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Regional-Level Analysis of the Outcomes of the TEEB Scoping Studies for the Forestry Sectors of Armenia, Azerbaijan and Georgia

Prepared by: Malkhaz Adeishvili

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List of acronyms

AMD	Armenian Dram
BAU	Business as Usual
DBPPA	Department of Biodiversity Protection and Protected Areas
ENPI	European Neighborhood and Partnership Instrument
EU	European Union
FDD	Forestry Development Department in Azerbaijan
HCV	High Conservation Value
IUCN	International Union for Conservation of Nature
MCPFE	Ministerial Conference on the Protection of Forests in Europe
MCT	Ministry of Culture and Tourism in Azerbaijan
MENR	Ministry of Ecology and Natural Resources of Azerbaijan
SEM	Sustainable Ecosystem Management
SFCS	State Fire Control Service in Azerbaijan
SLMC	State Land and Mapping Committee in Azerbaijan
SNCO	State Non-Commercial Organization in Armenia
SPNA	Specially Protected Nature Areas in Armenia
TEEB	The Economics of Ecosystems and Biodiversity
TCS	TEEB country study
TSCS	TEEB scoping country study
UNEP	United Nations Environmental Program
WB	World Bank
WWF	World Wide Fund for Nature
WWF-CauPO	World Wide Fund for Nature – Caucasus Programme Office

1. Introduction

1.1. Background and objectives of the study

Background

The European Union (EU) funded “European Neighborhood and Partnership Instrument (ENPI) East Countries Forest Law Enforcement and Governance (FLEG) II Program” is aimed to support the participating countries strengthen forest governance through enhancing their forest policy, legislation and institutional arrangements, and implementing sustainable forest management models on a pilot basis. The Program is being implemented in seven countries of the EU’s European Neighborhood and Partnership Instrument (ENPI) East region: Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine, and the Russian Federation.

The Program builds on initiatives undertaken under the first EU funded FLEG Program. It will be carried out over a four-year period, with end disbursement date of December 31, 2016. The Program is supported by the European Commission contributing to a single-donor trust fund administered by the World Bank (WB). Implementation of the Program is led by the WB, working in partnership with the International Union for Conservation of Nature (IUCN) and the World Wide Fund for Nature (WWF). The Program has three development objectives:

- 1) To make progress implementing the 2005 St. Petersburg FLEG Ministerial Declaration in the participating countries and support the participating countries commit to a time-bound action plan to ensure its implementation and follow-up activities (regional level).
- 2) To review or revise (or establish a time-bound action plan to review or revise) forest sector policies and legal and administrative structures; improve knowledge of and support for sustainable forest management and good forest governance (including the impact of related EU regulations) in the participating countries (national level).
- 3) To test and demonstrate best practices for sustainable forest management and the feasibility of improved forest governance practices at the field-level on a pilot basis in all participating countries (sub-national level).

The Economics of Ecosystems and Biodiversity (TEEB) is one of the important components of the Program. TEEB is an international initiative promoting sustainable economies in which the values of biodiversity and ecosystem services are fully integrated in decision-making. In 2007, the German Federal Ministry for the Environment and the European Commission initiated work on TEEB. In 2013, as a joint effort of the Government of Georgia, United Nations Environment Programme (UNEP) and WWF–Caucasus Programme Office (WWF-CauPO), the document *TEEB Scoping Study for Georgia: Main Findings and Way Forward* was produced. The study assessed five sectors of the Georgian economy – energy, tourism, agriculture, mining and forestry, demonstrating that these sectors largely depend on natural ecosystems. The need for a full-scale TEEB study was also identified.

In the framework of the FLEG2 Program, TEEB scoping studies were conducted in Armenia and Azerbaijan with particular focus on forestry sector. The three scoping studies have demonstrated the advantages of sustainable forest management not only from ecological, but also longer-term socio-economic perspective. In order to promote greater cooperation and synergies at the regional level (i.e. Southern Caucasus), it was decided to undertake a comparative analysis of these three scoping studies in the field of forestry. Consequently, WWF-CauPO commissioned this study for the regional-level analysis of the TEEB scoping studies (TSS) for the South Caucasus countries.

Objectives of the assignment

The regional-level scoping study aims to compare the outcomes and outputs of the TEEB scoping studies conducted for the forestry sectors of Armenia, Azerbaijan and Georgia and create a basis for sharing the experiences and improving the forestry policies. These experiences could be taken into consideration in full-fledged TEEB studies which can be undertaken for the forestry sectors in these three countries. Objectives of the regional-level analysis are:

- Obtain detailed knowledge of the major outcomes and outputs of the TEEB scoping studies implemented in the three countries of the South Caucasus;
- Conduct comparative analysis of these outcomes and outputs, identifying similarities and differences, lessons learned and best practices; based on these findings –
- Elaborate overall recommendations on how to: a) improve forest management and policy in each country and b) implement full-scale TEEB studies for the forestry sectors in these countries in the future.

1.2. Methodology used and limitations

The reference document for undertaking the regional-level analysis of the outcomes of the TEEB scoping studies for the forestry sectors of Armenia, Azerbaijan and Georgia is the **Guidance Manual for TEEB Country Studies, Version 1**.¹ This document was developed by UNEP, the Helmholtz Centre for Environmental Research (UFZ), Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) and the Institute for European Environmental Policy (IEEP), in 2013. The TEEB Manual provides both technical and operational guidance on how countries may conduct a TEEB Country Study. It outlines the various steps that may be taken to initiate and implement a country study, communicate its findings, and implement the recommendations of the study. Chapter 2 of the Manual provides guidance on how to select the scope and objectives of the TEEB country study and how to set up the process. More

¹<http://www.teebweb.org/resources/guidance-manual-for-teeb-country-studies/>

specifically, the Guidance Manual stipulates that at the end of the scoping phase of a TEEB country study one should have identified:

Objectives and thematic focus:

- An understanding of the policy context within which the full TEEB study falls
- Key thematic areas on which the full TEEB study will focus
- Draft objective or set of objectives for your study
- Set of key questions which the full TEEB study will aim to answer
- A list of outputs to be delivered by the full TEEB study (note: outputs can be delivered throughout the project, not just at the end).

Knowledge base:

- An overview of the state of knowledge on natural assets – their stock, state, changes and roles;
- At least a rough overview of data availability and any potential knowledge gaps;

Stakeholders

- An understanding of who the relevant stakeholders are and their main interests and concerns;
- A plan of how and when you are going to engage them within the timeframe of the TEEB study.

Process and Governance

- A governance structure decided upon and put in place with appropriate documentation outlining the respective roles of those involved;
- Work plan and milestones developed for the TEEB study: what will be delivered by when?
- Budget and plan outlining how resources will be mobilized and agreed upon for the TEEB study;
- Communication strategy for the TEEB study.

The author of the present study structures the analysis of the TEEB scoping studies in the South Caucasus countries around the topics suggested by the Guidance Manual and attempts to identify to what extent these topics are addressed in the scoping studies. At the same time, the author recognizes that the Guidance Manual was not developed by the time of preparing the scoping study in Georgia, and it was just made available when development of the scoping studies started in Armenia and Azerbaijan. Therefore, it has been understood that the South Caucasus countries could not fully apply the guidance provided in the Manual for developing their scoping studies.

For the overview of the forestry sectors in the South Caucasus countries, ecosystem services they provide, threats to forest ecosystems, policy legal and institutional frameworks the author mostly uses the information provided in the TEEB scoping studies. No major efforts have been made for the analysis to obtain additional and updated information on the state of forests, policy issues, legal and institutional frameworks and related problems in Armenia, Azerbaijan and Georgia.

The author does not provide his own critical analysis of problems in the forestry sectors of the South Caucasus countries. Instead, he uses the views and recommendations expressed in the scoping studies. Also, there is no intention of this study to undertake critical analysis of the scoping studies, e.g. whether they have been undertaken in line with their respective terms of reference or not. Rather, the objective is to identify common problems in the forestry sectors of the three countries and common issues which can be synergistically and effectively addressed by the full TEEB country studies. The other main objective is also to identify gaps in the scoping studies and provide recommendations for addressing these gaps before commencing the full TEEB country studies or in the process of their development.

1.3. Structure of the report

This report has been structured in the following way:

- **Chapter 1** Introduces the background and objectives, methodology applied and limitations of this study;
- **Chapter 2** provides a brief overview of the forestry sectors, ecosystem services and threats to forests in Armenia, Azerbaijan and Georgia. It contains general information on forests ecosystems, forest uses, ecosystem services forests provide and main threats to the ecosystems in the South Caucasus countries;
- **Chapter 3** provides a brief overview of policy, legal and institutional frameworks developed for forestry sector in the countries and problems in these areas as identified in the TEEB scoping studies;
- **Chapter 4** provides information on alternative policy options proposed in the scoping studies and initial analysis of their potential impacts on forest ecosystems in the South Caucasus countries;
- **Chapter 5** attempts to summarize overall objectives of the full TEEB country studies and questions to be addressed by these studies for Armenia, Azerbaijan and Georgia;
- **Chapter 6** analyzes the roadmaps for implementing the full TEEB studies in the South Caucasus countries, as provided in the scoping studies;
- **Chapter 7** summarizes the final outcomes of the TEEB scoping studies in Armenia, Azerbaijan and Georgia; and finally
- **Chapter 8** provides conclusions of the analysis and the author's recommendations for undertaking the full TEEB country studies in Armenia, Azerbaijan and Georgia.

Box 1. What is TEEB?

