Forest Management in Tusheti Protected Landscape

IUCN Caucasus Cooperation Center
Tbilisi 2014

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Abbreviations

APA       Agency of Protected Areas
FAO       Food and Agriculture Organization of the United Nations
IUCN     International Union for the Conservation of Nature
KNPA     Krkonose Mts National Park Administration
LEPL     Legal Entity of Public Law
MoENRP   Ministry of Environment and Natural Resources Protection of Georgia
MP       Management plan
NBSAP    National Biodiversity Strategy and Action Plan
NCA CR   Nature Conservation Agency of the Czech Republic
NEAP II  The National Environmental Action Plan for Georgia II
NFA      National Forestry Agency
NGO      Non-governmental organization
NP       National park
PA       Protected area
PL       Protected landscape
SFM      Sustainable Forest Management
SNR      Strict nature reserve
UNCED    United Nations Conference on Environment and Development
UNECE    United Nations Economic Commission for Europe
WCPA     World Commission on Protected Areas
Acknowledgments

Thanks are due to the Tusheti Protected Landscape Administration of Akhmeta municipality for their support in the process of preparing of this document. Personal thanks to Mr. Eristo Lagazidze and his team for their active involvement and collaboration.

Thanks to the Nature Conservation Agency of the Czech Republic. Special thanks to the team working on preparation of the management plan for Tusheti Protected Landscape - Ms. Lenka Jandova and Mr. Jindrich Chlapek for their contribution related to getting the information on Tusheti PL forests.

Our gratitude to the Ministry of Environment and Natural Resources Protection, and specifically the National Forestry Agency and Agency of Protected Areas, whose contribution was of a high value in the process of working on this document. Special thanks to

- Ms. Marina Sujashvili - the National Forestry Agency
- Mr. Toma Dekanoidze – the Agency of Protected Areas

And finally, we are grateful to the Tusheti Protected Areas administration for providing very valuable information for the research. Special thanks to Mr. Anzor Gogotidze and Mr. Onise Itchirauli for their help and support.
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1. Introduction

Sustainable conservation of forest ecosystems, protection and use of natural resources is one of the current challenges in Georgia. For Georgia, a country with limited land resources, the state Forest Fund is a treasure. Therefore, any issue related to sustainable use of forest resources, work towards their conservation is of a high value for the country.

This document has been developed with the primary goal of supporting sustainable forest management in the Tusheti Protected Landscape (hereafter Tusheti PL) - the only locally-managed forests in Georgia.

The Guidelines for Protected Area Management Categories defines Protected Landscape as: “A protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values” (IUCN Category V Protected Area).

The primary objective of a protected landscape is to protect and sustain important landscape and the associated nature conservation and other values created by interactions with humans through traditional management practices (Dudley 2008).

For IUCN, Protected Landscape is unique among the six categories. Management of Category V areas does not focus on nature conservation per se. It is about guiding human processes so that the area and its resources are protected, managed and capable to evolve in a sustainable way. This way the maintenance and enhancement of natural and cultural values is ensured (Philips 2002).

Tusheti is a pearl for Georgia - a mountainous region with a very rich biodiversity. The diversity of plant and animal species of the area is widely recognized. The forest ecosystem of Tusheti Protected Landscape (hereafter Tusheti PL) is an essential part of the biodiversity of the whole Tusheti Protected Areas. The total area of Tusheti PL is 31,517 hectares, located in the North-east part of Georgia, 10% of which is covered by forest. It is mainly composed of the pine tree *Pinus kochiana*. Birch forests cover a much smaller area, and deciduous mixed forests have an even more limited distribution.

Tusheti PL is an exception from other Protected Areas of Georgia – it is managed by Akhmeta municipality, while the management of all other protected areas is undertaken by the Agency of Protected Areas (hereafter APA) through local Protected Areas administrations. The main reason why the Tusheti PL is managed by local self-government is that the area is full of settlements and accordingly, socio-economic issues are very essential. Akhmeta municipality created the local administration of Tusheti PL, which does not have the capacity to carry out proper forest management. The APA is only involved in the issues related to biodiversity conservation. The National Forestry Agency (hereafter NFA) which is the main forest management body in the country declared this area out of its mandate.
There were several attempts to put a proper forest management system in place, but these were unsuccessful: the management of Tusheti PL was carried out by Agency of Protected Areas (2003-2006). In 2006 the management was handed over to the Akhmeta municipality with only one employee responsible for its management. In 2011 the decision was made by the municipality to establish Tusheti PL administration with the responsibilities covering issues such as the protection and restoration of ecosystems in Tusheti PL including forest ecosystems. It was obvious that those management practices in no way ensured proper management of local forest and biodiversity.

