Stakeholders’ Analysis Report

Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

March/April 2012
Contents

1. Introduction ..................................................................................................................................... 3
2. Objectives of Stakeholders’ Analysis ......................................................................................... 3
3. Methodology ................................................................................................................................... 3
4. Description and Analysis of Stakeholders .................................................................................. 4
   4.1. Governmental structures at national and local levels ............................................................. 4
   4.2. Scientific Community ............................................................................................................... 8
   4.3 NGOs at national and local levels ............................................................................................. 11
5. Summary and recommendation ................................................................................................... 15

Annexes

Annex 1. List of Interviewed Stakeholders
Annex 2. Stakeholders’ Analysis Checklist
Annex 3. Extended Outline

List of Tables

Table №1 Organizations’ Responsibilities for Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia and Current Activities
Table №2 Three major problems listed by governmental structures at central and local levels (organizational level)
Table №3 Sources of information as listed by governmental structures at national and local levels
Table №4 Other constraints as identified by governmental structures at central and local levels to relevantly address CCA, DRR and biodiversity conservation issues at national level
Table №5 Scientific Institutions Activities in Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia
Table №6 Three major problems listed by leading scientific institutions
Table №7 Other constraints as identified by a Scientific Community to relevantly address CCA, DRR and biodiversity conservation issues at national level
Table №8 Sources of information as listed by a Scientific Community
Table №9 Functions & Activities of NGOs at national and local levels involved in Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia
Table №10 Sources of information as listed by NGOs at national and local levels
Table №11 Three major problems listed by NGOs at national and local levels
Table №12 Other constraints as identified by NGOs at national and local levels to relevantly address CCA, DRR and biodiversity conservation issues at national level
Table №13 Technical support the key stakeholder groups need to effectively work on climate change related issues
Table №14 Topics of trainings related to climate change listed by the key stakeholder groups.
1. **Introduction**

The present stakeholders’ analysis report is developed within the framework of the EC-funded three year programme Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus. The project is being implemented by Mercy Corps and the Caucasus Environmental NGO Network (CENN) in Georgia, Armenia and Azerbaijan, with the following regions covered: Samtskhe-Javakheti, Kvemo Kartli and Kakheti in Georgia; Lori-Marz in Armenia and Agsafa, Tovus, Shamkir and Samukh Rayons in Azerbaijan.

The overall goal of this program is to build the capacity of local authorities, improve communities’ capacity and enhance regional bilateral cooperation, to understand and to cope with the environmental, social and economic impacts of climate change in the South Caucasus. The specific objective of the Project is:

- To target communities likely to be increasingly impacted by climate change in the Program trans-boundary areas of the Kura river basin to develop and implement integrated DRR/Climate Change Adaptation action plans for the better prevention and management of risk and protection of livelihoods, local biodiversity and ecosystems.

2. **Objectives of Stakeholders’ Analysis**

The aim of the present stakeholders’ analysis is to identify those stakeholders that are working on climate change related issues in Georgia at central and local levels, determine their profile and capacity in terms of CCA, DRR, biodiversity conservation and identify the needs of stakeholders to effectively cope with the CCA-related problems at local and central levels.

3. **Methodology**

*Identification of stakeholders*

In the first stage of the assessment stakeholders dealing with the climate change related issues at national and local levels in Georgia were identified.

The stakeholders were categorized in three main groups:

- Governmental structures at national and local levels;
- Scientific community;
- NGOs at national and local levels.

*Development of stakeholders’ analysis checklist*

A special checklist was developed in advance of the stakeholder analysis study. The checklist was developed in the Georgian language (See Annex 1). The checklist consists of 18 (opened and closed) questions. The checklist was developed as a method of obtaining information from stakeholders on the profile and capacity of their organization, the technical and informational needs their organization faces and their opinion on the topic of the study.

*Conduction of survey*

In order to reach all stakeholders in this field, Mercy Corps and CENN met with potential stakeholders and distributed and/or sent stakeholders’ analysis checklist and cover letters to all the relevant ministries (Ministry of Environment Protection of Georgia, Ministry of Energy and Natural Resources, Ministry of Agriculture, Ministry of Economy and Sustainable Development (the last two ministries did not fill in our Checklist sent), Biodiversity Conservation Service, other relevant agencies and services
and governmental structures (municipalities) at local level in order to enable all stakeholder groups to participate in the analysis and provide their input to the survey.

All the scientific institutions and NGOs at national and local levels that are working on the climate change related issues were contacted directly during the stakeholders’ analysis study (via meetings, formal letters, and/or email). As a result 158 completed questionnaires were received.

Representatives from various stakeholder groups working on climate change related issues participated in the stakeholder analysis study.

4. Description and Analysis of Stakeholders

4.1. Governmental structures at national and local levels

During the present stakeholders’ analysis study the representatives of all governmental structures at national and local levels that are working on climate change were interviewed. Specifically, representatives of the following governmental structures were interviewed:

- Ministry of Environment Protection of Georgia;
  - National Environmental Agency
  - Climate Change Division
  - Department of Integrated Environmental Management
  - Hydro-meteorological and Climate Change Division
  - Biodiversity Conservation Service
  - EcoCenter of Environment Protection
- Ministry of Energy and Natural Resources of Georgia – Natural Resources Department; Forest Nursery Farm.
- Ministry of Education – Ninotsminda and Marneuli Resource Centres
- Representatives of the target municipalities – Bolnisi, Marneuli, Dmanisi, Dedoplistskaro, Signagi, Sagarejo, Ninotsminda.