Ecosystems services result from the conversion of natural capital and assets into benefits to people. “Ecosystem services” means the benefits people obtain from ecosystems. These include provisioning services such as food, water, timber and fiber; regulating services that affect climate, floods, disease, wastes and water quality; cultural services that provide recreational, aesthetic and spiritual benefits; and supporting services such as soil formation, photosynthesis and nutrient cycling.

The Economics of Ecosystems and Biodiversity (TEEB) is a global initiative focused on drawing attention to the economic benefits of biodiversity including the growing cost of biodiversity loss and ecosystem degradation. TEEB presents an approach that can help decision-makers recognize, demonstrate and capture the values of ecosystem services & biodiversity.

The initiative was launched in response to a proposal by the G8+5 Environment Ministers (Potsdam, Germany 2007) to develop a global study on the economic benefit of biological diversity and economics of biodiversity loss. TEEB makes the case for integrating the economics of biodiversity and ecosystem services in decision-making. The TEEB study evaluates the associated decline in ecosystem services worldwide, and compares them with the costs of effective conservation and sustainable use. It intends to raise awareness of the value of biodiversity and ecosystem services and to facilitate the development of cost-effective policy responses and better informed decisions.

TEEB Phase II, currently underway, takes an economic approach that is spatially specific and builds on knowledge of how ecosystems function and deliver services. It examines how ecosystems and their associated services are likely to respond to particular policy actions.

TEEB aims to assess, communicate and mainstream the urgency of actions through its five deliverables - science and economic foundations, policy costs and costs of inaction, policy opportunities for national and international policy-makers, decision support for local administrators, business risks, opportunities and metrics and citizen and consumer ownership.

A fundamental focus of TEEB is on developing an economic yardstick that is more effective than GDP for assessing the performance of an economy. TEEB recommends that national accounting systems need to be more inclusive in order to measure the significant human welfare benefits that ecosystems and biodiversity provide. Such systems can help policy makers adopt the right measures and design appropriate financing mechanisms for conservation.

TEEB presents an approach that can help decision makers recognize, demonstrate and, where appropriate, capture (e.g. via regulation, zoning, or creating markets) the values of ecosystems and biodiversity. TEEB however is not simply economic valuation of ecosystems. One particularly important aspect of TEEB is to highlight the importance of public goods and public values (e.g. clean air, climate, landscape) and ensure that these are fully accounted for in any analysis of land-use or wider resource use decisions. Moreover, social and cultural values form an important part of the TEEB approach.

An increasing number of countries have initiated projects to implement TEEB findings and recommendations in policy processes at specific regional, national or sub-national levels. There may be various outputs of a TEEB process at the national level. These may include, but not be limited to, a TEEB scoping study, a full TEEB Country Study, TEEB synthesis of policy recommendations, other interim reports, and a monitoring and evaluation plan for recommendations. A ‘TEEB Country Study’ is a major output of the TEEB process. TEEB Country Studies are in-depth examinations for identifying ways to ‘work with nature’ to meet specific policy priorities and thematic concerns of the country. In the process of conducting a TEEB study, a scoping study is recommended to define the scope of the full TEEB study.

Guidance Manual for TEEB Country Studies (2013).

2. Brief overview of the forestry sectors, ecosystem services and threats to forests in Armenia, Azerbaijan and Georgia

Armenia, Azerbaijan, and Georgia are part of the Caucasus Ecoregion - one of the most biologically rich regions on Earth. The Caucasus is ranked among the planet's 25 most diverse and endangered hotspots and it is one of WWF's Global 200 vulnerable Ecoregions, identified as globally outstanding for biodiversity. The Caucasus has been named a large herbivore hotspot by WWF's Large Herbivore Initiative.

Forests are the most important biome for biodiversity conservation in the Caucasus. Mountain forests make up the majority of the forest biome. Forest cover is closely linked to precipitation and climate in the region, and the lower edge of woodlands varies considerably. Trees grow at sea level where average annual precipitation is high enough (in the Colchic and Hyrcan regions, for example). In the dry regions of the Araz (Araks) Basin, forests retreat almost to the subalpine belt. Broadleaf, coniferous, timberline, arid open woodland, and lowland forests are the main types of forests in the Caucasus, dispersed according to elevation, soil conditions, and climate.

Forests provide a habitat for variety of animal and plant species. In addition to the high ecological value, forests are important for economies, culture and livelihood of local people in the South Caucasus countries. At the same time, forests have been degraded and are under pressure due to poor protection and unsustainable use of forest resources over the decades.

The following subsections provide a brief overview of the forestry sectors in Armenia, Azerbaijan and Georgia including the information on main uses of forest resources, the role of this sector for economic development, ecosystem services provided by forests and threats to the forest ecosystems.

2.1. Brief overview of the forestry sectors

In Armenia 332,333 thousand ha or about 11.2% (according to the most recent study conducted by GIZ in 2011) of the country's territory (29.74 thousand km²) is forested. The forests are mainly located on steep slopes at the altitudes ranging between 550-2400 m above sea level.¹ Around 5.0% of the forests is classified as primary forest, the most biodiverse and carbon-dense form of forest.² The primary forested areas are in the north, northeast and south, while the central part of the country is almost treeless.

¹Scoping Study of Economic Significance of Ecosystems and Biodiversity of the Forestry Sector of Armenia. Prepared by *Armen Gevorgyan*. Yerevan, 2014.

²Source: <http://rainforests.mongabay.com/deforestation/2000/Armenia.htm>. Accessed on 03.02.2015.

There are more than 200 types of forest communities, 274 species of trees and bushes are found in forest areas, out of which the main natural forest species include oriental beech (*Fagus orientalis*), Georgian oak (*Quercus iberica*), oriental oak (*Quercus macranthera*), Caucasian hornbeam (*Carpinus caucasica*) and pine (*Pinus kochiana*). The average standing stock is about 125 m³/ha, the average annual growth rate is about 1.3 m³/ha. The wood biomass per capita is about 12 m³.¹

The main economic use of forests in Armenia is logging for producing timber and fuel wood. Timber is used mainly as construction material. In 2012, the volume of economic activities in the forestry sector amounted to 1,188 million Armenian Drams (AMD)². This made 0.03% of the GDP generated in the country the same year.³ According to official data, the logging, including thinning, transitional, sanitary and other logging took place on 1,417.5 ha or about 0.5% of the total forest area⁴. Total volume of harvested wood amounted 39,542 m³ or about 0.11% of the total forest stock in the country. The other uses of the forest include hay-making, grazing, collection of wild fruits. Income generated by the local people engaged in these activities amounted to 1.13 million AMD or about 2,370 USD in 2012.⁵

In Azerbaijan, the total area assigned for forestry (state forest fund area) is about 1,213.7 thousand ha of which 1,027.3 thousand ha is currently covered by forest vegetation, corresponding to 11.8% of the country area. Most of the forests is located in the Greater and Lesser Caucasus and in the Talish Mountains. Mountain forests are mainly located in high and middle mountain regions and occupy about 10% of the total land area of Azerbaijan. The mountain forests consist of a broad range of tree species.⁶ Oriental beech, Georgian oak, Chestnut oak and hornbeam are the main trees that comprise mountain forests of the country.

Riparian and plain forests in Azerbaijan occupy areas, where groundwater table is rather close to the surface and may permanently supply trees with water. These areas include Lenkoran and Yalama areas and Qanix-Haftaran valley. In addition, there are nearly 20,000 ha riparian forests in Azerbaijan, that mainly occupy banks of the Kura and Araz rivers. Riparian forests of Azerbaijan are locally called Tugay forests. The areas, where Tugay forests are spread are subject to regular inundation as well. Therefore, Tugays are largely dependent on floods and groundwater.

There is a strong historical evidence that the Tugay forests used to occupy extensive areas along the Kura and Araz rivers. Most of the Tugay forests in Azerbaijan consist of poplar trees.

¹Scoping Study of Economic Significance of Ecosystems and Biodiversity of the Forestry Sector of Armenia. Prepared by *Armen Gevorgyan*. Yerevan, 2014.

² Ibid.

³According to the Statistical service of Armenia, nominal GDP in the country amounted to 3,997,630 million AMD in 2012. Source: <http://www.armstat.info/en/?nid=126&id=01001>. Accessed on 29 January, 2015.

⁴ Ibid.

⁵Exchange rate 1 USD =476.7 AMD has been used. Source: RA National Statistical Service.

⁶TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

These forests occupy nearly 8,000 ha, most of which experience extreme degradation. Due to intensive deforestation, most of Tugay forests are swept out or replaced by urbanized lands.

A significant proportion of forests and scrublands is protected relatively well, being included in national parks and nature reserves.

In Georgia, about 40% of Georgia's territory is forested. About 97% of forests are located on slopes of the Greater and Smaller Caucasus Mountain, the rest are found in the valleys of East Georgia and the Kolkheti lowlands. National Environmental Action Program (2012-2016) of Georgia reports that total forest stock amounts to 430 million m³ and the average annual forest stock growth is about 4.0 million m³.

Forests provide commercial timber for domestic markets. The timber is mostly used for construction and furniture. The country also supplies timber to international markets. The timber is exported to the neighbouring countries including Armenia, Azerbaijan, Turkey and Iran¹. Forests are also used for fuel wood production for local households.

According to official data, extraction of timber and firewood, including registered illegal logging, varied in the range 584,441-805,422 m³ in the period 2005-2011. However, the forestry statistics and data on the amount of legal logging, according to some experts are far from being reliable.² As argued, actual amount of logging is much higher than the officially reported data. E.g. annual consumption for fuel wood in the country has been estimated at 2 million m³.

