

Analysis of Linkages between NBSAP and Sectoral Policy Documents

**Biodiversity Finance Initiative
(BIOFIN) – Georgia**

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The Biodiversity Finance Initiative (BIOFIN) - Georgia

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1. Introduction

Presented report is prepared in frames of Biodiversity Financial Initiative Project (BIOFIN), which aims finding biodiversity related relevant financial sources for countries using innovative methodology.

Possible outcomes of initiative are:

- Integrating biodiversity issues and ecosystem services in sectoral policy documents, plans and budgeting processes;
- Evaluating financial needs for management and conservation of biodiversity and ecosystem services.

In order to identify the possible entry-points for future interventions under BIOFIN process, it is important to have a clear understanding regarding the linkages between various actions identified by National Biodiversity Strategy and Action Plan (NBSAP) and other policy documents in environment sector as well as other economic sectors, which might have impact on biodiversity.

For this purposes mainstreaming of biodiversity issues, especially actions identified in NBSAP, into the different sectors, as well as into social-economic development strategies of regions and whole country, also in national climate change adaptation strategy and national action programme to combat desertification are reviewed in this report.

2. Existing mechanism for integrating biodiversity issues

NBSAP highlights importance of mainstreaming of biodiversity issues into the different sectors. Moreover the number of NBSAP actions should be implemented in cooperation with different sectoral ministries and other governmental bodies. Although majority of this actions are not reflected in relevant sectoral strategies.

One of the problems identified during the NBSAP's development process was that, the environmental issues, including biodiversity, are not properly integrated in other sectors and regional development plans, despite existing mechanisms,

Accordingly, following actions for improving integration of biodiversity issues in other sectoral development plans were planned by the NBSAP:

- To establish Strategic Environmental Assessments (SEAs) for national plans, programmes and legislation development processes the take account of biodiversity and ecosystem services (action A.3-o1.1);

- To develop national guidelines for the integration of biodiversity conservation into sectoral and cross-sectoral policies and strategies; (Actions A.3-o.1.2);

- To conduct a review and modification of the current system of spatial planning to ensure the integration of biodiversity through both the mapping of biodiversity and ecosystem services and systemic conservation planning (Action A.3-o.1.3).

Strategic Environmental Assessment that is one of the main tools for integration of environmental and biodiversity issues in development process is not implemented in Georgia. Although according to “Environmental Assessment code” which will enter into force, enforce in January 2018, it will be mandatory to carry out strategic environmental assessment for strategic documents, which will establish frame for future development in following sectors:

- Agriculture;
- Forestry;
- Fishery;
- Energetics;
- Industry;
- Transport;
- Waste management;
- Water resources management;
- Electronic communications;
- Tourism;
- Planning and spatial planning.

According to “Environmental Assessment Code”, obligations regarding strategic environmental assessment will enter into force from July 2018.

While strategic environmental assessment impact caused by implementation of strategic document should be evaluated, including impact on biodiversity and their components. Assessment contains study of possible impact and general modeling. For adoption of strategic documents for development of above-mentioned sectors, it will be mandatory involvement of the Ministry of Environment and Natural Resources Protection and the Ministry of Labor, Health and Social Affairs and take in account their recommendations. The process of strategic environmental assessment contains screening and scoping processes, also public participation should be ensured.

One of the targets identified in NBSAP (A.3- 01) is: “Integrate biodiversity conservation, sustainable use and ecosystems’ values into development programs for such sectors as forestry, energy, agriculture, tourism, mining and infrastructure; take all possible measures to prevent irreversible degradation of ecosystems`. However, for implementation abovementioned action economic evaluation of ecosystem values should be carried on national level by using TEEB (The Economics of Ecosystems and Biodiversity) approaches, which is also considered in NBSAP. (Action A.3-o2.1.).

Environmental impact assessment is a very effective tool for ensuring adequate consideration of environmental issues in development projects. This is especially true in light of the implementation of major infrastructural projects implied by the country's need of rapid economic development and poverty reduction.

According to active legislation, biodiversity issues are not considered enough in EIA process. From 2018, "Environmental Assessment Code" will enter in force. According to this Code, EIA will be required for all projects listed in Annex 1. Necessity of EIA for the projects listed in annex 2 will be defined according to the screening results. While decision making on the need of EIA the area and compatibility of planned activity should be considered:

- with wetlands;
- with black sea coastal area;
- with territories densely covered with forests, where species of "Red List" of Georgia are represented;
- With protected areas.

Consequently, the EIA process will become more efficient tool for integrating biodiversity issues in development projects.

Development of guidelines for impact assessment on biodiversity while implementation of different types of development projects is highly recommended. These guidelines shall be developed based on guidance principles and methodologies suggested by CBD and other international treaties related to the biodiversity.

3. Agriculture

3.1 Agriculture development strategy

Agriculture Development Strategy of Georgia (2015-2020)¹ represents part of integrated state policy and defines main middle term strategic directions and specific actions. Implementation of these actions will ensure sustainable development of agriculture.

The strategic vision for agriculture development based on the principles of sustainable development, aims to create an environment that will enhance the competitiveness of the agriculture sector, high-quality production growth, will ensure the food security and safety system and reduce a rural poverty. Strategy highlights priority of nature protection and agrobiodiversity preservation and contains actions for these directions. Document highlights the significance of Caucasus region agrobiodiversity and its preservation for sustainability of agriculture.

Agriculture Development Strategy foresees strengthening cooperation with the Ministry of Environment and Natural Resources Protection and with corresponding structures of neighboring countries regarding biodiversity preservation.

The strategy underlines that: *„The Caucasus is an eco-region of global importance, characterized by a high variety of species and biodiversity. The Ministry of Agriculture will ensure coordination of activities with the Ministry of Environment and Protection and relevant structures of neighbor countries on biodiversity and environmental sustainability issues“.*

The Agriculture Development Strategy includes seven strategic directions and relevant measures.

The main directions of the strategy are as following:

- Increasing competitiveness of the agriculture sector employees
- Institutional Development
- The land reclamation and soil fertility
- Regional and sectoral development
- The ensuring of food security
- Food Safety, Veterinary and Plant Protection
- Changes in climate, environment and biodiversity conservation.

¹ Adopted by the decree of the Government of Georgia #167, dated February 11, 2015

Mainly strategic direction 3.7 - Climate change, Environment and Biodiversity- is linked with NBSAP, which contains following actions:

- 3.7.1. Maintaining good agricultural practices, biodiversity and environmental sustainability programs;
- 3.7.2. Genbank development/management for conservation of agro-diversity and endemic species;
- 3.7.3 Promoting climate smart agriculture (CSA) practice.

Besides the following actions defined by strategic directions are in compatibility with NBSAP:

- Enhanced competitiveness of rural entrepreneurs (strategic direction 3.1);
- Regional and sectoral development - value chain development (strategic direction 3.4)
- Food Safety, Veterinary and Plant Protection (strategic direction 3.6).

Cross cutting measures from Agriculture Development Strategy and NBSAP are presented in the table below:

Measures identified by Agriculture Development Strategy of Georgia (2015-2020)	Relevant objectives and targets from NBSAP
<p>Measure 3.7.1 - Maintaining good agricultural practices, biodiversity and environmental sustainability programs</p> <p>Within the scope of the measure following activities is planned:</p>	
<p>Productive but sustainable farming methods will be encouraged by ensuring best agricultural practices, crop rotation for soil structure and quality improvement and promoting low level or appropriate chemical applications.</p> <p>For this purpose an awareness and training program of best agricultural practices (crop rotation, efficient Use of pesticides and fertilizers, use of organics, water use etc.) For farmers, advisers and policy makers, as well as introduce and enforce mechanisms for adherence to best agricultural practices.</p>	<p>Objective B.3-o2. Significantly reduce pollution from agriculture by improving the institutional framework and restoring degraded agricultural lands and natural grasslands and following actions under this objective: B.3-o2.1. - B.3.-o2.3.</p>
<p>A State program for developing bioorganic production will be adopted with associated measures for certification at both primary and</p>	<p>Action B.4-o2.2. Implement pilot projects on organic farming in at least six municipalities, including high mountain regions</p>

<p>processing levels.</p> <p>The certification systems will be introduced for creation, encouragement, and sustainable management of organic farming.</p>	
<p>A gene bank will be developed and efficiently managed for the conservation of agro-diversity and endemic species.</p>	<p>Objective C.5-o2. Implement ex situ conservation of endemic agricultural species and landraces as well as CWRs and micro-flora (starters/fungi) of traditional fermented products and following actions under this objective: C.5-o2.1. - C.5-o2.8.</p>
<p>For the purpose of maintenance and improvement of the bio agro-diversity, the measures for increase of efficiency of management of agro-ecosystems and natural pastures and meadows will be conducted.</p>	<p>Action B.1-o1.5 Elaborate and adopt national guidelines for the management of grazing lands</p> <p>Action B.1-o2.6 Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches</p> <p>Objective B.4-o1. Improve the legislative and institutional framework for conservation and sustainable management of agricultural ecosystems and natural grasslands and following actions under this objective: B.1-o1.1 - B.1-o1.5</p> <p>Action B4.-o.2.1. Implement pilot projects on the sustainable management of natural grasslands in at least six municipalities using specially designed certification and labelling schemes</p> <p>Action B4.-o3.3. Conduct an inventory of state-owned grasslands</p>
<p>Based on ecosystem approach the measures for support of development of aquaculture will be implemented in internal water reservoirs of Georgia.</p>	<p>Objective B5-o2. Establish a sustainable system for aquaculture management (including legal and institutional frameworks) which can overcome the problem of institutional dispersal of responsibility for resource management and create institutional mechanisms for the coordination between all involved sectors on the ground and all actions under this objective.</p>

