



Union for Sustainable Development  
**ECOVISION**

Georgian Biodiversity Protection Strategy and Action Plan Update

Topical Direction 6 – **Public Participation and Education**

Analysis of the Situation

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## Introduction

The Article 13 of Biodiversity Convention deals with education and awareness rising in public and requires from parties to promote understanding of the importance of biodiversity maintenance measures, the propaganda through mass media, taking these issues into the educational program, and in this respect, cooperation with other countries and international organizations.

The Convention Parties discussed the issue of implementation of the Article 13 for the first time in the 4th conference in 1998, and decided that the component of the education and awareness-raising in public to be integrated within framework of all thematic and sector work program under the Convention. At the 6th Conference of the Parties (2002) was adopted decision VI/19 of communication, education and public awareness (CEPA), which includes program elements of CEPA global initiative, such as formation of the communication, education and public awareness global networks (i), knowledge and experience sharing for the further development of the CEPA (ii) and strengthening the capacities of Parties for that they could put the biodiversity issues into other sectors (iii). At the 8th Conference of the Parties was adopted decision VIII/6, which includes the short list of the priority actions for CEPA work program implementation:

1. Formation of the process or structure for implementation of CEPA activities;
2. Assessment of knowledge and awareness of biodiversity and determination of communication opportunities;
3. Determination of the main messages;
4. Implementation of media relations strategy;
5. Development of CEPA strategy developing and introducing tools;
6. Organizing working meetings for CEPA strategy introducing;
7. Global network support and infrastructure development;
8. International Day for Biological Diversity;
9. Raise profiles of subsidiary body meetings addressed to the CEPA in the issues of the Convention parties' conferences and the scientific-technical and technological ones.
10. Enhance formal and informal education in the biodiversity area.

Some decisions taken by the Parties of Conference is related to the development of CEPA programs. Including decision IV/10 that requires from the parties to pay special attention to

Article 13 of Convention during developing the biodiversity national protection strategies and action plans, to encourage education in the field of biodiversity protection, allocate appropriate resources, to include the problems of biodiversity into the educational strategies, strategically use of education and communication tools during formulation, implementation and evaluation of biodiversity.

The Decision 18 adopted in the 10th Conference of Parties, which proposes to the Parties to strengthen CEPA's activities to achieve strategic goals of 2011-2020 Convention, these goals are to establish an appropriate coordination centers, assess the level of public awareness, and pay a special attention to access to genetic resources and public awareness about the Nagoya Protocol of benefit sharing, the Decision X/18 emphasize the importance of announcement about the Biodiversity Decade (2011-2020) for implementation of CEPA activities by the UN.

CEPA's programs are implemented in the field of biodiversity by Georgia ratified under other conventions, on the basis of relevant decisions and resolutions adopted by the Conference of the Parties, which requires from the parties developing and implementing of strategies and action plans based on the national level. Convention (Ramsar Convention) Resolutions VII.9, VIII.31 and X8 on Wetlands demand from the Parties to consider CEPA as a key instrument for implementing the Convention, to develop specific strategies and to include relevant measures into the wetland protection and preservation plans. "The Convention on International Trade in Endangered Species of Wild Fauna and Flora" (CITES) requires from the administrative bodies to ensure broad public awareness about the requirements of the Convention. Decisions and conservation plans made on the separate species under the CITE and the Convention on the Conservation of Migratory Species of Wild Animals (CMS) also include guidance on the measures of public awareness. "The Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea against Pollution" (ratified under the Parliament's Resolution N1710-II on September 24, 2009) also obliges the Parties to inform the public about biodiversity of the Black Sea, its conservation and protection areas, to include interested parties and public into the activities of the protected areas, species and landscape protection and assessment of the environment impact. Also include the Black Sea Biodiversity issues in the educational programs.

Under the conservation strategy and action plan of Georgia's biodiversity (2005) the issue of the people's awareness on Georgia Biodiversity in order to raise the environmental awareness, and

therefore, increase the activity of people during the decision-making process, was defined as one of the strategic areas.

The public participation and education was considered as one of the key issues at the Expert meeting (July 1, 2011), on which should be focused the renewed NBSAP.

As a result of the various studies and assessments carried out in recent years, the low level of the public and decision-makers awareness in Georgia is considered to be one of the reasons for the threats of biodiversity.

## **1. Access to information related to the Biodiversity issues**

### **1.1 The legislative framework**

The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) entered into force for Georgia in 2001. The 4th and 5th Articles of the Aarhus Convention establish the obligation of state authorities to provide access to environmental information. According to the Convention, environmental information included in the information on landscape and natural sites, biological diversity and its components' condition, and on genetically modified organisms. Under the Convention, public authorities are obliged to possess and update environmental information related to their functions and provide to increase the volume of environmental information gradually in the electronic database. Information available in electronic form shall include a report, legislation, strategic and operational plans and programs on the state of environment.

The Georgian legislation does not provide a definition of environmental information; however, the General Administrative Code of Georgia (1999) provides public access to information and openness. Only the official document is considered as public information and it means the information kept in a public institution, as well as the information received, processed, created or sent related to the public servant or the institution's activities. According to the General Administrative Code the right to request public information shall have everyone and it need not be specified the motive or purpose of the request for public information. The Code defines a public agency's rules for issuing public information, dates, details of which secrecy is not allowed.

A public agency shall establish a public servant in charge of public information access.

According to Article 49 of the General Administrative Code of Georgia on 10th of December of each year the public agency shall submit to the President and Parliament of Georgia the report on issuance of public information. In compliance with the Code requirements the abovementioned environmental report shall be prepared by the Ministry of the Public Relations. According to the 2011 report, 151 applications had received in the Ministry of Environment during the year, of which a large part of them were related to the biodiversity issues. Public information was issued under the request in 101 cases, and in 4 cases the decision was made in connection with the granting of partial information, under the Paragraph 2 of the Article 2 of the Clause 41 of Georgian Constitution and Chapter 2 of the General Administrative Code the applicant's request was refused. During the year in the Ministry of Environment office by public servants and the persons responsible for violating the requirements of the Administrative Code of the disciplinary cases have not been identified.

“The principle of access to information” is determined as the basic principle of environmental protection under the Georgian law about Environmental Protection (1996) - information about the state of the environment is open and available to the public. The public is entitled to receive full, accurate and timely information on their working and living conditions (Article 6); the duty of the Ministry of Environment is to possess and update the environmental information and provide availability to the environmental information (Article 13).

In order to public awareness the Georgian Ministry of Environmental Protection certifies the national report on the state of the environment (Article 14) in every 3 years. The compilation rule of this report is determined by the President's Decree #389 of 25 June 1999 about the “The rule of creation of the national report on the state of the environment”. Environmental national report is required to post.

In accordance with this law the Ministry of Environment within the competence coordinates the state accounting, reporting and evaluating the indicators of qualitative and quantitative environmental condition, which includes the cadastres planning, statistics, inventory, passport and cartography of the natural resources and environmental condition (Article 26). The Ministry carries out coordination of the common environmental observation (monitoring) system and the results should be available to the public (Article 27).

Moreover, today according to the Georgian law on “Forestry Fund Management” the forest monitoring and the creation of database from the forest monitoring results is the responsibility of the NNLP Agency of Natural Resources of the Energy and Natural Resources Ministry.

Under the Georgian law about the “Animal World” (1996), the natural and legal entities are entitled to obtain timely, objective and comprehensive information from the State Authorities about animals and their living conditions. On the other hand, the State for ensuring the animal protection, control the quantitative and qualitative changes among wild animal population (including endangered species) should make the accounting of the animals and using them and based on it the fauna State Cadastre is made, which should be financed from the State budget (Article 59).

In accordance with the Forest Code of Georgia (1999) the representatives of residents and public organizations have the right to obtain complete, objective and timely information about the condition of the State Forestry Fund (Article 35). And, on the other hand, the State Forestry Fund managing authorities should provide access to information (Article 36), as well as they should put information on the official website about the pre-selected forest areas location and number of wood resources designated for felling for long-term use of the forest. The Code includes provisions on the monitoring of the State forestry fund, which is defined as the system of State forestry fund assessment, the state of the dynamics of continuous observation, analysis and forecasting. State forest monitoring based on information supplied to the Georgian National Statistics Office (Article 25.)

According to the Georgian law about “Red List” and the “Red Book” (2003) the physical and legal persons have the right under the Georgian Legislation to receive information in time about the issues of “Red List” and “Red Book” within the scope of rules, apply to the relevant authorities, promote endangered species protection, restoration and preservation of state and regional programs, participate in the Georgian “Red List” and “Red Book” issues discussion, in accordance with the set rule request change the decisions of the issues of objects location, design, construction, reconstruction or maintenance, which may have harmful influence on endangered species (Article 8). Any citizen may submit a proposal for the containing endangered species into the “Red List” to the Ministry of Environmental Protection or to the Endangered Species Committee (Article 17).

## **1.2 Tools for Collecting and Spreading of Information**

### ***The Monitoring System***

In decision-making process the lack of information about the various components of biodiversity, the intensity of the threats (the scale of impact) and the effectiveness of actions is deterrent for the informed public participation. On the other hand, supply the timely and constantly updated information to the public about the Georgia's state of biodiversity and the threats affected on them will contribute to obtain the support of public to the conservation activities.

By the coordination and initiative of biodiversity security service of the Ministry of Environment is taking place the establishment of the national system of biodiversity monitoring. Minister of Environment on May 22, 2009 approved by Order #i-293 the 25 indicators of biodiversity state, pressure and reaction. In accordance with the 16 indicators the methodology of data collection and analysis was approved by the Minister of Environmental Protection on December 20, 2011 Order #65. Under this Order there should be started to collect and analyze data gradually from the January 2012. It should be noted that one indicator of the response is the public awareness about the biodiversity (change public attitude to the biodiversity), under which the assessment should be carried out once every 2 years in a variety of community focus groups of survey/interviews. So far such polls have not been conducted in Georgia (except for the protected areas of inquiry), so we do not have a real picture of the importance of biodiversity protection and preservation about the public awareness and support of the nature protection activities.

Detailed information about the formation of the biodiversity national system is placed on the following website: [www.biomonitoring.moe.gov.ge](http://www.biomonitoring.moe.gov.ge). On this website it has been already placed the information with the following indicators: agricultural land use intensity, genetically modified organisms, pastures use intensity, infrastructure impact on the protected areas, the total area of the protected areas network, protected areas managed by the qualified personnel on the basis of the management plans, nature conversation zones.



### ***Monitoring Biodiversity in Protected Areas***

The Georgian Minister of Environment approved the Order#26 of July 1, 2011 in accordance with the Article 2 of the provisions of "Protected Areas Agency's Provisions" the one of the direction of Agency's activities is organizing monitoring and scientific researches, processing data observation, storage and distribution on the Protected Areas.

Scientific research-monitoring is conducting on the Georgian protected areas by the protected area's agency and its territorial bodies, other public research institutions and nongovernmental organizations, also on the basis of individual projects.

The Georgian Minister of Environment approved the Order#27 of July 1, 2011 in accordance with the typical territorial administrations provisions of the Agency of Protected Areas, from administrations should be conducted accounting and monitoring of the activities, ecosystems and species permitted on the protected areas and organizing scientific-research activities. Based on the monitoring carried out by the territorial administrations of the Agency they are required along with other periodic reports to make the annual chronicle of nature and submission it to the Agency. Important information obtained by the administration is periodically placed on the Protected Areas Agency website. The Agency is produced the annual reports as well, which include each area of the Agency's activities, the reports are sent to different structures. As chronicles of the nature as well as the annual reports of the Protected Areas Agency are public. Interested parties may obtain them on the basis of applying to the Agency.

### ***National Report on State of Environment***

According to the law on Environmental Protection the Environment Ministry was preparing annually, and under the changes to the law in 2011 it will prepare once in the three year the national report about the state of environment, which refers to the following issues: species, ecosystems and habitats, the national plan of biodiversity protection. The national reports of the 2001, 2002, 2003, 2004 and 2005 are placed on the Aarhus Center website <http://aarhus.ge/index.php?page=105&lang=geo>, and national report of the 2006 has not been approved yet and published respectively. These national reports have more descriptive character and internationally agreed indicators were not used during their preparation.

The national report on the state of environment of 2007-2009 years has recently been approved by the Minister of Environment, draft of the document is placed on the website

[http://soegeorgia.blogspot.com/p/blog-page\\_08.html](http://soegeorgia.blogspot.com/p/blog-page_08.html) (the blog was covering the development of the environment report progress of the project). During making the last national report the UNECE manual was used for preparation the environmental assessment reports based on the indicators, which was recommended for Central Europe, Caucasus and Central Asia by the “Environment for Europe” Ministerial Conference in Belgrade (2007). According to the indicators mentioned in the area of living environment protection, the difficult of the report preparation was the absence of quantitative data of conditions of the individual species and ecosystems due to the absence of the monitoring system.