Overall, contribution of forestry sector to the national economy is low at present. According to the information of Georgian National Statistical Service, output of the sector varied in the range 56-83 million GEL amounting to 0.2-0.4% of the country's GDP.³ According to the World Bank, although domestic trade and export of timber and construction materials have considerable potential, it is undermined by a weak legal and institutional capacity to regulate commercial use of forest resources. Nevertheless, there is a large scope for development in terms of increased harvesting on a sustainable basis and processing for export as well as for domestic consumption.⁴

¹ TEEB Scoping Study for Georgia. UNEP. November, 2013.

² Environmental Performance Reviews: Georgia, Second Review. United Nations Economic Commission for Europe. United Nations. New York and Geneva, 2010.

³ The author's estimate, based on information provided by the Georgian National Statistical Service.

⁴ Integrating Environment into Agriculture and Forestry: Progress and Prospects in Eastern Europe and Central Asia. Volume II. GEORGIA Country Review. Europe and Central Asia Region Sustainable Development Department. THE WORLD BANK, November 200.

2.2. Forest ecosystem services¹

Forests in Armenia, Azerbaijan and Georgia provide essential ecosystems services such as soil formation and protection, water provisioning, climate regulation, safeguarding the biological diversity, prevention of natural disasters, recreation and health of population, cultural and spiritual values, and numerous other functions common to forest ecosystems. However, the following ecosystem services provided by forests are especially important in the South Caucasus Countries:

- **Provisioning of fuel-wood and timber for construction:** Due to high prices and limited access to fossil fuel as well as low level of affordability, fuel-wood is the main source of energy for the communities adjacent to forests. E.g. in Armenia average village household annually uses about 10 m³ fuel-wood. Each household in the country is entitled by the government to extract 8 m³ residual fuel-wood from forests free of charge. In Georgia more than 80% of rural households use fuel wood extracted from nearby forests for heating and cooking.² Some rural households in Georgia consume as much as 15 m³ of fuel wood annually.³ In recent years, in most of the rural areas of Azerbaijan fuel wood is the major source of energy. Wood is used to bake bread, prepare meals and heat houses during the winter. Studies confirm that average household wood use is nearly 12-15 m³.⁴ Many people living near forests use timber also for constructions in all the South Caucasus countries.
- **Provisioning of non-timber forest products (NTFP):** Fruit, berries, nuts, mushrooms, medicinal plants, honey and decorative plants. Many of these products are a common component of the diet of the rural population. These products are also marketed to generate supplemental income for rural households.
- **Provisioning of grass and hay for livestock breeding:** Livestock breeding is very important in all three countries of the South Caucasus. Livestock and dairy products are important farm products produced. E.g. villagers in most regions of Azerbaijan confirm that livestock production contributes an average of 30-40% of the total income. During the summer, most of Azerbaijan forests are used as the primary grazing areas. Cattle, sheep, water buffalo, goats, horses are the most important domestic animals in Azerbaijan.⁵
- **Provisioning of drinking water:** Forests play a critical role in the formation of drinking water resources. In many rural areas, especially in the mountains, natural springs are the primary source of drinking water supply. Cities also depend on forests for water. For example, Batumi, the largest city on the Black Sea coast of Georgia with a population of 180,000 (2008

¹ Classification of ecosystem services is provided in annex 1.

² Environmental Performance Reviews: Georgia, Second Review. United Nations Economic Commission for Europe. United Nations. New York and Geneva, 2010.

³ TEEB Scoping Study for Georgia. UNEP. November, 2013.

⁴ Scoping Study of Economic Significance of Ecosystems and Biodiversity of the Forestry Sector of Armenia. Prepared by *Armen Gevorgyan*. Yerevan, 2014.

⁵ TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

census), hosting more than a million tourists annually, receives drinking water from the forest in the Mtirala National Park.¹

Almost in all forested regions of Azerbaijan, forests provide natural filtration of water and people drink water sourced in the forests without treatment. Rough estimations confirm that nearly 2,100,000 people in Azerbaijan use non-treated clean water supplied from forested watersheds.²

- **Regulatory services:** Forests have direct influence on water balance, quantity and quality of water resources. Watersheds covered by forests feed springs, regulate surface water flows (rivers, streams) important for irrigation and hydro power production in the region. Forests considerably reduce water flow peaks. They help to reduce the risk of flash floods and droughts in the mountain areas. Erosion and mudflow prevention is also one of the most important functions of forests in the mountainous parts of the South Caucasus countries.

Forests regulate climate and contribute to cooler air in summer and warmer winter temperatures, reducing the difference between winter and summer temperatures. This effect may considerably reduce energy needs for heating during winter and cooling during summer times. E.g. in Nakhichevan region of Azerbaijan, where forests do not exist, annual temperature amplitude is nearly 35-40°C.³

- **Cultural services** including tourism, recreation and culture have become increasingly important in all countries of the South Caucasus. Development of forest related eco-tourism has a good potential in the region. Nature based tourism has been substantially increased e.g. in Georgia over the last two decades. There are numerous cultural monuments in forests, traditional lifestyle and crafts maintained in communities living close to forests which are attractions for tourism. Local and international tourists are engaged in hiking in mountain areas, collection of non-timber forest products, etc. In Azerbaijan, as incomes and leisure time have increased, more people are engaged in tourism and recreation. According to the Statistical Committee of Azerbaijan, the number of tourists visiting forested sites is notably higher than the areas with no forests (www.stat.gov.az).⁴ Tourism has become a source of income for the local population and contribute to poverty reduction and increased revenues to the national budgets.

- **Supporting services:** Forested areas have critical roles in nutrient cycling, predator-prey relationships and ecosystem resilience. Forests also provide a reliable shelter for many living organisms and are essential for biodiversity protection. Many species being at the edge of extinction live in forests. For example, leopards have returned to Hyrcan National Park of

¹ Valuation of the Contribution of Borjomi-Kharagauli and Mtirala National Parks Ecosystem Services to Economic Growth and Human Well-being. M. Flores, M. Adeishvili. 2011. Prepared for WWF Caucasus.

² TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

³ Ibid.

⁴ TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

Azerbaijan were previous estimates found none in existence. Leopards and other species add value to the forest as a wild habitat and as place for related tourism.¹

2.3. Threats to forest ecosystems

Threats to forest ecosystems in the South Caucasus countries are common and include:

- Unsustainable, often illegal, logging for fuel wood and timber production;
- Poorly regulated grazing and hay making for livestock breeding;
- Unsustainable extraction of non-timber forest products;
- Infrastructure development and land encroachment;
- Deforestation;
- Unsustainable tourism;
- Climate change.

Unsustainable logging: In 1990-ies, after the breakup of the Soviet Union the South Caucasus countries experienced a heavy shortage of energy. In this period forests and trees near the human settlements became the main source of fuel for heating and cooking. This put a significant negative pressure on the forests. As provided in the previous section, fuel wood continues to be the main source of energy for heating and cooking in rural areas in all three countries. Extraction of the fuel wood is often illegal and unsustainable resulting in the reduction of the forest cover and degradation of forests.

In Soviet period timber for construction and other uses was mainly imported from Russia. The stoppage of importing the timber forced the South Caucasus countries to use own forest resources more intensively. Moreover, Georgia, for example, started exporting its timber resources to the neighboring countries. Unsustainable practices of forest logging for timber production are common in the countries. Moreover, even though illegal logging has been reduced in recent years, it still continues to take place in all three countries of the south Caucasus. Poor access to alternative energy sources, especially in the mountainous settlements, lack of alternative income sources are the main reasons for local people and busyness to be engaged in illegal logging.

Over-grazing by livestock is another challenge in the forestry sector in the South Caucasus countries. In certain locations (near settlements, in winter pastures, etc.) grazing is often shifted to nearby forests. In combination with unsustainable logging, excessive grazing can cause severe damage to forest ecosystems. The main causes of over-grazing are limited control from the state authorities, rural poverty, limited alternative livelihood opportunities, improper range management, and a lack of awareness in shepherds and livestock owners. For many families, livestock keeping is almost exclusively the sole source of livelihood. Unsustainable range management practices (e.g. the concentration of livestock in relatively small areas, failure to use pasture rotation systems, no restoration of degraded pasture land, etc.) as well as the lack of support (subsidies, small grants, favorable-term loans, extension services) further aggravate

¹ Ibid.

the problem.¹

Infrastructure development is a relatively new threat to forest biodiversity. Rapid economic recovery and growth will trigger large-scale infrastructure development in the region in the coming years. These include new pipelines, dams, power lines, railways, mining facilities, roads, and buildings. There is significant risk of losing some forest areas due to infrastructure development activities. The clearance of even relatively small forest area can cause irreversible damages if this forest is located within ecological corridor or other environmentally sensitive area.

Deforestation and land encroachment: In South Caucasus countries forests have been cleared to replace the area for alternative uses such as urban, agricultural, infrastructure, mining industry development. Deforestation still continues in the countries. E.g. in Azerbaijan forests are cleared to plant various agricultural crops.²

Unsustainable tourism: In recent years nature based tourism increased considerably in the South Caucasus countries. In the absence of adequate tourism infrastructure, tourism services pressure on forests in the South Caucasus countries also increases. The problem is aggravated by low awareness of tourists and local people involved in tourism business on environmentally friendly behavior and practices in forest ecosystems.

