under the Ministry of Environmental and Natural Resources Protection with the following goals: to organise and administer an environmental information system in cooperation with state organisations, academic, non-governmental and international organisations and the business sector with the relevant competencies; to collect and share environmental information; to

collect the information on ongoing and completed environmental projects in Georgia; to create a database and to ensure its publicity; to collect statistical data related to the field of environmental protection; to establish and maintain an environmental library; to facilitate access to environmental information through the website and other information sources (internet, information network, media, etc); to facilitate education on the environment and sustainable development; and to promote public awareness within the competence of the Ministry of Environment and Natural Resources Protection.

4.2. The United Nations System in Georgia

Various **United Nations agencies** have been active in supporting the disaster risk reduction activities in Georgia through various 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 a functional information sharing group for DRR was established (DRR Think Tank). The second phase of the project spanned from 2011 to 2012 (USD 515,740).

- **UNDP, Immediate Response to 2012 Disasters in Georgia** (2012-2014; USD 144,011). Following a request from the government of Georgia, the United Nations and the World Bank offices in Georgia agreed to support the government in conducting a Joint Needs Assessment (JNA) for recovery and reconstruction after severe storms swept through Kakheti and other regions of eastern Georgia. The JNA informed the development of recovery framework plans and recovery activities in agriculture and disaster risk reduction.

- **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 supports the government and the communities of the target region of the Rioni basin to develop adaptive capacities and embark on climate resilient economic development. The project is working on the development of a floodplain policy to incentivise long term resilience to flood and flash flood risks. It also contributed to the design and implementation of climate resilient practices of flood management to reduce the vulnerability of highly exposed communities, and supports the improvement of early warning systems in order to enhance preparedness and adaptive capacities of the communities.

- **UNDP, Promote Sustainable Livelihoods and a Responsible Attitude to the Environment** (2012-2015; USD 1,505,593 funded by the government of Finland). The project focuses on sustainable livelihoods, responsible attitudes towards the environment and disaster risk reduction in the areas affected by forest fires during the 2008 armed conflict. The project works on income generation activities related to a safe environment; piloting alternative energy systems and energy efficiency measures to selected households, schools and municipality buildings; providing informal environmental education through eco clubs, eco camps and green schools; and increasing the disaster resilience of target communities through the 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 the integration of DRR in the national curriculum and teacher training, the development of interactive teaching and learning materials, and piloting a school-based disaster management model in selected schools in the most 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, organised through this project, played an important role in increasing the DRR awareness levels of education and emergency professionals and improving their 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 the improvement of food security by enhancing the design and implementation of the relevant policies and programmes. This was achieved by strengthening the 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 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 project aims to implement sustainable models for agricultural development in mountainous areas.

- **FAO, ENPARD Technical Assistance - Capacity Development project of the Ministry of Agriculture of Georgia** (Funded by the EU, EUR 2,000,000). The project aims at improving the competitiveness of the agricultural sector in Georgia through supporting policy making and the effective implementation of the Strategy for Agricultural Development. The purpose of the project is to contribute to increasing food production and reducing rural poverty.

- **IOM, the Interagency Forum on Disaster Risk Reduction** (2014) was organised with the support of the Ministry of Internal Affairs of Georgia (MIA) and the International Disaster Response Network (IDRN). The objective of the Forum was to raise awareness of the participants representing all the ministries of Georgia, as well as intergovernmental, international and local non-governmental organisations on the Migration Crisis Operational Framework (MCOF)[27]. The MCOF was developed by the IOM as an internal tool for managing crises with a migration dimension, as well as for 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 following severe storms and flooding that took place in July 2012 in Kakheti, Mtskheta-Mtianeti and Samtskhe-

Javakheti regions of Georgia, as well as the elaboration of the national report on preparedness for the implementation of the Hyogo Framework of Action Programme in Georgia.

4.3. Other DRR stakeholders in Georgia

- **DIPECHO, Disaster Preparedness Programme for South Caucasus** is to contribute to an increased resilience and reduced vulnerability of children and communities in areas prone to natural hazards. The programme is implemented in regions and communities highly exposed to natural hazards and disaster risks – primarily targeting community members and local institutions with a special emphasis on children and youths. This project combines community-based activities, directed to the enhancement of local capacities to better prepare for and respond to disasters, with policy development work aiming to further develop and include disaster risk reduction in education and national disaster management planning. The implementing partners of DIPECHO phase III are UNICEF, the Danish Red Cross in collaboration with the 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 recognised by the government 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 organisation with an auxiliary role to public authorities in humanitarian work, and with a mandate to coordinate the NGO response in emergency situations. The GRCS is supported by the International Federation of Red Cross and Red Crescent Societies (IFRC) (present in country from 1995) in its capacity to strengthen its organisational development and its legal base, advocating for a 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) 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 national Red Cross societies, with operational support provided by the Danish Red Cross which represents the co-financing partners: the Austrian Red Cross and Icelandic Red Cross. The objective of the programme is to reduce the vulnerability of the population of South Caucasus, living in areas most prone to and affected by natural disasters, by increasing the awareness, preparedness and response capacities of the local communities and partners. The specific objective of the programme was to assist targeted vulnerable communities in Georgia and Armenia to plan/prepare, mitigate and respond to disasters, through the consolidation and validation of the Georgian and Armenian Red Cross Societies' Community Based Disaster Risk Reduction model which included seven specific results. The programme commenced its third phase of action in 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 the International Committee of the Red Cross (ICRC) operational reception centres, will be established in Senaki, Kutaisi, Gori and Tbilisi. The main purpose of these centres is to provide assistance to the affected populations within 72 hours after a disaster (e.g. first aid, psychosocial support, restoring family links).

- **GRCS, Climate Forum East**, an 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, the GRCS coordinates a national network of civil society organisations concerned with climate change adaptation to build their capacity to advocate for climate change, environmental and DRR issues, and to engage in related youth and community actions. As part of the project, the network has developed a national climate vulnerability assessment focusing on health and water resources, with recommendations on adaptation measures for decision makers and civil societies.

- **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, without a budget or incentives, without state training or reimbursement of travel costs. Therefore, motivation is low. Oxfam educates women in Adjara where people are 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 in first aid and firefighters` training, and outsourced to the Red Cross. Emergency simulation exercises were carried out at community level and in schools, jointly funded by Oxfam and municipalities.

- **Save the Children,** in collaboration with **Arbeiter-Samariter-Bund (ASB)** and in partnership with the government, works on a range of disaster risk reduction initiatives, including DRR policy and planning, capacity development and media outreach, community-based and preschool-based DRR, including the development of practical DRR solutions for children. Simple, practical and non-technical DRR information are used in the education programs.

- **Programme on Prevention, Preparedness and Response to man-made and natural Disasters in the ENPI East Region (PPRD East)**: 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 programme contributes to the development of the Electronic Regional Risk Atlas and increasing DRR awareness among the key stakeholders. In Georgia, the programme is coordinated by REC Caucasus.