<p>Measure 3.7.2 - Gene bank development/management for conservation of agro-diversity and endemic species</p> <p>Within the scope of the measure following activities is planned:</p>	
<p>A plant and livestock conservation strategy will be developed and implemented. The strategy will include a detailed inventory and identification of native species and breeds and the development of an efficient gene bank.</p>	<p>Objective C.5-o1. Facilitate on-farm conservation of endemic agricultural species and local landraces, as well as conservation of wild relatives of crops and micro flora of traditional fermented products where they were originally distributed and all actions under this objective.</p> <p>Objective C.5-o2. Implement ex situ conservation of endemic agricultural species and landraces as well as CWRs and micro-flora (starters/fungi) of traditional fermented products and all actions under this objective.</p> <p>Action C.1.-o1.6. Conduct inventories of plant and animal landraces and CWRs (including plants harvested for food and medicine), of endemic microflora found in traditional products and of related traditional knowledge; assess their statuses and create a relevant red list</p>
<p>A farmer and other stakeholder awareness program will be implemented on agro diversity and endemic species</p>	<p>Objective C.5-o1. Facilitate on-farm conservation of endemic agricultural species and local landraces, as well as conservation of wild relatives of crops and micro flora of traditional fermented products where they were originally distributed and following actions under this objective: C.5. – o.1.3</p>
<p>The measures for maintenance of local and endemic plant and animal breeds and species as well as their wild relatives, and genetic purity of other socially or culturally important species will be implemented.</p>	<p>Action A.3 – o4.6. Prohibit the import of non-native breeds of bees</p>
<p>Measure 3.1.1 - Improved farmer knowledge and information and the delivery of efficient agricultural extension service support</p>	<p>Action A.2.-o.1.6. Prepare updated informational and educational materials on biosafety and agrobiodiversity for farmer’s extension centers</p>

	and provide access to regularly updated information, with an emphasis on gender equality, to all farmers
Measure 3.1.2 - Improved quality of vocational educational training (VET), university education and research within the food and agricultural sector	<p>Action E.2 - o1.1. Develop national guidelines (topics and sources of information, teaching methodologies, a list of typical errors/misconceptions concerning biodiversity issues in the natural and social science textbooks) for teaching of biodiversity (including agrobiodiversity) and prepare recommendations for the National Teaching Plan</p> <p>Action E.2.-o.1.5. Improve the teaching of biodiversity (including of agrobiodiversity and the microbiology of traditional products) in the curricula of relevant professional and higher education institutions and develop relevant information resources</p>
Measure 3.4.3. - Supporting the further development of geographic indication schemes and appellations of origin	Action C.5- o1.7. Register starter cultures of the identified traditional fermented products according to the relevant IPR legislation and implement at last three projects to facilitate their commercial production
Measure 3.4.4. Supporting the development of seed and planting material production	Action A.3 – o4.5. Create a legal framework that establishes the status of agrobiodiversity, its inventory, protection from bio piracy, stock/seed production, the coordination of ex situ conservation and a favorable environment for in situ conservation
Measure 3.4.6. - Development of Breeding System	Action C.5-o2.4. Establish a gene bank of sperm/embryos of domestic animal breeds/landraces
<p>Measure 3.6.3. - Plant protection and phytosanitary reliability</p> <p><i>In the regions of intensive pesticide use, the pesticide impact on plants and environment will be reduced through introduction of system for preliminary prognosis of spreading of pathogenic organisms.</i></p>	Objective B.3-o2. Significantly reduce pollution from agriculture by improving the institutional framework and restoring degraded agricultural lands and natural grasslands and following actions under this objective (B.3-o2.1. - B.3.-o2.3.)

<i>It is planned to support the use of biological means of pest management and conduct farmer training.</i>	
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3.2 Rural development strategy

On 30 December 2016, The Government of Georgia approved the first national strategy for rural development. It provides the country's vision for 2017-2020 in key areas of rural development – growth and diversification of local economies, improvement of social and public services, sustainable use of natural resources and local engagement in the development process.

The Strategy represents a new approach to rural development in Georgia grounded on the best EU practices in this field. It focuses on promoting entrepreneurship and civil engagement, and on improving the quality of people's life while paying special attention to the values of natural and cultural heritage. All relevant sectoral ministries and other governmental bodies are involved in implementation of the document and the actions defined in it. They collaborated programs orientated on rural development, which are represented in state budget. State budget is the main source of financing implementation of rural development strategy. Projects initiated towards rural development are financed by agencies under different bodies that are implementing the project or other funds. Implementation of the strategy is supported by EU neighbor program "Support to agriculture and rural development" (ENPARD 2013-2020).

Implementation of the strategy will be led by the coordination council in Ministry of Agriculture. Accordingly, this document will be discussed in agriculture chapter.

One of the priority directions of rural development strategy is **Environmental Protection and Sustainable Management of Natural Resources**, which contains following objectives:

Objective 1: Water, forest and other resources. The improvement of the management of water, forest and other resources in targeted rural areas.

Objective 2: Waste Management. The promotion of sustainable systems of waste management in rural areas.

Objective 3: Climate Change. Activities used to mitigate the negative impact of climate change.

Crosscutting measures from Rural Development Action Plan 2107 and NBSAP are presented in the table below:

Measures from Rural development Action Plan 2017	Relevant objective and actions defined by NBSAP
3.1.1 Elaboration and implementation of the optimal forest classification system for the sustainable usage of forest resources (including by the rural population)	Action C.3–o2.1. Revise the forest code in a participatory manner
3.1.2.Provision of the sustainable use of biological resources of natural pastures (Including sustainable management plan (pilot) of the Vashlovani, Lagodekhi and Tusheti Protected Areas is elaborated and approved)	<p>Action B.1–o2.6. Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches</p> <p>Action B.4.-o2.1. Implement pilot projects on the sustainable management of natural grasslands in at least six municipalities using specially designed certification and labelling schemes</p> <p>Action B.4.-o1.6. Elaborate sustainable management plans for the pastures situated within protected.</p>
3.2.2. Improvement of waste management in the protected areas (Guidelines for waste management in the protected areas is elaborated)	
3.3.2. Increase the awareness of local government on climate change in terms of the risks to bio-diversity and agriculture	Action D.2–o1.2 Organize meetings and workshops to facilitate the integration of measures and recommendations against preliminarily identified problems related to climate change into sectoral strategic and local plans

4. Forestry

Objective of National Forest Policy defined by National Forest Concept for Georgia² is to establish sustainable management system for forests, which ensures conservation of forest biodiversity and use of forest's economical potential, taking into account its ecological futures, participation of society in forest management and fair and equitable sharing of benefits. The document defines state attitude towards forests, taking into consideration their main functional purpose and value.

The forest concept is based on the following guidelines:

- Principle of Sustainable Management of Forests;
- Precautionary principle - to maintain protective functions of forests and their ecological balance;
- "All forests are local";
- Separation of policy, management and supervision functions;
- The forest sector as an integral part of the sustainable development of the country.

Concept establishes the following main priorities regarding forest management:

- forest management planning;
- Rational use of forest resources;
- Forest ownership, management and use rights;
- Adoption of the impacts of climate change.

The actions for implementation of these priority directions are identified by the concept.

Strategic directions and relevant actions are identified for legislation development and institutional arrangements, forestry administration, education and scientific research, public awareness and participation.

National Forest concept is in close connection with strategic directions, objectives and actions regarding forest ecosystems identified by NBSAP.

Cross cutting issues from National Forest Concept and NBSAP are presented in the table below:

National Forest Concept Priority Directions and Actions	Relevant objectives and actions defined by NBSAP
5.1 Forest management planning 5.1.1 Restoration of degraded forests and	

² Adopted by the decree of Parliament of Georgia on December 11, 2013. Based on the Forest Concept of Georgia Forestry sector legislation and institutional arrangements will be developed.

<p>afforestation</p> <p>5.1.2 Forest use</p> <p>Actions to be implemented:</p>	
<p>5.1.3. A) Regulating the forest management planning system through primary and secondary legislation that is obligatory for all bodies responsible for forest management.</p>	<p>Action B.1–o1.1 Develop and submit to the Parliament for approval a forestry legislation that is fully based on the principles of sustainable use</p> <p>Action C.3 -o1.1 Develop a forest policy, strategy and action plan in a participatory manner</p>
<p>5.1.3. b) Ensuring, by appropriate State supervision, that management of the Forest Fund of Georgia is carried out in conformity with appropriate standards, in particular the “Operational Level Guidelines for Sustainable Forest Management”, adopted by Forest Europe.</p>	<p>Action C.3 – o1.2. Promote active participation of the Georgian forestry authorities in international forestry processes (including Forest Europe); harmonize the Georgian forest policy, legislation and standards with EU requirements</p>
<p>5.1.3. c) Promote voluntary and independent certification of forests to complement government regulation and inspection of forest management and use</p>	<p>Action C.3 –o2.2. Adopt relevant forest regulations and standards, in a participatory way, that promote sustainable use of non-wood products, the restoration of natural forest landscape and adaptation to and mitigation of climate change</p>
<p>5.1.3. d) Elaborate and implement a plan for restoring degraded forest landscapes to full ecosystem health</p>	
<p>5.1.3 e) Increasing the contribution of timber harvesting and processing to the national economy, taking into account environmental loads and social demands, including: carrying out a review of the efficiency, profitability and potential of processing raw materials by wood harvesting and processing private enterprises</p>	
<p>f) Preparing an action programme to increase the added value from wood processing to the national economy;</p>	
<p>g) Carry out a target-oriented programme for plantations of species with fast cutting rotation;</p>	<p>Action B.1-o2.3. Establish fast growing forest plantations in forest clearances so that timber and fuel wood can be produced and provided</p>

	primarily to local communities
h) Increasing contribution to the national economy from the exploitation of non-timber forest products and use of forests by their functional purposes, taking into account environmental loads and social demands, including: carrying out a study of the potential for the establishment of small, non-timber forest product processing enterprises and developing and implementing an action plan based on the findings of the study;	
i) Carrying out a study of the tourist and recreational potential of forests and developing and implementing an action plan based on the findings of the study;	
5.1.3. J) Carrying out a study of the potential for using the carbon cycle regulation service of forests as a source of income, for example in the framework of voluntary carbon credits and the REDD+ program.	Action D.2 –o1.3. Conduct a feasibility assessment of the application of international mechanisms, suggested by UNFCCC (REDD+, international carbon market), in Georgia, this should be done in order to support biodiversity conservation.
5.2 Rational use of forest resources Actions	
a) Forest inventory – the inventory needs to be carried out by methods that enable researchers to determine the boundaries of the state Forest Fund, its conditions and the main values of the forest stands (expressed qualitatively). b) Categorize forests according to their different values and functions, including: b.a) Identifying High Conservation Value Forests by applying the methodology advocated by the High Conservation Value Resource Network; b.b) Dividing the Forest Fund into different functional categories. During this process, contribute to the completion of a representative network of protected areas by increasing the area of forest in IUCN categories I-IV, in accordance with the blueprint in the Caucasus Ecoregion Conservation Plan. c) Design and implement a system to enable policy makers and other stakeholders to continually monitor the state of, and trends in forests and the forestry sector. Ensure that the system	Action C.3- o2.3 Elaborate and implement an optimal system of forest categorization: identify category V (IUCN) ecological corridors and forests of High Conservation Value (HCV) and assign them a relevant status