Climate change: The diversity and distribution of forests in the Greater Caucasus, depends on climate, land, elevation and other factors. The recent observations show that oak trees in low altitudes are drying out, which can be associated with both decrease of groundwater resources and rise in temperature. Naturally, this factor increases the flood risks in medium and low mountain areas. Simultaneously, oak forests have moved upwards on altitudinal zones gradually replacing beech and hornbeam trees in many places. These changes prove to be the results of the climate change, and they signal serious problems in the mountain communities in the future and requires immediate adaptation measures.³

2.4. Impacts on forest ecosystems and ecosystem service

Threats discussed above have already resulted in significant negative impacts on forest ecosystems in the South Caucasus countries as well as their ability to provide essential ecosystem services. These impacts include, but are not limited to the following:

- **Changes in species composition and reduced capacity for regeneration:** Changes in species composition and structure occur in the forests, the stands loss their capacity of natural regeneration and their productivity is reduced. E.g. In result of overgrazing, in many places, high value forest species have been replaced with the steppe-meadow vegetation types. Natural regeneration of forest species of oak, beech and Caucasian pine and other

¹TEEB Scoping Study for Georgia. UNEP. November, 2013.

²TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

³ Ibid.

rare tree species have been drastically declined. At present they occur in the form on islands and individual trees.¹

- **Fragmentation of habitats:** The reduction of forested areas results in fragmentation of habitats for populations of plants and animals and loss of genetic diversity;
- **Disappearance of floodplain forests:** Historically floodplain (Tugay) forests occupied extensive areas along the Kura and Araz rivers. Due to intensive deforestation, most of floodplain forests disappeared. Flow regulation in the Kura river reduced floodplain areas and also affected Tugay forests in Azerbaijan.²
- **Increased number of landslides, avalanches and mudflows, erosions:** Due to unsustainable logging and degradation of forests the intensification of landslides, avalanches, mudflows, erosion, drying up the springs have been observed.³ These cause damage to communities, infrastructure and agriculture.
- **Increased sedimentation:** Intensive deforestation has made slopes more vulnerable to erosion and increased the turbidity of rivers and streams. In the turbid water suspended solids absorb more heat, increase water temperatures and reduce concentration of dissolved oxygen. Higher turbidity also negatively affect photosynthesis and the production of dissolved oxygen. Also, suspended substances can plug fish gills, reducing resistance to disease in fish, lowering growth rates, and affecting egg and larval development.⁴

¹Scoping Study of Economic Significance of Ecosystems and Biodiversity of the Forestry Sector of Armenia. Prepared by *Armen Gevorgyan*. Yerevan, 2014.

²TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

³ Ibid.

⁴ TEEB Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

3. Policy, legal and institutional frameworks for forestry sectors and related problems

The overall misuse of forests in the South Caucasus countries is mainly the result of the lack of an appropriate policy, legal, institutional and economic frameworks. The following sections of this report provide overview of these frameworks and related problems in Armenia, Azerbaijan and Georgia based mostly on the information provided in the TEEB scoping studies of these countries.

3.1. Armenia

Forest policy and legislation

Over the recent decade some key policy documents for the forest sector have been developed in Armenia such as the National Forest Policy (2004), National Forest Program (2005), Illegal Loggings Action Plan (2005), State Forest Monitoring Program (2006). The National Forest Policy of the Republic of Armenia adopted in 2004 sets forth that forests are national wealth and should serve to current and future generations through sustainable management of forests.

National Forest Program was adopted to support implementation of the national policy for sustainable forest management. It aims to protect forest ecosystems, rehabilitate degraded forest ecosystems, and effectively use forest resources. The program include activities for mitigation and prevention of illegal loggings, eradication of economic and social underlying causes of illegal loggings, improvement of institutional setup, scientific-educational development and capacity building.

Despite the presence of the National Forestry Policy and the National Forest Program in Armenia, their implementation is poor. Moreover, there are some drawbacks in these documents: As argued in the Armanian TEEB scoping study, there is no due regard given in the policy and program to ecosystem services; The national forest policy is not aimed at multi-functional forest use and ecosystem approaches in forest management; Enhancing the ecosystem services provided by the forests is not considered in the forest management; Developments in the sector do not meet the requirements and guidelines of international conventions, in particular, those related to: implementation of the criteria of **sustainable forest management**; revision of national legislation, **land use and land zonation schemes** to effectively protect the natural habitats; **engagement of local population in decision-making** (Aichi Biodiversity Targets, CBD Strategic Plan 2011-2020).

To achieve the strategic objectives of the National Forest Policy the Forest Code was adopted in 2005, which regulates the activities in the field. According to the Code the forests of Armenia are state property (though it is possible to have community and private forests, Article 4) and

they have to be managed by the governmental structures. The code classifies the forests as protection forests, forests of special significance and production forests. The following forms of forest use are allowed by the Forest Code: harvesting of wood and secondary forest products, use of non-timber forest products, activities for reproduction of fauna, scientific-research activities, forest use for health, sport, recreation and tourism.

Forest use in protected areas is regulated by the Law on Specially Protected Nature Areas (SPNA). The acting law on SPNA was adopted in 2006. Draft revised law on SPNA was developed in 2014 though it has not been officially adopted yet. The draft Law envisages wider opportunities for local self-governing bodies in terms of participatory management especially for the categories of natural monuments and protected landscapes.

According to the Armenian TEEB Scoping study, there are number of drawbacks and gaps in the national forestry related legislation. E.g. the law does not take appropriately into account the fact that most of the forests in Armenia are on slopes, they provide essential regulatory ecosystem services and must be categorized mainly as forests of “protection significance”; Regulations aimed at mitigation of climate change and increase of resilience of high conservation value forests and forest in protected areas are missing; Ecosystem approaches in forest management and provisions on valuation of ecosystem services and enforcement of related payment system are not defined in the Forest Code and the Draft Law on SPNAs, which are the two main laws regulating the forest management in Armenia.¹

Forest management institutions

The state forests of Armenia, including the system of SPNAs, are managed by the Ministry of Agriculture and the Ministry of Nature Protection and their subordinated bodies. There is a complex system of division of responsibilities between these institutions for forest management: The Ministry of Agriculture is responsible for protection, reproduction and use of forests in Armenia. “Hayantar” State Non-Commercial Organization (SNCO) with its 19 branches (Forest Enterprises) which is a structure under the Ministry of Agriculture manages about 75% of forest areas, including 13 sanctuaries. State forest control is vested with the State Forest Inspection under the Ministry of Nature Protection. About 25% of forest areas in the structure of protected areas is managed by the Bioresources Management Agency under the Ministry of Nature Protection.²

There are problems with clear division of responsibilities between these institutions. Neither there is an effective coordination and cooperation between them. Furthermore, problems are with human and technical capacities (insufficiency of qualified specialists, technical means and equipment) in these institutions to effectively meet their institutional responsibilities.³ Armenian TEEB Scoping study provides details of these problems.

¹ Scoping Study of Economic Significance of Ecosystems and Biodiversity of the Forestry Sector of Armenia. Prepared by *Armen Gevorgyan*. Yerevan, 2014.

² Ibid.

³ Ibid.

3.2. Azerbaijan

Forest policy and legislation

National Forestry Program (NFP) of Azerbaijan for the period 2015-2030 was adopted in 2014. According to this document, forest area in the country will be increased through afforestation/reforestation on suitable lands.

The Forest Code provides legal grounds for protecting, restoring, and using the Azerbaijani forests and related resources. This code identifies the forest resources of Azerbaijan as a shared national wealth. The Forest Code constitutes the basis of the forest legislation and regulates the balance between the use and protection of forest resources. According to the Code, all forests of the country are publicly owned and should be managed by the state institutions. There is no opportunity for representatives of the private sector or local communities to participate in the management of forests.

The current system provides little or no incentive for stakeholders to conserve forest resources and manage them sustainably. The Forest Code reduces options for public participation and private business in forest management.

Most of the forested areas of Azerbaijan are located in protected areas, management of which is regulated by the Law on Specially Protected Areas. According to article 17 of the law, use of lands, water, flora and fauna located within boundaries of state reserves is prohibited for economic activities. Article 21 of the law allows using the national parks for tourism and recreation.

Sector governance

The Ministry of Ecology and Natural Resources of Azerbaijan (MENR) conducts forest management in accordance with the Forest Code and the Law on Environmental Protection. The Forestry Development Department (FDD) under the MENR is the main government agency responsible for management of forests including those in protected areas.

The State Land and Mapping Committee (SLMC) is the central executive body implementing the land cadaster and monitoring. SLMC within its authority can monitor forested areas. State Fire Control Service (SFCS) of the Ministry of Emergency Situations is responsible for fire combating activities. The establishment of fire prevention rules, reduction of fire risks, taking actions directed to fire prevention are implemented by the Fire Control Service.

Ministry of Culture and Tourism (MCT) is implementing tourism policy in Azerbaijan. MCT conducts tourism management in accordance with the relevant legislation on tourism.

According to the TEEB Scoping Study of Azerbaijan, significant gaps exist in cooperation among the above-mentioned institutions. E.g. there is insufficient coordination between MENR and MCT. MENR is the government body responsible for managing national parks and other categories of protected areas, while MCT is a body that implements tourism policy. Currently, MCT is not involved in management of national parks and has no direct power to improve tourism potential of the parks. This obstacle creates additional problems for effective management of national parks. For instance, national parks with forested areas are not always open to tourists. Recreational activities in the area of parks are not organized well. The infrastructure and recreational design of the parks is rather weak and in most cases not user friendly.