### ***Statistical Data***

The National Statistics Office of Georgia places on their website annually the publication “Georgian Natural Resources and Environmental Protection” (<http://www.geostat.ge/>). This publication includes information on the forest resources, forest fires, forest restoration-planting, promoting natural renovation of forest, the volume of wood by the forest cutting, illegal cuts of forest, protected areas, protected animals and birds in the protected areas, expenses for the saving protecting areas. These statistical data are provided to the National Statistics Office, the Natural Resources Agency of the Energy and Natural Resources Ministry and Protected Areas Agency of the Environmental Protection Ministry.

Preparation of statistical data in the Protected Areas Agency is providing on the basis of the territorial administrations’ submitted information and Agency’s Central Office information. The direct responsibility of the of the scientific experts of territorial administrations is to assist research and monitoring activities and help other persons involved in the process of research that are represented the other institutions. Based on the field of the scientific research done by a special method and on the basis of produced and updated database, they carried out twice in a year providing reports of processed research, monitoring reports, plans and programs submission to the Agency.

However, because of protected areas are deprived of the ability to make full and regular accounting, data reliability is low. The reasons are caused by the lack of qualified personnel, appropriate infrastructure and absence of funding for monitoring and researches.

In 2011, as a result of reorganization, there is changed the monitoring and managing system of the existing forest. As a result of distribution functions between former Environment and Natural

Resources Ministry and Ministry of Energy, when the Ministry of Environment and Energy and Natural Resources Ministry have established, there were established the Natural Resources Agency and the former Forestry Agency is now within it as the Forest Management Department. After the cancellation of the environmental protection inspectorate in the Environment protection Ministry, the function of the monitoring of the forest resources relied to the Department of monitoring that is in the same Natural Resources Agency. According to the Order #1 of the 18th of March, 2011 from the Minister of Energy and Natural Resources, according to the provision of Natural Resources Agency – of the approved public legal person – their function include forest fund monitoring, processing the obtained information, accounting and analysis.

However, despite the reforms, within the country still is not going the complete inventory of the existing forest resources. This activity should be made by the long-term license holders. But in the areas issued under the license include only the part of the forest territories, therefore, the carried out inventory do not give us valuable information about the reliability and quality.

### ***Biodiversity Resource-Center of Georgia***

According to the Article 18.3 of the Biodiversity Convention in the framework of Convention the Clearing-House Mechanism (CHM) is made, which aims to promote effective performance of the Convention by the relevant information service, technical co-operation and sharing knowledge. CHM consists of the website of the Convention and the network of national resource-centers. Biodiversity resource-center in Georgia was established - [www.chm.moe.gov.ge](http://www.chm.moe.gov.ge) with the help of the GEF, UNDP and German Government. The resource-center is not included in the international network yet. On the website you can see the information about Georgian biodiversity (species and habitats), threatens, legislation, international obligations, red list, using natural resources, organizations and other issues related to the biodiversity. The information on the website needs permanent updating and it should be connected in the internet.

### ***Aarhus Center***

By the mutual initiative of Organization for Security and Cooperation in Europe (OSCE) mission in Georgia and the Ministry of Environment and Natural Resources of Georgia, the Aarhus Center was created in Georgia in 2005 that promotes publicity of environmental information by the regularly updated website, environmental library and organizing various informational events. <http://aarhus.ge/index.php?lang=geo&page=17>. On the Aarhus Center website is placed

environmental and biodiversity protection legislation, strategic documents, and the documents for public consultations. Under the various projects shall be made the accounts about the information of environmental organization.

### ***Websites, Publications, Information and Awareness Raising Campaigns***

Information in the website of the NNLP Agency of Protected Areas <http://www.apa.gov.ge/> is updated permanently about the ongoing events of the protected areas and Agency. Interactive map of the protected areas is placed in the site.

The website [www.biodiversity-georgia.net](http://www.biodiversity-georgia.net) made by the initiative of the Ilia State University include the list of the species described in the territory of Georgia, information about their conditions, pictures, maps of the area. The aim of the website is to introduce Georgian biodiversity to the scientific association. Website is updated gradually.

Information about the Georgian Red List species is placed on the official website of the Environment Protection Ministry and National Commission of the Red List <http://red-list.ge/>. On the website is placed only the part of the information about Red List Species.

Besides abovementioned websites for the dissemination of information related to the protection and preservation of biodiversity is used electronic networks of Regional Environment Center of Caucasus (RECC) of the Caucasus Environmental NGO Network (CENN) by the government and non-government organizations. The page Georgian biodiversity is created in the social network Facebook.

The awareness-raising campaigns have been initiated by the Biodiversity Protection Service, which aimed at schoolchildren and their teachers. "Garden Birds' Hour" takes place after 2009 to celebrate the International Biodiversity Day (May 22), and it includes 7000 public schools students from 358 schools of Georgia. About the Georgian Red List Species the campaign was launched in 2010 and included 250 public schools. These campaigns are conducted by the support of the German Society for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ) and Center of International Migration and Development (CIM). They are published regularly Bio-topics, the news. It is important that the protection of biodiversity and the further extension of such campaigns to be initiated.

It is very important the role of NGOs for the public awareness. Public information, education and awareness-raising activities are the main component of the NGO sector. By the Caucasus representatives of WWF, CENN, RECC, NACRES, the Georgian Greens, ECOVISION and other NGOs are performed public awareness campaigns and other activities in the field of biodiversity protection and conservation both, in local and national levels.

One of the strategic directions of the performed program in the Caucasus Region in 2005-2010 by the CEPF was providing awareness-raising of decision-makers, public and private sector support for maintaining the biodiversity. In the framework of this direction the program supported the edition of "Beautiful Georgia" magazine, there was shot documentary film "Mountain Goat's Return", was published the book "Caucasus- Treasure of Nature". The newspaper articles, digests, radio broadcasts, advertising spots, exhibitions and calendars were made in the framework of the program. CEPF supported in Georgia an interesting initiative that was aimed at developing cooperation between local government bodies and journalists. A network of journalist were set up in two regions of Georgia within the project, also there were conducting trainings for journalists and local authorities. The relevant consultations for interested journalist with environment topics were conducted by the Caucasus Regional Environmental Center under the support of CEPF. There were conducted 11 trainings, 120 journalists, 40 of the representatives of the local government and 45 of NGO representatives from Georgia and Azerbaijan took place. 2 transnational media-tours were organized.

Very important and effective measures are implemented for the popularization of protected areas.

At the minor zones of protected areas are conducted meetings with various interested people, organized from Agency of Protected Area in order to raise awareness in the local community, and as well there are conducted workshops for various target and age groups, trainings, conferences. Eco-tours, eco-camps and media tours are arranged in the protected areas. The different kinds of environment protection activities are conducted, and are arranged meetings with the population living in protective areas. According to the so-called Green Calendar, periodically are celebrated the several of environmental days. By the initiative of Agency are organized the specific contests for high schools students, in 2011 there were held the contest relating to the International Day of Biodiversity, the winner won the eco-tour on one of the protected areas. The information corners are opened in several educational institutions about

the protected areas. At the same time, the publication of printed materials about the protected areas are made from time to time, which are distributed free of charge by the Agency, souvenir production is done as well. In last 2011, in the eco-educational activities about 70 000 people took place, as compare to the last year it is 1.5 time higher. The Agency has carried out a survey from people of surrounding villages through public perceptions, the social impact monitoring and evaluation questionnaire. Based on the last year's survey results the public awareness for protected area increased approximately to 15% in the last three years. Residents said that the development of guest houses and traditional activities improve their living standards. The Agency is also developing special programs for local schools in order to involve in environmental activities the people who live in the support zone of protected areas. IUCN in 2010 prepared the "Young rangers program" in which was conducted the environmental awareness-raising activities of the students; the tours were conducted as well. In respect to the Georgian protected areas there is made the TV show as well in a form of a documentary and it is showed in one of the TV-channel. You can get information about Georgian protected areas, existing biodiversity, eco-tourism products established in the protected areas, ongoing projects and other activities on ([www.apa.gov.ge](http://www.apa.gov.ge)). Site contains the interactive map. A special page is made on the social network Facebook (Agency of Protected Areas).

### **1.3 Revealed Problems**

- The environmental information is not legally defined in Georgia, also there is not determined the types of information (databases) in the field of biodiversity conservation and of natural resources, which should be available to the public and relevant government agencies, including electronic form. It is recommended to determine public database components in the field of biodiversity protection and using of the biological resources. Also determine the goals of relevant data collection, processing and storage and its application areas.

Since the responsibility of the biodiversity protection and using biological resources are two different ministries, it is necessary to coordinate their actions in the field of information gathering and dissemination.

- Knowledge and experience of creating and using the geographic information database is very limited.

- Biodiversity Protection Service does not have sufficient human resources and qualified personnel for various target groups based on effective information/awareness-raising campaigns for the planning and implementation, as well as to assess their effectiveness. Currently, this service supports the project “Sustainable Management of Natural Resources in the South Caucasus”, which is implemented by German Society for International Cooperation (GIZ) support, as well as the Center for International Migration and Development (CIM) expert. However, it is important that the service will be able to plan and implement public awareness and awareness-raising activities. The biodiversity protections service shall develop appropriate concept of the public awareness and the strategy of awareness-raising activities, and implement them on cooperation with the public relations department.

- There are no conducted social surveys and special studies for determination of public awareness, which would be important for effective communication planning. In this respect, it is possible to use the social network.

- The level of awareness of representatives of business sector (even whose activities are directly related to the use of biological resources, which have licenses for fishing, wood cutting and owners of hunting farms) to the biodiversity protection and conservations issues are low. It would be good to implement the trainings and information/awareness-raising campaigns to the abovementioned target groups.

- Awareness level of the urgency and importance of biodiversity conservation of the decision-makers is low (The points to the fact that as a result of recent legislative changes in Georgia it is available hunting on the species of “Red List”). It is appropriate to make special educational and awareness-raising campaigns, which will be directed to the group.

- Despite public awareness and performed projects and programs for raising the awareness, some experts evaluate the existing tendency very negatively – Biodiversity Conservation in Georgia has much less priority now and public awareness in this regard remains very low, for example, a high level of poaching.

For this reason it is needed to implement more focused and long-termed programs. General education programs may be more effective taking into account their repeated and wide-ranging nature (for example, school teachers’ trainings, develop materials for long-term using).

- In spite of performed projects, the protection and conservation of biodiversity and socio-economic consequences of losing biodiversity is less important issue for the media. The local TV channels rarely show the scientific-popular films in Georgian language. Showing documentary film about Georgia's biodiversity and its importance is very rarely (it happens mainly in the air of the TV Channel "Ertulovneba"). Protection and conservation of biodiversity never has been a popular theme in the talk shows.

- Environmental protection issues are less important for local authorities. In fact, there is no information about the importance of maintain the biodiversity on local levels. There is no adequate incentive for local authorities.

## **2. Public participation in the decision-making process related to the biodiversity issues**

### **2.1 The legislative framework and mechanisms for implementation of the laws**

"Information access related to the environmental issues, public participation in the decision-making process and access to the justice in this field" of the Convention's 6 and 7 Articles are related to the public participation activities in the implementation of the decision-making process and the plans, programs and policies that are related to the environment.

Under the Georgian law on "Environmental Protection" as the basic principle of environment protection is determined "public participation in decision-making principle". Residents have right to participate in the discussion of the important decisions related to the environment protection and in the decision-making process (Article 6).

The Georgian legislation does not provide public participation procedures in the preliminary discussions of legislation, programs or strategies working versions that could affect on the biodiversity. In General, under the requirements of the Aarhus Convention, the ministries put the developed draft version of the documents related to the using natural resources on the website. The bills submitted to the Parliament for consideration will be put on the Aarhus Center website.

At the end of 2011, the Government has issued some normative acts allowing hunting animals that are in the Endangered Red List. NGOs believe that this action is not permitted, as long as will not be developed the mechanisms of control, monitoring, combating poaching, animal



protection and propagation in the territories where the hunting is allowed. In some species the hunting is not allowed at all, due to their current status. Hunting is still prohibited in the state reserves and national parks and 500 meter zone around them by the community effort.

As a result of reforms done in 2011, the Natural Resource Management that then was under the Ministry of Environment and Natural Resources, was transferred to the Ministry of Energy and was created on the one hand the Ministry of Environment, and on the other hand, the Energy and Natural Resources Ministry. However, in consideration of public opinion the Ministry of Environment manages the protected areas and the natural resources on them.