The aim of this document is go through the whole history and process of forest management in the Tusheti PL from the very beginning of its designation as a Protected Area, including the final transfer of management rights to local municipality. But the main objective is to assess the current legal and institutional arrangements in Tusheti PL, as well as to study the current practices of forest management. The first two chapters of this document are related to the Tusheti Protected Landscape in general, and more specifically to its forests. This is primarily the general information on Tusheti PL forests, including the usage of forest resources and the threats affecting its ecosystem.

The next chapters review the main legal basis for forest management in Tusheti PL. This includes the policy papers and strategic documents, specific laws on forest and Protected Area management, as well as the law on local self-government, which is very crucial for this concrete case. That chapter is followed by the review of the Protected Areas governance aspects, including public participation and the assessment of forest management in Tusheti PL. An insight in IUCN’s approach in management of forest Protected Areas is also provided.

The document is finalized with the conclusions and main findings that were the most highlighted during conducting the research.

The document has been created in the context of the European Neighborhood and Partnership Instrument East Countries Forest Law Enforcement and Governance II Program (the “Program”), The Program is aimed at putting in place improved forest governance arrangements through the effective implementation of the main priorities set out in the St. Petersburg Ministerial Declaration and Indicative Plan of Actions for the Europe and North Asia Forest Law Enforcement and Governance (ENA-FLEG) process.

This Program specifically covers seven countries of the ENA Region, including six members of the European Neighborhood Policy Instrument (ENPI) – Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine, and the Russian Federation. The Program supports selected pilot activities to be implemented with the active involvement of governments, civil society and the private sector. Most activities will be at a country level, complemented by strategically targeted sub-regional and regional actions. The Program is supported by the European Commission and other donors contributing to a special multi-donor trust fund administered by the World Bank (WB). Implementation of the Program is led by the World Bank, working in partnership with the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wide Fund for Nature (WWF) (all three collectively referred to as the “Implementing Organizations” or “IOs”) and in close coordination with governmental and nongovernmental stakeholders of the participating countries.
2. Background Information

2.1. Location and Purpose of Establishment of Tusheti Protected Landscape

The Tusheti Protected Landscape (IUCN Category V) is located on the North-East part of Georgia (42°16′40″ – 42°32′10″N, 45°22′20″ – 45°45′15″E) (NCA CR & KNPA 2013). It is situated in Kakheti region, Akhmeta Municipality and covers 31,518 ha. Together with Tusheti Strict Nature Reserve (hereafter Tusheti SNR) and Tusheti National Park (hereafter Tusheti NP) it creates Tusheti Protected Areas (hereafter Tusheti PAs).

The Tusheti PL was established in 2003 under the Georgian Law on “Establishment and Management of Tusheti, Batsara-Babaneuli, Lagodekhi and Vashlovani Protected Areas”.

The goal of establishing the Tusheti PL is: to protect nature as well as preserve the nature-cultural landscape, which is of high national importance and aesthetic value established through the harmonic relationship between human and natural environments. In addition the Tusheti PL aims to preserve habitat area, and to develop recreational resource use activities (Georgian Law No 2086-IIs, 22/04/2003).

The map of Tusheti PL is given in Annex 1.

2.2. Biodiversity

The Caucasus Region is one of the 34 worlds Biodiversity Hotspots and Tusheti is part of it. Tusheti itself is one of the richest regions of Georgia with its diverse plant and animal species. Vegetation cover includes mountain and subalpine forests, subalpine shrubs, mountain meadows, subalpine and alpine grasslands, subnival vegetation and scree vegetation complexes (Resolution No-16, 03/01/2014, NCA CR & KNPA 2013).

There are more than 1000 vascular plants of 92 families, i.e. one fourth of all species in Georgia. About 23% of all plant species are endemics (11 Georgian and 230 Caucasian). Four plant species are included in the Georgian Red List.

The region is also rich in fauna. There are 32 mammals and about 90 bird species, including Bezoar goat (Capra aegagrus) and East Caucasian Tur (Capra cylindricornis) Brown Bear (Ursus arctos), Caucasian black grouse (Tetrao mlokosiewiczi) and the Caucasian snowcock (Tetraogallus caucasicus), etc.

Tusheti is rich with its agro biodiversity, including cultural crops and animal breeds. From cultivated crop varieties barley is very significant. Tushetian horse, Tushetian sheep and Georgian shepherd dog are very important and well-known animal breeds.
2.3. Demography and Socio-economic Aspects

There are 48 villages in the Tusheti PL. The majority of Tushetians spend the winter season in lowlands and return to villages in Tusheti for its summer season. The total Tushetian population is estimated to be about 10000. The population in summer in Tusheti is about 2000-2500 people, and only about 20-40 persons stay there for the whole year (NCA CR & KNPA 2013).