- **TWINNING** project "Support the Emergency Management Department (EMD) in the Development of Emergency Services in Georgia" (funded by the EU, EUR 800,000). The project comprises of four key components: (1) to enhance risk mapping and response capacities of EMD, (2) to improve legislation and regulations on civil protection/disaster management in Georgia, (3) to strengthen the prevention activities and capacities of the Emergency Management Department at national level and (4) to improve EMD capacities to run awareness programmes on risk exposure, prevention and response, targeted to the Georgian population.

- **World Vision** works mainly on emergency preparedness at community level and in schools. World Vision assists communities to develop community disaster preparedness plans, which are partly financed from community funds, purchase equipment and organising drills. World Vision

also improves the decision making power and advocacy at local level, as municipalities are able to identify existing gaps and have 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, a computer and a car. The staff of the regional emergency management service received training on first aid.

- **Rural Development for Future Georgia (RDFG)** established a Disaster Risk Reduction Centre in 2011 to enhance local communities' resilience to natural hazards and to promote a culture of prevention through the provision of coordinated and systematic approaches in disaster management at regional and central levels. The DRR Centre has implemented several projects focusing on school-based disaster risk reduction, local communities' disaster management capacity, and building and strengthening the national emergency management system. The DRR Centre is a partner of the DIPECHO implementing organisations (namely ACF, Oxfam and UNICEF), and in its the framework of school-based disaster risk reduction, it 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 partners with EMD and other stakeholders to facilitate the improvement of the emergency management system at central and local levels. The DRR Centre participates in the design and revision of various guidelines, standards and templates, and promotes commonly agreed DRR terminology.

- **Caucasus Environmental NGO Network (CENN)** is a non-governmental, regional organisation established in 1998 and specialised in the fields of civil society development and institutional strengthening, environmental research and policy, resources management, compliance management, communication and the 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 organisations, including CENN, is implemented in six municipalities of Racha-Lechkhumi and Samegrelo-Upper Svaneti regions of Georgia. The project aims at reducing and damage caused by 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 a non-profit grassroots organisation that deals with a broad range of environmental issues. The organisation implements its mission through campaigns and projects, public information and involvement, policy making and lobbying. The focus areas include climate change mitigation and adaptation; the protection of water resources; the introduction of integrated water resource management; water supply and sanitation; the conservation of biodiversity and the protection of eco-systems; combating deforestation and forest protection; lobbying and advocacy for legal instruments referring to the principals of sustainable development at local and state levels; education for sustainable development. The Greens movement developed the "Green Manual" as a resource document for teachers and offered training programmes on sustainable energy, the Aarhus convention, waste management, and environmental protection. The organisation hosts a large volunteer network of approximately 2000 members in all municipalities.

- **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, lessen the vulnerability of people and property, and to improve preparedness and early warning for adverse events. RECC is a member of GNDR (The Global Network for Disaster Reduction), and since 2011 it has been assessing the progress made toward the implementation of the HFA at the local level. RECC is one of implementers of the regional project "Prevention, Preparedness and Response to man-made and natural disasters in the ENPI East Region (PPRD East)".

5. Technical, financial and human resources

Technical expertise and experience in disaster management and emergency response is extensive, both at central and decentralized levels. Technical skills and competencies exist in governmental and non-governmental institutions in areas that contribute to risk reduction. 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. Generally, there is low awareness that disaster risk reduction is primarily a development issue that 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 for 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 specialised 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 in DRR, and particularly on sectorial aspects of DRR (education, health, etc.), in all UN agencies taking part in 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 areas (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 programmes, 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, prioritised, systematised or regularised. Similarly, there is no specific annual recovery allocation in the state budget. Disaster response allocations are made through specific requests to the Ministry of Finance based on damage and loss assessments and calculations of costs. According to the Ministry of Finance, the allocation of extra funds has to be approved by the parliament. The Ministry of Finance also possesses the Reserve Fund for Regional Development, covering three areas, one 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 the 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 the advocacy/sensitisation 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 sensitisation programme for decision-makers at national and local levels.**

2. **Clearly define the roles and responsibilities of local and regional government structures in DRR.**

3. **Enforce and/or improve the 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 a clear definition of the functions and obligations of the responsible institutions.**

4. **Develop a National DRR Policy, a National DRR Strategy and a 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 and determine his/her minimum qualifications and competences (requirements specification). Clearly determine the roles and responsibilities of the DRR focal point at municipality level by Terms of Reference, including awareness raising and the coordination of DRR issues at municipality level.**

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, the next UNDAF, and sectorial programmes and frameworks.**

7. **Align the DRR coordination mechanism, based on the national legislative framework, with international standards and requirements (i.e. Hyogo Framework for Action), while taking into account available best practices in order to facilitate coordination across sectors and institutions (governmental, non-governmental, IOs, academia, etc.) Promote the 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 the 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 are 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 the database/portal; data is scattered across technical institutions, and it is not collected, systematised, customised 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 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 was developed through the project "Institution building for natural disaster risk reduction in Georgia", implemented from 2009 to 2012 by CENN and Faculty of Geo Information Science and Earth Observation, the University of Twente (ITC), the Netherlands, and it 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 of the natural and human conditions in the country. The maps show various types of vulnerabilities (physical, social, ecological, economic) and risks typical to Georgia's territory. The assessment revealed that further popularisation 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 assessments for most hazards and risks, specialised institutions, such as the Institute of Geophysics and the Institute of Earth Movement are under different management structures, and there is no binding requirement for any of these institutions to unify their methodologies or to share information. For example, while the Ministry of Defence is tasked with an anti-hail function, using canons, there is no clear evidence of regular information exchange with the Hydro Meteorological service.

The decision-makers` understanding of hazard and risk concepts and their application seem to need improvement. The 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 343 staff members nationwide, is responsible for the preparation of normative and informational documents, forecasts and warning regarding existing and expected hydro-meteorological and geodynamic processes, geo-ecological conditions of the geological environment and the conditions of environmental pollution; permanent mapping of the territory, risk zoning and forecasting of coastline

developments; the management of coast forming processes using engineering activities; the creation of environmental databases, metadata and ensuring its organisational management. NEA is divided into the departments of Hydrometeorology, Geology, Environment Pollution Monitoring and Licensing.

- The **Department of Hydrometeorology**, comprising 197 staff nationwide (60 staff in Tbilisi, the remaining staff spread in four areas in the East and West of Georgia), is primarily responsible for hydro-meteorological data collection and dissemination (including short and medium-term weather forecasts, prediction on spring flooding parameters and water discharge), early warning and estimation of hydro-meteorological risks (e.g. short term special forecasts and warnings 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: the elaboration of hazardous geological risk zoning maps (in scale 1:50,000); prediction and permanent monitoring of hazardous geological processes; provision of recommendations for population living in hazard-prone areas; implementation of all scales of engineer-geological, engineer-geodynamic and geo-ecological studies; zoning the territory of Georgia regarding the frequency and intensity of hazardous geological processes; engineer-geological and geo-ecological examination of big industrial projects to define the scale of a possible impact over changes in environment on the whole territory of Georgia; participation in the preparation of hydro-geological conclusions on sites intended for civil-industrial purposes.