Profile of the Organizations

The above mentioned governmental structures at national level are implementing the following activities with regards to climate change:

- Development and implementation of state policy on climate change (Ministry of Environment Protection of Georgia through Hydro-meteorological and Climate Change Division);
- Policy-making and enforcement in biodiversity conservation field; development of national monitoring system; strategy and action plan; overall coordination; implementation of commitments undertaken by the signing of the Framework Convention on Climate Change (Ministry of Environment Protection of Georgia through Biodiversity Conservation Service);
- Climate Change Assessment; CC modeling and development of CC scenarios; identification of the most vulnerable areas and species; calculation of agrometeo parameters; meteo and hydrological risks assessment: Climate Change has caused intensification of and increase in meteorological elements especially precipitation and humidity that have, in turn, caused extreme intensification of geological natural phenomena (landslides, avalanches, erosion processes). The Department of Geological Hazards is currently working on the link between deviation of meteorological elements from their perennial statistical values and geological disasters (Ministry of Environment Protection of Georgia - National Environmental Agency);

About 20 persons are involved in the above mentioned activities within these governmental structures at central level out of which: 6 persons at Biodiversity Conservation Service; 4 persons working on CC and biodiversity conservation and 5 in DRR at National Environmental Agency; 5 persons on CC & DRR at Forest Nursery Farm under the Ministry of Energy and Natural Resources.

With regard to the governmental structures at local level i.e. the local municipalities, in only two Municipalities of Dmanisi and Sagarejo, in the fields of CCA, DRR and biodiversity conservation, they are implementing the following activities:
Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

- Supervision of river bed cleaning works and forestry activities using their own resources (forestry experts) (Dmanisi).
- Practical experience in dealing with natural disasters (Sagarejo).

Around 7 persons are working in the governmental structures at local level on climate change related issues.

Governmental structures at central level, consider the following bodies significantly influencing the CCA, DRR and biodiversity conservation issues: government bodies; NGOs and scientific institutions; Ministry of Environment; CENN; Elcana; local municipalities; resource centers of Ninotsminda and Marneuli under the Ministry of Education.

Government structures at local level consider the following bodies significantly influencing the CCA, DRR and biodiversity conservation issues: Ministries of Environment; Agriculture, Energy and Natural Resources; and Internal Affairs; meteoservice; local municipalities; community level – Gamgeoba; Gamgebeli; Rtsmunebuli; Mineral Mining and construction enterprises.

While working on climate change issues, governmental structures at national level are dealing with different ministries, municipalities, certain enterprises and organizations countrywide. As for a length of their experience, Biodiversity Conservation Service has been working for 20 and more years; National Environmental Agency: 6-10 years in CC & DRR and 2-5 years in the field of bioconservation; Forest Nursery Farm – in CC & DRR for 2-5 years.

Governmental structures at local level are mainly targeting groups of local farmers, land owners, regional units of different bodies, NGOs and municipalities while dealing with climate change impacts and CC adaptation issues. Regarding the geographical coverage, these stakeholders are mainly working in their own administrative territories within their municipalities and the regions. As declared, in Dedoflistskaro Municipality they have 2-5 years of experience in working on above issues and in Sagarejo - 11-20 years.

Governmental organizations have the following responsibilities and functions for CCA, DRR and biodiversity conservation in Georgia:

**Table №1 Organizations’ Responsibility for Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia and Current Activities**

<table>
<thead>
<tr>
<th>Governmental structures</th>
<th>Responsibilities/Current Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Environment Protection of Georgia</td>
<td>Since the ministry is leading the climate change policy in the country, the adaptation to climate change, as one of the most important trends in climate change field, consequently falls under its responsibility.</td>
</tr>
<tr>
<td>National Environmental Agency</td>
<td>According to the IPCC’s (Intergovernmental Panel on Climate Change) agreement with WMO (World Meteorological Organization), the state Hydro-meteorological services should work extensively on the elaboration of future climate change scenarios and strategies for mitigation and adaptation. For the time being, however, this remains only a recommendation. Agency’s resources allow for CC assessment and forecasting having in place two internationally certified CC specialists. In DRR the Agency was involved in international cooperation and relevant projects.</td>
</tr>
<tr>
<td>Ministry of Energy and Natural Resources of Georgia</td>
<td>Support implementation of relevant CDM related projects in cooperation with the ministries responsible for these issues. Having CC experts and knowledge, Forest Nursery Farm is actively involved in the cooperation with international organizations.</td>
</tr>
<tr>
<td>Municipalities</td>
<td>Study of the issue, development of project proposals, different suggestions for different structures, implementation of the relevant work on site,</td>
</tr>
</tbody>
</table>
ensuring provision of information to the public. Cooperation with local and international NGOs and governmental organizations.

With regard to technical capacity of governmental structures, they possess some computer equipment, transport, GPS, photo cameras and basic software that are the only tools available while working on climate change related issues.