Historically this population is strongly linked to sheep-farming and production of the well-known sheep cheese in the region. The cheese and sheep meat are the main income source for locals. Production of wool and woolen materials are quite popular among locals and foreigner tourists.

According to the study carried out in 2010 almost half (46.9%) of local population is following some kind of economic activity during the summer months. The majority of these activities (82.8%) are connected with tourism, and 13.8% - sheep-farming. Generally, according to the local sheep-farmers 60-70% of local families are busy with sheep-farming. Each family has 300-400 sheep, some of them about 2000. In Tusheti there are approximately some 40 000 sheep in total (Resolution No-16, 03/01/2014).

The most valuable goods produced in Tusheti are lamb meat and Guda cheese. Wool is used to make traditional products, such as carpets, hats, socks, bags or clothing, that are mainly sold to tourists. One additional agricultural activity they are actively following during summer in Tusheti Mountains is cultivating potatoes.
3. Forests of Tusheti Protected Landscape

3.1. General Information

The information on the Tusheti PL forest is very poor. The most recent inventory in the region was carried out about 30 years ago. Some old maps on forests were obtained from the NFA. The Schematic Map of Forest of Akhemeta and Schematic Map of Forest Fires of Akhmeta’s Zapovednik are given in the annexes 2 and 3. The map of the forests of Tusheti PL, showing only general distribution of the forests is given in Annex 4.

The only source for obtaining recent information on Tusheti forests is the draft management plan of Tusheti PL. However, according to the experts working on the document, no detailed study (mapping or inventory) has been undertaken for the development of forest a chapter under the draft management plan of Tusheti PL. As a basis, information from the Management Plan for Tusheti SNR and Tusheti NP (from 2006) has been taken (Ms. L. Jandova, 2014, pers. Comm., 13 February). Some general data on the forest has been gathered additionally by the experts group during the field trips. Thus, the information provided in the draft management plan of Tusheti PL should be considered as the most recent data on the forest of Tusheti PL.

The draft management plan of the Tusheti PL states that about 10% of the Tusheti PL is covered with forests (NCA CR & KNPA 2013). The total forest coverage is about 3700 ha (Mr. A. Gogotide and O.Ichirauli, 2013, pers. comm., 24 December). The forests are situated mainly on steep slopes. Thus, their importance as the protection against erosion and for improvement of water retention is very high (NCA CR & KNPA 2013).

The forests habitats in Tusheti are mainly composed of the pine (*Pinus kochiana*). Much smaller areas are covered by birch; and deciduous mixed forests have even more limited distribution. The vegetation belt is found at the 1650-1800/1900 m asl. The subalpine forests range is between 1800/1900 and 2500/2600 m asl. Birch forests (composed by *Betula pendula*, *B. litwinowii* and *B.raddeana*) are found in 1700-2400 m asl. Large areas of these forests are located on the northern slopes of the Vestomchevi valley.

In some places (e.g. surroundings of Omalo), because of the changes in agricultural patterns, pine forests are expanding. The largest area of such forest stands are situated between Omalo and Bochorma on South-West slopes of the Pirikita Range, between Shenaqo and Diklo and between Khakhabo and Shtrolta. Such trend will continue to natural regeneration process on the secondary grasslands and meadows and will contribute to an increase of total area of pine forests.

The Alluvial alder forests are found in the small areas of natural floodplain habitats. They are presented at the river banks together with *Miricaria bracteata* and willow shrubs (this type of habitats can be seen in the Pirikita Alazani River valley between Omalo and Shenako).

Subalpine shrubs are presented by *Rhododendron caucasicum* communities at 2400-2800 m asl. Large areas of the shrubs are found along the Pirikita gorge, just above subalpine forest and also on the northern slopes of the Tsovata valley.
3.2. Use of Forest and Forest Resources

Timber in Tusheti is used mainly for two purposes - firewood and construction material. Logging of timber is necessary to preserve the traditional lifestyle in Tusheti (NCA CR & KNPA 2013). During last several years timber was given to the locals from the Tusheti PL territories, situated adjacent to the SNR and Tusheti NP (Mr. A. Gogotidze, 2013, pers. comm., 24 December).

Timber as construction material is necessary for construction/reconstruction of traditional houses and out-buildings. Timber is used by locals (by 16% of households) for construction of balconies, stairs, roof basis, as well as doors and windows. Timber is used also for construction of cattle-sheds (NCA CR & KNPA 2013).