- The primary functions of the **Department of Environmental Pollution Monitoring** of NEA are to determine the level of environmental pollution caused by various natural and anthropogenic factors; the establishment of the data collection and control systems; the provision of information on environmental issues to state entities and interested parties; participation in the assessment of the impact of ecological conditions within the framework of its competence (no defined set of indicators/standards that would describe what the respective 'level of competence' means is provided by the mandates/regulations of NEA Departments); 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 eight staff responsible for prognosis, monitoring and provision of recommendations for infrastructure development planning 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 responsibilities of the centre include: seismic data processing and development of earthquake catalogues; rapid estimation of earthquake parameters in time and space, such as the location (hypocentre, epicentre, magnitude, intensity); data exchange with international data centres, such as EMSC and ISC; providing quick information to several organisations regarding in emergency situations; provide updated information through a webpage http://seismo.iliauni.edu.ge. Customised seismic information is not provided for free by the Institute. The Institute does not produce risk data, only hazard data.

- A similar map of seismic hazards in Georgia is developed by the LEPL **Institute of Geophysics** that has also developed a Disaster Deficit Index. Observations have been made on the interchangeable use of the terms hazard and risk, as well as hazard and risk maps. Most respondents highlighted the need for a unified risk assessment methodology in Georgia. The

Institute of Geophysics also stated that a 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 the 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. Out of the 400 hydro-meteorological observation stations established before the 1990s, only 40 are currently operational, some of which have recently been upgraded or set up based on donor funding. This results in less reliable longer-term weather forecasts. Only short-term, 6-hour forecasts of expected hazardous events are made, without an indication of specific locations. Since 2000, no long-term prediction has been made for geological hazards, whereas the previous prediction covered a period of 20 years. Similarly, climate change modelling is not fully operationalised at the national level.

Based on the EU-Georgia Association Agreement, Georgia has committed to gradually harmonising its legislation with the EU legislation and 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 risks need to be implemented (within a timespan of four to nine years, from the entry into force of the EU-Georgia Association Agreement): the adoption of national legislation and the designation of competent authorities; undertaking a preliminary flood assessment; preparation of flood hazard maps and flood risks maps; and the 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 data can be visualised 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 by location. However, the assessment found that the portal is not known, used or widely referenced 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 digitalised 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 formalised way. The information is also not customised for the needs of the 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.

Access to initial databases (primary information on events, instrumental or descriptive records, bulletins and catalogues) plays an important role in disaster risk assessment and reduction. Meanwhile, all the initial data produced through projects, funded by international organisations, were identified as easily accessible. Some of the respondents identified the problems regarding the accessibility of data from government institutions as a major obstacle for scientific research, particularly in disaster risk assessment.

The National Environmental Agency (NEA) publishes an annual hazard assessment bulletin (informational bulletin on the developments of natural-geological processes in Georgia and the next

year's forecast) which is sent to municipalities, the EMD, the MRDI, non-governmental organisations and other interested parties. The bulletin, which is publicly available, contains information on hazardous geological processes, obtained through monitoring and surveys during disasters. The publication also provides information on dangerous geological processes in human settlements and the sites of engineering facilities within the monitored area. The bulletin also comprises maps containing information on geological processes and areas prone to geological hazards. The EMD develops additional recommendations and communicates them to the regions and municipalities based on an analysis of the information in the bulletin.

If the identified issues require urgent action, funding is provided by the local municipality reserve fund. The currently available information on recent hazardous geological events covers the past 50 years.

The Departments of Hydrometeorology and Geology still rely on paper-based data recording in the regions, which gets transferred into a digital format by NEA at the central level; however, only for the areas covered by 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/forecasts on hydro-meteorological hazardous events. The Department of Environmental Pollution Monitoring of NEA also produces monthly bulletins on the monitoring of environmental pollution, which are made publicly available and shared with interested stakeholders. NEA also cooperates with the National Statistics Office (GEOSTAT), based on the Memorandum of Understanding for regular information/data exchange and complying with the commonly agreed classifiers.

3. Early warning

Regarding early warning, various institutions have good technical capacities to conduct studies on developing trends. Most of these institutions have access to international data and the possibility to share information on risks that can impact the country. There is also 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 produced are not systematically shared in a reader-friendly format by the technical institutions to provide the national and local authorities a basis for risk-informed decision-making on long-term development investments by sector. The early warning information in the studies is often 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, a comprehensive training programme, tools and equipment. Ensure that this process is based on good practices in the country or in the region, and that it builds on existing proven methodologies, tools, modern equipment and software. Ensure systematic monitoring of hazardous zones.**

2. **Conduct proper risk assessments in all regions of Georgia in order to compile a comprehensive and unified national risk profile. The risk profile should serve as a 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 customisation, 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 the support of UNICEF. It was mandated 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 organised by UNICEF, in close collaboration with MOES and EMD. Nevertheless, there is a need for regular coordination meetings, particularly due to the 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 the development of preschool education by creating preschool curricula, preschool education teacher professional standard and training programmes. The MES actively participates in the elaboration of preschool law. For this purpose, a Preschool Education Development Unit was established within the National Curriculum Department of MES in December 2012. This unit is also responsible for developing and approving the preschool education curriculum and supporting its implementation. Presently, UNICEF supports the Ministry of Education and Science of Georgia with the revision of the national curriculum. It also assists the MES in the development of preschool law and a new curriculum.

Although the 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 EMD of within the framework of the DIPECHO program, MES could potentially integrate it 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 one school semester in the respective grades. As for the 'Head Teacher' program, Head Teachers should allocate at least one hour per week for teaching DRR with interactive methods throughout the academic year. The abovementioned DRR curriculum was developed in coordination and with the participation of EMD, based on extensive consultations with specialists from different sectors.

In 2013, the National Curriculum Department of the MES, with support from UNICEF, developed DRR electronic games for primary school children, covering five thematic areas (landslides, earthquakes, fires, floods/flash floods and strong winds). The information on the availability of the games was disseminated by the MES in order to appropriate educational resource centres; teachers and students from different regions of Georgia were given large-scale presentations on the electronic games. The

games were also uploaded on the website of the Ministry of Education and Science of Georgia (www.buki.ge). However, despite the efforts to support the popularisation of the games, random indirect monitoring (including 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, monitoring of the teaching process does not take place. MES is currently developing a classroom monitoring system for the core subject areas and also intends to look into the quality and periodicity of DRR teaching in schools nationwide. As a result of the informal monitoring of the process, 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 has trained approximately 3000 teachers throughout Georgia in civil defence and safety. The training was organised with ongoing support from the local education resource centres.