<p>complements other monitoring systems (e.g. the national biodiversity monitoring system).</p>	
<p>5.3. Forest ownership, management and use rights</p> <p>Action: Identifying the best forms of forest ownership and forest management based on specific case-by-case assessment (e.g. community ownership, management of state forests by a state body or an entity designated by this body, etc.).</p>	
<p>5.4. Adaption to the impacts of climate change Elaborate and implement activities aimed at mitigating and adapting to the impacts of climate change on Georgian forests, including:</p> <ul style="list-style-type: none"> a) Commissioning a national report on the state of forests, forest recourses, benefits derived from Georgian forests, and on the possible strategies for mitigating the negative impacts and adaptation of Georgian forests to climate change. The report should use the best available information from national and international sources; b) Conducting national dialogues on possible strategies to mitigate the negative impacts of climate change on Georgian forests; c) Categorizing forest stands according to forest composition and vulnerability to climate change; d) Elaborating and adopting sustainable management guidelines and measures, including guidance on the mitigation of negative impacts and adaptation of Georgian forests to climate change, for each forest type; e) preparing and implementing mitigation and adaptation plans for forest stands that are vulnerable to climate change; f)Expansion of protected areas; g) Reforestation – forest planting, greening urban areas, forest plantations; h) Providing forest management bodies and forest users with information on the best methods for carrying out vulnerability assessments. <p>Implementing research programmes, specifically on the impacts of expected climate change on</p>	<p>Action D.2 –o1.1 Assess the impact of climate change on biodiversity in vulnerable areas(e.g. Dedoplistskaro, Gardabani, Sagarejo, the Black Sea coast, high mountain areas, The Iori Plateau, and Karasani Ridge) and protected areas; develop relevant recommendations using methodologies accepted among the research and NGO circles</p> <p>Action D.2 –o1.3. Conduct a feasibility assessment of the application of international mechanisms, suggested by UNFCCC (REDD+, international carbon market), in Georgia; this should be done in order to support biodiversity conservation</p> <p>Action D.2 –o1.4 Implement appropriate international mechanisms that are suggested by UNFCCC (REDD+, international carbon market) for the benefit of biodiversity conservation</p>

<p>forests and the forest functions, and on ways to mitigate the negative impacts and adapt Georgian forests to climate change.</p>	
<p>6. LEGISLATION AND INSTITUTIONAL GOVERNANCE</p> <p>6.1. Legal framework The Forest Code – the main law governing the forestry sector and secondary legal acts needs to be developed to comply with both the international standards and primary and secondary national legislation.</p> <p>6.1.1. Actions Create a legal framework that provides the necessary basis for ensuring the protection and sustainable use of forests. This can be achieved by carrying out following actions: a) Preparing a new Forest Code that will provide new or revised systems and mechanisms that will be implemented on the basis of the Concept; b) Preparing secondary legislation, including instructions defining forest management standards, and regulations governing relations between the forest owner and bodies responsible for managing forests (communities, private sector, the State, etc.); c) Harmonizing other basic legal acts with the new Forest Code.</p>	<p>Objective B.1 - o1: Develop a legal and institutional base for the sustainable use of forests and other natural habitats Action B.1–o1.1 develop and submit to the Parliament for approval a forestry legislation that is fully based on the principles of sustainable use Action B.1–o1.2. Set up optimal entities for forest management</p> <p>Objective C.3-o1. Develop an optimal institutional framework for the Georgian forestry sector Action C.3 -o1.1 Develop a forest policy, strategy and action plan in a participatory manner Action C.3 – o1.3. Define and implement an optimal institutional structure for the Georgian forestry sector: define the roles and responsibilities of the state and private sectors, local communities and local self-government authorities</p> <p>Objective C.3- o2. Elaborate and adopt new forestry legislation that promotes sustainable management of all forests, including community forests</p> <p>Action C.3–o2.1. Revise the forest code in a participatory manner</p> <p>Action C.3 –o2.2. Adopt relevant forest regulations and standards, in a participatory way, that promote sustainable use of non-wood products, the restoration of natural forest landscape and adaptation to and mitigation of climate change</p> <p>Action C.3 –o2.4. Assess the potential for the implementation of community forestry</p>

	schemes; consider the role of women in the use of forest resources; implement pilot projects and support the replication of successful pilot projects
<p>6.2. Forestry sector administration</p> <p>Actions:</p> <p>a) Strengthen the capacity of forest management bodies;</p> <p>b) Develop an appropriate concept, legislation, standards and other instruments;</p> <p>c) Regulate forest use;</p> <p>d) Detect and suppress illegal forest use, including by reviewing the functions and capacities of forest management administrators;</p> <p>e) Prepare and implement plans aimed at increasing the capacities of the authorized bodies to carry out their functions effectively;</p> <p>f) Broaden and strengthen participation in the development of the concept and policy instruments, including by developing mechanisms to involve forestry sector stakeholders in the development of the Concept and policy instruments.</p>	<p>Action D.2 –o1.4 Implement appropriate international mechanisms that are suggested by UNFCCC (REDD+, international carbon market) for the benefit of biodiversity conservation</p> <p>Action B.1-o2.2. Improve the existing system of wood tracking to ensure timely detection of illegal logging</p> <p>Action B.1-o.2.4. Evaluate illegal logging at the regional and national levels</p> <p>Action A.2.-o.1.5. Develop and adopt regulations (or relevant changes therein) for public participation in the preparation of biodiversity-related policies and legislation as well as programmers</p> <p>Action A.2–o2.2. Improve public participation in decisions related to biodiversity conservation and use, including through the introduction of changes to the existing legislation</p>
<p>6.3. Forest management institutions</p> <p>Ensure that the respective management bodies have the human resources and technical means to be able to carry out their functions effectively, including:</p> <p>a) Prepare and implement a plan for the development of the forest management bodies, including a budget, required technical assistance and an indicative financing and/or business plan;</p> <p>b) Develop a scheme for staffing and capacity raising in all institutions according to the requirements of their tasks. Securing sustainable funding from budget and non-budget sources (sales of products and services, compensations, etc.).</p>	<p>Action C.3 – o1.3. Define and implement an optimal institutional structure for the Georgian forestry sector: define the roles and responsibilities of the state and private sectors, local communities and local self-government authorities</p>
<p>7. EDUCATION AND SCIENCE</p> <p>Actions</p>	

<p>a) Preparing and implementing an education plan for the forestry sector aimed at providing Georgia with the professionally qualified staff it needs;</p> <p>b) Teaching basic knowledge of forests in public schools;</p> <p>c) Training future academicians, applied scientists, forest managers, and professional teachers at MSc/MBA and PhD levels;</p> <p>d) Supporting the employment of young professionals in forestry and regional universities for the improvement of professional education;</p> <p>e) Establishing a forest training centre and a model forest management unit to provide field based training for foresters and other actors in the sector;</p> <p>f) Close cooperation between State forest institutions and educational institutions for improving existent expertise in forestry;</p> <p>g) Using international academic practices to strengthen insufficiently developed branches of forest science in Georgia and support the focused education of Georgian students at foreign universities;</p> <p>h) Developing a system for a steady rise in qualification and certification of all employees in the forestry sector (establishment and development of special professional colleges). Assessing the need for establishment of this system. Support modern level research projects in the field of forest science by:</p> <p>a) Supporting university-based researches in forestry science involving students as researchers;</p> <p>b) Ensuring close cooperation between research and university education in the field of forestry;</p> <p>c) Supporting implementation of modern research outcomes in forest practices;</p> <p>d) Re-establishing and developing the Scientific Research Institute of Forestry to meet the present challenges;</p> <p>e) Involving the scientific and expert potential of the Academy of Agricultural Sciences in the training and retraining of forestry professionals.</p>	<p>Action E1- o2.1. Conduct training and extension activities for biodiversity monitoring experts, foresters, wild fire fighters, wildlife managers, freshwater fishing specialists and protected areas personnel</p> <p>Action E1-o2.2. Update the current forestry curricula at universities</p>
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<p>8. Awareness in Involvement of Society</p> <p>Raise awareness among the population and decision-makers about the importance of forests and sustainable forest management principles, including:</p> <p>a) Designing and implementing a strategy and action plan for communicating key messages to the general public and selected target groups;</p> <p>b) Improving the mechanisms for public involvement in forest related decision-making, taking into account the norms established by multilateral international agreements and the best international practice.</p> <p>Broaden the range of livelihood opportunities for rural households, including:</p> <p>a) Integrating programs aimed at reducing rural poverty and creating new job opportunities that consider the interests of different groups of the population, including women and youth, into relevant national strategies;</p> <p>b) Development and implementation of such pilot projects that will facilitate commercial use of forests by local communities, creation of for new jobs and income sources and reduce the poverty.</p> <p>Provision of energy sources available to the rural population and their effective use in different ways, including:</p> <p>a) Assessment of Energy sources and development action plans, including cost-benefits analyses, by implementing energy efficient ovens, heating the houses, combined generation of heat and energy, expanding the natural gas network.</p> <p>b) Development and implementation of the program of provision of wood for rural population;</p>	<p>Objective A.1–o2. Develop key messages for the general public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media</p> <p>Action A.2.-o.1.5. Develop and adopt regulations (or relevant changes therein) for public participation in the preparation of biodiversity-related policies and legislation as well as programs</p> <p>Action A.2–o2. 3. Strengthen local NGOs, CBOs and local women’s groups and encourage their involvement in the decision-making in and monitoring of development projects as well as in biodiversity conservation and resource-use planning</p> <p>Action A.2 – o2.4. Strengthen local governments with regard to ensuring public communication and involvement in decision making processes</p>
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<p>c) Rational use of wood, using dry wood and reduction of firewood consumption by using of alternatives that are more efficient. Raising responsibilities of rural communities towards local forest resources, development and implementation of mechanisms that ensure involvement of rural population in forest management.</p>	
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5. Tourism

„National Tourism Strategy of Georgia 2025“ is adopted by the decree #1-1/639, dated November 18, 2016 of the Minister of Economics and Sustainable Development of Georgia. Strategy represents 10-year action plan for raising values and significance for countries economics and population. It was collaborated with cooperation of government and private sector, for ensuring sustainable profitability of the field and creating new working places.

The aim of the „National tourism strategy of Georgia 2025“ is to create guideline which ensures sustainable development of tourism, income increase and rising of importance of the sector.

For the achieving of strategic targets the document highlights the significance of Protected Areas of Georgia and indicates that their development leads to world level eco, skiing, bike, mountain, adventure, health and other kinds of tourism.

One of the targets indicated in strategy is to create unique and authentic visitor experiences centered on those natural and cultural assets.

One of the guiding principles identified to guide the strategy implementation is Focus on Sustainability – Centered on the National Geographic Society concept of “Geotourism” – travel that sustains and enhances the geographical character of a place, including its environment, culture, aesthetics, heritage and the well-being of its residents.

Consequently, one of the priority directions of the strategy is to **Respect, preserve and enhance Georgia’s natural and cultural heritage.**

Priority actions defined by Tourism Development Strategy and relevant actions from NBSAP are presented in the table below:

Tourism Development Strategy Priority Actions	Relevant Objectives and actions from NBSAP
6.1. Create and implement management plans for cultural sites and protected areas to ensure sustainable use of Georgia’s natural and cultural assets	Action c.4-o5.2 Prepare management plans for protected areas that do not have them
6.3. Introduce incentives to Protected Areas and Cultural Heritage sites to improve visitor services and interpretation and generate more visitor’s income benefiting local industries and supporting heritage preservation;	
6.4. Promote public-private partnerships and	

investments in protected areas and historic/cultural sites (including small and medium historic urban settlements);	
6.5. Improve access to natural and cultural sites through improved infrastructure (roads, trails, trail huts, picnic areas, visitors 'centers, bathrooms, parking, etc.);	

With World Bank support tourism developments strategies for Kakheti, Imereti, Samtskhe-Javakheti and Mtskheta-Mtianeti regions have been developed and their impact on environment and cultural heritage have been assessed. Assessment reveals the following potential negative impacts:

- Increase of pollution risks due to poor sanitation, lack of toilets and sewage systems, improper waste management at the sites of destination;
- Uneven distribution of tourist flows and creation of peak flows at limited areas, which may result in local exceeding of carrying capacity. This may be resulted in disturbance of habitats, creation of alternate routes contributing to soil erosion. Poaching or other misbehavior of tourists could be a reason for significant biodiversity losses.
- Rapid growth of tourist visits in most fragile, pristine areas and natural heritage sites, which may result in local exceeding of carrying capacity. Because of the seasonal nature of many tourist activities, wildlife may be affected by large influxes of people at the critical times of migration, feeding, breeding or nesting.
- Increase risk of forest fires, especially near tourist routes;
- Deterioration of water quality in surface waterbodies due to the increase of wastewater discharge.