Problems Identified

The table below highlights the three major problems as identified by governmental structures at central and local levels building constraints to working more effectively on climate change related issues in Georgia:

<table>
<thead>
<tr>
<th>Services/Source of Information</th>
<th>Problems</th>
<th>Needs to be Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Central Level</td>
<td>1. Lack of new technologies (non-sistemized data of observation) and modern equipment</td>
<td>CC database processing &amp; management and other specialized programs allowing for data interpolation, high sensitivity GPS, satelite photos availability, equipment and tools needed for study of huge landslide processes, various technical support.</td>
</tr>
<tr>
<td></td>
<td>2. Lack of professional staff (qualified specialists)</td>
<td>Trainings in new methodologies; seminars on CCA&amp;DRR and biodiversity conservation, education materials, exchange programs with international donor organizations, legislation-related consulting.</td>
</tr>
<tr>
<td></td>
<td>3. Low environmental awareness</td>
<td>Information on understanding of causal relationship/regularity between climate change impact and natural hazards occurrence.</td>
</tr>
<tr>
<td>At Local Level</td>
<td>1. Lack of Information and community centers equipped with new techniques and trained agronomists, soil specialists, meteorologists and other relevant specialists that would be working on the prevention of risks caused by climate change</td>
<td>Training on the topic: Human Role in CCA. Trainings and consultations with experts and different competent bodies in CCA&amp;DRR and biodiversity conservation issues. Educational materials, seminars and information. Professional development/advanced trainings for capacity building.</td>
</tr>
<tr>
<td></td>
<td>2. Improper and outdated material base, transport, lack of modern equipment (tractors, bulldozers, etc.) for eradication of the results of flooding, landslides, river bank wash off, etc.</td>
<td>Modern technical hardware and machinery. Exchange experience with other countries on climate change and adaptation issues.</td>
</tr>
<tr>
<td></td>
<td>3. Lack of funds</td>
<td>Meetings with donors and international organizations for possible fundraising and exchange of experience</td>
</tr>
</tbody>
</table>

The governmental structures at central and local levels name the following sources of information available in the field of CCA, DRR or biodiversity conservation:

Table №3 Sources of information as listed by governmental structures at central and local levels
Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

Sources of Information

<table>
<thead>
<tr>
<th>Governmental structures at central level</th>
<th>Governmental structures at local level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internet</td>
<td>1. TV</td>
</tr>
<tr>
<td>2. Scientific works</td>
<td>2. Radio</td>
</tr>
<tr>
<td>3. Public information</td>
<td>3. Newspaper</td>
</tr>
</tbody>
</table>

Along with all the said above with regards to the deficiencies and undesirable consequences, the stakeholders interviewed highlighted number of other major constraints which hamper efficient steps towards the global issues of CCA, DRR and biodiversity conservation. Table №4 below reflects those findings.

Table №4 Other constraints as identified by governmental structures at central and local levels to relevantly address CCA, DRR and biodiversity conservation issues at national level

<table>
<thead>
<tr>
<th>Other constraints identified in the country related to the CCA, DRR and Biodiversity Conservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governmental structures at central level</td>
</tr>
<tr>
<td>Lack of financial and human resources</td>
</tr>
<tr>
<td>Lack of relevant institutional base</td>
</tr>
<tr>
<td>Lack of coordination</td>
</tr>
<tr>
<td>Lack of methodology (CC and DRR- related activities are in inception phase)</td>
</tr>
<tr>
<td>Inefficient use of existing knowledge and experience</td>
</tr>
<tr>
<td>Lack of professional mobile groups</td>
</tr>
<tr>
<td>Lack of information on DRR, low awareness in general public</td>
</tr>
<tr>
<td>Regulations not enforced</td>
</tr>
<tr>
<td>Slow development of prevention measures</td>
</tr>
<tr>
<td>Extensive emission of exhausts</td>
</tr>
<tr>
<td>Lack of proper landfills</td>
</tr>
<tr>
<td>Lack of waste processing plants (no recycling)</td>
</tr>
<tr>
<td>Improper dislocation of mining plants</td>
</tr>
<tr>
<td>Unplanned forest cuts</td>
</tr>
<tr>
<td>Extermination of the Red Book species (animals, birds)</td>
</tr>
</tbody>
</table>

It is the opinion of this group of stakeholders that in order to solve the above mentioned problems existing in relation to effective Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia the following activities should be undertaken:

- Public awareness raising on climate change related issues
- Sharing of other countries experience on climate change adaptation mechanisms/Introduction of relevant modern climate change adaptation technologies in the country and advance the knowledge and skills of professional staff
- Implementation of researches to study the climate change development trends in the country to enable the problem solving/prevention/mitigation measures
- Increase funding.

This group of stakeholders expressed its interest and willingness to cooperate with the project (they appointed a contact person for this purpose) through provision of CC related information; assisting in identification of vulnerable areas; assisting in elaboration of future scenarios and recommendation; information dissemination and ensuring young peoples involvement in the process. They clearly acknowledge their role in the implementation of this program. Government structures at local level expressed their readiness for cooperation with international organizations and getting involved in
projects implementation; and assisting in informing the population on the new developments in the field.

4.2. Scientific Community

During the study all the key scientific institutions that are working on climate change issues in Georgia were interviewed. Particularly representatives of the following scientific institutions:

• Georgia State University – Institute of Geography
• Georgia Academy of Ecological Studies
• Georgia Agrarian University – Forestry Institute
• Georgia Agrarian University
• Institute of Geophysics.