The most important issue for the NGOs and public is the reform of the forestry sector and development of new forestry legislation. During the interview with representatives of various non-governmental organizations there were stressed that the one positive sides of the reform of the forestry sector should be mentioned the readiness for the individual consultations and public discussions by the Energy and Natural Resources Ministry and often initiate such meetings by them. It should be noted the issue of the draft laws and public contracts for the forest. These documents were originally published in English, which was major impeding factor for the various interested parties. Following the request the bill was translated into Georgian language, but Lease Agreement is only in English. Public's demand on the bill to reflect environmental permitting procedures within the forest management process was adopted and agreed, which was reflected in the draft interim working version, however, at the final version of this issue, when it was presented to the NGO sector representatives was not still reflected in desired form. It should be noted that despite the governments' plans to make faster the process, the bill's adoption and long-term forest lease at this stage is stopped and there are going the review procedures.

Some problems remain in terms of providing public information to stakeholders. NGOs have discovered instances where the Ministry of Energy and Natural Resources for public information about the official response to the request was answered only by the verbal explanation and was not delivered the complete information in written form.

Experts believe it is necessary to identify all possible stakeholders, conduct stakeholder analysis and involvement of each of them to a different issues and decision-making process in

order to be able to take into account opinions of all parties and in accordance with proper planning and better decision-making processes.

It should be noted that the above presented facts present only a few examples of government's response to the public opinions, however, the picture in whole shows that it is necessary to strengthen the cooperation between government and non-governmental sectors, change information and recommendations, in order to increase the importance of biodiversity conservation, protection sustainable development principles of environment.

Community involvement in the issuance of individual normative acts by the executive authorities is regulated with "General Administrative Code", in which the administrative body must ensure putting the individual legal act working version on the website, and submission of comments by the public should be made within 20 days.

It is established under the laws the public participation in the decision-making process of the approvals of management plans related to the using of biological resources.

According to the Order#163 of August 19, 2011 of the Energy and Natural Resources Minister about the "Development management plan of the internal reservoir and fishery activities and its approving rules", the internal reservoir and fish farm management plan (prepared by the fishing license owner) must be placed on official website of the Natural Resources Agency, after what the interested persons shall be entitled to submit comments and suggestions to the Agency related to the plans during the 15 calendar days. After that the Agency conducts the plan review with interested people and plan developers. In accordance with the recommendations (if there is any) the Agency certifies management plan within 30 calendar days after their submission and in the same term he returns the recommendations to the license holder, who is responsible to submit management plan taking into account the recommendations to the Agency for its certification within 3 months (in this case the management plan approval goes through the above mentioned procedure).

Relating to the approval of the hunting-farms management plan there has been operating the Order Order#16 of April 22, 2010 of the Energy and Natural Resources Minister about the "Development hunting-farm management plan and rule of approval". However, procedures

defined by this normative act are implementing by the Agency of Natural Resources<sup>1</sup>. Hunting-farm management plan (which is made by the holder of hunting license) is placed on official website of the Agency of Natural Resources. Interested persons can submit recommendations and suggestions related to the management plans within 20 days. After the Agency publicly discuss the plan. Then the plan is approved taking into account the recommendations or returns to the license holder for remaking.

Under the information of biodiversity protection service and Agency of natural resources there were not any case where the public participants take place into the management plan discussion. The reason is the following circumstances:

- The information is not spread about the management plan posting on the website;
- Deadlines for submission of comments from interested parties are a minor;
- Information posted on website about the management plans is not available for the municipalities where the hunting-farm or the internal reservoir is.
- Management plan discussions are held in Tbilisi, and that's why the local community is limited to participate in it whether they have information on it.

In connection with the approval of forestry plan is acting the Order Order # 672 of September 26, 2008 of the Energy and Natural Resources Minister about the "Development forestry management plan and rule of approval". However, procedures defined by this normative act are implementing by the Energy and Natural Resource ministry. Forestry management plan is placed on official website of the Ministry. Interested persons can submit recommendations and suggestions related to the management plans within 30 days. After the Ministry publicly discuss the plan with interested people and plan developers. In case of negative report the draft shall be returned to the draft developer, and re-processed draft will go through the procedure described above.

From 2009 till present there are conducted 39 public hearing of forestry plans. 8 of meetings were attended by the representatives of the Ministry sectoral service, license holders and authors of forestry draft projects, besides there were representatives of NGOs and scientific

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<sup>1</sup> The draft of the resolution of the Minister of Energy and Natural Resources is prepared, it will soon replace the Order #16 of April 22, 2010 of the Ministry of Environment And Natural Resources about the "Hunting management plan development and its approval".

institutions (Green Alternatives, the environmental movement of Georgia, the Foundation “Caucasus Environment”, Association “ELKANA”, WWF Caucasus Programme Office(WWF Caucasus), University of Agriculture, Kanchaveli Institute of Plant Protection, and others). On the basis of the results of the abovementioned public hearings 7 Forestry Draft was returned to the author for its re-processing, and only one had a negative conclusion<sup>2</sup>.

In accordance with Article 14 of the Convention on Biological Diversity, the parties of convention should provide opportunity for public participation in environmental assessment of the project, which may cause adverse impacts on biodiversity. According to the Georgian legislation such right of community is determined by the law about “Environmental Impact Permit” (2007). According to the law the necessary part of the procedure on Environmental Impact Assessment is public participation in decision-making process. To obtain a permit for regulation “Environmental Impact Assessment” (approved by the Minister of Environment and Natural Resources, March 9, 2009, Order #8) there should be submitted EIA accounting and other documents together with the results of public participation, indicating major differences.

In accordance with Article 6 of the Law, the performer is obliged to arrange a public hearing before submitting EIA to the administrative authority for issuing permits. Information about the planned activities should be published in the central and regional/local administrative gazette, where the implementation of activities is planned.

Information about the planned activities includes:

- The objectives of the planned activities, their name and location;
- Address, where public representatives will be able to learn about the documents related to the planned activities (including EIA reports);
- Deadline for submitting public officials’ opinions;
- Time and place for the arrangement of EIA for public hearing.

The performer of activity within 45 days of publication the information about the planned activities takes and reviews the comments and proposals submitted in written form by the community representative. Not earlier than 50 and not later than 60 days after publication of information about planned activities, the performer arranges the public hearing of the EIA

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<sup>2</sup> The letter to “EcoVision” issued on March 14, 2012 of the Agency of Natural Resources of the Ministry of Energy and Natural Resources of Georgia.

reports. A public hearing will be held in the center of the administrative unit where activities are planned. Taken into account all comments the final version of EIA report is prepared. In case of disregarding the comments and proposals from performer the public representatives, the performer should provide written justification and their sending to the author of comment. Any resident has right to attend the EIA's report public hearing. The information in the EIA report is public, except for the part, which was previously filed a statement of confidentiality.

Environmental impact assessment reports and relevant information about the public hearing shall be posted in the websites of the Environmental Ministry and the Aarhus Center.

Under the Georgian legislation EIA provides only activities provide by "Environmental Impact Permit" law. The list of activities does not include a range of activities, which are indicated in the in the Annex to the Aarhus Convention. In addition, under the Georgian law about "Environmental Impact Permit" it is possible to release the activities from EIA, if the common national interest requires beginning the activities and making decision on it in time (Article 11). In this case the public is no longer part of the decision-making process.

Environmental NGOs (CENN, "Green Alternative") carried out studies in order to improve the efficiency of EIA system; they are actively participating in the process of reviewing the EIA reports and monitor the protection of established procedures. Alternative analysis - Implementation of Aarhus Convention in Georgia (2011) - developed by "Green Alternative" is noticeable with this regard.

The Aarhus Center monitors public participation into the environmental impact assessment and decision-making process, on Aarhus website after the 2007 are posted the observer reports about the Environment Impact Assessment and decision-making process of public participation (<http://aarhus.ge/index.php?page=66&lang=geo>). The last 2011 report is related to the barriers of public participation. Under this report the main barriers are:

- Legislative gaps;
- Lack of the political will;
- Lack of financial resources;
- Mutual distrust;
- Low public awareness;
- Low environmental awareness of the performer.

Under the Georgian law about “Protected Areas System” (1996) the residents and the representatives of public organizations have the right to participate in the process of establishment, development, reduction and revocation decisions, management plans, regulations and other documents for review and amendment process of protected areas and also activities of the caring and management of the protected and buffer areas (Article 22).

Under the requirements of Article 21 of the Georgian law about “Protected Ares System” and by the order issued on July 1, 2011 from the Environment Ministry approved under the typical provision of the Agency of Approved Protected Areas of the of the territorial administration, in order to cooperate with local authorities there are created with the administration of Protected Areas the scientific-advisory councils, which provide advisory and methodological help to the administration in the integrated management process.

In order to involve the population and to improve the protected area’s management, the Friends Association are established for Tusheti, Vashlovani and Lagodekhi protected areas, which are nominated by the local community, government, NGOs and business sector representatives. The functions of Friends Association is to promote protected area’s management, raising the funds, carrying out the informative-educational activity, distribution the literature, cooperate with various interested parties, etc.

Tusheti and Vashlovani friendship association performs the Community Communication Strategy and action plan (the plan is designed by FFI/NACRES under the raptors Consrvation Project (ongoing). Tusheti Friends Association under this project performed sustainable using project of the village Chigho adjacent pasture (2011). Tusheti Friends Association has also received the grant from the Fund Open Society – Georgia (Soros) in order to perform eco-educational activities (2011). Under the project the eco-camps were arranged for the students, also “trainings for trainers” were conducted for them, after that the student conducted special trainings for school students about the protected areas. Vashlovani Friends Association from the Eurasia partnership fund received the grant in 2011 for the relation of the Colchian Pheasant.

Administrations of the protected areas conduct an annual poll within the local population, which allows them to reveal the level of public awareness and attitude towards the protected areas in the following directions:

- Public awareness;
- Public fear and expectations towards the protected areas;
- Profit and loss;
- Public social-economic status;
- Participation into the protected areas development project and management planning (whether or not people believe that they are involved in the management process).

## **2.2 Revealed Problems**

Under the Georgian legislation there is no determined the obligation for public of participating into the developing legislative, political and strategic planning documents. Although in some cases these documents are in draft version published for public hearings, it is largely due to the NGOs and donors. Conducted consultations have formal character and have rarely been a real influence on the decision maker.

- The existing legislation does not provide participation of the interested people in the forestry, hunting farms and fisheries management planning hearing. The terms are very small, and the legislation does not determine the public hearing at the local level, local authorities, local communities and NGOs.

- Public interest is still very low to the public hearings. In fact, the public can not influence on the decision-making process, which on the one hand is due to its low awareness, lack of knowledge and relevant experience, and on the other hand, the fact that public participation is not understood by decision makers as a possible tool for optimal decision making. In number cases the performer cannot properly informing the public and its involvement in the decision-making process. The social background plays an important role as well. The more urgent are the social problems then the environment and biodiversity issues. Because of this, in most cases the public are interested with the project only for employment.

### **3. Biodiversity education and public awareness**

#### **3.1. Legislative and Strategic Framework**

Georgia has a long tradition of supporting environmental education since 1977 (and probably earlier) when the World's First Intergovernmental Conference on Environmental Education organized by UNESCO/UNEP was held in Tbilisi (former USSR Republic of Georgia). However, the policies determining the practical instruments to be implemented to this end varied through years in accordance with the political and socio-economical changes taking place in the country and relative priority the governments in office gave to the environmental issues.

Current Georgian legislation identifies environmental and ecological education as well as awareness rising in this direction as a civil right. The framework law on the environment (Law on Environmental Protection, 1996) defines the role of environmental education and calls for the creation of a unified environmental education system including a network of academic institutions and life-long training opportunities, thus, ensuring continuing environmental education at pre-school, general, vocational and higher education levels (Law on Environment Protection, Section III, Articles 8 and 9, 1996). The competencies of local self-governance bodies in the sphere of "ecological education" is defined by "Forest Code" (Forest Code, 1998) as well as "Law of Georgia on Red List" defines competencies of the Ministry of Education and Science of Georgia that has an authority "develop, publish and distribute an adapted version of "Red List of Georgia" for preschool and primary school children in agreement with Scientific Academy of Georgia and the Ministry of Environment Protection of Georgia" (Chapter VI, Clause 21.7)

Despite the fact, that none of the country's overall strategic documents - Basic Data and Directions (where the policy orientations of the Government of Georgia for the relevant time-span are formulated) - mentions environmental education and public awareness rising as their priority or an activity under any of the priorities, environmental education is still allocated its due focus within the sector specific documents (NEAP 2 2011-2016, the National Biodiversity Strategy and Action Plan adopted in 2005, Preschool Standards, National Curriculum 2011-2016) and specific considerable actions have been implemented on governmental as well as non-governmental level to enhance the profile of environmental education in formal settings as well as undertake capacity building activities of different target groups through training programs, seminars, media coverage etc.



More importantly, the Ministry of Environment Protection in partnership with the Ministry of Education and Science of Georgia is working over the Strategy and Action Plan of Education for Sustainable Development of Georgia. The document is comprehensive covering formal as well as non-formal/informal education channels and different target groups and will provide a framework of all actions in environmental education in Georgia.