Recently interviewed heads of local municipalities, representatives of the education resource centres and municipal disaster management services were not aware that DRR is part of the curriculum. It still remains a challenge to change the perception of DRR as an isolated and one-off or pilot initiative in the curriculum, towards more sustainable mainstreaming.

The consolidated strategy for the Georgian education system for 2014-2024 is underway, where safe schools are one of the priorities. The strategy has a systemic approach to DRR issues, and it embraces a systemic vision of education at all levels: preschool, primary and secondary, vocational and higher education. The action plan of the strategy will be elaborated with concrete activities for risk management. This means the development of specific DRR instructions for schools, as well as the introduction of the concept Education in Emergencies concept that ensures children access to education 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 Teachers' 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 a teacher training program were developed by TPDC in collaboration with EMD. It was piloted in December 2013. A core group of five trainers was formed who were specially trained by EMD and TPDC specialists.

The 20-hour training module targeting 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 the education system in 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, mitigation, preparedness, etc.;
- Causes and consequences of disasters;
- Rules of behaviour before, during and after disasters;
- Teachers' role in disaster risk reduction.

As of September, 2014 the National Centre for Teachers' 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 webpage. The courses are free of charge for public school teachers.

In addition, MES printed the "Head Teacher's Guide on Teaching Disaster Risk Reduction with Interactive Methods" and disseminated it 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 with templates for schools for establishing disaster response boards, preparing evacuation plans and organising 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 formalise this model for all schools in Georgia.

The national legislative framework provides the basis for the compliance of schools with basic safety measures, including the maintenance of plans for evacuation and school disaster preparedness. However, very few schools comply with these regulations and a great majority of schools either do not have school disaster preparedness plans or they are out-dated and not functional. In most instances, even where they exist, disaster preparedness plans and evacuation routes are not adapted to the special needs of children with disabilities. The same applies to the safety of school/preschool buildings. No national assessment of the safety of school buildings has been conducted that could be used as a basis for a later reconstruction/retrofitting of the educational facilities. In various cases, existing plans are revitalised through pilot projects implemented by NGOs or the GRCS. However, once the pilot projects come to an end, the uptake and follow-up by local authorities or the community remain rather limited.

The results of the nationwide survey conducted in 600 schools in Georgia within the framework of a UNICEF-MES project to improve water, sanitation and hygiene conditions, revealed that 70% of schools do not have water facilities in the school building. In 85% of schools in villages the water source is located outside the building and only 35% of the observed schools have sanitation facilities indoors. The distance of the outdoor facilities varies within 10-200 meters of the school buildings. In 2013, UNICEF supported the development of WASH standards in schools and produced a teacher's guide. However, the regulatory part of the water and sanitation facilities still needs to be adopted by the government. A WASH monitoring framework has also been developed, and it is due to be incorporated into the Education Management Information System (EMIS) as of the academic year 2014.

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

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

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

One of the main tasks of the LEPL Office of Resource Officers of Educational Institutions under the Ministry of Education and Science of Georgia is the protection of public order and safety on the grounds of educational institutions. The protection of public order primarily implies ensuring the physical safety of the pupils/students of an educational institution, as well as its personnel.

The duties assigned to the LEPL Office of Resource Officers of Educational Institutions are implemented by the Resource Officers of Educational Institutions. Since 2011, the resource officers have been trained through programmes and activities to understand critical situations and to take appropriate measures, based on an agreement signed between the 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 "Preparation of Resource Officers for Acting in Emergency Situations", contained key issues related to disaster risk management[30].

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

1.5. Postgraduate education

The Tbilisi State University Department of Exact and Natural Sciences teaches hydro-meteorology, physical geography, geomorphology, cartography/geo-informatics and geo-ecology, as cross-cutting subjects. The Private Agrarian University has agrarian and veterinary faculties and serves as a pool for new recruits for the Ministry of Agriculture staff. The Technical University of Georgia offers bachelor's, master's and doctoral programmes in emergency management and work safety, as well as a master's degree in emergency management, design and safety. The Technical University of Georgia teaches a bachelor's programme in geophysics and seismology, and it also has a faculty of melioration. The Aviation University offers an undergraduate program in emergency management.

As of October 2012, the Ilia State University offers an 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, the analysis of stakeholders, the assessment of needs and resources subsequent to disasters, crisis management, Inter-Agency Standing Committee (IASC) guidelines, the multidisciplinary approach to disaster management, early intervention among children, adolescents and the elderly, as well as psychological first aid (PFA). The Ilia State University School of Engineering offers teaching on several subjects related to disasters, especially about DRR.

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

There is no systematic approach or coordination within the education system. Only sporadic lectures are conducted by invited NEA specialists. No postgraduate programmes in disaster management or disaster risk reduction are available in Georgia.

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 of the 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 (a Red Cross tool) to enable the teachers to conduct training sessions for students. The aim is for students to sensitise 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, scientific research institutes have been linked to formal higher education institutions. The aim of the reform was to support the integration of scientific knowledge and practice into the education process in order to enhance the effectiveness of scientific research and to support the development of applied sciences.

The Institute of Earth Science conducts research on seismic risk in the whole country and in specific regions. It has 20 professional staff, with a specific plan to involve to young scientists – graduates of Ilia and other universities. The university staff combine their research activities with regular teaching practices in higher educational institutions, 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 following the application of new data and modern software.

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

Currently there are two scientific academies in Georgia: the National Scientific Academy of Georgia and the Agricultural Science Academy of Georgia. Both organisations are state-funded legal entities of public law. The latter was established by the Ministry of Agriculture in 2014, will have 121 staff based in Tbilisi and in three other regions of the country. Several respondents 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.

4. Professional training

Most of the responding institutions remarked that formal staff development and professional training on DRR, institutionalised and regularly funded through institutional or state budget sources, is not in place. There is no risk assessment training programme in Georgia, and training on hazard identification and mapping is mostly externally funded and ad hoc. Most respondents named frequent staff rotation a challenge for awareness-raising within institutions and among decision-makers.

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

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

In 2013 the Ministry of Agriculture established information centres with the purpose of training all municipalities. Each centre consists of 4-6 professionals. The frequency and curricula of the training programmes vary between municipalities.

5. Public awareness and sensitisation of decision-makers

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

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

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 the business sector, etc.), facilitate access to information and promote public participation in decision-making.**

3. **Ensure the integration of DRR into the preschool curriculum based on available good practices 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 the 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 organise 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 (BA, MSc, PhD) in disaster risk reduction/ disaster risk management and climate risk management, particularly through experience exchange with other universities having such programmes.**

7. **Develop a 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 the celebration of "international days" (e.g. International Day for Disaster Reduction, International Environment Day). Integrate disaster risk issues into advocacy campaigns related to, among others, environmental sustainability and protection, climate change and water resource management, 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 to the public, including early warning messages about slow-onset disasters (e.g. heat waves), but also to ensure proper coverage of risk reduction and preparedness topics in the media.**

10. **Promote youth empowerment and participation in DRR initiatives through the capacity building of informal youth groups and networks, based in schools. Deliver guidance on how to integrate DRR into their activities (including extra-curricular activities, popularisation of family emergency planning, organisation 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 in communities.