Profile of the Scientific Bodies

Below are presented the topics studied/covered by these organizations while working on climate change related issues:

- Glaciers monitoring/Water resources inventory and assessment in the CC viewpoint /Atmospheric pollution/DRR-flashflood forecasting (mudflow, landslide, rockfall, erosion)/monitoring, research/preventive measures/recommendations (Institute of Geography)
- Professional staff of scientists conducting seminars, writing monographs (Academy of Ecological Studies)
- In the field of DRR 8 projects implemented; in the biodiversity conservation field: bioecology study conducted to preserve their gene funmaps developed; seed bank arranged (Forestry Institute)
- In the field of CCA: breeding new species; changing agroseasons; working out energy efficient agritechnical activities; optimization of fertilizer application; reduction of greenhouse gas emissions out of soil; climate impact assessment; in the DRR field: seed storage; in biodiversity conservation: agribiodiversity conservation; collecton, assessment, inventory, use and spread of genetic resources (Agrarian University)
- In CCA field: study and assessment of climate change; projection using statistical and nonlinear dynamic methodology; in the DRR field: study of natural and technogenic hazards and risks; study and modeling of Black Sea and ground water and atmospheric pollution (Institute of Geophysics).

About 65 persons are involved in the above mentioned activities within the named scientific institutions.

The scientific institutions listed above have a considerable experience of working in the Climate Change field for 11 - 20 and more years.

Scientific institutions are mainly targeting specialists in Hydrometeorological Institute; Departments of Hydrology and Geology under National Environmental Agency; population of Georgia; National Parks and protected territories (Borjomi-Kharagauli; Marjamjvari; Vashlovani; Nedzvi protected area; Kintrishi, etc.); scientific community; NGOs; forestry farms in the different municipalities; State Forestry bodies; Institute of Geography; Climate Change division; Ciiti hall. Regarding the geographical coverage, these stakeholders are working in different regions of Georgia (Racha; Svanetia; Kakheti; Ajara; Mtshketa-Mtianeti); the whole territory of Georgia; areas with green forest cover under the jurisdiction of Georgia; Caucasus; specific areas of great importance, like Enguri Hydropower Station; Bako-Tbilisi-Ceihan pipeline; construction fields; areas exposed to landslide risks and resort-touristic zones.

Table №5 Scientific Institutions Activities in Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia

<table>
<thead>
<tr>
<th>Scientific Institution</th>
<th>Functions/ Activities</th>
</tr>
</thead>
</table>

Mercy Corps/ CENN
Institute of Geography

One of the first scientific bodies who raised issue of global heating and Climate Change in Georgia. Professional team was actively involved in preparation of 1st and 2nd national Communications and was awarded for the work performed in the CC field. In the field of DRR the institute worked out the recommendations for mudflow prevention activities in Kakheti region. The institute participates in annual scientific expeditions. It has in place various databases and maps.

Georgia Academy of Ecological Studies

Actively using their theoretical knowledge in dealing with Climate issues for 40 years, and in biodiversity conservation field – a twenty years of experience.

Forestry Institute

In the field of Climate Change the institute determined a Carbon content in the forest fitomass; conducted researches of a global heating impact on forests; In the DRR field: description/assessment of zones exposed to forest fire, avalanches and landslides; assessment/rehabilitation of windbreak belts; study of processes causing desertification and further prevention measures; flashpoint identification and prevention of harmful diseases; biological and integrated plant protection. In biodiversity conservation field: study of species of genetical value; conservaton; seed bank set up based on FAO standards; developing database and maps; awarding IUCN categories.

Georgia Agrarian University

In the field of Climate Change: working out producction system in field crop cultivation; seedbreeding systems; and species.

Institute of Geophysics

In the field of Climate Change: Assessments of Climate Change trends; in DRR – elaboraton of seismic maps; projections of Black Sea contamination with oil; development of multy-risk maps for 12 types of hazards; monitoring of constructions; early notification systems. In biodiversity conservation field: anthropogenic risks assessment.

Problems Identified

The table below highlights the three major problems as identified by scientific institutions building constraints to working more effectively on climate change related issues in Georgia:

<table>
<thead>
<tr>
<th>Problems</th>
<th>Needs to be Addressed Training/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lack of national platform backed up by sufficient legislative base</td>
<td>Raise young professionals; Seminar topics: (i) Contemporary trends in Climate Change; (ii) Plant selection/data processing; (iii) Cooperation with stakeholders. Expert visits – international seminar; consulting.</td>
</tr>
<tr>
<td>2. Outdated material-technical base</td>
<td>Modern laboratories; field refrigerators; cryo boxes; notebooks.</td>
</tr>
<tr>
<td>3. Lack of funding</td>
<td>Increase demand on scientifically proved professional opinion</td>
</tr>
</tbody>
</table>

Table №7 Other constraints as identified by a Scientific Community to relevantly address CCA, DRR and biodiversity conservation issues at national level

Other constraints identified in the country related to the CCA, DRR and Biodiversity
Enriching Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

Conservation

<table>
<thead>
<tr>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informing the population</td>
</tr>
<tr>
<td>Lack of practical use of scientific knowledge and expertise</td>
</tr>
<tr>
<td>Poor understanding of actual threats caused by Climate Change (hazards are created when the event is limited in time and space)</td>
</tr>
<tr>
<td>Improper legislation base</td>
</tr>
<tr>
<td>Low environmental awareness</td>
</tr>
<tr>
<td>Involvement of unqualified specialists in decision-making</td>
</tr>
<tr>
<td>Lack of coordination</td>
</tr>
<tr>
<td>Poor cooperation level between the stakeholders</td>
</tr>
<tr>
<td>Lack of sustainable systems against CC &amp; DRR</td>
</tr>
<tr>
<td>Lack of unified national platform</td>
</tr>
</tbody>
</table>