## **3.2. Existing Biodiversity Education and Awareness Raising Instruments**

### **3.2.1. Formal Biodiversity Education**

3.2.1.1. Institutionally **education at preschool level** is administered by local governance bodies in Georgia. However, the Ministry of Education and Science of Georgia in 2010 established the Learning and Development Standards that can be followed by kindergartens. Current Standards were developed in 2010 by the National Curriculum and Assessment Centre with the support of UNICEF and represents a set of learning and development outcomes in 5 areas (namely, health and physical development, cognitive development and general knowledge, attitudes towards learning, speech development and social-emotional development) for age-groups of 0-1, 1-3, 3-5, 5-6. The standards have strong focus on environmental issues and contain outcomes conducive to developing environmental awareness and a positive attitude towards environment in children.<sup>3</sup> Most of the topics aimed at environmental awareness in children fall under the “Cognitive development and general knowledge” section of the standards, one of the subtopics of which, namely “Nature and technology,” is oriented at children’s abilities “to learn physical environment, observe and investigate, test the processes that have a visible outcome.”<sup>4</sup>

3.2.1.2. Environmental education, more exactly “knowing of, potential harms to and ways to protect and preserve natural habitats” is one of the national goals for **general education** in Georgia (a Governmental Decree No.84 of October 18, 2004 on Approving **National Goals** of General Education). As the document states “adolescents should know what natural

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<sup>3</sup> “by learning about the environment children get information about e.g. earth and living nature” and through development of analytical and critical thinking the children are helped to use this knowledge in practice.” (Preschool learning and development standards, 2010 Georgia).

<sup>4</sup> ISBN 978-9941-0-1521-2 © National curriculum and assessment center. 2011

habitat/environment they live in, what potential harm people may inflict on environment by their actions; how to preserve and protect natural habitat/environment”.

Environmental education (and, in particular, biodiversity education), as can be expected, is not identified as a separate subject/blocks of subject in the **National Curriculum** (current National Curriculum 2011-2016 was adopted last year). The content and appropriate learning outcomes related to environmental/biodiversity education is addressed in transparent priority competencies of the National Curriculum as well as is integrated in an inter-disciplinary manner and are embedded in specific subjects of the curriculum at all three: primary, basic and general education levels.

National Curriculum identifies 9 priority competencies that are integrated in different subjects throughout the whole general education and is aligned with “National Goals of General Education and demand from the society” and possession of which is decisive for self realization and finding your place in modern world.” “Ecological literacy” is one of the abovementioned transparent priorities Ecological literacy means developing people’s healthy attitudes towards environment, meaning that pupils should understand their personal responsibilities towards current phenomena, be able to participate in their protection and restoration.”<sup>5</sup>

Apart from transparent competencies, environmental teaching and learning is mainly consolidated in two blocks of the subjects: natural and social sciences. Nature studies within natural sciences block of the subjects (nature studies, basics of biological sciences, biology, chemistry, physics) have seven major directions: living world (basics of biology), earth and cosmos (Geography and Astronomy), man and environment (Basics of Civic Education), objects and phenomena (Physics and Chemistry), scientific research (Research Skills), physical phenomena (basics of Physics), chemical phenomena (Basics of Chemistry). Out of which the first three contain different topics on related to biodiversity, potential risks to biodiversity and biodiversity protection (for more detailed description of the contents of nature studies see Annexes). The same way, out of 11 major directions in social sciences block (Our Georgia, Geography, Civic Education, Emergency Safety/DRR, etc) three covers the learning outcomes related to biodiversity. The expected changes in the National Curricula will be three new elective

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<sup>5</sup> National Curriculum 2011-2016, Chapter **VIII. Article 48.**

subjects: a 2-module “environment and sustainable development,” “Conservative biology” and “Monitoring o Natural Monuments”) in the natural and social sciences that includes teaching of biodiversity conservation (Eka Slovinski, 2012).

It is important to note that the National Curriculum development process was highly participatory process and involved experts from field, academia as well as pedagogical backgrounds, thus should be well reflecting the subject specific expertise and up-to-date scientific knowledge and advances. On the other hand, the problems associated with the curricula could still be within the **textbooks** and internet accessibility: a) the existing textbooks are not sufficient to provide the students with broad subject and industry knowledge and there is still lack of additional teaching materials in many subjects (this is especially true of elective subjects). Besides, despite the existing quality management mechanisms, the information within the books are sparse, sometimes there are even factual discrepancies. b) Despite the fact that most of the schools throughout Georgia are connected to the internet, and the Ministry of Education and Science provides intensive IT trainings to secondary school teachers, not all teachers have enough internet access and ICT skills to take full advantage of internet resources and digital professional development opportunities (Manana Ratiani, 2012).

Key role in the adequate knowledge transfer and skills development lies within **teachers** who can creating suitable teaching and learning environment in the classroom and be mediators in transfer of knowledge, adoption of relevant skills, values and attitudes. That’s why, proper professional development of teachers is of high importance. Teacher turn over in Georgian educational system is not really high (which can be in many respects also a positive sign) attention should be paid to in service retraining of the teachers employed (and of course proper pre-service training of the ones, who will potentially join the system at some later stage).

In line with the educational reforms taking place in Georgia since 2003, teacher professional development was high on the agenda. Under the aegis of the reforms teacher professional standards were developed (detailed guidelines are also being prepared) and trainings, both subject specific and teaching methodology related, have been offered to teachers<sup>6</sup>.

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<sup>6</sup> Since 2011, in service training provision is centralized and are offered free of charge (1<sup>st</sup> round of each exam) to all acting teachers as well as inductees, as compared to decentralized provision of the previous two years, where teachers were granted stated funded vouchers to take trainings from any accredited provider operating on the market.

Reformed education system in Georgia envisages also teacher certification as an additional means of quality management in general education. Teachers have to take at least two certification exams: professional abilities and subject exams. The process started in 2010 and is voluntary up to the 2014<sup>7</sup>. However, teachers of social and natural sciences, as well as primary school teachers were offered the subject specific exams only in 2011. In 2012 teachers of natural sciences will be able to sit exams in experimental part of the subject, as well. As of January 2012 only a small number of natural and social science teachers have passed the exams and consequently been certified (see Table 1).

**Table 1: Teacher certification statistics**

Exam	Teachers total:	registered	Papers Assessed	Passed minimum Barrier	Got certified No	Got certified %
Civic Education	2704	199	157	67	46	1.7%
Physics	2784	518	413	36	28	1%
Chemistry	2352	627	521	226	146	6%
Geography	2882	<b>712</b>	<b>609</b>	<b>233</b>	<b>116</b>	4%
Biology	3511	793	647	347	228	6.5%
Primary School (I-IV)	9148 <sup>8</sup>	3654	3014	855	606	6.6%
Professional abilities	69165	20738	18263	5655	3229	4.7%

Source: NAEC, 2012

<sup>7</sup> The process of certification started in 2010 with the exams for Georgian Language and Literature, foreign languages and Maths teachers as well as exams in professional abilities. So far up to 20000 teachers (almost a third) have undertaken trainings and passed certification exams in one or 2 subjects and take the increased salaries. Extra-incentives are offered to those passing exams in foreign languages and computer skills besides passing the abovementioned two obligatory exams, as well as for additional exams (e.g. experimental part of science teaching). Those within top 25% of the certified teachers are offered additional salary bonuses.

<sup>8</sup> There are 23147 primary school teachers altogether in Georgia, the figure in the table represents the number of teachers in biological sciences at primary level.

Apart from the Ministry of Education and Science of Georgia (with its agencies) probably second most important actors in teacher awareness rising with regards to biodiversity conservation and protected areas of Georgia is the Ministry of Environment Protection of Georgia (and its agencies/departments – Agency of Protected Areas of Georgia and Biodiversity Service). Primary targets within their campaigns were biology and geography teachers. So far the coverage is not very comprehensive (approx. 120 and 500 teachers respectively) but the Ministry plans to work in this regard in the coming years. The aim of the projects is to raise the awareness of school teachers and pupils on Georgia's Protected Areas, Georgia's biodiversity and the species that are on the verge of extinction.

In spite of a number of important institutional achievements in teacher professional development that has been brought by the educational reforms of the recent years, experts speak of certain systemic inadequacies as well. The problems persist with the low influx of qualified workforce in the profession, low salary perspectives, still unmet need for extra in-service training for teachers (especially those with no relevant academic background)<sup>9</sup> and uncovered additional costs of the trainings for teachers (trainings are offered free, but the costs are still high for teachers who have to invest time and money in their trip to training facilities). With the certification process still under way school management is unable to make administrative decisions to replace the unqualified teachers with more qualified counterparts: new university graduates that have passed through induction phase and successfully sat through certification exams. The cost of entering profession is high compared to the prospective benefits with the induction service for new university graduates are not paid (Manana Ratiani, 2012).

The inadequacies with teaching and especially teaching of natural sciences can be also related to the existence of **modern teaching aids and equipment** in the school classrooms. To cope with the lack the Ministry of Education and Science is investing in school electronic infrastructure (computer labs, smart boards, etc). The Project Einstein apart from provision of equipment envisages the complimentary trainings in the utilization and maintenance skills for the school staff. However, the scope of the activities again is smaller than the existing needs.

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<sup>9</sup> The ministry of Education and Science of Georgia plans for more Teacher Houses throughout Georgia to increase the capacity of teacher training provision and of longer (60 credits) training courses to meet the skills demand of the teachers.

3.2.1.3. There are up to 11 institutions all over Georgia offering different level **vocational and higher education** (professional IV, V levels, bachelor, Master, PhD) in subject areas related to biodiversity and environmental protection. The number of institutions in this regards have fallen down since 2005, which is expected and normal considering the consolidation process that was under way during the higher education reform that decreased the number of uncompetitive HEIs<sup>10</sup>.

Curriculum development at Georgian higher educational institutions is fully under the responsibility of HEIs, according to the principle of academic freedom. However, the programs have to comply with the minimal standards defined by the National Qualifications Framework (NQF)<sup>11</sup>.

Figure II below illustrates the profile of biodiversity teaching at post secondary level at Georgian universities and colleges for the academic years 2010-2011 and 2011-2012. However, the spectrum and number of programs may vary year by year. The table contains the programs that have at least one module related to biodiversity as a core module. Since the higher education programs at any level contain elective modules, students have relative freedom to choose any of the biodiversity modules at their will.

**Table 2: Tertiary Environmental Education in Georgia**

<b>University</b>  <b>Program Level</b>	<b>Vocational</b>	<b>Bachelor</b>	<b>Master</b>	<b>Doctoral</b>
<b>Tbilisi State University</b>		<ul style="list-style-type: none"> <li>• Biology</li> <li>• Applied</li> </ul>	<ul style="list-style-type: none"> <li>• Biology</li> <li>• Applied</li> </ul>	<ul style="list-style-type: none"> <li>• Biology</li> <li>• Applied Ecology</li> </ul>

<sup>10</sup> Within the framework of HE reform external quality assurance mechanisms – licensing (later replaced by authorization) and accreditation – were introduced. which forced institutions that were not competitive enough and did not have adequate resources for teaching (and research) in terms of infrastructure and faculty either merge with other universities, or phase out as a result of by the former National Education Accreditation Center (National Center for Education Quality Enhancement). Thus, the number of HEIs decreased from 240 in 1990s to 47 by 2011.

<sup>11</sup> The documents are developed under the aegis of the National Center for Education Quality Enhancement and adopted recently by the Ministry of Education and Science of Georgia. These are minimal requirements the programs have to comply with. Apart from this, the structure of curricula and proportion of compulsory and elective subjects are defined by programme leaders within the HEIs. Most programmes have a modular and major/minor-based structure, except those for the regulatory professions (medicine, law and education).