6. Energy Sector

One of the main direction of the State Policy in Energy Sector of Georgia³ is **taking into consideration environmental components in the implementation of the energy projects**. While implementing energy projects including implementation of large HPP projects, that might have an environmental and social impact, it's vital to take into consideration best international practices, which include environmental and social impact assessment, consultations with local population, information publicity and availability.

Energy Sector Development Strategy⁴ have been developed based on the State Policy in Energy Sector. The Strategy describes current situation in the energy sector, defines vision, priorities, challenges and ways to address them. Energy Sector Development Strategy is developed for the years 2016-2025.

The Energy Sector Development Strategy does not include biodiversity conservation and maintenance issues. However, the strategy indicates that the power plants development projects should be implemented in accordance of Law on "Environmental Impact Assessment". Environmental Impact Assessment is a crucial mechanism for

Environmental impact assessment is a significant tool for ensuring adequate consideration of environmental issues in development projects, including biodiversity. Moreover, Georgia's "Environmental Assessment Code", which will enter into force from January 1, 2018, includes considerable improved procedures (in relation to the current situation) for the consideration of biodiversity issues.

At present, with the support of the World Bank, environmental and social strategic assessment of Georgia's electricity sector development scenarios is underway. The aim is to assess the environmental and social impacts of various strategic scenarios of the energy sector and related transmission infrastructure development and provision of recommendations on optimal scenario based on approaches and guidelines of the following EU directives: EU 2001/42 / EC (Directive on **the assessment of the effects of certain plans and programs on the environment**), 92/43 / EEC (Directive on Natural Habitats) and 74/409 / EEC (Directive on Birds).

Environmental and Social Strategic Assessment will be completed by the end of 2017. Environmental and Social Strategic Assessment will reveal key cumulative issues of energy sector development and will offer instructions and recommendations to address environmental and social impacts; General environmental and social mitigation measures to be implemented for different scenarios will be suggested based on assessment as well.

³ Adopted by the Decree #3757-III of the Parliament of Georgia on June 24, 2015

⁴ During the preparation of this report, Energy Sector Development Strategy was not adopted. Draft of the Strategy is available through web site of The Ministry of Energy.

Performance of this assessment can be considered as the implementation of NBSAP action A.3-o1.1. Establish Strategic Environmental Assessments (SEAs) for national plans, programs and legislation development processes that take account of biodiversity and ecosystem services

The following actions defined by NBSAP are also linked with energy sector:

A.3-o1.2. Develop national guidelines for the integration of biodiversity conservation into sectoral and cross-sectoral policies and strategies

A.3-o5.2. Establish emission, discharge and water consumption norms with full regard to biodiversity conservation

However, no relevant measures are included in the Energy Development Strategy.

7. Mining Industry

Mining industry is one of the strong factors of destruction/degradation of habitats. Extraction of minerals leads to the destruction of ecosystems, air, water and soil pollution, erosive processes, etc. The most widespread form of extraction of minerals in Georgia is through open-pit mining. This method has a devastating impact on the environment, since forests are cut at pit locations; fertile layers of soil are completely damaged; surface and underground waters are polluted⁵.

The NBSAP indicates that the degradation or even complete loss of forest cover is often caused by open-pit mining.

Mining Industry Development Strategy does not exist so far in Georgia. Third National Environmental Action Programme of Georgia (2017-2021) indicates that sustainable use of mineral resources and the development of overall mining sector have been identified as one of the priority areas by the Government of Georgia for reform efforts. In this context, the development of a responsible mining policy and strategy framework, and modernization of the legislative basis in this sector is needed. The reform is expected to ensure the sustainable use of mineral resources and at the same time enhance the investment climate in this sector.

At present licensing, is an only tool to envisage of biodiversity issues in mining planning. Terms for biodiversity protection can be integrated into mineral resources licensing conditions. However, due to the gaps in the relevant legislation, this is not practically implemented.

Another mechanism to ensure integration of biodiversity issues into mining industry is environmental impact assessment. However, as of today, according to the legislation of Georgia, extraction of minerals does not require environmental impact assessment. From January 2018 "Environmental Impact Code" will be enter into force. According to the code, full EIA will be required for:

- Open-pit mining when the surface area of the extraction is above 25 hectares;
- Peat extraction when the surface area of the extraction is over 150 hectares.

For the following activities necessity of EIA will be defined based on screening:

- Extraction of minerals (including groundwater for enterprise purposes) when the amount of resources obtained is more than 100,000 m³ per year (except oil and natural gas extraction and extraction of groundwater for the purpose of personal use);
- Extraction of minerals in the sea.

NBSAP included the following activities to integrate biodiversity issues in mining industry:

⁵ Irakli Macharashvili, National Needs Assessment for Monitoring the Biodiversity Trends and Impacts, 2016

A.3-o3.1. Conduct a review of the regulations for licensing and permit issuance for the use of natural resources with respect to the mitigation of their impact on biodiversity and protected areas and incentives for conservation

A.3-o3.2. Increase the capacity of licensing and permit-issuing units through training and provision of resources (including equipment)

A.3-o3.3. Elaborate and adopt guidelines for the control and monitoring of licenses involving the use of natural resources such as forestry, hunting, fishing, etc.

A.3-o5.1. Introduce legal amendments that ensure that an EIA is required for any infrastructure development or other project that may have a significant impact on biodiversity and ecosystems (or protected areas), and provide for adequate law enforcement (e.g. ensure that the conduction of EIAs prior to the commencement of development activities is enforced)

A.3-o5.3. Establish fair and adequate compensation schemes for those cases in which the impact on the natural environment is unavoidable.

8. Climate Change

Climate change impact is already visible on forest ecosystems in Georgia, which appears through rising plant pathology diseases (Adjara), change of forests upper border in high mountain ecosystems (Svaneti) and changes in species, in increase of fires and diseases (Borjom-Kharagauli forests). Impact of climate change on forest ecosystems was assessed while preparing Third National Communication to UNFCCC. Climate Change Strategy of Georgia foresees preparation of sustainable management action plan of forest ecosystems towards climate change. NBSAP and National Climate Change Strategy, both consider assessment of the use of international mechanisms proposed by Climate Change Convention (REDD+ and international market of CO₂) and their implementation, also assessment and monitoring of climate change impact on protected areas, especially in the regions vulnerable to climate change (Arid and semi-arid ecosystems, high mountains, Black Sea coastal zone).

Strategic goals and action defined by Climate Change Strategy and relevant actions from NBSAP are presented in the table below:

Climate Change Strategy of Georgia - 2014 Main Strategic Goal and Activities	Relevant objectives and actions defined by NBSAP
<p>Main Strategic Goal 4. Building local capacity in Georgia for the efficient implementation of the principles of the UNFCCC and ensuring participation in global processes on a parity basis.</p> <p>Activities. • Promotion of the local capacity of all those ministries, activities of which are connected with the climate change problem; • Informing constantly persons in charge of the relevant ministries on the possible negative consequences of climate change and providing recommendations for taking into account threats in the planning process; • Strengthening the potential of the self-governing bodies on climate change issues; • Strengthening technical capacity in municipalities of Georgia.</p>	<p>Objective A.1-o3. Increase the awareness of the general public and decision makers of climate change as a threat to biodiversity</p> <p>Action A.1-o3.1. Organize workshops for national and local governments on the impacts of climate change on biodiversity</p> <p>Action A.1-o3.2. Conduct a national awareness campaign on the issue of climate change as a threat to biodiversity</p>
<p>Main Strategic Goal 11. Organizing and where it has started to continue monitoring of the impact of climate change on different ecosystems: Semi-arid territories (Taribana, Udabno, Gardabani, Gori Municipality, etc.); protected areas, where the ecosystems are relatively free of human anthropogenic interference (Protected areas of Dedoplistskaro District and Ajara, Batumi</p>	

<p>Botanical Garden, etc.); glaciers feeding large rivers (Tsaneri, Koruldashi, Dolra and Kirtisho), Black Sea Coastal Zone (the entire coast of Batumi-Adlia and Ajara Region, Poti Zone); river sources and drainage basins of Enguri, Rioni, Aragvi and other large rivers important for the country, where the initial runoff of the river is formed; land degradation (Ajara, semi-arid regions, Racha-Lechkhumi, Mtskheta-Mtianeti and particularly vulnerable municipalities of Kakheti Region).</p> <p>Activities: • The constant (or periodic) monitoring systems measuring climate changes on ecosystems (land degradation, glaciers, mountainous regions, arid zones, Black Sea coastal zone, country's economically important rivers). Where such systems have been already developed, to continue the monitoring process; • Prepare reports of ongoing and impending threats; • Assessing the risks; • Preparing recommendations for the prevention of expected risks and threats, national and local (municipal level) strategies and action plans; • Provide information to the relevant ministries and responsible persons (Government of the country).</p>	
<p>Main Strategic Goal 17. Assessing the impact of climate change on the forest sector of Georgia. Developing the adaptation strategy and action plan by taking into consideration negative influences observed in different forests of the country.</p> <p>Activities: It is necessary to complete the inventory of forest fund and the assessment of its agro-ecological and socio-economic potential according to the regions. The state priority related to the forest resources should be determined; Based on the results of the inventory it is necessary to assess the impact of climate change on the forest ecosystems in Georgia (the Upper Svaneti and Borjomi-Bakuriani forest ecosystems are evaluated at present, with relatively low precision and using</p>	<p>Action C.3 –o2.2. Adopt relevant forest regulations and standards, in a participatory way, that promote sustainable use of non-wood products, the restoration of natural forest landscape and adaptation to and mitigation of climate change</p> <p>Action D.2 –o1.3. Conduct a feasibility assessment of the application of international mechanisms, suggested by UNFCCC (REDD+, international carbon market), in Georgia; this should be done in order to support biodiversity conservation</p> <p>Action D.2 –o1.4 Implement appropriate</p>