The Scientific Community named the following sources of information available in the field of CCA, DRR or biodiversity conservation:

**Table №8 Sources of information as listed by a Scientific Community**

<table>
<thead>
<tr>
<th>Sources of Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scientific literature material</td>
</tr>
<tr>
<td>2. Local and international conferences</td>
</tr>
<tr>
<td>3. Internet</td>
</tr>
<tr>
<td>4. Scientific sources</td>
</tr>
<tr>
<td>5. Modern scientific works</td>
</tr>
<tr>
<td>6. Geostat</td>
</tr>
<tr>
<td>8. Monitoring network</td>
</tr>
<tr>
<td>9. EU Council</td>
</tr>
<tr>
<td>10. UNDP</td>
</tr>
<tr>
<td>11. Information means: TV, press</td>
</tr>
</tbody>
</table>

As we see from the above presented tables, in terms of working more effectively on issues related to climate change in Georgia this group of stakeholders have more needs in terms of improvement of their material-technical base rather than in increase of knowledge in the field.

Scientific community considers the following bodies significantly influencing the CCA, DRR and biodiversity conservation issues: scientific-research institutions; Ministry of Environment; National Environmental Agency; NGOs; Ministry of Education; Ministry of Agriculture; Institutes of Geophysics and Geography; Hydrometeorological Institute and Department; Georgia National DRR Committee; UNDP; CENN.

It is the opinion of this group of stakeholders that in order to solve the above mentioned problems existing in relation to effective climate change adaptation in Georgia and to support effective adaptation to climate change of the country the following activities should be undertaken:

- Introduction of modern technologies and provision of respective software
- Upgrade a material-technical base
- Increase awareness of public in the field of CCA, DRR and biodiversity conservation.

This group of stakeholders expressed its interest and willingness to cooperate with the project (they appointed a contact person for this purpose) through provision of experts; consulting; assisting in the field studies; more active involvement in delivering professional advices; database maintenance; assisting in development of a single web-portal to ensure a common information coverage system; database analysis & monitoring; mapping; vulnerability assessment of cultural heritage monuments and providing relevant recommendations. They sufficiently acknowledge their role in the implementation of this program. Scientific community expressed its readiness for cooperation with international
organizations and getting involved in projects implementation and assisting in informing the population on the new developments in the field.

4.3 NGOs at national and local levels

The following NGOs at national and local levels were interviewed during the present stakeholder study:

NGOs at national level:
- The Greens Movement of Georgia – Friends of the Earth
- IUCN Programme Office for the South Caucasus
- WWF Caucasus
- NACRES
- Energy Efficiency Centre of Georgia (EEC)
- Ecocenter of Environmental protection
- HEKS EPER.

NGOs at local level:
- Vashlovani Protected Territories (Dedoplistskaro)
- World Vision Telavi (Telavi)
- New Generation- New Vision (Dedoplistskaro)
- Georgia Business Communities (Signagi)
- Lampari 2009 (Signagi, Tsnori)
- Ninotsminda (5 NGOs)
- Bolnisi (9 NGOs)
- Marneuli (8 NGOs)
- Dmanisi (4 NGOs)

Profile of the NGOs

Table №9 Functions & Activities of NGOs at national and local levels involved in Climate Change Adaptation, Disaster Risk Reduction and Biodiversity Conservation in Georgia

<table>
<thead>
<tr>
<th>NGOs at national level</th>
<th>NGOs at local level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public awareness raising on climate change related issues at local and national levels through Climate Week (2009-2011)</td>
<td>Sustainable organic agriculture</td>
</tr>
<tr>
<td>Popularization of alternative energy sources and energy efficient technologies</td>
<td>Informing population through meetings and radio broadcasting; Information dissemination through media means, brochures, trainings</td>
</tr>
<tr>
<td>Provision of support in developing climate change adaptation and mitigation programs and informing the population on respective measures</td>
<td>Designing projects on biodiversity conservation</td>
</tr>
<tr>
<td>Environmental impact assessment and review of the risk assessment reports</td>
<td>Undertaking certain adaptation measures: grape sanitation technologies; hail-resistant crop planting</td>
</tr>
<tr>
<td>Biodiversity monitoring / educating schoolchildren regarding the species on the edge of extinction</td>
<td>Tree planting for river bank stabilization (riv. Kura)</td>
</tr>
<tr>
<td>Lobbying the Law on Biodiversity /forest conservation campaigns</td>
<td>Monitoring emissions</td>
</tr>
<tr>
<td>Deliver a Regional Report on Climate Change Impacts in South Caucasus</td>
<td>Annual observations and assessment with regard to climate change</td>
</tr>
<tr>
<td>Update of national strategy and action plan</td>
<td>Awareness raising campaigns</td>
</tr>
<tr>
<td>Implementation of CC mitigation and biodiversity conservation projects (since 1990-ies)</td>
<td>Rehabilitation of resistant sustainable plant species</td>
</tr>
<tr>
<td>Study of sun radiation impact in alpine and sub-alpine zones</td>
<td>Protection/revival of species exposed to hazards</td>
</tr>
</tbody>
</table>
Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

<table>
<thead>
<tr>
<th>DRR projection</th>
<th>Risk assessment using Kovak method in schools, trainings and Disaster Preparedness Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working out bioengineering measures</td>
<td>Sustainable organic agriculture</td>
</tr>
<tr>
<td>Public awareness raising on climate change related issues at local and national levels through Climate Week (2009-2011)</td>
<td></td>
</tr>
</tbody>
</table>

The NGOs at national level have a significant experience of working on the CCA, DRR and biodiversity conservation issues respectively from 2-5 to 20 and more years. The local NGOs have 2-10 years of practical experience.