		BioSciences and BioTechnologies <ul style="list-style-type: none"> <li>• Ecology</li> <li>• Natural Sciences</li> </ul>	BioSciences	
<b>Ilia University</b>		<ul style="list-style-type: none"> <li>• Biology</li> <li>• Ecology</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher of Natural Sciences</li> <li>• Ecology</li> <li>• Bio Resources Management and Protection</li> <li>• Entomology</li> </ul>	<ul style="list-style-type: none"> <li>• Ecology</li> <li>• Animal Structures and Diagnosis</li> <li>• Entomology</li> </ul>
<b>Akaki Tsereteli State university</b>	<ul style="list-style-type: none"> <li>• Decorative Gardening</li> <li>• Horticulture</li> <li>• Wine growing</li> </ul>	<ul style="list-style-type: none"> <li>• Biology, Geography, Ecology</li> <li>• Applied BioSciences (Bio Technology)</li> <li>• Agroecology, forestry and agronomy</li> <li>• Agrotechnology , horticulture</li> </ul>	Agrotechnology of Subtropical Culture; Agroecology; Selection of Subtropical Species; Landscape Design	Doctoral program on biology
<b>Shota Rustaveli State university</b>	PlantProtection Technician	<ul style="list-style-type: none"> <li>• Biology</li> <li>• Ecology</li> </ul>	Biology	• Doctoral program on biology
<b>Agricultural university of Georgia</b>		<ul style="list-style-type: none"> <li>• Forestry</li> <li>• Zootechnical</li> <li>• Agronomy</li> <li>• Applied Biosciences (biotechnology)</li> </ul>	<ul style="list-style-type: none"> <li>• Forestry</li> <li>• Agronomy</li> <li>• Applied Biosciences (biotechnology)</li> </ul>	<ul style="list-style-type: none"> <li>• Forestry</li> <li>• Agronomy</li> </ul>
<b>Telavi Iakob Gogebashvili State University</b>	Forestry (Forest Cutting, Taxator)	<ul style="list-style-type: none"> <li>• Biology, Ecology, Geography</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Studies</li> <li>• MicroBiology</li> <li>• Ecology</li> <li>• Biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of Life Nature</li> <li>• Biodiversity</li> <li>• Ecology</li> </ul>
<b>Technical University of Georgia</b>	<ul style="list-style-type: none"> <li>• Plant Protection Technician</li> </ul>			
<b>Sokhumi State University</b>		<ul style="list-style-type: none"> <li>• Ecology</li> </ul>	<ul style="list-style-type: none"> <li>• Applied Biology</li> </ul>	<ul style="list-style-type: none"> <li>• Ecology</li> </ul>
<b>Akhaltzikhe</b>	<ul style="list-style-type: none"> <li>• Plant</li> </ul>	<ul style="list-style-type: none"> <li>• Ecology</li> </ul>		

<b>University</b>	Protection Technician	• Zootechnology		
<b>Gori University</b>		• Biology (1 <sup>st</sup> year of teaching)		
<b>Community College of decorative Gardening of Patriarchate of Georgia</b>	<ul style="list-style-type: none"> <li>• Decorative Gardening</li> <li>• Florist</li> </ul>			
<b>Vocational College "Horizon"</b>	• Forestry			
<b>Community College of Agrobusiness and Agroecology</b>	<ul style="list-style-type: none"> <li>• Decorative Gardening</li> <li>• Medical Herb Processing</li> <li>• Plant Protection Technician</li> <li>• Farmer</li> <li>• Environmental Technician</li> </ul>			
<b>Vocational College "Spektri"</b>	<ul style="list-style-type: none"> <li>• Environmental Technician</li> <li>• Decorative Gardening</li> </ul>			
<b>Community College "Aisi"</b>	• Wine Growing			

**Source: LELP EQE and respective websites of the universities**

Experts think that the interest of students in sciences has been increased after it was prioritized by the government. Figure III below provides the 2005-2011 statistics of students studying at tertiary educational level.. As the Figure shows, the number of students studying environmental programmes had been relatively steady during the years (not taking into consideration the year 2005, when enrollment in Natural sciences was comparatively low). However, as National Examinations and Assessment Center explained, Statistics in this case are a bit misleading, since the figure for 2011 is not comparable to the previous figures. The reason for this is the fact that started from 2011 the enrolment figures are shown by programs as compared to the previous years, when the enrolment was shown by faculty. Though not reflected by the statistics below, sector specialists (Ilia State university, TSU) speak about the increase of the number of



students to natural sciences during 2011, which can be related to the new funding formula introduced by the government for 2010-2011 academic year and forth.

**Table 3: Student enrolment to natural sciences programs by years**

Year	Total enrolled	In Natural Sciences	% of total enrolled
2005	16507	490	2.97%
2006	19479	1026	5.27%
2007	15445	771	4.99%
2008	15559	796	5.12%
2009	21182	1173	5.54%
2010	22576	865	3.83%
2011	23209	1010	4.35%

**Source: NAEC 2012**

Positive changes under the HE reform include the integration of teaching and **scientific research** (EACEA, 2010). Unlike the former Soviet style universities, new mandate stipulates that universities are places for both teaching and research. Under the reform the research institutions that operated under the Ministry of Education and Science, now became part of different universities that will enable students to be practically involved in the research and improve the practical component of educational programmes. All the universities interviewed indicated that their students had opportunities to participate into the research that was undertaken by the universities. For example, Master and doctoral students of Ilia State University have opportunities to be involved in current research by Ecology, Zoology Institutes and Entomology and Biocontrol Research Center<sup>12</sup>.

<sup>12</sup> The research of the aforementioned institutes cover a number of biodiversity topics, namely:

1. Register and Inventory of Fauna in Adjara, 2009-2011, scientific manager: Alexandre Bukhnikashvili;
2. For the Rehabilitation of Highland Pastures: Mesofauna and Biodiversity, scientific manager: Mzia Kokhia;
3. Current State of Vertebrate Biodiversity in Highlands of Eastern Georgia (Greater Caucasus), 2010-2012, scientific manager: Alexandre Bukhnikashvili;
4. Hazardous Nematode Potato Diseases in Javakheti Highlands (Biodiversity of Nematode Population, Distribution of Pathogenetic Species), 2010-2011, scientific manager: Irakli Eliava
5. Current State of Vertebrate Fauna of the River Khrami and Upper Mtkvari Reservoirs (on the Territory of Georgia), Ways of its Degradation and Preservation Problems, 2008-2010, project manager: Alexandre Bukhnikashvili;
6. Study of Parasitology and Ecology of Fauna of Tbilisi Reservoirs and Waterside, 2008-2010, project manager: Lali Murvanidze;
7. Potato and Soil Nematodes in the Potato Production Regions of Eastern Georgia, 2008-2010, project manager: Irakli Eliava;
8. Study of Distribution of Specific Citrus Nematode, 2008-2010, project manager: Irakli Eliava;
9. Entomopathogenic Nematodes for Biocontrol, 2008-2010, project manager: Irakli Eliava;
10. Integrated Study of Hydrobiology of the Tbilisi Sea, 2008-2010, project manager: Bela Japoshvili;
11. Cariologic Study of Georgian Plant Lice (Hemiptera, Aphididae), 2010-2012, project manager: Nana Bakhtadze;

The university-business cooperation is not really close that may mean both difficult education to work transition for students and comparatively loose connection between the skills and updated knowledge demanded by the industry and the educational programs. “The dialogue between the enterprises in Georgia and the academic world is fairly weak, although 80% of HEIs report that they have cooperation agreements with private business. The main cooperation area is employability of graduates and traineeships for students... Only 10% of universities cooperate with employers on curriculum design, and only six universities (all private) cooperate in the field of university management, inviting business representatives in governing bodies (board trustees, boards of consultants)” (EACEA, 2010 ).

However, the Agency of Protected Areas (MoE) reported it has signed MoUs with 7 universities of the country working in the field of biodiversity and ecology. The MoUs envisage mutual scientific and educational cooperation within the framework of which the students and faculty of the universities are given opportunities to offer public lectures, use scientific libraries and arrange eco-camps on the territories of Regional Administrations offices of APA or undertake scientific research there.

Besides, the Ministry of Environment Protection itself has signed MoU on 27 of May, 2011 with Tbilisi State University, Iliia University and NGOs working in the field of biodiversity (Green Movement, Green Alternative, Nacres, WWF, IUCN, Elkana, GCCW etc) stipulating the cooperation in the sphere of biomonitoring, exchange of information, development and implementation of joint programmes and projects. The Ministry of Agriculture of Georgia also indicated close cooperation with HEIs, that were mostly initiated by the HEIs themselves, but still are good signs interchange of expertise between the industry, research and academia.

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12. Biochemical Adaptation to Environment of Some Invertebrates, 2010-2011, project manager: Nana Bakhtadze.
  13. Ecology and conservation of big mammals
  14. Quantitative ecology programme
  14. Research of mountainous ecosystems
  15. 2009-2011 - The invertebrate animals of Colchis National Park (coastal part), their biodiversity and population of the main habitats and ecosystems. GNSF-367
  16. 2008-2010 - The biodiversity of Odonata, Hemiptera, Hymenoptera and Coleoptera in Borjom-Kharagauli National Park (GNSF Grant № GNSF/ST 07/6-236)
  17. 2010-2011- Vitis pest Tetranychoid (Tetranychodea) mites of Kakheti Region. GNSF-565
  18. 2008 grant for a 3-year project from TUBITAK about: “Measurement of insect biodiversity and development of the protected strategies in Golcuk Natural Park in Isparta”. Project Leader – Ref: B.02.1.TBT.0.06.03.11/AA-055, Project N1070743
  19. 2007- present, Investigator in the DPT project (4 year): Ref: 2007K121320. Research and Rearing Center of Biological Control Agents (coordinator Prof. Dr. Ismail Karaca).
  20. 2010–2013. Monitoring of the settlement of invertebrate animals on dumps and recultivated territories of manganese quarries. STCU-4875 (manager – M. Murvanidze).
  21. 2010-2013. An ecological assessment of different forest types of Borjomi gorge protected territories by indicator insects and education of local population on conservation of biodiversity. RSG-7838-1 (manager- M. Murvanidze).

And last, but not least one more positive tendency in higher education is its openness to international partnership and mobility. “Development of joint academic degree programmes is seen by the HEIs and the state as one of the most effective tools for programme quality enhancement and internationalization of Georgian higher education. There is no explicit policy to promote mobility of students from or to Georgia, although number of incoming and outgoing students is steadily increasing. The vast majority of Georgian students study in the USA, Germany and the UK, followed by other EU countries” (EACEA, 2010).

Recently the number of joint programming between several Georgian and foreign universities have increased considerably. Programmes that were developed under Tempus projects are the major part of the tendency (e.g. Ilia state university programs: SALiS - Student Active Learning in Science; CIBELES - CIBELES -Curriculum Invoking Bologna-aligned Education Leading to reform in Environmental Studies, partner Georgian universities are: Ilia State University, I. Gogebashvili Telavi State University; Mater program in Environmental and Climate Change Law, partner universities : Pace University, Ilia State University, Technical University of Georgia; Master program in Applied Biosciences, partner universities: Iv. Javakhishvili Tbilisi, State University, Agrarian University of Georgia, Akaki Tsereteli State University; etc.)

However, problems persist. As the policy brief “Higher education system in Georgia” states: “In fact the research component in HEIs is still underdeveloped. The neglect of research at universities and its main concentration in the institutes of the Academy of Sciences, inherited from Soviet times is obvious. Thus, only 8.8% of HEIs participate in scientific grant competitions announced by the Georgian National Science Foundation (GNSF) (presently, Rustaveli Georgian National Foundation T.S.).” (EACEA, 2010).

The figure below gives the breakdown of grants according to field (those related to biodiversity are highlighted, and the number of research on specifically biodiversity issues by years are given in a separate row). In 2011 the Foundation allocated 35 Scientific Grants, out of which 3 was on biodiversity. The detailed information about grants and scholarships allocated by Rustaveli Georgian National Foundation in 2007-2011 are given as an annex. However, the universities and research institutions are also eligible for international grants and funding from sources other than state budget.

**Table 4: Projects financed from the state grant fund by scientific field**

#	Scientific directions	2009		2008		2007	
		N projects	Budget	N projects	Budget	N projects	Budget
1	Information technologies, telecommunications	3	29330	8	808539	10	1 069 147.36
2	Mathematics, mechanics	11	136342	17	2 034298		
3	Life sciences	6	72963	14	1 537879	26	2 932 384.52
4	Medicine sciences	10	112381	18	1 902608		
5	Nature sciences	14	167169	27	2 999230	20	2 434 878
6	Earth studying sciences and environment	18	227487	27	3 371 647	17	1 987 771
7	Engineering sciences, high technology materials	22	2459855,	24	2 379578	21	2 125 623.44
8	Agrarian sciences	19	224798	26	3 007034	14	1 240 428
	Among these on biodiversity issues	7		11		9	
	<b>Total</b>	<b>103</b>	<b>12164584,4</b>	<b>161</b>	<b>18 041 613</b>	<b>108</b>	<b>11 790 232</b>

**Source: The National Scientific Fund (<http://gnsf.ge>)**

The specialist often point out the importance of environmental knowledge and awareness among law and journalism program graduates. Unfortunately, none of the journalism programs offer courses related to environmental issues, though with the modular curriculum of the reformed HE there is always a possibility for an interested student to take a relevant subject as an elective.

Law has been another field of study with no related training possibilities as noted by the NBSAP 2005: “no formal curricula exist, and there is lack of information relating to environmental law.” Ecological law as a unique case was taught at TSU. At present international ecological law is taught at bachelor and master level at several universities (e.g. Sokhumi State University offers Ecological Law at Master’s level, Ilia State university – at Bachelor’s level, Tbilisi State University offers International Ecological Law, etc.).

### **3.2.2. Non-formal Environmental Education:**

Apart from formal settings environmental awareness and knowledge is created through non-formal educational opportunities that are aimed at different target groups and are offered by educational institutions, NGOs, International organizations working in Georgia and different governmental structures. Apart from teachers already mentioned above, other major groups that have been recently targeted by different environmental capacity or awareness building instruments include children aged 12-18, authorities in charge of environmental issues, business representatives, journalists etc.