In Tusheti there is no gasification (and it is most likely impossible to have it in near future), so the main energy source is Firewood. Firewood is used for cooking and heating (by 62% of households). The alternative to the firewood are solar panels, but they are quite expensive. Only local guesthouse owners have received them through grant programmes. Biogas is also not used as an energy source (NCA CR & KNPA 2013). Annual average amount of firewood used by households is about 1500-2000 m³. The firewood is used by approximately 300-400 households from the villages situated in the Pirigita, Gometsari, Chaghma and Chanchakhovani gorges (Mr. A. Gogotidze and O.Ichirauli, 2013, pers. comm., 24 December).

Non-timber forest products used by locals are: mushrooms, berries and herbs (for tea and medicine). They are used by approximately 38% of the households, generally gathered in small quantities, mostly for self-consumption (NCA CR & KNPA 2013).

The phenomenon of sacred forests exists in Tusheti. Sacred forests, together with the other sacred sites are a very important component of religious life in Tusheti. Sacred forests are kind of “reserves”, created and protected due to religious considerations. These areas are almost intact and often distinguished by high aesthetic value and rich biodiversity. Such forest is a good example of how the forests would look without any kind of anthropogenic impact for a long time (or even never) (Resolution No-16, 03/01/2014).

3.3. Existing Threats

The main threats related to ecosystems of the Tusheti PL are: illegal logging, forest fires, forest pests and diseases, as well as other threats including Climate Change, waste and unsustainable management.

Illegal Logging

Illegal logging puts very significant pressure in Tusheti PL. It has declined since the establishment of the Tusheti PAs. The main causes are (a) high demand on timber and (b) poor law enforcement (NCA CR & KNPA 2013).
The high demand for timber leads to the illegal activities in the surrounding forests. The poor law enforcement is caused by the lack of capacity. The administration of Tusheti PL is lacking the capacity and knowledge to deal with specific forest related issues, including basic forestry and forest law enforcement. Proper rules for issuing a forest use ticket are not utilized and there is not sufficient knowledge and capacity to carry out proper law enforcement. The situation could be improved by more intensive communication with locals. However, there is no effective control and illegal logging cannot be fully eradicated yet.

In 2012 illegal logging of the Tusheti PL forests occurred near the villages Mirgvela and Diklo. As a result, a verbal instruction from the government on cutting the forest for local use was issued.

Additionally, no clearly defined boundaries for the Tusheti SNR, Tusheti NP and Tusheti PL contributed to misunderstandings regarding logging in those areas. Therefore locals can't identify places that are dedicated for local use.

Initial demarcation was carried out without considering need of locals for forest resources. Some forest areas located close to villages were within the boundaries of the Tusheti SNR or the Tusheti NP. This has been partly corrected in 2011 by changing the Category of those areas to the Protected Landscape category through the amendments to the law on “Establishment and Management of Tusheti, Batsara-Babaneuri, Lagodekhi and Vashlovani Protected Areas” (Georgian Law No 2086-Is, 22/04/2003). However, there are still mistakes made by Public Registry while registration of the boundaries, which need to be corrected (Mr. A. Gogotidze, 2014, pers. comm., 17 February).

**Forest Fires**

One of the potential threats to the Tusheti PL is forest fires (mainly anthropogenic fire) especially because they can damage valuable forest stands not only in Tusheti PL, but also in Tusheti SNR and Tusheti NP (NCA CR & KNPA 2013). Fire has always been a significant threat to this forest. According to the Schematic Map of Forest Fires of Akhmeta’s Zapovednik (currently Tusheti SNR) from 1986, the majority of the forests, especially those located close to the settlements, belong to the 2nd fire risk category (out of existing 4 categories) and relatively small areas to the 4th category (see the map of Forest Fires in Annex 3).

Only one case of fire has been recorded on the territory of Tusheti PL and occurred in the village of Mirgvela during the last five year period. (Mr. A. Gogotidze and O.Ichirauli, 2013, pers. comm., 24 December). An increasing number of tourists increases the risk of forest fires, especially when taking into account the non-existent tourist infrastructure (official camp sites) and patrol service (rangers) provided by the Tusheti PL Administration. These “anthropogenic” fires would generally increase frequency of fires in the area and could damage or negatively influence valuable forest stands. The risk of fire is high as most of forests are pure coniferous (pine) stands. Therefore, proper fire management plan for the whole area of Tusheti needs to be elaborated (Mr. M. Machavariani, 2014, pers. comm., 24 August).
**Pests and Diseases**

Forest pests and diseases are identified as one of the significant threats for Tusheti PL. As the study conducted in Tusheti NP in 2013 showed, populations of bark beetles increased tremendously and adversely affected pine trees. The area affected by bark beetles in the Tusheti PL is approximately 967 ha (V. Gulisashvili State Forest Institute of Agricultural University of Georgia, 2013). According to some experts the most damaged areas in the Tusheti PL are between Diklo and Shenaqo and areas of Que Mirvela (Mr. Z. Lagazidze, 2013, pers. comm., 24 December).