Within the aforementioned organizations in average from 3 to 12 people are working on CC, DRR and biodiversity conservation issues. An exception is Greens Movement of Georgia where at present about 50 people are working on CC, 10-50 on DRR and 20 on biodiversity issues. They are actively involved in forest, water, energy efficiency, energy saving, eco-sanitary and other issues, including climate change; in some organizations there is no diversification of staff according to specific theme.

**Table № 10 Sources of information as listed by NGOs at national and local levels**

<table>
<thead>
<tr>
<th>Sources of Information</th>
<th>NGOs at national level</th>
<th>NGOs at local level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Official information</td>
<td>1. Internet</td>
<td>1. Internet</td>
</tr>
<tr>
<td>2. Reports</td>
<td>2. TV/Radio/Mass media</td>
<td>2. TV/Radio/Mass media</td>
</tr>
<tr>
<td>3. Local population</td>
<td>3. NGOs (CENN, World Vision)</td>
<td>3. NGOs (CENN, World Vision)</td>
</tr>
<tr>
<td>5. Other organizations and Internet Websites</td>
<td>5. Local population</td>
<td>5. Local population</td>
</tr>
<tr>
<td>7. Literature</td>
<td>7. Governmental structures</td>
<td>7. Governmental structures</td>
</tr>
<tr>
<td>8. Other NGOs</td>
<td>8. Relevant agencies</td>
<td>8. Relevant agencies</td>
</tr>
<tr>
<td>10. Ministries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Printed media</td>
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</tr>
</tbody>
</table>

NGOs at national level consider the following bodies significantly influencing the CCA, DRR and biodiversity conservation issues: Ministries of Environment; Agriculture; Regional Development & Infrastructure; Energy and Natural Resources and Internal Affairs; local self-government; governmental and non-governmental bodies; Mineral Mining and construction enterprises; local municipalities; community level – Gamgeoba; Gamgebeli; Rtsmunebuli.

NGOs at local level consider the following bodies significantly influencing the CCA, DRR and biodiversity conservation issues: international organizations; eco-police; Ministries of Environment; Energy & Natural Resources; and Emergency Situations; local NGOs; scientific institutions; governmental bodies at national and local levels; users of natural resources; Elkana; private companies; and CENN.

While working on climate change related issues these organizations mainly target the following groups:

**NGOs at national level:**
- Women/students/school children/housewives/ethnic minority groups/village population
- Environment Ministry personnel; Protected territories agency staff; Biodiversity Conservation Service staff
- Wide range of stakeholders
- Donor and international organizations
- Central and local government authorities
- NGOs
- Local communities
- Scientific community
- State institutions

**NGOs at local level:**
- Women/students/school children/housewives/ethnic minority groups/village population
- Environment Ministry personnel; Protected territories agency staff; Biodiversity Conservation Service staff
- Wide range of stakeholders
- Donor and international organizations
- Central and local government authorities
- NGOs
- Local communities
- Scientific community
- State institutions
Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

- Business sector

NGOs at local level:
- Women groups/farmers/young people/journalists/rock processing and bitumen plant management
- Municipality officials
- Heads of territorial bodies
- School teachers and students
- Farmers/village population
- Small farms

The national level NGOs are mainly working on the whole territory of the country, and even in other neighboring countries of South Caucasus, like Armenia and Azerbaijan, whereas the local NGOs are working within the borders of their municipalities and/or regions or project specific sites.

Problems Identified

Table №11  Three major problems listed by NGOs at national and local levels

<table>
<thead>
<tr>
<th>NGOs at National Level</th>
<th>Problems</th>
<th>Needs to be Addressed Training/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGOs at National Level</td>
<td>1. Lack of a single national platform (an unified program is under development), insufficient legislative base and poor coordination</td>
<td>Trainings, seminars and consulting on the CCA, DRR and biodiversity conservation topics; Training topics: (i) Clean Development Mechanisms; (ii) Contemporary Renewable and Energy Efficient Technologies</td>
</tr>
<tr>
<td></td>
<td>2. Poor informational coverage by mass media (low environmental awareness)</td>
<td>Topic-related TV programs; educational material on CC assessment modern methodology</td>
</tr>
<tr>
<td></td>
<td>3. Insufficient competence of experts involved in project evaluation</td>
<td>International experts’ consulting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local NGOs</th>
<th>Problems</th>
<th>Needs to be Addressed Training/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local NGOs</td>
<td>1. Poor access to funds (lack of material-technical base)</td>
<td>Training in fundraising; provision of modern equipment</td>
</tr>
<tr>
<td></td>
<td>2. Inertness of governmental bodies and low interest of local NGOs</td>
<td>Improved lobbying</td>
</tr>
<tr>
<td></td>
<td>3. Lack of science-based approach and of professional experts</td>
<td>Trainings and consulting in modern agricultural technologies (drip irrigation); Seminars; printed and video educational material; consulting in soil and water status assessment and respective legal consultancy; Training in English language; Consulting on reintroduction of biodiversity</td>
</tr>
</tbody>
</table>

Along with all the said above the stakeholders interviewed highlighted number of other major constraints which hamper efficient steps towards the global issues of CCA, DRR and biodiversity conservation. Table №11 below reflects those findings.