<p>the old data); In order to reduce adverse impact identified in each forest massif, it is necessary to prepare a specific action plan for the sustainable to climate change management of concrete woodlands; To conduct academic research and assess the impact of climate change on the forests and study the necessary parameters; In case of forests in borderline areas, it is necessary to carry out joint research and measures against the spread of diseases in cooperation with neighboring countries; Georgia needs to review and assess the country's participation in the mechanisms of the Climate Convention, namely REDD47 + and NAMA48 adopted for reducing forest degradation</p>	<p>international mechanisms that are suggested by UNFCCC (REDD+, international carbon market) for the benefit of biodiversity conservation</p>
<p>Main Strategic Goal 18. Assessing the impact of climate change on those protected areas of Georgia, which were not assessed in the Second and Third National Communications. Developing the adaptation strategy and the action plan by taking into account identified adverse effects on various protected areas Activities: Monitoring of biodiversity and various ecosystems should be going on constantly on protected areas; The impact of climate change on these areas should be assessed based on the monitoring results (There is no anthropogenic pressure here and we actually use background information); The results of observations made on the protected areas should be used for assessing the impact of climate change on other areas;</p>	<p>Action D.2–o1.1 Assess the impact of climate change on biodiversity in vulnerable areas(e.g. Dedoplistskaro, Gardabani, Sagarejo, the Black Sea coast, high mountain areas, The Iori Plateau, and Karasani Ridge) and protected areas; develop relevant recommendations using methodologies accepted among the research and NGO circles</p>
<p>Main Strategic Goal 24. Assessing the possible impact of climate change on mountainous regions (Mtskheta-Mtianeti, Racha-Lechkhumi, Upper Imereti, MtaTusheti, Khevsureti), which have not yet been evaluated within Georgia's Second and Third National Communications Activities: • To assess vulnerability of the mountain ecosystems to climate change; • To develop a portfolio of adaptation measures and concrete project proposals for the ecosystems of</p>	<p>Action D.2–o1.1 Assess the impact of climate change on biodiversity in vulnerable areas(e.g. Dedoplistskaro, Gardabani, Sagarejo, the Black Sea coast, high mountain areas, The Iori Plateau, and Karasani Ridge) and protected areas; develop relevant recommendations using methodologies accepted among the research and NGO circles</p>

<p>mountainous regions that are particularly vulnerable; • To develop the adaptation strategies for vulnerable regions or ecosystems; • To attract local and international donors for the implementation of adaptation measures; • To develop local capacity for planning and implementing preventive and adaptation measures</p>	
<p>Main Strategic Goal 27. Attracting investments and promoting the implementation of adaptation measures in Lentekhi Region Activities: To update the adaptation strategy to climate change for Lentekhi District; To rehabilitate and correctly manage the most damaged forest sections; To restore the forest ecosystem function as a deterrent of landslides and implement permanent restoration works in places, where they were already implemented and plan new sections</p>	
<p>Main Strategic Goal 28. . Attracting investments and promoting the implementation of adaptation strategy to climate change for Ajara51 Activities: Continuous monitoring of the impact of climate change on biodiversity (protected areas, forests, aquatic ecosystems, etc.) and study of possible results; Continuous monitoring of forest degradation and implementation of plant disease preventive measures in close coordination with the neighboring country (Turkey).</p>	<p>Action B.1–o2.9. Conduct assessments to identify forested areas that are affected by pests and pathogens</p> <p>Action B.1–o2.10. Elaborate an action plan for the combating of forest pests and diseases and support its implementation</p>
<p>Main Strategic Goal 29. Attracting investments and promoting the implementation of Agriculture Adaptation 52 Strategy to Climate Change for Kakheti Region Activities: Rehabilitation of windbreaks; Energy forest cultivation; Ensuring proper management of pastures and herding tracks</p>	<p>Action B.1-o2.3. Establish fast growing forest plantations in forest clearances so that timber and fuel wood can be produced and provided primarily to local communities</p> <p>Action B.4.-o2.1. Implement pilot projects on the sustainable management of natural grasslands in at least six municipalities using specially designed certification and labelling schemes</p>
<p>Main Strategic Goal 31. Developing the National Adaptation Plan to Climate Change and starting its implementation</p>	<p>National Target D.2. By 2020, the impact of climate change on biodiversity is evaluated; ecosystems resilience</p>

<p>Activities: To assess vulnerability of forest ecosystems to climate change for all regions of Georgia, which were not assessed in the Second and Third National Communications and to plan adaptation measures at the national level;</p> <p>To assess vulnerability of protected areas/ecosystems to climate change for those protected areas, which were not assessed in the Second and Third National Communications and to plan adaptation measures at the national level</p> <p>To assess the impact of climate change on the Black Sea coastal zone and the impact of changes in the marine ecosystem on the coastal zone, tourism, agriculture, infrastructure development, the marine ecosystem, etc.</p> <p>To assess the impact of climate change on Georgia's mountain ecosystems, which were not assessed in Georgia's Second and Third National Communications. Special attention should be paid to the current change in the climate zones of the mountainous regions and how these changes affect living conditions of the local population. To plan adaptation measures by taking into account local conditions for each mountainous region;</p>	<p>has been enhanced through relevant environmental policies and activities</p> <p>Action D.2 –o1.1 Assess the impact of climate change on biodiversity in vulnerable areas(e.g. Dedoplistskaro, Gardabani, Sagarejo, the Black Sea coast, high mountain areas, The Iori Plateau, and Karasani Ridge) and protected areas; develop relevant recommendations using methodologies accepted among the research and NGO circles</p> <p>Action D.2 –o1.2 Organize meetings and workshops to facilitate the integration of measures and recommendations against preliminarily identified problems related to climate change into sectoral strategic and local plans</p> <p>Action D.2 –o1.3. Conduct a feasibility assessment of the application of international mechanisms, suggested by UNFCCC (REDD+, international carbon market), in Georgia; this should be done in order to support biodiversity conservation</p> <p>Action D.2 –o1.4 Implement appropriate international mechanisms that are suggested by UNFCCC (REDD+, international carbon market) for the benefit of biodiversity conservation</p>
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9. Combat Desertification

Second National Action Program to Combat Desertification, adopted by the decree of Georgia's Government №742 on 29th December 2014, highlights importance of coordinated implementation of obligations under three UN Conventions (Convention to Combat Desertification, Convention on Biodiversity and Framework Convention on Climate Change), also considers development of joint action plan for implementation of these three conventions by 2017. The Action programme also includes actions towards public and decision makers awareness rising regarding interrelation of desertification/land degradation, biodiversity preservation and climate change. Actions orientated on biodiversity conservation, as sustainable management of pastures, identification and conservation of the plants and animals species threatened because of desertification, assistance of conservation of local varieties, development of organic farming and pilot projects for restoration of polluted soils are integrated in Second National Action Program to Combat Desertification.

Cross cutting actions defined by the Second National Action Program to Combat Desertification and relevant NBSAP objectives and targets are presented in the table below:

Measures defined by Second National Action Program to Combat Desertification	Relevant objectives and targets defined by NBSAP
The norms regarding the SLM, to combat desertification/land degradation, biodiversity protection and climate change reduction related issues are integrated in the laws on protected areas and forestry and also in the existing spatial-territorial development policy (Georgian law on "The Basis of Spatial Planning and Urbanization")	Action A.3-o1.3 Conduct a review and modification of the current system of spatial planning to ensure the integration of biodiversity through both the mapping of biodiversity and ecosystem services and systemic conservation planning
Development of Methodology for preparation of pasture management plans based on internationally recognized approaches to Integrated Management	Action B.1-o1.5 Elaborate and adopt national guidelines for the management of grazing lands
Determination and conservation of plant and animal species under threat by desertification; Implementation of projects for conservation of local varieties	<p>Action C.1.-o1.6. Conduct inventories of plant and animal landraces and CWRs (including plants harvested for food and medicine), of endemic microflora found in traditional products and of related traditional knowledge; assess their statuses and create a relevant red list</p> <p>Action C.2 - o1.18. Ensure the conservation of at least 40% of critically endangered plant species</p>

	<p>through including them in ex situ collections.</p> <p>Action C.5.-o1.3. Implement on-farm conservation programs of identified crop and animal landraces in the regions of their origin (preferably in the support zones of the protected areas); conduct trainings for local farmers in conservation, cultivation/breeding, primitive selection and production and marketing of traditional products</p> <p>Action C.5 -o1.5. Implement urgent intervention measures to save landraces that are under threat of imminent extinction</p> <p>Objective C.5-o2. Implement ex situ conservation of endemic agricultural species and landraces as well as CWRs and micro-flora (starters/fungi) of traditional fermented products and all actions under this objective.</p>
The implementation of pilot projects for the development of organic farming	Action B.4.-o2.2. implement pilot projects on organic farming in at least six municipalities, including high mountain regions
Implementation of erosion control measures in Forest areas	
Rehabilitation measures of endemic varieties and traditional agricultural production (wine, wheat, etc.)	Action C.5.-o1.3. Implement on-farm conservation programs of identified crop and animal landraces in the regions of their origin (preferably in the support zones of the protected areas); conduct trainings for local farmers in conservation, cultivation/breeding, primitive selection and production and marketing of traditional products
Introduction of sustainable pasture management practices among farmers/shepherds	Action B.4.-o2.1. Implement pilot projects on the sustainable management of natural grasslands in at least six municipalities using specially designed certification and labelling schemes

10. Regional Development

Regional Development Programme of Georgia for 2015-2017 adopted by the Decree of the Government of Georgia #1215-1, is a medium-term governmental document specifying the main goals and objectives of Georgia's Regional Development Policy and its relevant priorities and measures. It also defines the necessary conditions for the balanced and sustainable socio-economic development of the country's regions.

Georgia Forest Inventory and Implementation of a Stable Forestry Strategy is one of the measures under the priority direction 1- Improvement of physical infrastructure and Environment Protection – of the programme. Ministry of Environment and Natural Resources Protection is responsible for implementation of this measure. This measure aims to promote stable forest management and use to ensure fair and equal distribution of benefits among local communities.