Bark beetles are a common part of natural forest ecosystem cycle and their existence in forest habitats should be considered as a normal process of ecosystem development. However, the risk of loss of these ecosystems is obvious if the scale of their distribution considerably exceeds the limit (M. Machavariani, 2014, pers. comm., 24 August).

Dominant species in the areas are *Tomicus minor* and *Ips acuminatus*, less important *Ips.Sexdentatus* and *T. Piniperda*. The existence of high amount of breeding materials (thrown and broken wood in the forests) and possible climate change served as a good opportunity for bark beetle reproduction and caused increase of their number (Tomiczek 2013).

The recommendations are provided on how to address these problems, but there is no capacity (financial and personnel) for implementation and further monitoring. But still, some activities (use of pheromone traps, “salvage logging”) were implemented in the whole Tusheti PAs during last summer (A. Gogotidze, 2014, pers. comm., 19 September).

**Other Threats**

Climate Change is defined by the experts group working on the Tusheti PL management plan as the significant threats to Tusheti PL forest (NCA CR & KNPA 2013). This is a potential threat to the mountain areas and could have significant impact on the Tusheti PL. The changes caused by Climate Change, e.g. increasing temperature and precipitation, their uneven distribution, heavy storms and rains, longer periods of droughts, etc. can influence mountain ecosystems. The results of such influence could be shifting of alpine timberline to higher elevations or raising the scales of distribution of diseases in the forest.

Waste and waste water is also one of the important threats to the forest ecosystems, growing with increasing number of tourists.

Unsustainable management is also an important threat to forest ecosystem. The delay in approval of the Tusheti PL management plan; the absence of forest management plan that includes regular logging; post-regeneration measures; and forest protection are leading to unsustainable management of forests in the area. This is caused by the lack of knowledge, capacity and financial resources for conducting forest inventory, developing forest management plans and updating the maps.
4. Legal Basis

The right of Georgian citizens to live in a healthy environment and to benefit from natural resources and cultural values is guaranteed by Georgian Constitution. The document obliges each and every person in the country to take care of the cultural and natural environment. The state ensures environment protection and a rationale use of natural resources considering the interests of current and future generations. Furthermore, the state guarantees the sustainable development of the state in accordance with the economic and ecological interests of society. All these should ensure safe environment for human health. Finally, it states that everyone has the right to be timely informed on the state of environment.

4.1. Policy Papers

4.1.1. National Forest Concept of Georgia

First time in country's history the main document for management of forests – National Forest Concept for Georgia (hereafter - the Concept) was developed and approved by the Parliament of Georgia in 2013 (Decree №1742-IS, 26/12/2013). The Concept defines the relation of the State with forests taking into account main services provided by forests and their values. The Concept shall apply to all forests of Georgia irrespective of their ownership and form of management. The document will serve as a basis for the development and improvement of the forestry sector related legislation, institutional set-up and other policy documents.

Chapter 4 of the document defines the main principles for the Forest concept. The principle “all forests are local” identifies local population as the main stakeholder in the context of forests:

Box 1. Principle 4.3 “all forests are local”

Priority shall be given to meeting the due requirements of the local population; still all stakeholders (including remote users and beneficiaries) shall be engaged in and empowered to decision-making and management. At the same time, local population (specifically, women) shall be considered as a separate stakeholder. All stakeholders shall be empowered to participate in the process effectively.

Everybody's principally free access to forests for non-commercial purposes will be ensured, regardless of the form of forest ownership (state, communal, private). The identity and culture of local communities residing in the forested areas, and traditional knowledge regarding forest use and conservation shall be acknowledged, appreciated, and supported. All benefits derived from the use of natural resources shall be distributed fairly between local, regional and national users.

Furthermore, the concept defines the Priority Directions. The direction on Forest ownership, management and use rights defines that the state is the owner of Forest fund of Georgia. The
responsibilities for managing the State forest fund are divided between the Legal Entity of Public Law National Forestry Agency (hereafter – the NFA) and Legal Entity of Public Law Agency of Protected Areas (hereafter – the APA) of the Ministry of Environment and Natural Resources Protection of Georgia. The State forest fund on the territory of the Abkhazia and Adjara Autonomous Republics is under management of the relevant bodies of the Abkhazia and Adjara Autonomous Republics. However, the Concept refers to present Forest Code of Georgia, stating that it allows the existence of “local forests” in the country with the condition that those forests are managed by a self-governing unit within the competences established by the Georgian legislation and in accordance with Forest Code. According to the Concept, the “local forests” do not exist and relevant legislation and resources are needed for implementation of this practice.