Table №12 Other constraints as identified by NGOs at national and local levels to relevantly address CCA, DRR and biodiversity conservation issues at national level

Other constraints identified in the country related to the CCA, DRR and Biodiversity Conservation
Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in Georgia and the South Caucasus

The interviewed NGOs consider that the following activities should be implemented in order to solve the existing problems related to the effective CCA, DRR and biodiversity conservation in Georgia. NGOs at national level:

- Development of nation level policy
- Coordination of actions
- Enhancing scientific research
- Raising environmental awareness in the field of CCA, DRR and biodiversity conservation (prevention/mitigation/eradication)
- Involving relevant stakeholders
- Designing/implementation of projects
- Fundraising
- Gathering and science-based study of existing information
- Elaboration of long-term strategy
- Cooperation with international projects
- Ensure availability of renewable and energy efficient technologies
- Sharing knowledge of experienced climatologists.

NGOs at local level

- Training of specialists
- Informing public and ensure its involvement in problem-solving and decision-making processes
- Elaboration of unified government approach
- Implementation of prevention/mitigation measures (soil stabilization; windbreak belts; restrictions on cultivating slopes with more that 30% of inclination; unplanned (illegal) forest

<table>
<thead>
<tr>
<th>NGOs at national level</th>
<th>NGOs at local level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence of unified national policy in the country</td>
<td>Lack of information</td>
</tr>
<tr>
<td>Lack of coordination</td>
<td>Lack of modern equipment and technologies</td>
</tr>
<tr>
<td>Insufficient legislation base</td>
<td>Import of genetically modified species and extinction of local species</td>
</tr>
<tr>
<td>Lack of necessary scientific studies</td>
<td>Lack of systemic approach</td>
</tr>
<tr>
<td>Lack of knowledge, interest and funds</td>
<td>Lack of unified government program and strategy</td>
</tr>
<tr>
<td>Lack of prioritization</td>
<td>Lack of qualified specialists on sites</td>
</tr>
<tr>
<td>Lack of reliable data</td>
<td>Windbreak belts cut down (due to high tariffs on electricity)</td>
</tr>
<tr>
<td>Lack of modern methodologies and practices</td>
<td>Soil and forests utilization in zones highly exposed to avalanches and landslides</td>
</tr>
<tr>
<td>Non-sustainable policy for use of bio resources</td>
<td>Drastic reduction in endemic biodiversity</td>
</tr>
<tr>
<td>Inertness of local self-government (no access to funding)</td>
<td>Atmospheric pollution due to greenhouse gas emissions (CO)</td>
</tr>
<tr>
<td>Poor level of community mobilization</td>
<td>No funds foreseen in the budget to cope with the listed problems</td>
</tr>
<tr>
<td>Lack of coordination of international projects</td>
<td>Excess use of crashed stone and sand from the river-beds</td>
</tr>
<tr>
<td>Low awareness of population</td>
<td>Channelling of faeces into potable water basins from outdated sewage system pipes and water pollution</td>
</tr>
<tr>
<td>Poor access to clean technologies due to high prices</td>
<td>Channelling of poisonous chemicals and fertilizers into water causing water pollution</td>
</tr>
<tr>
<td>No clear distinction between anthropogenic and CC causes</td>
<td>Lack of landfills and no waste processing practice</td>
</tr>
<tr>
<td>Poor and insufficient legislation base</td>
<td>Low environmental awareness (of fishers, hunters, gamekeepers)</td>
</tr>
<tr>
<td>Lack of accurate risk assessment skills and practices</td>
<td></td>
</tr>
</tbody>
</table>
cut; rehabilitation of irrigation systems; reduction of electricity tariffs; intensification of emission control; strengthening the tools for biodiversity conservation; selection-based cultural crops planting; extend green cover; assessment and rehabilitation of irrigation and potable water systems to ensure hazard preparedness; eradicate direct contamination of water basins; ensure enterprises are equipped with refining filters; river-bed cleaning and riverbank stabilization; breeding of emission absorbant species)

- Vulnerability mapping
- Enhance information exchange between the municipalities and close cooperation
- Restrict illegal mineral mining
- Introduce modern management methodology
- Improve the legislation base
- Sharing EU expertise
- Elaboration of national action plan
- Lobby for inclusion funds for DRR in the national budget.

This group of stakeholders expressed its interest and willingness to cooperate with the project. The national level NGOs view their role and involvement through contributing their knowledge and expertise in designing and implementation of projects; lobbying and advocacy; mobilization of donors; participation in policy development and provision of professional ecological expertise. Local NGOs consider themselves being useful in information dissemination; ToT trainings; community mobilization; readiness to participate in natural hazards prevention/mitigation and eradication activities; involvement in lawmaking procedures; participation in establishment of hunters and fishers associations; contributing to eco-tourism development and promotion; designing tours (touristic routes) to cultural monuments of Georgia; and involvement in joint projects.