HFA Priority Action 4: Reduce underlying risk factors

In Georgia, many sectorial policies, programmes and projects contribute indirectly 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 policy frameworks, and only a number of localised and disparate projects specifically target disaster risk reduction activities. Inter-sectorial coordination among various institutions and stakeholders engaged in programmes contributing to risk reduction is not always effective. Properly defined institutional and individual mandates, responsibilities and commitments are not in place. 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. This leads to projects and programmes being implemented, monitored and accounted for in a scattered manner.

A key area of concern regarding underlying risk factors is the 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 preceded by proper risk mapping or assessment of geological and hydrological specificities which should play a significant role in the urban development process. Building codes and regulations from the Soviet era are still valid in Georgia. In 2013, the Government adopted a decree to recognise the 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 processes are decentralised. The central government is responsible for the development of country-wide spatial territorial plans, whereas municipalities are responsible for the development of their respective spatial territorial plans. Construction permits are issued by municipalities based on compulsory geological, seismological, geomorphological, and other types of assessments. However, such assessments can be conducted by both state and private companies. This results in risk-laden construction practice.

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 aggravated by inadequate human and technical capacities, and inadequate funding.

1. Climate change and environmental sustainability

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

Adaptation to climate change was acknowledged as a priority in the National Climate Change Policy (2009) following 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 (ongoing since 2011). At decentralised level,

the Climate Change Strategy for the 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, in the Second National Communication two tools were used to forecast the possible changes in 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 for Climate Prediction and Research, UK.

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

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

The Greens Movement of Georgia is implementing the "Clean up Georgia" programme to support solving waste management through public awareness campaigns, introducing 3R systems, cleaning up rivers and river banks nationwide, developing interactive maps of hotspots and a cadastre of water resources. The hazards the Greens Movement works on are flash floods, landslides, and forest fires.

2. Natural and water resource management

Water resource management in Georgia is regulated through the legislation on environmental protection, law on water, law on public health, law on the regulation and structural protection of the 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 are changing and increasing in size, velocity and frequency. However, the government has no systematic approach to address the changing nature and scope of floods. A regional approach to water management, involving Armenia, Georgia and Azerbaijan is needed as flooding is not an isolated phenomenon. The good experience gained in the cross-border management of the Kura-Aras river basin between Armenia and Georgia is an example to follow.

The Regional Environmental Centre (RECC) has developed an atlas of land degradation in the Kakheti region (in scale 1:200.000). GEF is expected to fund the development of a similar atlas for the whole country in partnership with PPRD East.

The Water Management Institute of Georgia has developed a national programme to address soil erosion. Within this programme, a number of riverbanks were reinforced.

Because coastal zone development in Georgia is not based on the concept of integrated coastal zone management (ICZM), there is no general development plan for the Georgian coastal zone, or construction in this zone, as a whole. Neither monitoring nor predictions are 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, 83% of which are self-employed[31]. There are two types of farmers in Georgia: the small-scale or subsistence farmers that make the overwhelming majority, and market oriented investor-driven farming. Large-scale farmers have sufficient resources, expertise and the ability to protect themselves from various risks, but subsistence farmers, due to limited knowledge and abilities, are more vulnerable to natural disaster risks and animal diseases. The agriculture sector contributed 9.3% to GDP in 2013[32]. The agriculture sector suffers from low productivity, high segmentation, a lack of financing, underdeveloped value chains and poor food safety. The inadequacy of the irrigation system in Georgia creates an 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 centres at its local territorial units in order to provide farmers with specialised services regarding modern agricultural methods and technology. The information centres also collect information on local agricultural and rural activities.

With support from USAID, the ministry provides its staff capacity development programmes on new agricultural technologies.

Similarly, in 2014, the Ministry of Agriculture established a scientific centre for the purposes of long term prediction for crop diversification, climate change, desertification, etc. The centre is planned employ 121 staff in three regions of the country.

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

The Amelioration Systems Company of Georgia Ltd is an entity responsible for land reclamation and irrigation systems, improving land fertility and food security. The long-term goals of the Amelioration Systems Company, to be achieved by 2030, include fighting the impacts of climate change through the rehabilitation and construction of new water reservoirs. These are needed for irrigation in the summer periods when the water level in rivers lowers due to the increased temperatures and reduced rainfall as predicted by climate change models. Other goals include designing and implementing measures against desertification; protecting and promoting the sustainable use of terrestrial ecosystems; halting land degradation and biodiversity loss; ensuring the availability and sustainable use of water; sanitation for all; integrated water resources management at all levels and through trans-boundary cooperation; ensuring food security; ensuring a sustainable energy supply; ensuring the development of infrastructure; and promoting 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 the 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 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 the EU focused on the improvement of the food security and livelihoods of IDPs in Georgia. The project intended particularly to increase the food production and income generation capabilities of the IDPs through cost-shared support to agricultural investment.

Cooperation in agriculture and rural development are delineated under the EU-Georgia Association Agreement, focusing on the following aspects: facilitating 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 agricultural production; sharing knowledge and practices of rural development; improving the competitiveness of the agriculture sector, promoting quality policies and their control mechanisms; disseminating knowledge and promoting extension services; striving for the harmonisation of issues dealt within the framework of international organisations, 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 to support the development of agro-insurance affected the 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 insure agricultural crops against natural hazards, such as hail, flooding, wind storms, frost. Within the framework of the programme only registered agricultural plots will be insured (those that have a cadastre code and GPS coordinates).

Initially the new agro-insurance programme will operate as a pilot scheme that will finance part of a farmer's insurance premium in the first year. The government will cover 70%-95% of the costs, while the rest will be covered by the farmer. The outcome of this experimental programme should give the 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 decentralised. The central government is responsible for the 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 the spatial-territorial planning of the city, and issuing construction permits. The Capital City General Development Plan33 was first updated in 2009 (since 1974) based on the available information. However, the revision did not take into consideration existing geological and hydrological specificities and hazards. Between 2010 and 2012 the Seismic Monitoring Centre of Ilia State University worked on the development of the Tbilisi Seismic-tectonic Model. 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 a 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 on the 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 a detailed assessment of the situation or the resettlement of the population in case of a disaster. The hydrological hazard map is now consulted as construction permits are issued for public and private construction projects in Tbilisi.

The #59 Resolution of the Government of Georgia on the "Rules of Use of Settlements and Regulation of their Development", from 15 January 2014, defines the urban development and construction parameters to be applied by the 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 recognises technical regulations enacted in the OECD countries as applicable in Georgia. This means that insofar as a certain construction project is in line with the building regulations of one of the OECD countries, the permit can be issued. The EU-Georgia Association Agreement, signed on 27 June 2014, requires aligning the Georgian land-use planning standards 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 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 systematised monitoring and control, illegal construction and renovation occur frequently. The issuance of construction permits is based on the assessment of, among others, the geological, seismological and geomorphological conditions. The construction of buildings with low, moderate and high risk levels (II, III IV categories) require construction permits issued by the 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.