There is no effective cooperation between FDD and the Department of Biodiversity Protection and Protected Areas (DBPPA) both being the substructures of the Ministry of Ecology and Natural Resources. Close cooperation between FDD and the SFCS belonging to different ministries is often challenging. Local communities and municipalities are not involved in the management of forests. The former depend on forests for fuel to heat homes in cold weather. The present legislation creates conflicts between FDD, DBPPA and local communities.

Research on forestry issues in Azerbaijan is practically not carried out. The Forestry Research Institute of MENR needs resources, including qualified staff, to conduct such research. In order to improve forestry education in Azerbaijan, Forestry School under the Ganja State University was created in 1995. However, this educational program does not have qualified staff and other resources required to meet basic standards of quality education about forestry.¹

3.3. Georgia

Forest policy and legislation

First official forest policy document in Georgia “The Main Principles of The Government Policy for Georgia’s Forest Sector Development in 2002-2010” was elaborated and adopted in 2002. The document stated that the forest sector is one of the most important sectors for social-economic development of the country and expressed commitment of the Government of Georgia to elaborate a national forestry sector policy in full compliance with requirements of UN resolution on sustainable development and management of forests. It took a long time for the government to develop and finally adopt the National Forest Concept (NFC) of Georgia in 2013.² The concept document stipulates that Georgian forests have a vital importance for safety and well-being of the population, for poverty alleviation and development for industries. Essential ecosystems services forests provide have been underscored in the document.

¹ Scoping Study for Forestry Sector of Azerbaijan. Prepared by *Rovshan Abasov*. Baku, 2014.

² The National Forest Policy was endorsed by the Georgia Parliament in December 2013. The document was developed with support of the Austria Government.

The NFC also recognizes problems in the forestry sector including, but not limited to, the following:

- Bottlenecks in the legislation, weak forest management institutions and poor enforcement of the regulations;
- Low awareness among the decision makers of the importance of forest ecosystem services and insufficient consideration of the forest values in developing and planning processes;
- Insufficient financing of the sector;
- Weak involvement of local people in the management of forest resources.

The NFC of Georgia calls for addressing the problems through:

- Improved forest management planning;
- Reforming the forest ownership, management and use rights;
- Preparing a new Forest Code and developing regulations for sustainable forest management;
- Improving the institutional set-up with respect to the forest management;
- Increasing awareness and involvement of the society, including local people and local governments in decision making and forest management processes;
- Enhancing education and research in forestry sector.

The NFP states that at present the potential of forests is not used fully and efficiently both from economic and environmental perspective. Planning and implementation of multipurpose and efficient forest use (timber and non-timber forest resources, tourism and recreation, hunting and fishing, use of forest lands for agricultural purposes, etc.) should create a precondition for sustainable forest use.

Adoption of the NFC laid the ground for the development of National Forest Program in Georgia. The program is being prepared by the Ministry of Environment and Natural Resources. Nevertheless, a number of obstacles still remain hindering sustainable management of forests in the country.

Sector governance

Currently State forests (except the forests in the protected areas) are managed by Forest Agency - a legal entity under the Ministry of Environment and Natural Resources Protection. Agency of Protected Areas also under the Ministry of Environment is responsible for the management of protected areas including strict nature reserves, national parks, nature monuments and managed reserves.

Even though a lot was done in recent years in Georgia to strengthen the institutions responsible for managing forest resources, yet more needs to be done for improving the institutional setup and building technical and human capacities in these institutions. E.g. the National Forest Concept of Georgia calls for establishment of new forest management bodies having forestry management powers including: creating infrastructure, managing hunting farms, harvesting

timber and other forest products, as well as selling forest resources and providing tourist and other services, reinvesting profits and equipped with adequate human and financial resources.

3.4. Problems related to policy, legal and institutional frameworks in the forestry sectors of the South Caucasus countries

There are number of common problems related to policy, legal frameworks and institutional setup in the South Caucasus countries identified in the scoping studies carried out in Armenia, Azerbaijan and Georgia in 2013-2014. The main problems are:

- Insufficient involvement of communities and local population in forest management and decision-making processes;
- Legal and technical problems with respect to the establishment of community and communal (municipal) forest management systems - current legislation does not provide public and community participation in the governance of forests. Communities located rather close to forested areas have no rights in managing forest resources. Local governments are also not involved in forest management.
- The lack of forest inventories resulting in forest use without appropriate knowledge about the state of the forests, including timber stock availability, diseases and pests, impacts of climate change, etc.;
- The lack of sustainable forest management plans;
- Existing approaches are not aimed at multi-functional forest use; different functional zones of active economic intervention, recreation, tourism development, strict protection, rehabilitation, etc. have not been designated;
- Extraction of non-timber resources such as food items, medicinal and decorative plants is not regulated. Moreover, assessments of the status of these resources are not yet complete. Accordingly, rare, endemic and endangered species are not fully protected by law;
- Unclear division of responsibilities between the institutions responsible for various aspects of forest management, lack of cooperation between them and lack of appropriate technical and human capacities in these institutions to effectively carry out their tasks;
- Financial problems are one of the major factors that create barriers to sustainable forestry. Allocation of financial resources to the authorities responsible for forest management at national and local levels is inadequate.
- Low awareness among the decision makers of the importance of forest ecosystem services and insufficient consideration of the forest values in developing programs and planning processes;
- Absence of financial tools and economic incentives for sustainable management of forest resources.

The TEEB scoping studies provide details of the above problems in each country and call for addressing them.

4. Alternative policy options proposed in the scoping studies and their potential impacts on forest ecosystems

One of the objectives of the TEEB scoping studies for the South Caucasus countries had been identification of alternative policy scenarios/options and their potential impacts on natural ecosystems. Policy priorities, principles and criteria for sustainable forest management, which apply globally, have been outlined in a number of international agreements and processes of which the South Caucasus countries participate. Examples include “Statement on Forestry Principles” (adopted in Rio de Janeiro in 1992), Expanded Program of Work on Forest Biodiversity (within the Framework of the Convention of Biological Diversity (CBD), Forests Europe, and voluntary forest certification systems.

The CBD Secretariat suggests the following to achieve Aichi Targets (CBD Strategic Plan 2011-2020):

1. By 2014, national legislation and land use plans or zonation maps have been reviewed and updated in relation to national targets for the maintenance of natural habitats, and spatial planning tools are made available for wide use;
2. By 2014, additional measures are taken, as necessary, including for example for the enhancement of land tenure, the enhancement of law enforcement and the use of incentive measures.
3. Apply existing criteria for sustainable forest management (e.g. the Forest Europe criteria and indicators, 2003) and forest level operational guidelines.
4. Enhance customary use of biodiversity by indigenous and local communities by increasingly delegating governance and management responsibility to the local level.
5. Promote the use of certification and labeling systems or standards.

The sustainable ecosystem management (SEM) strategy for forestry sector in the South Caucasus countries should include all items (1-5) above with the following additional elements, as identified in the TEEB scoping studies:

1. Establish ‘protected’, ‘protective’ and ‘other’ forest classes using Strategic Environmental Assessment (SEA, Georgian TEEB scoping study);
2. Ensure that all harvesting of forest resource, including non-timber forest products, is sustainable through management, monitoring and enforcement (Georgia, Armenia, Azerbaijan);
3. Transfer of some rights (ownership rights of some forests; hunting rights) to local communities (Georgia, Armenia, Azerbaijan);
4. Enhance financing and capacities of institutions involved in forest management (Georgia, Armenia, Azerbaijan);
5. Assess and integrate the value of ecosystem services forests provide in development programs and decision making (Georgia, Armenia, Azerbaijan);
6. Introduce financial tools and economic instruments, including payment for ecosystem

services, for sustainable management of forest resources (Georgia, Armenia, Azerbaijan);

7. Expand the network of protected areas and establish corridors between them (Georgia, Armenia, Azerbaijan);

8. Increase the role of private business in forest management (Georgia, Azerbaijan).

All TEEB scoping studies in the South Caucasus countries emphasize the need for multipurpose/multifunctional use of forest resources in order to adequately protect forests, whilst obtaining the maximum benefits in a sustainable way. This requires a flexible categorization (functional zoning) of forests. Present forestry legislation and management standards in the South Caucasus countries cannot adequately provide for multipurpose forest management and functional zoning. Therefore one of the priorities for alternative policy option is to introduce/revise existing legislation and build respective institutional and human capacities for effective classification and zoning of forest to ensure their multipurpose use and continuous provision of essential ecosystem services.

As suggested in the Georgian TEEB Scoping Study, the strategic zoning may be carried out in accordance with MCPFE classes (see Forest Europe, Vienna resolution IV)¹. This can support the protection of forests with High Conservation Values (HCVs) and sustainable use of productive forests. As argued, in business as usual (BAU) scenario, without strategic zoning, forests with HCVs will be downgraded – potential new protected areas might be treated as regular forests, creating barriers for establishment of new protected areas.²

The analysis undertaken in TEEB scoping studies of the South Caucasus countries prove that in the BAU scenario short term benefits will be gained by a smaller group of forest users leading to environmental, economic, social and cultural losses in the long term. In contrast, implementation of SEM policies and practices will ensure protection and sustainable use forest resources and delivery of essential ecosystem services and related benefits continuously for all types of stakeholders now as well as for future generations. While economic benefits of some stakeholders under SEM may be minimized for short-term periods, over the long-term periods, economic gains for all types of stakeholders are increasing and remain sustained.³

¹Source: http://www.foresteurope.org/docs/MC/MC_vienna_resolution_v4.pdf

² TEEB Scoping Country Study for Georgia. UNEP. 2013.