5. Summary and recommendation

As mentioned above, the present Stakeholder Analysis was aimed at

As a result of the present stakeholders’ analysis study conducted on climate change related issues (CCA; DRR and biodiversity conservation) in Georgia the following conclusions can be made on the study focus areas:

Needs of key stakeholder groups

Conclusion

Key stakeholder groups have the following needs in terms of material-technical support:

<table>
<thead>
<tr>
<th>Stakeholder groups</th>
<th>Needed technical support</th>
</tr>
</thead>
</table>
| **Governmental structures at central level** | CC data processing & management systems  
SPECIALIZED programs allowing for data interpolation  
High sensitivity GPS  
Satellite photos  
Equipment and tools to study huge landslide processes  
Upgrade of material-technical base |
| **Governmental structures at local level** | Modern technical hardware and machinery  
Upgrade of material-technical base  
Transport means  
SPECIALIZED machinery |
Below are presented climate change related topics of trainings the key stakeholders groups would like to go through:

**Table №14 Topics of trainings related to climate change listed by the key stakeholder groups**

<table>
<thead>
<tr>
<th>Stakeholder groups</th>
<th>Training topics</th>
</tr>
</thead>
</table>
| **Governmental structures at central level** | New methodologies  
Seminars on CCA&DRR and biodiversity conservation  
Exchange programs with international donor organizations  
Legislation  
Understanding of causal relationship/regularity between climate change impact and natural hazards occurrence |
| **Governmental structures at local level** | Human Role in CCA  
CCA&DRR and biodiversity conservation issues  
Professional development /advanced trainings for capacity building |
| **Scientific community** | Contemporary trends in Climate Change  
Plant selection/data processing  
Expert visits  
International seminar/consulting  
ToT trainings onsite |
| **NGOs at national level** | CCA, DRR and biodiversity conservation issues  
Clean Development Mechanisms  
Contemporary Renewable and Energy Efficient Technologies |
| **NGOs at local level** | Modern agricultural technologies (drip irrigation)  
Printed and video educational material  
Soil and water status assessment and respective legal consultancy  
English language  
Reintroduction of biodiversity  
Fundraising |
These technical needs of stakeholder groups should be considered while developing target projects aimed at the improvement of the material-technical base of different groups working on climate change related issues.

With regard to the need for increased knowledge, the key stakeholder groups named different training topics they are interested in along with participation in local and international seminars and conferences as discussed above in the relevant chapters of the study.

It is recommended to develop some targeted projects for different stakeholder groups in the sector to promote sustainable adaptation to climate change. The projects should be directed towards meeting stakeholder groups needs by increasing their knowledge in climate change related issues and improvement of their material-technical base. It is highly recommended to involve international experts on climate change in the trainings/seminars. The trainings/seminars should be dedicated to the topics that are of interest to stakeholder groups and aimed at the promotion and introduction of international best practices in the country in the light of CCA, DRR and biodiversity conservation.

### Problems related to CCA, DRR and biodiversity conservation in Georgia and possible solutions
(As identified by the key stakeholder groups)

**Conclusion**

The stakeholders named different problems they view in the country, hampering CCA, DRR and biodiversity conservation activities. Presented below are the key problems:

- Lack of new technologies (non-systemized data of observation) and modern equipment
- Lack of professional staff (qualified specialists)
- Low environmental awareness
- Lack of Information and community centers equipped with new techniques and trained agronomists, soil specialists, meteorologists and other relevant specialists that would be working on the prevention of risks caused by climate change
- Improper and outdated material base, transport, lack of modern equipment (tractors, bulldozers, etc.) for eradication of the results of flooding, landslides, river bank wash off, etc.
- Lack of funds
- Lack of national platform based on sufficient legislative base
- Poor coordination
- Poor informational coverage by mass media
- Insufficient competence of experts involved in project evaluation
- Inertness of governmental bodies and low interest of local NGOs
- Lack of science-based approach and professional experts

According to the key stakeholder groups, the below listed activities are required to solve the aforementioned problems country-wide and promote effective CCA, DRR and biodiversity conservation:

- Development of national policy
- Coordination of actions
- Enhancing scientific research
- Raising environmental awareness in the field of CCA, DRR and biodiversity conservation (prevention/mitigation/eradication)
- Involving relevant stakeholders
- Designing/implementation of projects
- Fundraising
- Gathering and science-based study of existing information
- Elaboration of long-term strategy
- Cooperation with international projects
- Ensure availability of renewable and energy efficient technologies
- Sharing knowledge of experienced climatologists
- Training of specialists
- Informing public and ensure its involvement in problem-solving and decision-making processes
- Elaboration of unified government approach
Implementation of prevention/mitigation measures (soil stabilization; windbreak belts; restrictions on cultivating slopes with more than 30% of inclination; unplanned (illegal) forest cut; rehabilitation of irrigation systems; reduction of electricity tariffs; intensification of emission control; strengthening the tools for biodiversity conservation; selection-based cultural crops planting; extend green cover; assessment and rehabilitation of irrigation and potable water systems to ensure hazard preparedness; eradicate direct contamination of water basins; ensure enterprises are equipped with refining filters; river-bed cleaning and riverbank stabilization; breeding of emission absorbant species)

- Vulnerability mapping
- Enhance information exchange between the municipalities and close cooperation
- Restrict illegal mineral mining
- Introduce modern management methodology
- Improve the legislation base
- Share the EU expertise
- Elaboration of national action plan
- Lobby for inclusion funds for DRR in the national budget.

Recommendation

The problems listed by stakeholder groups and especially the methods proposed to solve the problems related to/ caused by climate change and promote effective adaptation to climate change in the country should be widely discussed by relevant experts. The results of these discussions/ consultations should be formed into a coherent action plan to be seriously considered by decision makers in order to instigate sustainable adaption to climate change within Georgia.