4.1.2. National Environmental Action Plan of Georgia II

The National Environmental Action Plan of Georgia II (hereafter NEAP II) was adopted by the Government of Georgia for the period of 2012-2016 (Decree #127. 24/01.2012). The aim is to solve the most urgent and burning problems and serve as an instrument for protection of Georgian Natural resources through implementation of economically viable activities.

Chapter VI on Biodiversity and the Protected Areas states that proper management planning, together with completion of monitoring system, creation of the Protected Areas database and improvement of the legal basis, is the most important prerequisite for effective and efficient Protected Areas management in the country. Illegal use of the natural resources is defined by the NEAP II as one of the biggest challenged in the PAs. The document sets protection, restoration and conservation of unique ecosystems, species diversity and genetic resources as the long-term (20 years) goal.

Chapter 7 of NEAP II is dealing with Georgian Forest sector. The document acknowledges that current forest management in Georgia is not carried out according to the principles of sustainable forest management. And accordingly, the main cause of forest related ecological problems in the country is the absence of mechanisms of sustainable forestry. The existing methods for forest monitoring and planning are not consistent with the principles of sustainable development; Country’s forest sector is lacking the standards and indicators for sustainable forestry, as well as relevant legal basis. Usage of methods of unsustainable forest cutting, as well as overgrazing are described as important factors negatively impacting forest sector. Improvement of overall functional conditions of forests through development of sustainable forest management is declared as the long-term (20-year) goal by the NEAP II.

4.1.3. National Biodiversity Strategy and Action Plan of Georgia

National Biodiversity Strategy and Action Plan of Georgia (hereafter - NBSAP) was approved by the Government of Georgia on May 8, 2014 for the period of 2014-2020 (Resolution No-343. 08/05/2014).
The specific chapters of NBSAP identify the main problems for Protected Areas and Forests in Georgia are the quality of Protected Areas coverage and the ineffectiveness of the network; Protected Areas management; public awareness and participation; lack of financing; unsustainable (including illegal) use of forest resources; unsustainable grazing; forest pests and diseases; invasive tree species; forest fires; climate change and forest biodiversity; unsustainable forest management.

NBSAP sets the following vision: “By 2030 Georgia will be a country where the citizens are living in a harmony with the Nature, and where the biodiversity values are widely acknowledged. Conservation and rationale use of biological resources ensures the continuity of ecosystem processes, healthy environment and vital benefit for the whole society”.

In order to achieve the above mentioned vision, the NBSAP sets the global strategic goals and the national goals. The global strategic goal on improving the status of biodiversity through protection of ecosystem, species and genetic diversity sets in two national goals:

- The national goal C3 - By 2020 forest biodiversity is protected through implementation of the best practices of sustainable forest management.
- The national goal C4 – By 2020 the Protected Areas will cover at least 12% of the terrestrial and 2.5% of the Black Sea aquatorial areas.

4.2. Legislation on Management of Protected Areas

4.2.1. Georgian Law on Protected Areas System

The main law regulating issues of protected areas is the law on “Protected Areas System” (Law No 136-IIs, 07 March, 1996). It defines, that the Protected Landscape, IUCN Category V Protected Area “can be established for the purpose of protection of natural landscape of national importance remarkable for its high aesthetic value, as well as the natural-cultural landscape formed due to harmonized relations of human and nature, for maintenance of vital environment, for recreation-tourist and traditional economic activities.” The Protected Landscape may be part of other Protected Areas, or it may include other Protected Areas.

The Ministry of Environment Protection and Natural Resources of Georgia implements the public policy of establishing, functioning and management of Protected Areas, and coordinates and controls the actions, while the Protected Areas Agency is practically managing the Areas.

4.2.2. Georgian Law on Establishement and Management of Tusheti, Batsara-Babaneuri, Lagodekhi and Vashlovani Protected Areas

The Law on “Establishement and Management of Tusheti, Batsara-Babaneuri, Lagodekhi and Vashlovani Protected Areas” is the key law in management of Tusheti Protected Areas (Georgian Law No 2086-Iс, 22/04/2003). The main aim of the law is to establish Tusheti, Batsara-Babaneuri, Lagodekhi and Vashlovani Protected Areas and define the mechanisms for their management.
Tusheti Protected Areas consists of three parts:

- Strict Nature Reserve - 12,627.2 hectares;
- Tusheti National Park - 69,515 hectares;
- Tusheti Protected Landscape - 31,518 hectares.