³ Ibid

5. Objectives, thematic focus and questions to be addressed by full TEEB country studies

According to the Guidance Manual for TEEB Country Studies, one of the major tasks of TEEB scoping studies is to identify objectives and thematic focus of full TEEB Studies. More specifically, TSCSs should identify the following:

- Key thematic areas on which the full TEEB study will focus;
- Overall goal, draft objective or set of objectives for the TEEB study;
- Set of key questions which the full study will aim to answer;
- A list of outputs to be delivered by the full TEEB study (note: outputs can be delivered throughout the project, not just at the end).

It is the author's view that TEEB scoping country studies for the South Caucasus countries could not fully formulate and distinguish between the focus, overall goal, objectives, questions to be answered and list of outputs to be delivered by the full TEEB studies. Instead, the scoping studies, specifically those of Armenia and Azerbaijan, provide a set of prescribed recommendations and, in some cases, specific measures, including institutional changes, capacity building, studies, policy instruments, etc. to be implemented for improved forest management in the countries.

Attempts have been made by the author of this study to identify and categorize, based on the outcomes of the TEEB Country Scoping Studies of the South Caucasus countries, the focus, overall goal, specific objectives, key questions to be answered and list of outputs to be delivered by the full TEEB country studies (see Table 1).



Table 1. Thematic focus, objectives, key questions and a list of outputs to be delivered by the full TEEB country studies.

	Armenia	Azerbaijan	Georgia
Key thematic areas on which the full TEEB study will focus	Forestry and forest ecosystems	Forestry and forest ecosystems	Forestry and forest ecosystems together with the energy, tourism, agriculture and mining sectors
Overall goal of the full TEEB country study	<p>Not clearly formulated in the Scoping Study. The overall goal is suggested to be:</p> <ul style="list-style-type: none"> • To raise awareness and inform decision makers and general public on the economic values of forests and ecosystem services they provide; • To provide evidence base for multipurpose and sustainable forest management. 	<p>Not clearly formulated in the Scoping Study. The overall goal is suggested to be:</p> <ul style="list-style-type: none"> • To raise awareness and inform decision makers and general public on the economic values of forests and ecosystem services they provide; • To provide evidence base for multipurpose and sustainable forest management. 	<p>Not clearly formulated in the Scoping Study. The overall goal is suggested to be:</p> <ul style="list-style-type: none"> • To raise awareness and inform decision makers and general public on the economic values of forests and ecosystem services they provide; • To provide evidence base for multipurpose and sustainable forest management.
Specific objectives for the full TEEB study	<p>Suggestions of the author of this report:</p> <ul style="list-style-type: none"> • Full economic assessment of forest ecosystems and biological diversity, which can justify not use of the given forest ecosystem for short-term economic purposes or its alternative use to get more benefits in a longer term; • Contribution to promotion and justification of institutional reforms in the forest management sector as well as the practice of sustainable ecosystem management; 	<p>Suggestions of the author of this report:</p> <ul style="list-style-type: none"> • To develop a comprehensive analysis of use and non-use values of forests in Azerbaijan, with a vision of what sustainable forest management means; • To provide assistance to the government of Azerbaijan in the formulation of sustainable forest management policies and strategies. 	<p>Suggestions of the author of this report:</p> <ul style="list-style-type: none"> • To identify ways to maximize the benefits of forests through measures such as sustainable forestry, zoning, and changes in land tenure arrangements.



	<ul style="list-style-type: none"> • Support to forest biodiversity protection, multi-purpose use of forests and restoration of valuable features of forests. • Support to provision of alternative sources of income and poverty reduction. • Support to sustainable management and development of related sectors (tourism, agriculture, energy production sector, water management, mining industry and others). 		
<p>Key questions which the TEEB study will aim to answer</p>	<p>Not clearly formulated. However, the following applies:</p> <ul style="list-style-type: none"> • What is the economic value of the ecosystem services provided by forest ecosystems of Armenia? • What will be expected long-term benefits from ecosystem protection/not use, including socio-economic benefits of communities? • What would be the most effective economic uses/ economic activities in forests of different categories. 	<p>Not clearly formulated. However, the following applies:</p> <ul style="list-style-type: none"> • What are the use and non-use value of the ecosystem services provided by forest ecosystems in Azerbaijan, including provisioning, regulatory, supporting and cultural services? 	<p>Not clearly formulated. However, the following applies:</p> <ul style="list-style-type: none"> • Examine and quantify, wherever applicable, the biodiversity and ecosystem services impacts and dependencies of the forestry sector; • Examine ways to internalize this information in existing forestry policies (such as licensing, protected area management, and forest management).



<p>Outputs to be delivered by the full TEEB study</p>	<ul style="list-style-type: none"> • Pilot assessments for forest areas of various types (an area subject to economic activity, protected area, high conservation value forest area and others), in particular prior to commencing economic activity in the given area. • Introduction of the system of payments for ecosystem services at national level. 	<p>Analysis of use and non-use values of forests in Azerbaijan</p>	<ul style="list-style-type: none"> • Recommendations for land use planning may be accompanied with policy instruments to attain these goals; • Policy instruments may be assessed on the basis of distributional, economic, social, and environmental impacts; • A synthesis report may also be part of the TEEB study. It would summarize sectoral policy recommendations, but also provide findings from cross-sectoral initiatives that relate to TEEB and its recommendations. For example, natural capital valuation has emerged as an important exercise for stock taking of a country's natural assets.
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6. Roadmaps for implementing the full TEEB studies

A final step in TEEB scoping studies is to propose roadmaps and recommendations or, in other words, process and governance for implementing the full TEEB studies. These include:

- A governance structure decided upon and put in place with appropriate documentation outlining the respective roles of those involved;
- Work plan and milestones developed for the study: what will be delivered by when?
- Budget and plan outlining how resources will be mobilized and agreed upon for the study;
- Communication strategy for the study.

Armenian TSCS does not provide detailed roadmap for undertaking the full TEEB country study. Rather, the document suggests to implement, as an initial step, pilot assessments for forest areas of various types (an area subject to economic activity, protected area, high conservation value forest area and others), in particular prior to commencing economic activity in the given area. As suggested, full economic assessment of forest ecosystems and biological diversity should be undertaken to "justify no use of the given forest ecosystem for economic purposes, or its alternative use to get more benefits in a longer term".¹

TSCS of Azerbaijan proposes an implementation plan for undertaking the full TEEB study. However, it does not provide a governance structure, budget or a plan for resource mobilization, and communication strategy.

Georgian TSCS proposes governance structure for involvement of the stakeholders and detailed 30-month work plan of the full TEEB study development. However, the document does not provide a budget or a plan for resource mobilization and communication strategy.

Table 2 summarizes the processes and governance structures for implementing full TEEB studies in Armenia, Azerbaijan and Georgia as proposed in the respective country scoping studies.

¹ Scoping Study of Economic Significance of Ecosystems and Biodiversity of the Forestry Sector of Armenia. Prepared by *Armen Gevorgyan*. Yerevan, 2014.



Table 2. Process and governance structure for implementing full TEEB studies in Armenia, Azerbaijan and Georgia

	Armenia	Azerbaijan	Georgia
Steps to be undertaken for developing a full TEEB study	To implement pilot assessments for forest areas of various types (an area subject to economic activity, protected area, high conservation value forest area and others), in particular prior to commencing economic activity in the given area.	The full TEEB study will develop a comprehensive analysis of use and non-use values in Azerbaijan. The study should aim to provide assistance to the government of Azerbaijan in the formulation of a sustainable forest management policies and strategies.	<p>Step 1: Further consult relevant stakeholders and find agreement on outcomes of the full TEEB study;</p> <p>Step 2: If needed, further define which ecosystem services are most relevant given the results of the scoping study and within the context of the decision-making problems identified above;</p> <p>Step 3: Define information needs and select appropriate methods for the specific situation of Georgia;</p> <p>Step 4: Undertake the actual assessment of ecosystem services, possibly, but not necessarily, by monetary valuation;</p> <p>Step 5: Look at possible policy responses and the policy instruments at hand, some of which have been preliminarily reviewed in the scoping study;</p> <p>Step 6: Assess distributional impacts and implications for poverty alleviation in Georgia.</p>
Governance architecture	not available (na)	na	<p>Steering (coordination) group/ Project Advisory Group: This group will take decisions to guide the study, ensuring that the project is delivered to meet its agreed objectives. It may guide the study to focus in the right areas, but it should not seek to influence the actual results, to maintain independence. The steering group may have representatives from donor agencies and from main ministries.</p> <p>Expert panel: This group may be composed of experts from relevant disciplines who would lead in the design and review of technical aspects of the study. This type of group can provide specific input (scientific, policy, and stakeholder), quality assurance, help develop key messages and facilitate outreach and communication to the scientific community.</p> <p>Author teams: Authors can come from a range of agencies and can include government departments/ministries, independent consultancies, universities and other academic organizations. Author teams that bring together individuals from different</p>



			<p>organizations can bring different perspectives, build important capacity, and establish new contacts to assist in dissemination of study findings.</p> <p>Peer reviewers and review editors: A mix of national and international peer reviewers may be selected to revise and review the study. Reviewers must be independent. Furthermore, all reviewers should be involved as early as possible and, should review the ToR of the study.</p>
Implementation plan and milestones	na	<p>24 months implementation plan including:</p> <ul style="list-style-type: none"> • Launch of the full TEEB study; appointment of the head expert and interviewees; • Data collection; • Questionnaire compiling; • Interview process; • Preparation of the first draft of the document; • Stakeholder input; • Peer review; • Final work over the report. 	<p>30 months implementation plan including:</p> <ul style="list-style-type: none"> • Appointment of reviewers of deliverables; • Appointment of Study Chair; • Fundraising for country study; • Author team and communication team selection; • Undertaking TEEB country study; • Peer review; • Stakeholders input; • Board review; • Final report; • Communication and awareness raising.
Budget and plan outlining how resources will be mobilized and agreed upon for your study	na	Na	na
Communication strategy	na	Na	na