Construction permits for infrastructure of critical importance (V category) are decided in line with requirements provided by LEPL Technical and Constructions Supervision Agency (TASCA), under the Ministry of Economy and Sustainable Development. TASCA also conducts the technical inspection of objects with an 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 type of ownership. However, there is no information on the 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, requirement by the EU from its member states (EU Parliament and Council Directive INSPIRE-2007/2/EC). The INSPIRE Directive calls for the harmonisation of the geo-information system, legislative base and administrative matters with the European standards. The effective use and sharing of the geospatial information NSDI provides contributes to an improved regulation of the agriculture, environmental 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 in the past 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 the 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. It will also increase cooperation regarding possible trans-boundary effects of industrial accidents.[34]

6. Health

The coordination of disease prevention and the protection of the population from adverse health related events is provided by MOLHSA through delegating some of the functions to the NCDC. NCDC is mandated to identify emergencies and to issue recommendations to different governance structures for the prevention and control of epidemics. Furthermore, it is the responsibility of NCDC, complying with International Health Regulations, to immediately inform international authorities in case of international-scale emergencies[35]. NCDC operates an electronic disease surveillance system covering all 64 municipalities and conducts epidemiological surveillance of 74 diseases. Although NCDC does not itself work directly at community level, it trains medical staff who do. The training comprises of health promotion, disease surveillance, immunisation 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, provided to MOLHSA, led to certain improvements. Most of the assessed hospitals that were later closed and newly built were following the recommendations of 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.

The Emergency Situations Coordination Department of MOLHSA is in charge of mobilising the relevant resources to ensure the provision healthcare services in emergencies. The “Emergency Response Plan of the Ministry of Labour, Health and Social Affairs, updated every two years, contains required preparedness and response measures for natural, man-made or other emergency situations.

More details on health in emergencies are provided in the chapter 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 the services available to the citizens. The SSA covers pension, social assistance, health insurance, assistance to persons with disabilities (PWD), guardianship and custody of children deprived of care. DRR related indicators are not taken into account when considering or 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 in addition to 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 boarding schools have no information about dangers caused by natural disasters or 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 received 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 staff do not know in what form and by what means they should inform beneficiaries in case of disasters. The beneficiaries might typically include persons with a visual or hearing impairment, those using a wheelchair or other subsidiary means, and those with restricted mobility or a mental restriction. The staff was not aware of the procedure, sequence, and means they should evacuate 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 a small group of children's homes[37] 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 the consideration of DRR and environmental impact issues, prior to approving spatial and urban development plans, legally binding. Improve the 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 sensitisation 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 the 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 public buildings, identify retrofitting measures required, and establish a legally binding order for regular monitoring.**

10. **Support the development and endorsement of a school-based disaster management model and sustainable multi-hazard resistant building codes and standards for school construction/reconstruction in line with international standards. Support the introduction of mechanisms to ensure adherence to the stadards. Ensure the provision of safe school environments, including the selection of a suitable location, as well as safe construction**

techniques for education facilities. Ensure nationwide school safety assessments are carried out, and that school safety indicators are incorporated 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. Support the improvement of the water supply and sanitation infrastructure in schools and preschools with a 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. Promote 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 for emergency response is better established and managed than the other HFA priority areas. The disaster response system is based on a number of laws and regulations, and it is underpinned by an institutional framework that is decentralised from the national to the municipal and local levels. The government focused its efforts on the capacity development of the response structures and personnel, including the maintenance and upgrade of the existing human, financial and technical capacities of emergency management units (professional training, equipment, emergency stocks, shelters, transport and communication means). The elaboration and application of response management and coordination procedures were also improved.

The assessment identified a number of challenges regarding preparedness and response capacities at national level, including the lack of a clear mechanism and standard operating procedures for the regular update of national, regional and local disaster response plans; capacities for information management and communication in crisis situations; and multi-hazard early warning systems. The decentralisation of the emergency response system impedes upon the seamless communication between the national, regional and local emergency response services. An additional challenge is related to the fact that structures at different levels depend on different funding sources, while many local services have limited budget allocations.

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. Instead, something resembling a surveying method is used, primarily relying on anecdotal observations, i.e. identifying the 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 of the disaster preparedness and response functions performed by the relevant state institutions.

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 (replaced by the new law on “Civil Safety” which entered in force on 12 June 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 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 **Civil Safety Law (2014)** is an umbrella law for regulating the field of disaster management in Georgia. The new law was developed within the framework of two projects: the TWINNING project, titled "Support to the Emergency Management Department with the purpose of improving the environment and the safety of the Georgian population in emergencies", and the PPRD East project (Prevention, Preparedness and Response to Natural and Manmade Disasters), implemented by the Ministry of Internal Affairs of Georgia, with the aim to bring Georgia closer to civil safety mechanisms of the EU. 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 law predominantly addresses civil protection, defining the 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 the immediate response stage. It introduces a common system of emergency management and centralised control of command at all levels (central/national, regional, municipal, and Autonomous Republic of Adjara). The law contains provisions for upgrading the current Department (EMD) to Agency (EMA). The law also mentions the State Security and Crisis Management

Council under the PM's office as the main responsible body for managing crises on a senior political level and advising the PM accordingly, as well as activating and managing the Crisis Operations Centre as needed. The future EMA would coordinate emergency response at national level (Article 13). EMA will ensure emergency prevention, the preparedness of the unified system, the organisation of emergency response and recovery activities and the 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 a number of existing laws regarding the protection of the population with laws on fire safety. This brings about a more effective management of emergency preparedness and response and ensures the safety of the civil population. However, issues related to natural hazard mitigation, risk assessment, and the 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 the classification of emergencies, #69 on the adoption of a governmental commission on emergency management, #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.

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

The Unified System for the Prevention of Emergencies, Mitigation and Elimination of their Consequences[39] provides a legal basis for 17 emergency management and coordination functions to authorised 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), and the Ministry of Culture and Monument Protection (protection of cultural heritage). Each ministry has got their precise sectorial response plans belonging to their respective functional area. However, the content of some of the plans is confidential and accessible only to specially authorised government employees. Two Ministries have not developed plans. Furthermore, a comparison of the response plans of the ministries revealed that the plans were not developed uniformly regarding their structure and content.

Recent political changes and the revision of the constitution, shifting from a presidential to a parliamentarian republic, resulted in strengthening the position of the Prime Minister, assigning him/her full executive power. This change reflected the overall legislation of the country, allocating many of the previously presidential functions to the PM.