Actions under this measure and relevant actions from NBSAP is presented in the table below:

Actions indicated by the Regional Development Programme of Georgia for 2015-2017	Relevant objectives/actions from NBSAP
Perfection of current legislative and methodological bases in the field of forestry to establish efficient forest management system;	<p>Action B.1–o1.1 Develop and submit to the Parliament for approval a forestry legislation that is fully based on the principles of sustainable use</p> <p>Action C.3 – o1.2. Promote active participation of the Georgian forestry authorities in international forestry processes (including Forest Europe); harmonize the Georgian forest policy, legislation and standards with EU requirements</p> <p>Action C.3–o2.1. Revise the forest code in a participatory manner</p> <p>Action C.3 –o2.2. Adopt relevant forest regulations and standards, in a participatory way, that promote sustainable use of non-wood products, the restoration of natural forest landscape and adaptation to and mitigation of climate change.</p>
Further development of current electronic system of forest resource management	Action B.1-o2.2. Improve the existing system of wood tracking to ensure timely detection of illegal logging
Continuous professional development and training of the employees of LEPL-National Environmental Agency;	Action E1- o2.1. Conduct training and extension activities for biodiversity monitoring experts, foresters, wild fire fighters, wildlife managers, freshwater fishing specialists and protected areas

	<p>personnel</p> <p>Action E.2-o.1.6. Support short-term courses (at institutions of higher education) in biodiversity for specialists of various sectors related to biodiversity conservation and use</p>
Meeting demand for wood resource (including firewood);	
Identification of allowable wood cutting;	
Development of mechanisms for diverse use of forests;	
Implementation of forests maintenance and restoration measures;	
Undertake necessary measures for institutional strengthening of LEPL-National Environmental Agency to ensure effective monitoring and improving of physical protection of forests;	<p>Action B.1–o1.2. Set up optimal entities for forest management</p> <p>Action C.3 – o1.3. Define and implement an optimal institutional structure for the Georgian forestry sector: define the roles and responsibilities of the state and private sectors, local communities and local self-government authorities</p>
Implementation of the functional zoning and forest inventory measures; Establishing an effective system of data management, analysis and forestry planning	Action C.3- o2.3 Elaborate and implement an optimal system of forest categorization: identify category V (IUCN) ecological corridors and forests of High Conservation Value (HCV) and assign them a relevant status
Clarification of the forest fund territories by means of state forest fund registration to prevent fragmentation and reduction of the forest territory	

Regional Development Programme also considers improvement of solid waste and wastewater management and reducing pollution, which is also important for biodiversity protection.

Biodiversity issues are integrated in the Regional Development Strategies for 2014-2021 for the regions of Georgia, adopted by the Government of Georgia.

Measures under this strategies and relevant objectives / actions from NBSAP is presented in the table below:

Measures under the Regional Development Strategies	Relevant Actions from NBSAP
Kakheti Regional Development Strategy 2014-2021, adopted by the GoG decree #1366, September 17, 2013	
Goal 24. Preserve forests and biodiversity by means of inventory and protection of biodiversity	
Objective 24.1 Inventory of forests; Strategic zoning and inventory of forests should be performed, including identification of pastures and non-forest areas.	<p>Action C.3- o2.3 Elaborate and implement an optimal system of forest categorization: identify category V (IUCN) ecological corridors and forests of High Conservation Value (HCV) and assign them a relevant status</p> <p>Action B.4.-o3.3. Conduct an inventory of state-owned grasslands</p>
<p>Objective 24.2 Protection of biodiversity A database of threatened species of plants and animals should be created. A strategy for the protection of Kakheti’s biodiversity and a red list should be developed. Conservation of flood plain forests (using a single approach) and phytopathological research should be performed. Seed farms should be established in the region thus contributing to the protection of the region’s biodiversity</p>	<p>Action C.1.-o1.3. Create electronic databases of fauna and flora</p> <p>Action B.1–o2.9. Conduct assessments to identify forested areas that are affected by pests and pathogens</p>
Goal 25. Improve the efficiency of protected areas management and increase their potential for tourism	
<p>Objective 25.1 Improve management of protected areas Plans for management of protected areas in Batsara-Babanauri, Mariamjvari, Lagodekhi and Vashlovani, Iori and Chachuna should be developed at the central level.</p>	Action C.4–o5.2. Prepare management plans for protected areas that do not have them

Goal 28. Improve environmental management by raising environment awareness	
Objective 28.1 Include environmental education in the school curricula of the region Schools should be equipped with the necessary equipment for study of natural science Environmental education should become a mandatory component of extra-curricular studies at school.	Action E.2 – o1.4. Support the establishment and functioning of eco-clubs in schools to promote teaching of biodiversity-related topics
Objective 28.2 Study of natural science in the Telavi University The Telavi State University should offer the following educational programs relevant for the Kakheti region: climatology, forestry, ecology, geology	Action E1-o2.2. Update the current forestry curricula at universities Action E.2 –o1.5. Improve the teaching of biodiversity (including of agrobiodiversity and the microbiology of traditional products) in the curricula of relevant professional and higher education institutions and develop relevant information resources
Shida-Kartli Regional Development Strategy 2014-2021 adopted by the GoG decree, #1364, September 17, 2013	
Target 1. Raise environmental awareness and education Objective: Increase of the population's environmental awareness	Objective A.1- o2. Develop key messages for the public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this object.
Target 3. Improve soil condition Objective: Prevention of excessive grazing and desertification	Action B.1–o2.6. Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches Action B.4.-o1.5. Integrate management methods related to agro ecosystems and natural grasslands into at least three regional strategic documents and six municipal annual work plans
Target 5. Protect the forest eco-system and biodiversity Objective: Stop and prevent deforestation,	Action B.1-o.2.4. Evaluate illegal logging at the regional and national levels

especially, in proximity to settlements	
Kvemo-Kartli Regional Development Strategy 2014-2021, adopted by GoG Decree #1365, September 17, 2013	
Target 2: Effective management and use of regional resources. Arrange forestry infrastructure in local forest, To develop plan for plantation of fast growing species on selected areas for production of timber, To ensure full inventory of forest resources	Action B.1-o2.3. Establish fast growing forest plantations in forest clearances so that timber and fuel wood can be produced and provided primarily to local communities
Target 13: Execution of Environmental activities Conservation of hazardous waste landfill in Ialghuja.	
Establishment of ``Energy Plantations``, Planting of windbreaks in priority areas.	Action B.1-o2.3. Establish fast growing forest plantations in forest clearances so that timber and fuel wood can be produced and provided primarily to local communities
Increase of the population's environmental awareness	Objective A.1- o2. Develop key messages for the public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this objective.
Infrastructure development in Gardabani Manage Reserve and Algeti National Park	
Mtskheta-Tianeti Region Development Strategy 2016-2021, adopted by GoG Decree #1285, July 1, 2016	
Target 1. Environmental protection Maintaining sustainable ecological balance	
Targer 1.3 Ensuring sustainable management of forests and carrying out relevant human resources policies;	Action B.1-o1.2. Set up optimal entities for forest management Action C.3 – o1.3. Define and implement an optimal institutional structure for the Georgian forestry sector: define the roles and responsibilities of the state and private sectors, local communities and local self-government authorities

<p>Target 1.4. To raise public awareness on environmental issues</p>	<p>Objective A.1- o2. Develop key messages for the public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this objective.</p>
<p>Target 1.5 Development of infrastructure and innovation management system of protected areas of the Region.</p>	
<p>Target 1.10. Promotion of natural resources management, use and monitoring</p>	
<p>Target 1.12 To ensure sustainable fishery, hunting and collection of wild plants, To establish effective control mechanisms.</p>	<p>Action B.5-o1.5. Assess commercial fish stocks in the country's inland waters. Action B5-o2.3. Integrate an ecosystem approach into aquaculture practices</p>
<p>Samtskhe-Javakheti Regional Development Strategy 2014-2021, adopted by the GoG decree #1371, dated September 18, 2013</p>	
<p>Strategic Task 4.1. – Support of the tourism business in the region Result 4.1.c: Around 10 touristic routes are mapped for eco-tourists in the region.</p>	
<p>Strategic task 12.2. – Ensured safety of the local population, mitigation of all the risks of economic losses and reduction of all possible negative impacts both on humans and the environment Result 12.2.b. Increased awareness of the local population about environmental protection</p>	<p>Objective A.1- o2. Develop key messages for the public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this objective.</p>
<p>Strategic Task 12.3. – Support to creation and development of sustainable timber industry system and improve general conditions in the regional forests. Result 12.3.a: Increase awareness of the local people and relevant staff of local self-governing bodies with issues related to sustainable management of forest resources Result 12.3.b: Sustainable Management of</p>	<p>Objective C.3- o2. Elaborate and adopt new forestry legislation that promotes sustainable management of all forests, including community forest Action C.3 –o2.4. Assess the potential for the implementation of community forestry schemes; consider the role of women in the use of forest resources; implement pilot projects and support the replication of successful pilot projects</p>

<p>privately owned regional forests is introduced</p> <p>Result 12.3.c: Relevant forest infrastructure is created which will guarantee to satisfy the needs of the population in locally important forests and to maintain the forest resources</p> <p>Result 12.3.d: Forestation and forest-industrial emergency measures will be implemented in priority areas on the basis of the relevant action plan</p>	<p>Action B.1–o2.9. Conduct assessments to identify forested areas that are affected by pests and pathogens</p> <p>Action B.1–o2.10. Elaborate an action plan for the combating of forest pests and diseases and support its implementation</p>
<p>Imereti Regional Development Strategy for 2016-2021, adopted by the GoG decree #1287, July 1, 2016</p>	
<p>Target 6. Development of ecologically clean, safe and sustainable environment</p>	
<p>Objective 6.5 Improvement of state of regional forests and restoration windbreaks</p>	
<p>Objective 6.6 To raise public awareness on environmental issues</p>	<p>Objective A.1- o2. Develop key messages for the public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this objective.</p>
<p>Objective 6.7 To establish new protected areas in the Region, development of relevant infrastructure in protected areas and ensure effective management</p>	<p>Action C.4–o3.1. Establish new protected areas of different categories</p>
<p>Objective 6.10 To develop of pasturelands management plans and apply sustainable agriculture practice to reduce soil degradation</p>	<p>Action B.1–o2.6. Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches</p>
<p>Samegrelo-Zemo Svaneti Regional Development Strategy for 2014-2021, adopted by the GoG decree #1372, dated September 18, 2013</p>	
<p>Target 3: Effective management and use of natural resources To establish and support modern technologies and management practice for wise use of region’s natural resources and conservation of</p>	

natural heritage.	
Target 13: implementation of effective environmental activities	
Development of emergency forestry measures and restoration of windbreaks to ensure sustainable management of forests, raising awareness of the local population and capacity building of relevant staff of local self-governing bodies.	Action B.4.-o1.5. Integrate management methods related to agro ecosystems and natural grasslands into at least three regional strategic documents and six municipal annual work plans
To address illegal grazing	Action B.1–o2.6. Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches
Ensure water quality control of the Black Sea coastal zone and extension of Paliastomi lake monitoring network	Action B.3-o1.2. Mitigate/eradicate the human causes of marine eutrophication through the establishment of relevant effective mechanisms Action B.3-o3.2. Establish a system to assess the biological state of inland water ecosystems Action B.3-o3.3. Establish a system to assess the chemical state of inland water ecosystems Action B.3-o3.4. Conduct monitoring of inland water ecosystems within the framework of the national biodiversity monitoring system
Increase awareness of local population on environmental issues	Objective A.1- o2. Develop key messages for the general public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this objective
Ensure regional involvement in transboundary and inter-state environmental cooperation and activities	
Guria Regional Development Strategy for 2014-2021, adopted by the GoG decree #1363, dated September 17, 2013	
Target 2: Effective management and use of natural resources	