One need not be a teacher at a school to promote love and awareness of biodiversity in children that will help shape children's values, perspectives, and understanding of the environment and help them develop into responsible adults. Children need to learn from a very early age that the environment has an impact on their lifestyle and quality of life and vice versa. Early environmental education is critical since today's children will be responsible for making decisions that will shape the health of the environment in the future.

Despite quite a number of **extra-curricular projects** for children initiated by different institutions, both educational and environmental, aimed at increasing awareness of the children on importance and conservation of biodiversity, the scope is still really little and the impact of the programmes can not be of big scale. So there is still much space for future interventions.

3.2.2.1. Since 2007 on the initiative from the Ministry of Education and Georgia and in partnership with universities a series of **public lectures** on a number of popular scientific topics, among them biology and geography, is being delivered at general schools all around Georgia. The project is aimed at updating the knowledge of natural sciences as well as making them more attractive and appealing to students. As part of the project the lectures and practical

demonstrations have been delivered in Tbilisi, Telavi, Mtskheta, Gori, Kutaisi, Senaki, Rustavi, Akhalkalaki, Ozurgeti, Poti, Khelvachauri, Borjomi, Oni, and Mestia. The lecture series are mostly designed and targeted at the senior students but are open to interested pupils of other age groups as well. Thousands of pupils have attended these lectures during the five year period.

3.2.2.2. Another initiative by the Ministry of Education and Sciences of Georgia is a national awards initiative for school students called “**Olympiads**”. The Olimpiads cover a number of subject groups and is a country wide initiative allowing all basic and secondary school students to participate in it. Under the topic *education for sustainable development* the following areas were included: Conservation of the Black Sea coastal zone (Sarphi- Batumi or Supsa-Natanebi); Conservation and rational use of forests; Inclusion of local natural and historic relics into tourism development; Quality of environment and health, etc.

3.2.2.3. **Ecotours and ecocamps** have gained increasing popularity in Georgia during the last years. The goal for the camps and tours is to promote volunteerism and environmental awareness as well as knowledge of biodiversity and popularization of healthy lifestyle. The target groups of the various ecocamps have been Georgian as well as international students (e.g. Check Embassy finances Check students’s visit and participation in eco-camps in Georgia that are arranged by Agency of Protected Areas of Georgia (APA). The camps are financed from different sources by national and international organizations and initiated by APA itself, or other organizations working on environmental issues CENN, CARE, Scouts of Georgia etc.

In general, the number of students participating in environmental educational activities have considerably increased in recent years indicating the increase in interest on the part of the students as well as efforts and successful work in this regard by APA and other institutions active in this field. However, overall statistics are still low, representing only approx. 10% of all secondary school student population of Georgia. So there are more to be done in terms of quantity and especially quality to make the camps and tours more educational and informative and varied, and to turn the entertainment side of the projects into behavior change and functional knowledge and development of proper values and attitudes towards nature.

3.2.2.4. By the initiative of the Ministry of Environment Protection of Georgia a Green Youth Club was created joined by hundreds of young people from different universities and initiating

and participating in volunteer activities to protect nature. However, the Green Club is not the only eco club in Georgia. **Eco clubs** are being initiated within secondary educational institutions by different Georgian NGOs (Green Movement, CENN to name just a few) and are aimed at raising children's awareness on diverse environmental issues including climate change, waste management, watershed management, etc apart from biodiversity issues. What's more the clubs help children become active citizens and implement various projects to protect environment around them.

The Ministry of Sports and Youth can also promote awareness and participation of youth in environmental issues because of its mandate. Environment was one of the Ministry's "Children and Youth Development Fund of Georgia " priorities for 2011 and 3 small grants were awarded to youth initiative groups to undertake community projects on environmental issues.

3.2.2.5. **Museums and national parks**, one of the major functions of which is educational portfolio, can have a strong say in environmental education and awareness rising. We have already spoken over educational and awareness initiatives (different awareness raising campaigns, public lectures, ecotours, eco camps etc.) National Parks that are part of Agency of Protected Areas network.

Tbilisi Zoo has an educational center for children "Metazoa", aiming at environmental awareness raising and ecological education of children (age groups 5-16), informing and involving different target groups into biodiversity conservation and supporting harmonious coexistence of humans and living nature (Metazoa Education Policy Document)

Since 2005 Department for Educational Programmes is working under National Museum of Georgia as well. The department develops programmes based on the museum collections and targeting school children. Museum has close partnerships with teachers and education experts. Museum initiated Interactive Dialogues on environmental topics that are regularly held at Chitaia Ethnographic Museum. The course is aimed at 10-15 year olds. The museum plans cooperation with the Ministry of Environment protection over environmental education.

3.2.2.6. TSU **Junior University** and within the University a School of Young Biologists aims at popularizing natural sciences among children by holding public lectures and practical

experiments with the participation of secondary school teachers and students, to improve knowledge and skills of the teachers, and to lay foundations for research in young children.

Within the framework Junior University plans for student competitions and conferences, as well as open seminars in different regions of Georgia.

TSU, natural sciences department also arranges **summer schools** for senior secondary school students. This program provides students with a unique opportunity to obtain extra-curricular information about new scientific and technological advancements, interact with some of Georgian and non-Georgian top scholars and teachers, participate in real time experiments and projects. In 2011 the summer school covered 4 topics: environment, energy, materials and health as well as provided for a day meeting with CERN scholars, representatives with the teams of the following projects: “Promotion of Biodiversity through Restoration of Quarries,” Heidelberg Cement PLC and German International Cooperation (GIZ), participate in the IYC Global Water Experiment,” etc.

3.2.2.7. Target groups for **adult education** programmes implemented by a number of international as well as national organizations under different environmental projects have included public and non-public authorities, communities, journalists, etc.

Adult education is an area targeted by the Environmental Education Center under Ilia State University. It plans to start offering diverse certificate courses for the following target groups: general and higher education teachers, public servants working in the field of environment protection and natural resource management, managers and specialists employed in the private sector as well as bachelor and master students.

### **3.2.3. Informal Education**

Some of the challenges identified by the “National Biodiversity Strategy and Action Plan - Georgia” adopted in 2005 were related to informal environmental education and assessed the latter as “unsystematic and fragmented;” problems were associated with mass media that “shows little interest in the environment and lacks specialist knowledge in this field;” Unfortunately, the same conclusions were made by a printed and online media monitoring



report that was undertaken by IUCN/Programme Office for Southern Caucasus in 2010<sup>13</sup>, which indicates that problems in this regards have persisted through years.

On the other hand, as many sources indicate (NEAP 2012, SoE 2011, Alternative Aarhus Report by green alternative) the Ministry of Environment Protection of Georgia gives high priority to public awareness on environmental issues and several TV and radio channels regularly report on environmental initiatives, high-level meetings, conferences media briefings of the Ministry.

The official websites of the Ministry and its agencies (especially, the websites of Agency of Protected Areas of Georgia and Biodiversity Service) and their counterparts on different social media (Facebook, Youtube, Myvideo, etc) serve as important sources of information about the Ministry activities and consequently cover diverse biodiversity issues as well. The websites of international and national environmental NGOs (e.g. NACRES (Noah's Ark for the Re-introduction of Endangered Species) and WWF Caucasus Office, CENN, Green Alternative, Green Movement, Caucasian Regional Environmental Centre, Elkana, etc.) also provide wide range of information on biodiversity of Georgia and its conservation.

Info tours that are arranged by the Ministry and its partners target in many cases journalists to increase the profile and the quality of media coverage of environmental (among them biodiversity) issues.

The public relations activities of the Ministry of Environment Protection and its partners and sometimes other governmental bodies (e.g. Mayor's Office of Tbilisi) serve as sources for public awareness as well as are aimed at making public behavior more environmentally friendly and include, but are not restricted to different outdoor campaigns (Hour of Garden Birds, Red List, Tree-planting, Clean-up campaigns, etc.), social advertisements on TV and Radio, adventure tours, art exhibitions, outdoor billboards, etc. The target groups can be really wide varying from children to adults, from policy makers to NGOs, journalists and international community. The Ministry of environment protection as well as most of the environmental NGOs support publication of different informational and educational leaflets, brochures on various issues related to biodiversity.

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<sup>13</sup> Unfortunately, the report misses out some important sources of printed and online media (Liberali and Tabula, to name just a few), thus can be a little bit biased.

Unfortunately, overall profile of biodiversity issues on TV and Radio is not really high, which as media experts explained is the result of low interest from the public. At present, biodiversity is only covered by one TV programme – GEO guide, a weekly adventure show on Rustavi 2 (the primary goal of which is to attract eco tourists and biodiversity coverage is a kind of second product, a side effect). A similar programme was also on Public Broadcast project “A Traveler’s Diary.” Besides, Radio “IMEDI” and, later on, TV “Mze” had a weekly program “Green Broadcast” led by the Minister Goga Khachidze himself that could have been a potential platform for biodiversity awareness rising. environmental issues are regularly covered by one-hour long programme on Radio 1 “Ecometer.” We can gladly note that kid television “Enki-Benki” beside including some of biodiversity issues in other educational programs, offers “Zoo-TV” that covers issues related to domestic and wild animals, Red List species, friendship with animals etc. (Enki-Benki, Program Annotation). In future the TV plans to broaden its environmental education profile.

Considering the fact that the majority of population of Georgia and especially those in the regions use TV (and radio) as primary source of information, the resources in this regard should be better exploited. Internet media being second most popular and fast growing in media communications can be also a powerful ally in educating the public on biodiversity issues.

### **3.3. Summary of the problems**

- With no quantitative formal evaluation of knowledge on biodiversity issues experts still and assess public awareness in this regard as low;
- Formal education on biodiversity issues has strong structural background (in terms of curricula). However, more needs to be done to have it institutionalized in the classroom. Particular attention in this regard should be paid to teacher trainings and preparation of teaching and informational materials;
- Internet is by far the broadest and cheapest informational resource, so internet access and proper skills of the teachers and students to use those resources should be ensured.
- More attention should be paid teaching sustainable development principles related to biodiversity at higher and vocational educational programs that have indirect or direct contact with natural resources (specifically agriculture, tourism, production etc.).

- Non-formal platforms for biodiversity teaching and awareness rising should be exploited more. The scope as well as quality (how well the biodiversity issues are covered, how the knowledge can be turned into behavior change) still needs to be improved.
- Sustainability of non-formal platforms of environmental education should be carefully considered. At present, most of the providers of environment education are nongovernmental organizations that will stop provision as soon as the specific project funds are have finished. It is important to channel the efforts and funds towards capacity building of more sustainable educational platforms such as museums, national parks, schools and other institutions having educational components;
- Informal environmental education is still unsystematic and fragmented, however the Ministries of Environment Protection and Education and Science of Georgia are working on EE strategy that will make environmental education more planned and focused on specific goals;
- The media shows little interest on biodiversity issues and still lacks skills to successfully handle the issues in this field; More should be done to use broadcast and internet media resources;

## Annexes

### Annex 1

#### NBSAP, Action Plan (2005-2010): Environmental Education, Public Awareness Raise and Community's Participation

##### Condition of Performance

	Action	Indicator/Expected Results	Condition of Performance
1.	Arrangement of social research (according to target groups) with biodiversity issues in order to assess the level of public awareness	It is studied and analyzed by the regions, what volume of works is done in order to raise public awareness of biodiversity issues	<b>It is not done</b>
2.	Arrangement information campaign participating with non-governmental organizations, local residents, especially women and youth	Prepared brochures, leaflets and other materials;  There were arranged by the regions minimum two campaigns in a year with active participation of volunteers	<b>It is done</b>  After the 2009 year, under the Biodiversity Protection Service of the Ministry of Environment is conducted awareness raising campaigns – “Garden Birdwatch” and “Species of Red List”, which involved schoolchildren and teachers of public schools.  In the minor zones of protected areas are conducted meetings with various stakeholders, lectures-seminars for different target and age groups, trainings and conferences for local community to raise their awareness by the Agency of Protected Areas.  In the direction of public awareness it is important to conduct public awareness campaign in local and in national level and other activities for protecting and maintaining biodiversity by the non-governmental organization sector WWF the Caucasus representation, CENN, RECC, Nakresi, Georgian Green, Ecovision and other non-governmental organizations.