Further, the law describes the territorial and functional set-up of the Protected Areas, separately for each of the categories and the reasons for their establishment. The reason for establishment of Tusheti PL is given in box 2:

Box 2. The reasons for establishment of Tusheti Protected Landscape
a) Protection of unique ecosystems, specific natural components from degradation-loss from anthropogenic impacts;
b) Maintenance of the most reach national heritage – cultural architectural monuments and historical and cultural landscape;
c) Development of the necessary infrastructure to meet the growing recreational needs on psychological-aesthetic resources of high mountainous natural and historical-cultural landscape;
d) Maintenance and development of local traditions and folklore.

The activities that are allowed in Tusheti Protected Landscape taking into consideration the protection status are given in box 3:

Box 3: Activities that are allowed on Tusheti Protected Landscape:

a) Protection, tending and restoration of environmental, historical and cultural monuments;
b) Manipulated scientific research;
c) In-situ conservation and restoration of wild animals and plants occuring in Tushetian ecosysms and beyond;
d) Recreational-touristic and educational activities;
e) Traditional agricultural activities;
f) Development of relevant infrastructure for tourism development

4.2.3. Other Regulations

The Tusheti PL Management Plan, for the period of 2014-2019, has been prepared by Nature Conservation Agency of the Czech Republic (NCA CR) and Krkonose Mts National Park Administration (KNPA). The Project of Development Cooperation between the Czech Republic and Georgia - Preparation of Management Plan for Tusheti Protected Landscape - was financially supported by the Czech Development Agency.

The document is still in its draft form. It went through the hearings at the local representative body
(Sakrebulo) of Akhmeta municipality. Currently it is continuing through the procedures at different institutions within the central Government of Georgia, after which it will be approval by the Prime-Minister.

The Sakrebulo of Akhmeta municipality approved the Statute of Tusheti PL administration (hereafter – the statute) in 2013. The provisions of the statute regulate the implementation of different activities by Tusheti PL administration, as well as the management and financial issues (Order-37, 24/05/2013).

The Management Plan for Tusheti Protected Areas (hereafter Tusheti PA MP) was approved by the government of Georgia on January 2014 and is valid for 6 years. The Management plan covers only the Tusheti Strict Nature Reserve and the Tusheti National Park. However, Tusheti is one whole unit and the management of all three consisting parts is closely interlinked. Accordingly, the Tusheti PA MP is an important document for the management of the whole area (Resolution No-16, 03/01/2014).

The detailed review of the above listed three documents, in the context of governance and management of Tusheti PL forests is given in chapter 5.

4.3. Forest Related Legislation

4.3.1. Georgian Forest Code

The Georgian Forest Code (hereafter – the Code) is the main legislative basis regarding forest management and protection in Georgia. It was adopted by the Georgian Parliament in 1999 (No 2124-IIs, 22/06/1999). The code regulates the legal relationships related to protection, restoration and use of forest and forest resources. The Code defines the following main goals: protection of human rights and law enforcement; forest tender and restoration; environment conservation and protection; defining the rights and obligations of forest users; meeting the demand of the population on forest resources but within existing resources; as well as defining the main principles of forest management in Georgia.

The State Forest Fund is divided into two parts: (i) the Protected Areas – those are the areas which are defined by the Law on Protected Areas System of Georgia; (ii) State Forestry Fund outside of PAs, which also includes the local forest funds.

The State Forest Fund is generally managed by the Legal Entity of Public Law – the National Forestry Agency. The forests within the boundaries of the Protected Areas are managed by the Agency of Protected Areas. The forests in autonomous republics of Adjara and Abkhazia are managed by their respective institutions. However, the Code gives special provisions on management of the forests of local importance. The Code gives the definition of the local Forest Fund as the part of the State Forest Fund, where the legal relationships are regulated by local self-governmental units, but in accordance with the Code and other related legislation of Georgia. Furthermore, the Code describes the functions of the bodies of local self-government with regard to forest management:
Before adoption of the Concept, the Forest Code used to be the main legal document related to forests, including defining forest policy. However, there have been critiques about its ineffectiveness. Due to this, the decision was made to work on a new forest Code in order to harmonize it with the newly adopted Concept and to ensure balanced coverage of all aspects of the forest management.

4.3.2. Other Regulations

The Resolution of Georgian Government on Approval of the Rules on Forest Use is one of the key legal acts regulating the use of forest resources in Georgia. The Rule became essential document for forest management in Tusheti PL especially after its amendment in September 2014. According to the amendments, Akhmeta municipality is officially named as the managing body for Tusheti PL forests (No 242, 20 August 2010).