<p>- To establish and support modern technologies and management practice for wise use of region's natural resources and conservation of natural heritage.</p> <p>- Development of forest management strategy and ensure its effective implementation; Arrangement of forestry infrastructure to ensure availability of forest resources for local population and maintenance of forest ecosystems. Ensure inventory of forest resources.</p>	
<p>Target 13. Implementation of effective environmental activities</p>	
<p>Development of emergency forestry measures and restoration of windbreaks to ensure sustainable management of forests, raising awareness of the local population and capacity building of relevant staff of local self-governing bodies.</p>	<p>Action B.4.-o1.5. Integrate management methods related to agroecosystems and natural grasslands into at least three regional strategic documents and six municipal annual work plans.</p>
<p>To address illegal grazing</p>	<p>Action B.1–o2.6. Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches</p>
<p>Ensure water quality control of the Black Sea coastal zone and extension of Paliastomi lake monitoring network</p>	<p>Action B.3-o1.2. Mitigate/eradicate the human causes of marine eutrophication through the establishment of relevant effective mechanisms</p> <p>Action B.3-o3.2. Establish a system to assess the biological state of inland water ecosystems</p> <p>Action B.3-o3.3. Establish a system to assess the chemical state of inland water ecosystems</p> <p>Action B.3-o3.4. Conduct monitoring of inland water ecosystems within the framework of the national biodiversity monitoring system</p>
<p>Increase awareness of local population on environmental issues</p>	<p>Objective A.1- o2. Develop key messages for the general public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using</p>

	diverse media and all actions under this objective
Ensure regional involvement in transboundary and inter-state environmental cooperation and activities	
Racha-Lechkhumi and Kvemo Svaneti Regional Development Strategy for 2014-2021 adopted by the GoG decree #1374, dated September 19, 2013	
<p>Target 2: Effective management and use of natural resources</p> <ul style="list-style-type: none"> - To establish and support modern technologies and management practice for wise use of region's natural resources and conservation of natural heritage. - Development of forest management strategy and ensure its effective implementation; - Arrangement of forestry infrastructure to ensure availability of forest resources for local population and maintenance of forest ecosystems. - Ensure inventory of forest resources. - Support the sustainable collection of Caucasian fir cones in the Ambrolauri municipality. 	<p>Action B.1–o1.2. Set up optimal entities for forest management</p> <p>Action C.3 – o1.3. Define and implement an optimal institutional structure for the Georgian forestry sector: define the roles and responsibilities of the state and private sectors, local communities and local self-government authorities</p> <p>Action C.3 –o2.4. Assess the potential for the implementation of community forestry schemes; consider the role of women in the use of forest resources; implement pilot projects and support the replication of successful pilot projects</p>
<p>Target 3. Industry Development</p> <p>Task 3.1. Promotion of food industry development</p> <ul style="list-style-type: none"> - Promotion of the wild fruit and berries collection and processing industries, as well as juices and jam manufacturing enterprises. - Promotion of - Promotion of endemic grape varieties to increase their acknowledgement on global level; <p>Promotion of pork ham produced in Racha; Support of wine, ham and mineral water advertising in the context of initiatives for</p>	<p>Action B.4. - o2.3. Implement at least four pilot projects on sustainable harvest schemes for wild-growing plants</p> <p>Action C.5-o1.2. improve the recognition of crop and animal landraces and traditional products on the market through the development of certification schemes and the arrangement of regional fairs of</p>

<p>regional branding</p>	<p>local breeds and products, testing events, festivals and promotion campaigns</p> <p>Action C.5.-o1.3. Implement on-farm conservation programs of identified crop and animal landraces in the regions of their origin (preferably in the support zones of the protected areas); conduct trainings for local farmers in conservation, cultivation/breeding, primitive selection and production and marketing of traditional products</p>
<p>Target 13: Improvement of environmental activities</p> <p>Increase the number of water quality monitoring points, conduct regular monitoring and prevent surface water pollution;</p> <p>Development of emergency forestry measures and restoration of windbreaks to ensure sustainable management of forests, raising awareness of the local population and capacity building of relevant staff of local self-governing bodies.</p> <p>To raise environmental awareness of local population;</p> <p>Ensure regional involvement in transboundary and inter-state environmental cooperation and activities;</p> <p>Arrangement of infrastructure in the Racha-Lechkhumi-Kvemo Svaneti National Park and ensure effective management</p>	<p>Action B.3-o3.2. Establish a system to assess the biological state of inland water ecosystems</p> <p>Action B.3-o3.3. Establish a system to assess the chemical state of inland water ecosystems</p> <p>Action B.3-o3.4. Conduct monitoring of inland water ecosystems within the framework of the national biodiversity monitoring system</p> <p>Action B.1-o1.2. Set up optimal entities for forest management</p> <p>Objective A.1- o2.</p> <p>Develop key messages for the general public as well as for specific target groups for raising awareness of biodiversity (including agrarian biodiversity) values and ecosystem services; launch campaigns using diverse media and all actions under this objective</p> <p>Action C.4-o3.1. Establish new protected areas of different categories</p>
<p>Strategic Development Plan of 2016-2021 of the Autonomous Republic of Adjara (Only draft of the strategic development plan was available during the report preparation)</p>	
<p>Priority 1.4 - Providing safe environment for life and leisure</p> <p>Task 1.4.2: To apply Ecological Standards and</p>	<p>Action B.3-o1.1. Conduct a study on the causes and main sources of marine eutrophication</p> <p>Action B.3-o1.2. Mitigate/eradicate the human</p>

<p>Prevention of Environmental Pollution</p> <ul style="list-style-type: none"> - Water resources protection and rational use taking into account the principles of sustainable development; - Maintenance, protection and restoration of forests, maintenance climate and water regulation, protective functions, cultural features of the forest ecosystems. <p>Monitoring of all sources of atmospheric air and water pollutions on the seacoast and determination of wastewater and atmospheric air quality indicators.</p>	<p>causes of marine eutrophication through the establishment of relevant effective mechanisms</p>
<p>Strategic Direction 5 – Adjara is a region where cultural heritage and environment are subject of care of all population</p> <p>Objective 5.3.1 Protection of the region's biodiversity</p>	<p>Measures under objective 5.3.1 of Adjara AR development strategy overlaps with NBSAP objectives. It is recommended to revise this part of strategic document and indicate priority measures for Adjara AR PAs.</p>
<p>Task 5.3.2 Improvement of efficiency of forestry sector management systems</p>	<p>Action B.1–o1.2. Set up optimal entities for forest management</p> <p>Action C.3 -o1.1 Develop a forest policy, strategy and action plan in a participatory manner</p> <p>Action C.3- o2.3 Elaborate and implement an optimal system of forest categorization: identify category V (IUCN) ecological corridors and forests of High Conservation Value (HCV) and assign them a relevant status</p>
<p>Task 5.3.3 Protection and restoration of forest resources of the region</p>	<p>Action B.1–o2.3. Establish fast growing forest plantations in forest clearances so that timber and fuel wood can be produced and provided primarily to local communities</p> <p>Action B.1–o2.9. Conduct assessments to identify forested areas that are affected by pests and pathogens</p>

	<p>Action B.1–o2.10. Elaborate an action plan for the combating of forest pests and diseases and support its implementation</p> <p>Action C.3- o2.3 Elaborate and implement an optimal system of forest categorization: identify category V (IUCN) ecological corridors and forests of High Conservation Value (HCV) and assign them a relevant status</p> <p>Action B.1–o2.6. Conduct pilot projects that demonstrate sustainable grazing methods and modern approaches that help reduce grazing pressure on the forest; promote the replication of successful approaches</p>
<p>Objective 5.3.4: Promote effective and optimal use of timber and non-timber resources</p>	<p>Action B.1-o2.2. Improve the existing system of wood tracking to ensure timely detection of illegal logging</p>

With support of the World Bank, strategic impact assessment of the Regional and tourism development strategies of Samtskhe-Javakheti and Mtskheta-Mtianeti was carried out in 2016.

The development of the following sectors is supported by strategic plans for both regions: agriculture, energy, infrastructure, and tourism, small and medium enterprises.

Strategic Impact Assessment reveals following possible adverse effects on biodiversity in the mentioned regions:

- The intensification of the cattle-breeding and increase of number of domestic animals under the conditions of limited reserves of agricultural land and pastures will lead to invasion of grazing activities into the untouched natural landscapes and sensitive and valuable alpine and subalpine meadows of Samtskhe Javakheti and Mtskheta-Mtianeti regions.
- Intensification of agricultural activities requires increased production and supply of pesticides and fertilizers. This, in its turn, increases the risk of pollution of soil and surface and groundwater resources with further effects on human health.
- Intensification of cattle breeding and poultry is related to increased waste production (including hazardous wastes). This, in its turn, increases the risk of environmental pollution, especially contamination of local water resources (small rivers are often used for cleaning and washing needs and wastewater is discharged into the rivers).
- Risks of losing endemic species of fish due to introducing and spread of alien species. The fish farming in both regions is supported mostly in artificial reservoirs, but also in the natural lakes and ponds. Even

in case of farming in artificial reservoirs, the latest are not well isolated and the spread of cultivated species into the natural environment is not a rare case. In both regions, the endemic-trout species in mountainous rivers are gradually replaced by alien trout species escaping from artificial ponds.

- Environmental risks associated with the plans of developing a system of small and large HPPs such as Change of hydrological regime and hydro-ecological features of the rivers and ravines affected by the HPP projects and irreversible damage of landscapes and habitats occupied by reservoirs and HPP facilities.

- The potential negative impacts of the wind-farms and solar power farms are related to the permanent take of significant areas of land and associated impacts on landscapes and habitats of the affected land. The other type of environmental impacts is related to the death of birds and bats due to collision with the facilities. These environmental impacts have local significance and could be managed through the site selection and mitigation plans developed under the project-specific EIAs.

- According to RDSs, less share of adverse impact on the environment falls on the large enterprises, functioning in the regions. Large production volume and investments enable them to equip their enterprise with modern cleaning and purification technologies, provide waste recycling and re-utilization. Much higher is a cumulative impact of many separate small and medium-sized enterprises, most of which are developed with the limited financing and poor environmental management and are not adequately controlled by the supervising agencies. Intensive promotion of the new small and medium-scale businesses may even further aggravate the situation. Cumulative impacts of small and medium enterprises is high in relation to pollution due to emissions, wastewater discharges and improper waste management, uncontrolled logging and timber production etc.

Impact of new local and regional roads on pristine environs - new roads often make available access to the untouched environs (forests; wetland; other sensitive habitats) and may stimulate uncontrolled logging in earlier preserved areas, poaching and increased tourist flows exceeding the carrying capacity of the area. Besides that, there is a risk of introducing pests and spread of forest diseases from affected and degraded forest sections to pristine and non-affected forests. Introduction of alien species of plants transmitted by vehicles is another risk.

The potential negative impacts of the **development of water supply, sewage systems, wastewater treatment plants, gas and electricity supply** are related to the permanent take of land and associated impacts on landscapes and fragmentation of habitats. The other types of environmental impacts are related to the construction activities. The strategic environmental impact on the natural environment of the mentioned types of infrastructure projects is beneficial as leads to reduction of waste and wastewater related pollution, fossil fuel related pollution and reduction of using timber as an energy source. In general, this will contribute to reduction of greenhouse gas emissions.

The above-mentioned risks are analyzed in the regional development strategies and mitigation measures are defined. Additional mitigation measures were recommended by SECHSA.