3.	Information and scientific-popular materials, making videos on rational use of natural resources and biodiversity protection.	It is collected and prepared informational materials and publications; It is made and shown in central and regional TV-channels 10 video films.	<p><b>It is done partly</b></p> <p>In recent years, under the implemented programs and projects had published the information and awareness raising materials on the Georgian biodiversity, including “Beautiful Georgia” the magazine, “Caucasus – Treasure of Nature” the book (CEPF).</p> <p>It have been regularly publishing different kinds of information and awareness raising material, which are promoted the Georgian protected areas.</p> <p>Movies were filmed on the national Park of Colchis (GEF/WORLD BANK), “Mountain Goat’s Return” and a documentary film of the Georgian protected areas.</p> <p>However, the national and local TV-channels are rarely showing the film. And in general, to protect and preserve the biodiversity, the social and economic consequences of biodiversity lost is still less important issue for the media.</p>
4.	Arrange mediators in order to inform and get interested the local journalists	The media tours were arranged at least twice in a year in each region for representatives of central and regional media.	<p><b>It is done partly</b></p> <p>Arrangement of media tours are mainly done by the Agency of Protected Areas.</p> <p>Under the support of CEPF the relevant consultations were made to the journalists who were interested in environmental issues by the Environment Protection Center.</p> <p>There were conducted 11 trainings, in which were attended 120 journalist, 40 representatives of local government and 45 representatives of NGOs from Georgia and Azerbaijan. Also there were arranged the two transboundary media tours.</p> <p>CEPF has supported in Georgia the interesting initiative of Georgian Green Movement, which was directed at the development of cooperation between local government bodies and journalists. Under this Project a network of journalists was established in the two regions of Georgia, as well as there was conducted training for journalist and local authorities.</p>

5.	Development of cooperation between state and public sectors on the local level	On the Regional divisions base of the Ministry of Environment and Natural Resources is created a permanent clubs that are holding regular meetings with civil society organizations.	<b>It is not done</b>  In 2010 the regional divisions of the Ministry of Environment were abolished.
6.	Study the traditional approach to the nature in Georgia and preparing the publication in a popular language.	The published scientific-popular literature.	<b>It is done partly</b>  Under the support of Georgian Protected Areas Development Project (GEF/World Bank) have been published the brochure about Tusheti traditional activities.
7.	Prepare the special edition about protected areas and its prospects.	The relevant article is published and distributed.	<b>It is done</b>  There is egularly published the various kinds of information and awareness-raising materials that are promoted the Georgian Protected Areas.
8.	The establishing a network of literature, small libraries and videos that are existed in the area of biodiversity.	There are established minimum of 4 fully-equipped libraries at the regional divisions of environmental protection.	<b>It is not done</b>  On the one hand, the regional divisions have been abolished since 2010, and on the other hand, there was no attempt to create such library in the central level.
9.	Organize the soectacular events (quizzes, sports competitions, Alpiniads etc.)	There are prepared and implemented the spectacular events as in the center so in the regions.	<b>It is done partly</b>  Organizing spectacular events are made by the Ministry of Environment and as well as by the non-governmental sector and is mainly dedicated to the protection of biodiversity on the celebration of international days.
10.	Arranging scientific-popular workshops in the regions of Georgia.	There were conducted at least one workshop in all regions.	<b>It is not done</b>
11.	Organizing meeting of representatives of state, public organizations and business sector, in order to establish relationships and to identify common interests.	Each year it is prepared and conducted at least one meeting.	<b>It is done partly</b>  The Public Council is created by the Ministry of Environment Protection, which members are representatives of NGOs, Council meetings are hold regularly.  By the initiative of the Ministry of Environment Protection there is also created the “Green Club”, which brings together students from different

			<p>universities.</p> <p>However, the protection of biodiversity-related issues is rarely discussed in these forums.</p>
12.	<p>Creation the training (preparation) center (courses) for biodiversity conservation and management for various target groups.</p>	<p>There is created the training center equipped with appropriate equipment;</p> <p>There are developed a special training programs for various target groups.</p>	<p><b>It is not done</b></p> <p>However, at least 11 universities study subjects that contain biodiversity issues in the various educational programs.</p>
13.	<p>Organizing permanent environmental courses for school teachers in various areas of Georgia.</p>	<p>35% of teachers are trained in all region of Georgia.</p>	<p><b>It is not done</b></p> <p>However, since 2009 the teacher training programs have been going under the education reform. Under the reform there have been developed professional standards for teachers (additional detailed guidelines are currently under preparation) and the teachers were able to pass the trainings in order to improve as teachers as well as the technical skills. These trainings of teachers partially contain the environmental issues.</p> <p>In addition, The Ministry of Environment Protection (and its subordinated institutions – NNLP Agency of protected Areas and Biodiversity Service) carries out certain programs on biodiversity issues and especially for awareness-raising about the protected areas. Their target groups generally are the school teachers of Biology and Geography under a different campaign. But now the size of that campaign is not large (about 120-500 teachers).</p>
14.	<p>Integration of biodiversity issues into the educational programs of pre-school, secondary and higher schools and universities.</p>	<p>The principles of protection of biodiversity are integrated into the educational programs.</p>	<p><b>It is done</b></p> <p>Pre-school education advisory content is defined by the “Early learning and development standards” that was developed in 2010 with the support of UNICEF by the NNLP National Curriculum and Assessment Center and include five areas of the learning and development (namely, health and physical development, cognitive development and general knowledge, approach to learning, speech development, social-emotional development) for 0-1, 1-3, 3-5 and 5-6</p>

			<p>years age groups. The environmental issues are clearly laid out in the standards and include the results of study, which focuses on formation of children's environmental consciousness and positive attitude to the natural environment<sup>14</sup>. Pre-education program is based on this standard as well <sup>15</sup>, the achievable results under it include five areas of study (including "World Perception"), and the biodiversity issues take a huge place in it.</p> <p>The content of education and learning outcomes related to the environmental and biodiversity issues, on the one hand, are integrated into the national curriculum of competences (the National Education Plan 2011-2015 came into force in 2010-2011 school year), and on the other hand, it is given and included interdisciplinary into the different subjects of curriculum at all three levels: primary, basic and secondary. The National Curriculum identifies nine priority areas which are integrated into the whole course of general education during teaching the different subjects, which includes "national objectives of general education and requirements of public" and "their knowledge is essential for self-realization and establishing the appropriate place in the modern world". An environmental literacy is one of the abovementioned competencies: " An environmental literacy means development the healthy attitude of person to the environment, which means that student must understand the personal responsibility to the processes going in environment, be able to participate in its protection and restoration"<sup>16</sup></p> <p>Beyond the competencies environmental education and training courses are mainly</p>
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<sup>14</sup> "Nature and Technologies" one of the sub-issues of the "Cognitive development and general knowledge" means that the Child's ability to understand and study physical environment, to observe, explore, conduct experiments on the processes, which have the visible result. In addition, by the taking knowledge about environment, the child receives the information, e.g. about "The Earth and Living Nature", and with the development of critical thinking the child use this knowledge in practice. (Early learning and development standards, 2010)

<sup>15</sup> Pre-school Education Program ISBN 978-9941-0-1521-2 © National Curriculum and Assessment Center. 2011

<sup>16</sup> 2011-2016 Curriculum. **Chapter VIII. Article 48.**



			<p>consolidated into two blocks of subjects: in natural and social sciences. In the natural sciences block (Natural Science, Fundamentals of Natural Science, Biology, Chemistry, physics) are seven main areas: Living world at the primary stage (Biology introduction), the earth and outside the world (Geography and Astronomy), Man and Environment (fundamentals of Public Education), body and events (elements of the Physics and Chemistry), and as well as at the basic and secondary stages the scientific research, natural events (fundamentals of Physics) and chemical effects (fundamentals of Chemistry), the first three of them include information about the issues of biodiversity, threats to biodiversity and biodiversity conservation. Also, 3 of the 11 directions of the Social Sciences (Our Georgia, Geography, Civic Education, safety in emergency situations, etc.) include the biodiversity. The expected change in the national curriculum, in 2012 includes the addition of new subjects into the subject elective block of the national curriculum: "Environment and Sustainable Development", "Natural Monuments Monitoring" and "Conservation Biology". The first contains two modules (I module: "Environment and Sustainable Development", II module: "GeoEcology and Environmental Management"). In the elective courses the great importance has the teaching of biodiversity and conservation approaches (Eka Slovinski, 2012).</p> <p>In Georgia about 11 universities offer different levels of vocational and higher education (professional, bachelor's, master's and doctoral) in the neighboring specialties of Biodiversity and Environment protection (These programs have at least one mandatory module on the biodiversity issues).</p>
15.	Development supporting books for pre-school, secondary and higher education institutions in terms of promoting biodiversity.	It is published and approved at least one supporting book for pre-school, secondary and higher education institutions	The question is asked very general. it is difficult to evaluate whether the action is executed.

16.	Establish biodiversity teaching clubs at schools.	In some schools there are created biodiversity teaching clubs, which has appropriately equipped cabinets (pilot-project)	<p><b>It is not done</b></p> <p>However, the activities of the Ministry of Environment Protection and its partners are often directed to the public awareness-raising (including school children). The campaigns “Garden Birdwatch” and the “Species of Red List” made by the Biodiversity Agency in partnership with the German International Aid Organization include about 300-400 public schools and considers various types of activities (taking information and knowledge on these issues, direct observation-experiment, make a simple project on above mentioned issues (e.g. draw a picture), prepare supporting materials, supply and etc.).</p>
17.	Arrangement Eco-Camps for teenagers and students.	It is arranged at least 4 Eco-Camps	The arrangement of Eco-Camps was supported by the programs and projects that were implemented in Georgia in the last years, including “The Georgian Protected Areas Programme” (GEF/WB), CEPF. Eco-Camps are regularly organized by the Agency of Protected Areas of Georgia.
18.	Make amendment into the Georgian Legislation about advertising, which will create better conditions for placing environmental ads.	The relevant proposals are prepared and submitted to the Parliament	
19.	As a special course should be added “General Ecology and Environmental Law” to the Faculties of Journalism.	The special course “General Ecology and Environmental Law” is added to the Faculties of Journalism in any university.	<p><b>It is not done</b></p> <p>However, taking into the account of the modular nature of undergraduate programs, students have the opportunity to take any course as a free credit, including the course of studying biodiversity issues, if such is taught in the university.</p>
20.	Development and implementation of the state teaching program in the field of the Environmental Law.	In any university’s Master are introduced the specialty of Environmental Protection Law (Environmental Law) in a selective way.	<p><b>It is not done</b></p> <p>However, the “Environmental Law” (elective courses) are taught at the Sukhumi State University (LLM Program) and at Ilia State university (Bachelor’s program in Law), as well as “International</p>

			Environmental Law” is taught at Iv. Javakhishvili Tbilisi State University (Bachelor’s program in international law). Also the study of international environment law is scheduled to teach at least at two other universities.
21.	Put the consecutive web-site in the internet of the implementation biodiversity strategy.	Web-site is already placed in the internet.	<p><b>It is done partially</b></p> <p><i>The condition of the biodiversity strategy implementation is assessed in the 4<sup>th</sup> report of Georgia of biodiversity convention, its electronic version is placed on the following web-site:</i></p> <p><a href="http://www.chm.moe.gov.ge/index.php?page=konvenciebis_daregva&amp;lng=ge">http://www.chm.moe.gov.ge/index.php?page=konvenciebis_daregva&amp;lng=ge</a></p> <p><i>It is possible to place more detailed information on this web-site about the conditions of implementing documents obtained during the NBSAP updating process.</i></p>

## **Annex 2: Interviews Held with Key Environmental Experts/Informants**

The research team conducted semi-structured interviews with the following key informants:

### ***State Agencies:***

The Ministry of Environmental Protection (MoE):

Public Relations Department

Protection of Biodiversity Service

LEPL - Agency of Protected Areas

Department of Environmental Policy and International Relations

Ministry of Energy and Natural Resources (MENR)

LEPL - Agency of Natural Resources

Ministry of Sports and Youth Affairs (MSY)

Department for Youth Affairs

LEPL – Children and Youth Development Fund

Ministry of Agriculture (MoA)

Ministry of Education and Science of Georgia (MES)

LEPL – Teacher Professional Development Center

Department for National Curriculum and General Education

Mayor's Office of Tbilisi Municipality

### ***Non-Governmental Organizations:***

Aarhus Center

Regional Environmental Center (REC-Caucasus)

Caucasus Environmental NGO Network (CENN)

WWF Caucasus Programme Office

Green Alternative

Nacres – Biodiversity Conservation and Research

IUCN South Caucasian Office

Association of Organic Farmers Elkana

Greens Movement of Georgia/FOE Georgia

The Association of Field Researchers CAMPESTER

Ecovision

***Educational Institutions:***

Ivane Javakhishvili Tbilisi State University

Ilia State University

Georgia Agrarian University

Decorative Gardening Public College at Patriarchate of Georgia

Akhaltzikhe State University

Batumi Shota Rustaveli State University

Kutaisi Akaki Tsereteli State University

Telavi State University

***Other Organization:***

Tbilisi Zoo, education center „Metazoa”

Georgia State Muzeum, education department

### Annex 3. Bibliography and websites

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5. Georgian law about Red List and Red Book 2003
6. Georgian General Administrative Code 1999
7. Georgian law about environmental impact permits 2007
8. Law of Georgia on general education 2005
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10. Law of Georgia on Higher Education 2004
11. National Curriculum 2011-2016 2011
12. National Preschool Standards 2007
13. Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention)
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15. Convention on wetlands (Ramsar)
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21. Species Conservation Centre NACRES, 2008
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[www.biomonitoring.moe.gov.ge](http://www.biomonitoring.moe.gov.ge)

[www.chm.moe.gov.ge](http://www.chm.moe.gov.ge)

[www.aarhus.ge](http://www.aarhus.ge)

[www.statistics.ge](http://www.statistics.ge)

[www.redlist.ge](http://www.redlist.ge)

[www.parliament.ge](http://www.parliament.ge)

[www.apa.gov.ge](http://www.apa.gov.ge)

[www.geostat.ge](http://www.geostat.ge)

[www.cbd.int](http://www.cbd.int)

[www.ramsar.org](http://www.ramsar.org)

[www.wwfcaucasus.ge](http://www.wwfcaucasus.ge)

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[www.ecbsea.org](http://www.ecbsea.org)

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[www.greenalt.org](http://www.greenalt.org)

[www.nacres.org](http://www.nacres.org)

[www.gccw.org](http://www.gccw.org)

[www.greenway.ge](http://www.greenway.ge)

[www.rec-caucasus.org](http://www.rec-caucasus.org)

[www.iucn.org](http://www.iucn.org)

[www.cauenv.gol.ge](http://www.cauenv.gol.ge)

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## Annex 4: Stakeholder Meeting Protocol

Stakeholder Meeting was held in Courtyard Marriot Tbilisi within the component of renewal of Georgian Biodiversity Protection Strategy and Action Plan (NBSAP), “Public Participation and Education”.