7. Final outputs of TSCSs in Armenia, Azerbaijan and Georgia

As provided in the methodology of this study, the Guidance Manual for TEEB Country Studies (2013) stipulates that at the end of the scoping phase of a TEEB country study one should have identified:

<p>Objectives and thematic focus:</p> <ul style="list-style-type: none"> • An understanding of the policy context within which the full TEEB study falls • Key thematic areas on which the full TEEB study will focus • Draft objective or set of objectives for your study • Set of key questions which the full TEEB study will aim to answer • A list of outputs to be delivered by the full TEEB study (note: outputs can be delivered throughout the project, not just at the end). 	<p>Stakeholders</p> <ul style="list-style-type: none"> • An understanding of who the relevant stakeholders are and their main interests and concerns; • A plan of how and when you are going to engage them within the timeframe of the TEEB study.
<p>Knowledge base:</p> <ul style="list-style-type: none"> • An overview of the state of knowledge on natural assets – their stock, state, changes and roles; • At least a rough overview of data availability and any potential knowledge gaps; • These points will help you to reflect upon the study focus given both the importance of issues and practical considerations of data availability. 	<p>Process and Governance</p> <ul style="list-style-type: none"> • A governance structure decided upon and put in place with appropriate documentation outlining the respective roles of those involved; • Work plan and milestones developed for the TEEB study: what will be delivered by when? • Budget and plan outlining how resources will be mobilized and agreed upon for the TEEB study; • Communication strategy for the TEEB study.

Table 3 summarizes the scoping studies of Armenia, Azerbaijan and Georgia in terms of the outputs to be delivered, as suggested in the Guidance Manual for TEEB Country Studies.

Table 3. Outcomes of TSCS in Armenia, Azerbaijan and Georgia

Outcomes	Armenia	Azerbaijan	Georgia	Comments
Objectives and thematic focus of the full TEEB study				
An understanding of the policy context within which the full TEEB study falls	yes	yes	Yes	Some changes have occurred in forestry policies of Azerbaijan and Georgia since the development of the scoping studies. Therefore, it would be expedient to examine, before commencing full TEEB study how the study falls with the new policy context.
Key thematic areas on which the full TEEB study will focus on	yes	yes	Yes	Sustainable forest management is the common focus for all TEEB studies. However, Georgian TEEB considers other sectors also such as hydropower, agriculture and tourism.
Set of objectives for the full TEEB study	partially	partially	partially	Specific objectives are there. However, the overall objective is not clearly formulated. Further stakeholder consultations needed to formulate the main objective of the full TEEB study.
Set of key questions which the full TEEB study will aim to answer	partially	partially	partially	Questions not clearly formulated. Further stakeholder consultations needed to formulate the questions to which the full TEEB Study will attempt to address.
A list of outputs which will be delivered by the study (note: outputs can be delivered throughout the project not just at the end)	yes	yes	Yes	
Stakeholders				
A mapping of stakeholders and terms of engagement with them within the timeframe of the full TEEB study	partially	partially	partially	Stakeholders in forest management have been identified. However, their role and engagement in the full TEEB study have not been discussed. Further stakeholder consultations needed in all countries



Knowledge base				
An overview of the state of knowledge on natural assets –their stock, state, changes and roles	partially	partially	partially	Very limited information has been provided on the state of knowledge on forests and other natural assets in forest ecosystems in all TEEB scoping studies
At least a rough overview of data availability and any potential knowledge gaps	partially	partially	partially	Very limited information has been provided on data availability and any potential knowledge gaps in all TEEB scoping studies
Process and Governance				
A governance structure with appropriate documentation in place in relation to their roles. Work plan and milestones for full TEEB study	na	na	Yes	Further stakeholder consultations needed in Armenia and Azerbaijan
Budget and resource mobilization plan	na	na	Na	Further stakeholder consultations needed
Communication strategy	na	na	Na	Further stakeholder consultations needed

8. Conclusions and recommendations for undertaking full TEEB Country Studies in Armenia, Azerbaijan and Georgia

Conclusions

Forests provide significant ecosystem services in the South Caucasus countries including:

- Provisioning of timber and fuel wood, drinking water, non-timber forest products for food and medicine;
- Regulation of water flow and climate, prevention of floods and draughts, erosion, landslides, mudflows and avalanches;
- Cultural services including tourism and recreation;
- Supporting the lives of plants and animals as well as genetic diversity;
- Serving as carbon sinks.

However, forests and forest ecosystem services have been threatened by human interventions such as:

- Unsustainable, often illegal, logging for fuel wood and timber production;
- Poorly regulated grazing and hay making for livestock breeding;
- Unsustainable extraction of non-timber forest products;
- Infrastructure development (new pipelines, dams, power lines, railways, mining facilities, roads, and buildings) and land encroachment.
- Deforestation;
- Unsustainable tourism.

Climate change has also become a threat to forest ecosystems.

These threats have already impacted negatively the forests and their ability to provide essential services. The impacts include, but are not limited to the following:

- Reduction of forest cover;
- Changes in species composition and reduced capacity for regeneration;
- Fragmentation of habitats;
- Disappearance of floodplain forests;
- Increased number of landslides, avalanches and mudflows, erosions;
- Increased sedimentation in water bodies resulting in the degradation of aquatic ecosystems.

Policies, regulatory and institutional problems related to forestry sector are quite similar in the South Caucasus countries creating barriers for the development of sustainable forestry. These include:

- Legal and institutional gaps;
- Insufficient financial resources;
- The distribution of roles and responsibilities between central and local authorities;

- Poor coordination between institutions responsible for forest management;
- The absence of a forest inventory and monitoring systems;
- Lack of knowledge and experience in sustainable forest management;
- Insufficient information on the state of forest resources;
- Absence of forest management standards which are in compliance with the requirements of sustainable development/ best international practice;
- Absence of economic incentives for sustainable forest management.

Initial analysis in the scoping studies show that if changes do not take place in policies, legislation, institutional setup and if practices in forest management continues as they are now (BAU) provisioning is expected to decline for most of the ecosystem services leading to social, cultural, economic and environmental losses.¹

All TSCSs have proposed sustainable ecosystems management (SEM) as alternative policy option to avert the situation in the forestry sectors. The SEM strategies for forestry sector in the South Caucasus Countries, as proposed in the scoping study for Georgia, should be based on the Aichi Targets and include, but should not be limited to, the following (CBD strategic plan 2011-2020):

1. Review national legislation; review and updated land use plans or zonation maps in relation to national targets for the maintenance of natural habitats; make spatial planning tools available for wide use;
2. Undertake additional measures, as necessary, including for example for the enhancement of land tenure, the enhancement of law enforcement and the use of incentive measures;
3. Apply existing criteria for sustainable forest management (e.g. the Forest Europe criteria and indicators, 2003) and forest level operational guidelines;
4. Enhance customary use of biodiversity by indigenous and local communities by increasingly delegating governance and management responsibility to the local level;
5. Promote the use of certification and labeling systems or standards.

All TSCSs have undertaken initial analysis to determine the change in ecosystem service provisioning under a scenario (SEM) where some (but not all) of these problems might be addressed in a feasible policy strategy package. The analysis confirms that implementation of SEM in the long term will result in increasing quality of ecosystem services and ensure long-term benefits of sustainable forestry for wider group of stakeholders. And finally, all TSCSs call for carrying out full valuation-based TEEB assessments to provide a complete evidence-base for the appraisal of BAU versus SEM.

Recommendations and way forward

Even though this has not been clearly stated in the TSCSs of the South Caucasus countries,

¹ TEEB Scoping Study for Georgia. UNEP. November, 2013.

the overall objective of the full TEEB studies will be to make forests' values visible by assessing and communicating to decision makers and broader audience the value of forest ecosystems for the economies, people's wellbeing, poverty alleviation, culture and biodiversity. Furthermore, objective of the full TEEB studies will be also to help integrate these values in developing sustainable forest management and, possibly, other sector development policies and plans by improving the evidence base for decisions.

There are number of issues which clearly emerged in the TSCSs as alternative SEM policy options and need to be addressed by the Full TEEB studies, including:

- Strategic zonation of forests and establishment of “protected”, “protective” and “other” forest classes using Strategic Environmental Assessment (SEA) (TSCS Georgia);
- Zonation of productive forests for their multipurpose uses including economic uses (e.g. logging, tourism, collection of non-timber forest products) and provisioning of essential regulatory, supporting and cultural ecosystem services (TSCS Armenia, Azerbaijan, Georgia); Timber harvesting should be permitted but in well-defined zones;
- Multipurpose use of forest resources through sustainable management, monitoring and enforcement (TSCS Armenia, Azerbaijan, Georgia);
- Defining the roles and responsibilities (and jurisdictions) of local and national government in forest management clearly;
- Involvement of local people and local governments in the management of some forests (TSCS Armenia, Azerbaijan, Georgia);
- Transfer of land tenure and some rights to local people and private sector (TSCS Armenia, Azerbaijan, Georgia);
- Promote the use of certification and labeling schemes (TSCS Georgia);
- Enlargement of protected areas and establishment of corridors (TSCS Armenia, Azerbaijan, Georgia);
- Remove perverse incentives for forestry encroachment.