In terms of disaster preparedness, the EU-Georgia Association Agreement specifies actions regarding cooperation in disaster risk management, and it envisages an exchange and regular update of contact details in order to ensure the continuity of dialogue, a 24-hour availability, and the facilitation of mutual assistance in case of major emergencies. The agreement also included provisions for the exchange of early warning and updated information on large scale emergencies on a 24-hour basis; the exchange of information on providing assistance to third party countries in 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 organised 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 the new model of the constitution of Georgia required reshuffling the security sector, including the establishment of new institutions, the development of relevant capacities and mechanisms for interaction within the government system. According to the government's resolution #38 of 6 January 2014, the **State Security and Crisis Management Council** was established within the structure of the government.

The goal of the State Security and Crises Management Council is to identify and prevent any threats at both strategic and tactical levels and to take a coordinating role. The duties of the Council, inter alia, include the assessment of internal and external threats; domestic and foreign policy issues directly related to state security; state strategy in 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 neutralising the country's internal and external threats; development of suggestions for preventing severe political, social, economic, ecological and other consequences; and above all, the management of crises 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 overlap between the functions of the two Councils is meant to be resolved. The functions are to be 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.

In accordance with the current legislation, the **National Emergency Response System** in Georgia consists of three categories, corresponding to the scale of a disaster:

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

At the operational level, crisis management is ensured by the Ministry of Internal Affairs, through the **Emergency Management Department (EMD)**. The Department has got the following main functions: inter-agency coordination of emergency management activities; the development of the Civil Protection Plan at national level; the implementation of civil protection tasks in times of peace as well as hostilities;

the development of the National Response Plan; training relevant municipal level personnel on the development of municipal Emergency plans, the implementation of emergency preventive measures and preparedness, and to manage emergencies more effectively; training regional emergency management services, volunteers and school teachers; providing arrangements for receiving international rescue forces and humanitarian assistance, and ensuring their distribution on the ground; organising civil-military cooperation in the case of an emergency.

At present, the EMD is decentralised at **municipal level**. Local EMDs are under the authority of the municipalities and funded through regional or municipal budgets. Many EMDs have insufficient technical capacities, including rescue and firefighting equipment, limited opportunities for professional development, for example in first aid, both for rescuers (regional level) and firefighters (municipal level), and a limited awareness of prevention or mitigation measures. The Tbilisi EMD, however, disposes of cars and better technical equipment, and has 1170 staff. In accordance with the law, the EM Agency (currently EMD) will absorb 4000 firefighters/ rescuers from municipalities into its territorial structures. In addition to heavy organisational issues, a re-training of firefighters into firefighter-rescuers will be required.

The **Georgian National Response Plan-NERP** (2008) defines the roles of the central and municipal authorities, and provides for the cooperation among relevant national institutions in its implementation. The plan presents 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 an operational level and issues recommendations to the State Security and Crisis Management Council. The operational centre is responsible for the assessment of post-disaster loss and damage; however, no reference is made to the methodology used. EMD is identified as the main responsible body for the implementation of the plan, and various ministries are assigned supportive roles for its implementation.

In 2012, a **Disaster Management Team (DMT)** and a technical working group were re-established, and a series of meetings, with the participation of UNDP, UNICEF, FAO, WHO, WFP, UNHCR, IOM and UNFPA, were held to formulate an updated UN contingency plan. 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. Later on, the project had consultations with a large group of organisations interested in taking part in the Humanitarian Country Team and the 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, yet performing under the authority of the Ministry of Internal Affairs. It is based in Tbilisi, although it covers the whole country, including the Autonomous Republic of Adjara. The service unites the operation of the ambulance, police and firefighting services. The service is equipped with trained personnel and technical capacities, and it is capable of monitoring the traffic situation, getting real time online information on the location and movement of ambulances and fire engines.

The Ministry of Agriculture is responsible for the 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 and cannot be used 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 the daily water use of an adult is estimated to be only three litres. Summer temperatures in a camp can reach +40°C, and the allocated water would only be enough for drinking. The ration seems to disregard the need to cook, clean, wash, etc.

While ministry staff identified desertification as one of the 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, 26 August 2008). The GRCS participates in search and rescue activities, and it coordinates the activities of non-governmental organisations involved in emergency response. The GRCS acts as an auxiliary body to the Ministry of Labour, Health and Social Affairs of Georgia providing primary medical care in emergencies and setting up field hospitals. The GRCS is also an auxiliary to the Ministry of Agriculture supplying food and water during emergencies.

4. Competencies, tools and resources for emergency response

In accordance with the current National Emergency Response System, there is a three-tiered emergency response force in Georgia:

- Municipal fire and rescue units (placed under the EMD following the new law on civil safety)
- Regional Emergency Response Taskforce, responsible for the regional emergency response management and coordination (placed under the of EMD following the new law)
- Emergency Management Department at central level, responsible for national-scale disaster response management and coordination

The Fire-Rescue Faculty, at the Academy of the Ministry of Internal Affairs, offers professional firefighter-rescuers vocational training programs and certification.

4.1. Community Volunteer Groups (CVGs)

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

4.2. Satellite image interpretation and analysis

There are different institutions that use GIS maps for assessment and analysis, among them the Ministry of Internal Affairs, the Ministry of Environment and Natural Resources Protection (MEPNR), the National Environmental Agency (NEA), the Institute of Geophysics and the Institute of Earth Science, which also develop GIS maps. The EMD has also confirmed their use of maps containing several layers of hazards and risks. The satellite images and GIS maps will be used by the CMOC for situation monitoring and analysis. There are two special GIS departments in the EMD that are in charge of the application of GIS maps in the programs and supporting the operations management service.

4.3. Response plans and contingency planning

The existence and level of sophistication of contingency planning 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 have occurred. Furthermore, according to the #153 Governmental Resolution, the instructions for risk and emergency assessment are adopted by the Minister of Internal Affairs.

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

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

4.4. Civil-military coordination

The military forces are involved based on the recommendation of the EMD of the Ministry of Internal Affairs and decision of President. The Department of Humanitarian Affairs and Civil-Military Coordination within the framework of the Civil Protection Division acts under the supervision of the EMD Deputy Director. There is a particular relationship with NATO, for example regarding civil-military coordination in emergencies. In some cases, international and local military forces have been involved in simulation exercises ('Viking 14', NATO EADRCC, etc.)

4.5. Emergency health services

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 government decision. Out of 250 operational hospitals, up to 85% of hospitals are private, mainly newly build or renovated in order to get licensed. In emergencies, the private hospitals are under the command of the Ministry. This also includes associated services, such as blood banks, and the distribution of the capacities of general and intensive care units (ICU). During emergencies, medicines are provided free of charge, paid from the state budget. The Ministry of Labour, Health and Social Affairs follows the hospitals' emergency plans, to be updated on an annual basis. Hospital drills are also carried out regularly under the supervision of the Ministry.