Date: April 02, 2012

Time: 14:00

Address: 0105 Tbilisi, Freedom Square 4

Phone: +995 574 73 88 71

Targets of the meeting:

- Meeting with main stakeholders of mentioned direction of the project
- Introduction of report of NBSAP components - “Public Participation and Education”
- Discussion on stakeholder involvement procedures
- Discussion on obstacles in the field of Public Participation and Education on biodiversity issues and development of recommendations

The meeting was chaired by Nino Sulkhaniashvili (ecovision executive director).

The meeting had been given in accordance with the Bylaws of ECOVISION and that the notes would be attached to the minutes.

### Agenda

14:00-14:20	Opening of the meeting/presentation on NBSAP updating in the thematic field of “Public Participation and Education” Nino Sulkhaniashvili – ECOVISION Executive Director  Greeting Ioseb Kartsvadze – Ministry of Environmental Protection of Georgia, Head of Biodiversity Protection Office Natia Kobakhidze - GIZ
14:20-15:30	Presentation NBSAP updating in the thematic field of “Public Participation and Education” Nino Sulkhaniashvili Tea Siperashvili
15:30-16:30	Dinner
16:30-17:30	Questions, discussion
17:30-17:40	Coffee break
17:40-18:30	Discussion on obstacles in the field of Public Participation and Education on biodiversity issues and development of recommendations
18:30	Closing of the meeting

### List of participants

#	Name	Organization	Contact
1	Tea Siprashvili	Project expert in the field of education	Phone: +995 591 40 00 40 <a href="mailto:teasiprashvili@yahoo.com">teasiprashvili@yahoo.com</a>
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5	Tamar Kvantaliani	Biodiversity Protection Office of Ministry of Environmental Protection	<a href="mailto:t.kvantaliani@moe.gov.ge">t.kvantaliani@moe.gov.ge</a>
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24	Nino Chkhobadze	The Green` s Movement of Georgia Friends of the Earth	<a href="mailto:nino.chkhobadze@gmail.com">nino.chkhobadze@gmail.com</a>
25	Nodar Elizbarashvili	Tbilisi State University Professor Head of the Department	<a href="mailto:nelizbarashvili@yahoo.com">nelizbarashvili@yahoo.com</a>
26	Maia Chkhobadze	LEPL Agency of Natural Resources	<a href="mailto:maya.chkhobadze@yahoo.com">maya.chkhobadze@yahoo.com</a>
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29	Lela Kacheishvili	The Green` s Movement of Georgia Friends of the Earth	<a href="mailto:lelakacheishvili@gmail.com">lelakacheishvili@gmail.com</a>
30	Madona Pirvelashvili	The Green` s Movement of Georgia Friends of the Earth	<a href="mailto:madonapirvelashvili@yahoo.com">madonapirvelashvili@yahoo.com</a>
31	Irma Bochorishvili	Educational Center of Tbilisi Zoo Metazoa	<a href="mailto:bochorishvili.irma@gmail.com">bochorishvili.irma@gmail.com</a>

### ***Content of the meeting***

Nino Sul Khanishvili	Greeted attendants and opened the meeting. Presented agenda of the meeting. Underlined the significance of stakeholder participation in the project.
Natia Kobakhidze	Presented the meeting participants the project for Updating of Georgian Biodiversity Protection Strategy and Action Plan (NBSAP) and its main directions.
Nino Sul Khanishvili	Made presentation about project of Updating of Georgian Biodiversity Protection Strategy and Action Plan, 6 <sup>th</sup> direction – report of participation and education of society, 1 <sup>st</sup> and 2 <sup>nd</sup> chapters (access to information regarding to biodiversity issues and existing instruments for collection and spread of information).
Tea Sipurashvili	Made presentation about project of renewal of Georgian Biodiversity Protection Strategy and Action Plan, 6 <sup>th</sup> direction – report of participation and education of society, 3 <sup>rd</sup> chapter (public consciousness and education).
Natia Kobakhidze	Noticed that present status of existing NBSAP, performance of given direction had not been reflected clearly in pre-report.
Ana Rukhadze	Explained that unfortunately there were no indicators to be measured in order to determine given direction of existing NBSAP, current status of performance. Mentioned that general evaluation schedule of given direction, executed actions would be attached to final report as an annex.

Tamuna Sharashenidze	Mentioned that unfortunately biodiversity and generally environmental protection were not rating topics for media, namely for televisions. It is difficult to sale advertisement of mentioned subject matter broadcasts. Accordingly, these topics are less broadcasted by media. There is need to create interest and requirement in relation to relevant issues.
Nodar Elizbarashvili	<p>Made recommendations about report:</p> <ol style="list-style-type: none"> <li>1. Recommended to prepare and publish popular book (monograph) – biodiversity of Georgia, basis of which collected statistics published by WWF would be used.</li> <li>2. Recommended to prepare and publish map - biodiversity of Georgia, on which special places distinguished with its biodiversity, potential places for creation of protected territories and etc. would be specified.</li> <li>3. Recommended to create geographic information system (GIS) in the aspect of Georgian natural resources and utilization of them. Especially, for large projects supporting prognostication.</li> <li>4. Recommended to create conception and make program and subject matter planning for integrated study in school education, to integrate issues of biodiversity and landscape diversity in geography and biology disciplines.</li> <li>5. Recommended to translate international conventions into Georgian, because it would be public. Landscape Convention of Europe (Florence Convention. 2000) would be added to conventions mentioned in report.</li> </ol> <p>Noticed that issues regarding to biodiversity are taught with full course only in 4 higher institutions from 11 higher institutions listed in the report. As well as list of master and doctoral programs would be defined.</p>
Nino Sulkhaniashvili	Agreed the said recommendations and mentioned that they would be reflected in final report as far as possible.
Nino Gvazava	Mentioned that it is true that Georgian Law does not determine environmental information and its modes, but it is determined by Orhus Convention. Hence, because Georgia is a party of Orhus Convention, in case of need, it is possible to lead by Orhus Convention.
Ana Rukhadze	Agreed the previous speaker, although explained that it was difficult to be executed in reality. Like a fact that Georgian Law does not determine obligation of participation of society in development of legislative, political and strategic planning documents. This is one of the main reason of that participation of society in development of such documents is unimportant.
Dimitri Glonti	Mentioned that generally information about environmental protection was incomplete and unsystematic. Drawn attention to possible resources of supply of information about environmental protection to the ministries.
Ana Rukhadze	Mentioned that all projects executed in the country in the field of environment were ready to provide the ministries with the reports and results of appropriate projects.
Dimitri Glonti	Mentioned that the ministries have no human resource ensuring operative issuance of public information. Cited as an example when one of the nongovernmental organization requested information, and consolidation and preparation of it for issuing needed one week and great number of human resource.
Ana Rukhadze	Mentioned that in the Ministry of Environmental Protection information regarding to biodiversity is in permanent renewal and improvement process.

Eka Slovinski	<p>1. Mentioned that she had comments with regard to the educational part of the report regarding to one more regulatory document of pre-school education, as well as regarding to part of draught competences of national educational plan, which would be presented in writing.</p> <p>2. Mentioned that it is true that some issues with regard to biodiversity had been reflected in national educational plan, but there were serious problems in study materials and manuals. This is mostly referred to manuals of selective subjects, because publishers have insufficient financial interesting in development of such manuals and, it will be better if experts involved in the project would help in this direction.</p> <p>3. Mentioned that lots of selective subjects entered in national educational plan support creation of knowledge and consciousness about biodiversity in young generation and in this regard together with possible changes of national educational plan given in the report it will be better to mention one more selective subject “monitoring of nature monuments”, involvement of which in national educational plan is intended for future, and it’s good information about it will be given in the report.</p> <p>4. Also mentioned that the Ministry of Education and Science is glad to have cooperation with working process on guidelines for teachers and called the attendants to provide information being with them about study resources regarding to biodiversity, as well as to take participation in development of teachers` practical reference books of school inventory gained and improved within the project “Einstein” because the latter ones will be able to use this inventory for the purpose of biodiversity study.</p>
Rusudan Tevzadze	Mentioned that practical habits and skills must be created in children, for example, their involvement in monitoring of nature monuments and such projects. Also it is advisable to create terminological guidelines for journalists.
Tamuna Aladashvili	Agreed the previous speaker and mentioned that environmental journalism must be supported in the country. There are journalists who often broadcast environmental subject matter, but they have still some problems in view of content and terminology of subject matter.
Elene Shatberashvili	Mentioned that the so-called GAP analysis was recommended, which would determine priority directions of information regarding to biodiversity.
Irma Bochorishvili	Underlined the importance of students` education about environmental protection. Provided the attendants with information about activity of educational center “Metazoa” and its role in view of growth of consciousness.
Levan Kurdiani	Mentioned the role of patriarchate of Georgia and Orthodox Church in this direction. Christian science and ideology draw great attention to the mentioned issues. Mentioned that resource of church may be used effectively for increasing education and consciousness about biodiversity issues. For this channel of patriarchate “Ertsulovneba” may be used.
Nino Lagidze	Mentioned that every person must have direct contact with nature. Must be field practical manuals. Students must be directly involved in field researches and showing of results. Drawn attention to lack of specialists who work with the children in field conditions. Study portal is recommended in which all necessary information will be collected.

Maia Chkhobadze	Agreed the previous speaker and mentioned that training of narrow specialists and practical, field researches must be strengthened. For today, consolidation and treatment of information is generally done on theoretical basis.
Paata Shanshiashvili	Mentioned that protected territories have great importance for field researches and formal education.
Archpriest Bidzina Gunia	Underlined the significance of the meeting. Mentioned that internal motivation together with external factors is the most important in human consciousness and behavior. Or the feeling of that, we will be responsible for destruction of God's creature. Explained that such conception is typical also for other religions and they have the same dependence to nature. Mentioned that cooperation with the patriarchate in this direction would be most effective. Positively estimated the idea of Mr. Nodar Elizbarashvili about publishing popular book (monograph) – biodiversity of Georgia and map. Also mentioned the important recommendations represented by representatives of the Ministry of Education and Science.
Paata Shanshiashvili	Talked about NBSAP and mentioned that common idea must be established. Named problems of execution of NBSAP. First, executed activities were not oriented to target groups, key messages and results. Established basic necessities in order to eradicate problems and achieve success in this direction. Mentioned that public attention to biodiversity was most important. Most important is that people see direct contact between their health/welfare and environmental condition. Both formal and informal education is important in this direction. As a result of it the mentioned subject matter will be requested in population, which will provoke interest of media too. Key messages must be developed well and supplied correctly to target groups. In development of key messages, it will be taken into account that they will be as emotional as intellectual. All mentioned actions must be pragmatic and result-orientated. And the final result will be changing of human behavior, their reasonable dependence to environment.
Nino Sulkhaniashvili	Resumed the meeting. Thanked the participants for active cooperation and recommendations. Mentioned that notices and recommendations would be reflected in final report.

Upon being duly made, seconded, and passed, the following conclusions were adopted:

- According to Orhus Convention, Orhus Center will support the project in gaining and spreading appropriate environmental information
- All stakeholders will actively cooperate with the project
- All stakeholders parties will support the project in collecting necessary information.

**Meeting photos**