11. Social-Economic Development Strategy of the Country

Social-Economic Development Strategy of Georgia “Georgia 2020”⁶ is orientated on country’s economic development, improvement of investing and business environment, overcoming poverty and infrastructure development.

Regarding biodiversity the strategy highlights that the protection of forests and the introduction rational practices for their exploitation will significantly improve the population’s socio-economic standing, particularly as the development of agriculture, hydro-electric power generation, tourism and other sectors of the economy is directly linked to the health of the country’s forest ecosystems.

In the Strategy is mentioned that, introduction of modern models of forest management and innovative technologies (taking into consideration the need to preserve forest biodiversity, its recreational, water regulatory and soil protection functions) will reduce the negative consequences of forest degradation and will increase economic benefits through the improvement of forest ecosystem services.

Strategy also highlights the importance of Environmental Impact Assessment while infrastructure planning.

“Georgia 2020” is implemented through the Basic Data and Directions Document (BDD), State Budget, as well as through the Strategies and Action Plans prepared by the Ministries of Georgia.

The Basic Data and Directions Document for the Period 2017-2020 considers following measures for biodiversity conservation:

- New regulatory norms will be implemented, with purpose of protection -maintenance of biodiversity and sustainable use of biological resources, including in hunter and fishery fields;
- The state will ensure the promotion of expansion of protected areas and ecotourism;
- With purpose of implementation and promotion of sustainable forest management practice, effective mechanisms will be established for taking care, protection and restoration of forests, which will promote maintenance – improvement of qualitative and quantitative indicators of the forests;

Governmental Program “Freedom, Rapid Development, Prosperity” (2016-2020) was adopted in November 2016. Four-point plan for country’s fast development is identified in the document:

- Economic Reform;
- Education Reform;
- Spatial Planning Reform;

⁶Adopted by the Decree of Government of Georgia No.400, June 17, 2014

- Governing Reform.

Governmental program foresees adoption and implementation of new regulations aiming protection - maintenance of biodiversity and sustainable use of biological resources, including hunting and fisher, which corresponds to NBSAP's action A.3-o4.1. - *Improve the existing regulatory framework through the integration of the country's obligations that derive from its bilateral and multi-lateral agreements into the national legislation.*

The governmental program includes promotion of expansion of protected areas and ecotourism that corresponds to NBSAP's objective C.4-o3. - *Increase total protected areas coverage* and all actions under this objective.

The governmental program also contains obligation for implementation and promotion of sustainable forest management practice, effective mechanisms for protection and restoration of forests. This corresponds to NBSAP's national target C.3 - *By 2020, forest biodiversity is safeguarded through sustainable management policies and practices and to the relevant activities under this national target.*

Spatial planning reform is also foreseen by Governmental Programm as well. However, biodiversity issues are not integrated in the activities planned in this direction. Although NBSAP Action A.3-o1.3 envisages modification of spatial planning to integrate of biodiversity conservation issues in this process.

12. Third National Environmental Action Programme of Georgia 2017-2021 (draft version)

The National Environmental Action Programme (hereinafter NEAP-3) identifies the environmental priorities of Georgia, establishing at the same time the strategic objectives/directions and long term goals as well as targets and activities required to improve the environment during the coming 5 years.

The following target and objectives are identified regarding nature protection:

Goal: To ensure that biodiversity is valued, conserved, restored and wisely used, ecosystem processes and services are maintained, and a healthy environment is sustained

Targets:

Target 1: Promotion of sustainable management of biodiversity

Target 2: Protection and prevention of the loss of species and habitats

Target 3: Expansion of protected areas network

Target 4. Improvement of protected area management system

Target 5: Promotion of eco-tourism on protected areas

In following table actions regarding biodiversity identified in environmental action programme (NEAP 2017-2021) are presented.

The table below presents the measures envisaged by the National Environmental Action Program (NEAP 2017-2021) and relevant actions from NBSAP.

Measures envisaged by the NEAP	Relevant objectives and actions from NBSAP
Target 1: Promotion of sustainable management of biodiversity	
Status Assessment of Georgian Biodiversity	<p>Action C.1.-o1.1 Determine the conservation statuses of rare animal species and introduce changes to the National Red List accordingly</p> <p>Action C.1.-o1.4. Revise the existing list of plant species that are important for conservation and introduce relevant changes to the National Red List</p> <p>Action C.1.-o1.5. Complete the identification of important plant areas</p> <p>Action C.1.-o1.6. Conduct inventories of plant and animal landraces and CWRs (including plants harvested for food and medicine), of endemic microflora found in traditional products and of related traditional knowledge; assess their statuses and create a relevant red list</p>
Finalization and promotion of the law on biodiversity	Action A.3- o4.1. Improve the existing regulatory framework through the integration of the country's obligations that derive from its bilateral and multi-lateral agreements into the national legislation
Development of Legislation on hunting and fishing	Action A.3- o3.1. Conduct a review of the regulations for licensing and permit issuance for the use of natural resources with respect to the mitigation of their impact on biodiversity and protected areas and incentives for conservation
Establishment of effective Biodiversity monitoring system	Objective C.1- o2. Set up an effective and comprehensive biodiversity monitoring system and all actions under this objective.
Establishment of sustainable hunting system	Objective B.6 -o1. Establish a national sustainable hunting system (including legal and institutional frameworks) with the involvement of all stakeholders and all actions under this objective.

Target 2: Protection and prevention of the loss of species and habitats	
Conducting conservation measures regarding endangered species (identified in NBSAP)	Objective C.2 - o1. Implement effective species-specific conservation measures including reintroductions and encouragement of natural growth and all actions under this objective.
Identification and designation of special protection areas (SPA) for bird species	
Improvement of Habitat protection	Objective B.1 - o1: Develop a legal and institutional base for the sustainable use of forests and other natural habitats and all actions under this objective. Objective B.1-o2. Reduce pressures on forest ecosystems and all actions under this objective
Research of pressure on inland water ecosystems	Objective B.3-o3. Reduce the level of pollution of inland waters to ecologically acceptable levels and all actions under this objective.
Reduction of direct pressure on Black Sea biodiversity	Objective B.3-o1 Assess the feasibility of reducing Black Sea eutrophication and implement relevant effective measures and all actions under this objective.
Designate not less than 5 Emerald sites	Action C.4-o4.2. Develop the Emerald Network of Georgia
Study of candidate Emerald sites for their designation	Action C.4-o4.2. Develop the Emerald Network of Georgia
Target 3: Expansion of protected areas network	
Establishment of new protected areas	Action C.4-o3.1. Establish new protected areas of different categories
Creation of support Zones in new protected areas	Action C.4-o5.4. Assess the feasibility of various mechanisms for the avoidance/mitigation of any direct and indirect impacts on PAs from land use and/or development projects outside of PAs; introduce relevant changes to all related laws
Expansion of existing protected areas	Action C.4-o3.2. Expand existing protected areas as needed

Prepare nomination of the sites of world heritage and submitting for approval	
Presentation of new protected areas for a Green List	
Development of cooperation between the protected areas of the cross-border and neighboring countries of Georgia	Objective C.4–o7. Develop transboundary cooperation with protected areas of neighboring countries and all actions under this objective.
Target 4. Improvement of protected area management system	
Development of Qualification raising concept for Agency of protected areas staff	Action C.4–o5.1. Develop the knowledge and capacity of the personnel of the APA and PA administrations through regular training programs
Development of management plans for remaining protected areas	Action C.4–o5.2. Prepare management plans for protected areas that do not have them
Creation of law enforcement guidebook for protected areas	Action C.4–o1.1. Improve the PA legislation (by the approval of a full set of regulations) using the latest IUCN guidelines
Development of biodiversity status plans for protected areas including cross-border monitoring system	
Establishment of a modern technology-based system of law-enforcement proceedings (data accounting and analysis)	
Implementing/developing a restoration/conservation plan for endangered species of national parks	
Target 5: Promotion of eco-tourism on protected areas	
Development of sustainable tourism strategies and action plans for protected areas	
Developing of new tourist infrastructure and services on the protected areas	

Regarding forest management following goal and targets are identified in NEAP:

Goal: To improve the overall condition and ecological functions of forests through development and establishment of a full-scale sustainable forest management system in Georgia

Targets:

Target 1: Improvement of legal framework and development of the Sustainable Forest Management system

Target 2: Reduction of pressure on the forest through promoting the use of alternative fuel sources and improvement of qualitative and quantitative characteristics of forests

Target 3: Optimization of forest management and control entities

Target 4: Promotion of the use of forest ecosystem services

The table below presents the measures envisaged by the National Environmental Action Program (NEAP 2017-2021) and relevant actions from NBSAP.

Third National Environmental Action Programme of Georgia 2017-2021	Relevant Objectives and actions from NBSAP
Target 1: Improvement of legal framework and development of the Sustainable Forest Management system	
Finalization and promotion of the "Forest Code"	<p>Action B.1–o1.1 Develop and submit to the Parliament for approval a forestry legislation that is fully based on the principles of sustainable use</p> <p>Action C.3–o2.1. Revise the forest code in a participatory manner</p>
Development of bylaws relevant to the Forest Code	<p>Action C.3 –o2.2. Adopt relevant forest regulations and standards, in a participatory way, that promote sustainable use of non-wood products, the restoration of natural forest landscape and adaptation to and mitigation of climate change</p>
Development of Forest Monitoring and Information System	<p>Action B.1–o2.1. Monitor the rate of the loss and degradation of forest habitats</p>
Development and adoption of Forest Reform	<p>Action C.3 -o1.1 Develop a forest policy, strategy</p>

Strategy and Action Plan	and action plan in a participatory manner
Development of forest education and promotion of involvement of relevant qualified professionals in forest management process	Action E1-o2.2. Update the current forestry curricula at universities Action E.2 –o1.5. Improve the teaching of biodiversity (including of agrobiodiversity and the microbiology of traditional products) in the curricula of relevant professional and higher education institutions and develop relevant information resources
Verification of Georgian Forest borders and their registration	
Forest management (detailed) inventory in priority regions and development of management plans	
Forest inventory at national level	
Target 2: Reduction of pressure on the forest through promoting the use of alternative fuel sources and improvement of qualitative and quantitative characteristics of forests	
Development of a state program for providing population and public entities with fuel resources	
Promotion of access to alternative fuel sources for population and public entities	
Development of national plan for restoration of degraded forest areas and restoration of identified priority areas	
Target 3: Optimization of forest management and control entities	
Evaluation of capacities, identifying needs and	Action B.1–o1.2. Set up optimal entities for forest management

optimization of forest management entity	Action C.3 – o1.3. Define and implement an optimal institutional structure for the Georgian forestry sector: define the roles and responsibilities of the state and private sectors, local communities and local self-government authorities
Evaluation of capacities, identifying needs and optimization of forest control entity	
Target 4: Promotion of the use of forest ecosystem services	
Evaluation of multifunctional potential of forests	
Improvement of necessary infrastructure required for tourism development on the Georgian forest fund territory	