There are currently both private and state-owned ambulances. The plan is to shift to a fully state-run ambulance service which is to guarantee the required quality of emergency health services, as well as an equal access to it. Ambulance calls, referrals and the dispatch of patients to hospitals are done efficiently, 24/7, using the 112 service. The whole process is managed by specially designed computer programmes, ensuring the effective transfer of patients to hospitals within the shortest period of time.

The NCDC has well-defined responsibilities during emergencies, particularly during disease outbreaks. Being responsible for epidemiological surveillance and biosafety, it acts within the framework of International Health Regulations (IHR). The NCDC takes part in setting hygiene and sanitary norms (e.g. for schools), although it has no direct curatorial function for schools. Public Health Regional Centres are responsible for reporting on health-related statistical information, such as immunisation data, while the Regional Resource Centres, under the Ministry of Education and Science, are assigned to monitor school compliance with existing sanitary-hygiene norms.

The EU-Georgia Association Agreement envisages a number of changes in public health legislation as Georgia is to align its national legislation with regulations covering communicable diseases. The changes include the EC decision 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 setting up an early warning and response system for the prevention and control of communicable diseases.

UNFPA is negotiating the integration of the Minimum Initial Service Package (MISP) for Reproductive Health into the portfolio of the Ministry of Labour, Health and Social Affairs. 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 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 systematised approach towards early warning (EW) in Georgia, although certain institutions have their own EW systems. There is a need for the establishment of a unified and standardised EW system which is seen as a precondition for the timely initiation of effective preventive and preparedness measures.

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

The EMD regularly collects information from different sources (the seismic security service, the hydro-meteorological service, the 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 providing guidance regarding readiness. Municipalities have the responsibility to communicate the alert to the population and to initiate preparedness and response measures. The early notification is broadcast on the national television channel and the national radio communication network, but also via patrol car speakerphones.

The Hydro-Meteorological service of the Ministry of Environment and Natural Resources Protection provides early warnings, 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 warnings 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 that can consolidate and transfer relevant information to the population on a 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 the government. Similar procedures, as an integral part of the overall reporting procedure, also exist in other ministries. However, there is no common information management system or framework ensuring agreed standards and formats among the stakeholders involved in the collection, storage and sharing of the information. The 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 the central government. The current restructuring of the government, the new law on disaster preparedness and response, and the formation of new structures, such as the Crisis Management Centre under the Office of the Prime Minister, are bringing about changes. The Prime Minister's Office is likely to become the institution to provide the final estimation of losses and needs, and to decide on requesting international humanitarian aid. There is a readiness in the government to follow the internationally recognised standards and rules for international disaster relief, which is also reflected in the relevant legislation.

4.9. Post disaster-damage and loss assessment

Most respondents noted that no formal damage and loss assessment methodology is used after disasters. Normally, a commission with officials representing the sectorial departments of the municipality (i.e. agriculture, construction, health) visits the disaster affected area and, using current market prices, calculates an estimation of the losses. The percentage of the loss to be compensated can vary. There are two funds where compensation can be drawn from: the President's Fund and the Prime Minister's Fund. No limit has been specified for the amount that can be requested from these funds.

There is no initial needs assessment methodology in place to inform the scale and content of the immediate humanitarian relief assistance required. The weakness of the national insurance system is seen as another cause for the insufficient loss and damage assessment system. According to the assessment, all stakeholders agreed that a methodology is needed and that the lead should be taken by EMD. The stakeholders also indicated that an effective insurance system should be elaborated and introduced the relevant government structures.

The Post-Disaster Joint Needs Assessment (JNA), conducted in 2012 after the extreme weather events of 19 July in Eastern Georgia, prove that the government's attitude is changing toward the establishment of a comprehensive post-disaster needs assessment system that will inform and direct its short and long-term recovery plans.

In 19 July, 2012 heavy rains and hailstorms led to flash floods and strong winds severely hitting the southern and eastern parts of Georgia. Thousands of families and households in 8 municipalities were affected.40 This medium-sized hazard resulted in a disproportionate socio-economic disaster: 75,000 people were affected, and the economic losses reached 202 million GEL (USD 123 million).41 Georgia's Minister of Finance requested the World Bank and the UN to support the conduction of a 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, the World Bank and GFDRR, in close cooperation with government representatives from central and regional levels, conducted a mission on a Joint Needs Assessment, on 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 programme 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 paying jobs, and an improved social status of the citizens. Within these strategies, six pillars were indicated:

1. Maximising opportunities when implementing disaster recovery plans in order to create a more resilient, modern and competitive agriculture sector;
2. Ensuring disaster-affected children and youth have continuing 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 that the measures needed for their full recovery are in place;
4. Providing accessible, high quality, modern, and affordable healthcare and social services to all persons impacted by disaster;
5. Revitalising the municipal infrastructure to support economic growth and high living standards;
6. The effective use of natural resources and the protection of the natural environment, thus minimising the risk of natural disasters where possible.

Some respondents noted that several ministries have contingency plans and associated budgets, which include provisions for recovery. However, in many cases, the legislation leaves room for interpretation on what is considered to be recovery. Furthermore, many recovery activities are not based on 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 and requests funds to cover these costs from the central budget and if these funds are used for more than compensations, then this can qualify as a recovery program. An example of this is the post-storm renovation of house roofs in the Kakheti region (where JNA was conducted). Another example is the weak integration of recovery planning into the regional development plan for Kakheti region (financed by the World Bank), which neither regional, nor municipal authorities were aware of.

One of the worst cases of ineffective rehabilitation or recovery policy is the situation of the people affected by environmental/ technological accidents (potential IDPs or eco-migrants). Currently the Ministry of IDPs from Occupied Territories of Georgia, Refugees and Accommodation (MRA) has registered 37,000 families who have been affected by the aforementioned mentioned types of disasters (150,000 people).

The Special Report of the Public Defender's Office (2013) describes in detail the human rights situation of eco-migrants in Georgia, and identifies the following key issues requiring immediate attention from the Government: the absence of a legislative framework defining the status of 'eco-migrants', the lack of legal protection mechanisms and the absence of a post-resettlement adaptation and integration strategy for the eco-migrants.42 The report also provides a 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 operationalise 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 the respective sectorial plans of the 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 National Emergency Response Plan with the UN Inter-Agency Contingency Plan and wider humanitarian community response plans, 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 a health sector disaster risk management public awareness strategy, including guidelines/protocols for all health related public information announcements during disasters. Develop a strategy for the 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 the 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 institutionalisation of relevant standards and Standard Operating Procedures, the development of a methodology for response to separate cases and outbreaks, the development of an 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 the 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 firefighters/rescuers through the provision of regular training and the 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 the provision of logistics and communication services during large-scale emergency operations. Strengthen disaster management information systems ensuring international standards for data collection, storage and sharing. Improve mechanisms for an 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 the application of international coordination mechanisms for emergency response (UNDAC, OSOCC, MCOF, cluster system). Improve the 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 the Post-Disaster Needs Assessment methodology in order to set up recovery frameworks. Train relevant sectorial staff involved in the process. Mainstream 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