The full TEEB country studies could provide non-prescriptive analysis of these policy options in more details and assess their advantages and disadvantages, apprise their potential long term impacts on forest ecosystems, economic sectors and local people. The full TEEB country studies could also provide recommendations for implementing the above policy options. These could include policy instruments such as economic incentives, payment for ecosystem services, enhancement of public financing, awareness raising, certification and labeling, etc. The studies should also examine distributional effects of these instruments taking into consideration their potential impacts on different stakeholders. The full TEEB studies could provide case studies and experience from other countries how these policies worked and what are the lessons learnt.

TEEB studies should examine and quantify, wherever applicable, ecosystem service impacts and dependencies on economic sectors such as tourism, agriculture, hydropower, irrigation and drinking water supply, mineral water industry. This can be done for selected forest ecosystems, for selected regions or sectors. This will improve the evidence base for decision

makers, business and local people on the roles and values of biodiversity and ecosystem services and integrate these values in public discussions, decision making and planning.

There are some gaps in the scoping studies which can be addressed before commencing the full TEEB studies. Namely, the gaps have been found in:

- Formulating clearly and agreeing with the stakeholders **overall objectives of the full TEEB Country Studies, questions to be answered by the TEEB studies and deliverables.**
- **Process and Governance** - a governance structure with appropriate distribution of roles in the full TEEB studies have not been proposed in the scoping studies of Armenia and Azerbaijan. Work plan and milestones for full TEEB study are missing in the scoping study of Armenia; budget and resource mobilization plan, communication strategy, mapping of stakeholders and terms of engagement with them within the timeframe of the full TEEB study are missing in all scoping studies.

Additional efforts and consultations with the stakeholders will be needed to address these gaps. The consultations should be undertaken as the initial stage in the full TEEB country studies. It is essential that TEEB country studies engage stakeholders and addresses their needs at the early stage to encourage a demand-driven process and the uptake of results or at least ensure support to the TCS.¹

The first part of the main study phase should aim to refine the objectives. It is preferable to spend a little more time on refining the objectives and planning of the study process rather than commencing with an unfocused and potentially misguided study process.

As suggested by the Guidance Manual for TEEB Country Studies the following steps should be undertaken:

STEP 1. Refine the objectives of the TCS by consultations on the key policy issues with stakeholders;

STEP 2. Identify the most relevant ecosystems and ecosystem services;

Step 3. Define information needs and select appropriate methods;

STEP 4. Assess and value ecosystem services;

STEP 5. Identify and outline pros and cons of policy options, including distributional impacts;

STEP 6. Review, revise, and report study results.

And finally, despite some gaps in the TEEB scoping studies undertaken in Armenia, Azerbaijan and Georgia, it is the author's view that all the studies provide sufficient background to carry out full valuation-based TEEB assessments to provide the complete evidence-base for the importance of forests and forest ecosystem services for economies, people and biodiversity in the South Caucasus countries; to appraise BAU versus SEM policies, provide recommendations, including regulations, economic incentives and other instruments, for implementing policies and strategies for sustainable management of forests and continuous delivery of essential forest ecosystem services for current and future generations.

¹Guidance Manual for TEEB Country Studies, 2013.

Annex 1: Classification of Ecosystem Services

Provisioning Services - ecosystem services that describe the material or energy outputs from ecosystems	Regulating Services are services that ecosystems provide by acting as regulators	Habitat or Supporting Services underpin almost all other services	Cultural Services include the non-material benefits people obtain from contact with ecosystems
<p>Food: Ecosystems provide the conditions for growing food. Food comes principally from managed agro-ecosystems but marine and freshwater systems or forests also provide food for human consumption.</p>	<p>Local climate and air quality: Trees provide shade whilst forests influence rainfall and water availability both locally and regionally. Trees or other plants also play an important role in regulating air quality by removing pollutants from the atmosphere</p>	<p>Habitats for species: Habitats provide everything that an individual plant or animal needs to survive: food; water; and shelter. Each ecosystem provides different habitats that can be essential for a species' lifecycle.</p>	<p>Recreation and mental and physical health: Walking and playing sports in green space is not only a good form of physical exercise but also lets people relax.</p>
<p>Raw materials: Ecosystems provide a great diversity of materials for construction and fuel including wood, biofuels and plant oils that are directly derived from wild and cultivated plant species</p>	<p>Carbon sequestration and storage: Ecosystems regulate the global climate by storing and sequestering greenhouse gases. As trees and plants grow, they remove carbon dioxide from the atmosphere and effectively lock it away in their tissues. In this way forest ecosystems are carbon stores.</p>	<p>Maintenance of genetic diversity: Genetic diversity is the variety of genes between and within species populations. Genetic diversity distinguishes different breeds or races from each other thus providing the basis for locally well-adapted cultivars and a gene pool for further developing commercial crops and livestock</p>	<p>Tourism: Ecosystems and biodiversity play an important role for many kinds of tourism which in turn provides considerable economic benefits and is a vital source of income for many countries. In 2008 global earnings from tourism summed up to US\$ 944 billion.</p>
<p>Fresh water: Ecosystems play a vital role in the global hydrological cycle, as they regulate the flow and purification of water. Vegetation and forests influence the quantity of water available locally</p>	<p>Moderation of extreme events: Ecosystems and living organisms create buffers against natural disasters, thereby preventing possible damage. For example, wetlands can soak up flood water whilst trees can stabilize slopes. Coral reefs and mangroves help protect coastlines from storm damage</p>		<p>Aesthetic appreciation and inspiration for culture, art and design: Biodiversity, ecosystems and natural landscapes have been the source of inspiration for much of our art, culture and increasingly for science</p>
<p>Medicinal resources: Ecosystems and</p>	<p>Waste-water treatment: Ecosystems such as wetlands</p>		<p>Spiritual experience and sense of place:</p>

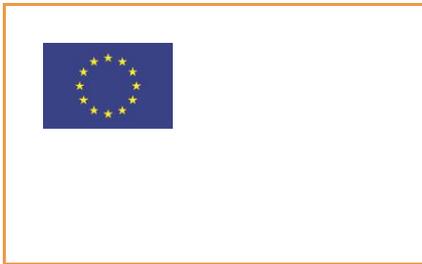
Provisioning Services - ecosystem services that describe the material or energy outputs from ecosystems	Regulating Services are services that ecosystems provide by acting as regulators	Habitat or Supporting Services underpin almost all other services	Cultural Services include the non-material benefits people obtain from contact with ecosystems
<p>biodiversity provide many plants used as traditional medicines as well as providing the raw materials for the pharmaceutical industry. All ecosystems are a potential source of medicinal resources</p>	<p>filter both human and animal waste and act as a natural buffer to the surrounding environment.</p> <p>Erosion prevention and maintenance of soil fertility: Soil erosion is a key factor in the process of land degradation and desertification. Vegetation cover provides a vital regulating service by preventing soil erosion. Soil fertility is essential for plant growth and agriculture and well functioning ecosystems supply the soil with nutrients required to support plant growth</p> <p>Pollination: Insects and wind pollinate plants and trees which is essential for the development of fruits, vegetables and seeds. Some 87 out of the 115 leading global food crops depend upon animal pollination including important cash crops such as cocoa and coffee (Klein et al. 2007)</p> <p>Biological control: Ecosystems are important for regulating pests and vector borne diseases that attack plants, animals and people.</p>		<p>In many parts of the world natural features such as specific forests, caves or mountains are considered sacred or have a religious meaning. Nature is a common element of all major religions and traditional knowledge, and associated customs are important for creating a sense of belonging</p>

Adapted from MA – Millennium Ecosystem Assessment (2005) [‘Ecosystems and Human Well-being: Synthesis’](#), Island Press, Washington DC.

About FLEG II (ENPI East) Program

The Forest Law Enforcement and Governance (FLEG) II European Neighbourhood and Partnership Instrument (ENPI) East Countries Program supports participating countries' forest governance. At the regional level, the Program aims to implement the 2005 St. Petersburg FLEG Ministerial Declaration and support countries to commit to a time-bound action plan; at the national level the Program will review or revise forest sector policies and legal and administrative structures; and improve knowledge of and support for sustainable forest management and good forest governance in the participating countries, and at the sub-national (local) level the Program will test and demonstrate best practices for sustainable forest management and the feasibility of improved forest governance practices at the field-level on a pilot basis. Participating countries include Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia, and Ukraine. The Program is funded by the European Union.
<http://www.enpi-fleg.org>

Project Partner



EUROPEAN COMMISSION

The European Union is the world's largest donor of official development assistance. The European Commission's Directorate General for European Neighbourhood Policy and Enlargement Negotiations (DG NEAR) manages the bulk of the Union's financial and technical assistance to the neighbourhood and enlargement countries. By implementing assistance actions in Europe's eastern and southern neighbourhood, DG NEAR supports reform and democratic consolidation, and strengthens the prosperity, stability and security around Europe. DG NEAR helps to promote EU values, policies and interests in this region, and to contribute to developing the special relationship of the EU with its neighbouring countries.

http://ec.europa.eu/index_en.htm



WORLD BANK

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IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN's work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, food and development. IUCN supports scientific research, manages field projects all over the world, and brings governments, NGOs, the UN and companies together to develop policy, laws and best practice. IUCN is the world's oldest and largest global environmental organisation, with more than 1,200 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world.
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WWF is one of the world's largest and most respected independent conservation organizations, with almost 5 million supporters and a global network active in over 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.
www.panda.org