The Law on Licenses and Permits of Georgia defines that the forest use is the subject to licensing. More specifically it defines the two types of the forest use license: special license for timber production and the special license for hunting farms. Firewood for personal use by local population is not the subject of licensing (No. 1775, 24 May 2005).

The main aim of the Resolution of Georgian Government on the Rules and Terms of Issuing of Forest Use License is to set the rules on issuing the general license on timber production and establishment of hunting farms. The resolution also regulates the issue on providing the local population with timber forest resources and states that the extraction of firewood which locals need for their personal use is not the subject of licensing. The resolution exclusively states that the license holders, despite of the types of their licenses, are not allowed to hinder the state officials
in issuing the firewood tickets for personal use of local population (No-132, 11/08/2005).

**Governmental Resolution on the Rules for Definition of Forest Fund of Local Significance**
describes the forest fund of local significance as the “forest fund which was transferred to local
governing bodies and which in accordance to Georgian legislation, can be used by local
communities to meet their needs”. The law further sets the basics for definition of the forest of local
significance, including the provisions on how the areas should be selected and transferred to local
governing body. The resolution also defines the Ministry of Environment as the key
responsible state institution in this process. The main responsibility of the ministry is to handle the
recommendation of the state commission to the Government, which in its turn (i) approves the list of
the areas, (ii) their location and amount, and (iii) sets the deadlines for transfer of the selected forest
fund to the local self-government. In addition to this, the work related to the transfer of the selected
forest fund into the local self-government should be carried out by the Ministry of Environment and
Natural Resources Protection together with the Ministry of Economy and relevant local self-
government (No. 105, 23 May 2007).

### 4.4. Georgian Code on Local Self-government

The Tusheti PL forests are the only forests in Georgia managed by local self-government. Due to
this the legislation related to the local self-governance plays an essential role for the concrete case.
The Georgian Code on local Self-government approved by the parliament of Georgia defines the
self-governance as “the right and the ability of locally registered population to take the decisions on
the issues of local importance, in accordance with Georgian legislation and through elected local
governing bodies”. The local self-governance is the municipality, which is described as a
settlement (self-governing town) having administrative boundaries, or a complex of settlements
(self-governing commune), having the administrative boundaries and administrative center, elected
local governing bodies, both – local representative (Sakrebulo) and executive boards, owns
the belongings and has its own budget. The municipality is the independent legal entity of public
law.

The municipality has two types of authorities: the exclusive authority of the municipality and the
authority that was delegated from the state government. The code on local self-government states
that the management of natural resources of local significance, including water and forest
resources, and the land resources which belong to the municipality is the exclusive authority of the
municipality. The municipality manages the above mentioned resources according to Georgian
legislation. The code on local self-government furthermore states that the forest and water
resources of local significance belong to local municipality (№1958-IIs, 05/02/2014).
5. Governance and Management of Forests in Tusheti Protected Landscape

5.1. Governance of Tusheti Protected Landscape

Governance in relation to the protected areas is an important concept for modern protected areas legislation. It has two dimensions: the first relates to the quality of governance, the process by which the decisions are made, also known as good governance. The second dimension defines who makes decisions, who holds the decision-making power and who is held accountable, independent from the process used. This is the governance approach or the type of governance regime (Lausche, B 2011).

In general, the Protected Areas are managed by the Agency of Protected Areas in Georgia. Other institutions and the bodies of local self-government are participating in management of Protected Areas in accordance with the rules and procedures defined by Georgian legislation and within their competences, but through active cooperation and coordination with the Agency of Protected Areas and the Ministry of Environment and Natural Resources Protection. Specifically, the Protected Areas agency is authorized within its power:

- to manage the Strict Nature Reserves, National Parks, Natural Monuments, Managed Nature Reserves, Biosphere Reserves, World Heritage Sites and Wetlands of International Importance;
- together with the other organizations manage the Protected Landscapes and in exceptional cases – the separate zones of Managed Nature Reserves, Biosphere Reserves, World Heritage Sites and Natural Monuments; (No 136-II, 07 March, 1996)

The last approach was applied while designing the management of Tusheti PL. The Tusheti PL was established in 2003, as a top-down approach. During the period of 2003-2006 it was managed by the Agency of Protected Areas under the Ministry of Environment and Natural Resources Protection of Georgia. In 2006 it was handed over to Akhmeta Municipality (Stanciu, E. & Ionita, A. 2013; Mr. Z. Lagazidze, 2013, pers. comm., 24 December; Mr. A. Gogotidze and O.Ichirauli, 2013, pers. comm., 24 December).

Since 2011 the management body of the PL is a non-profit, non-commercial legal person “Tusheti Protected Landscape Administration” established by the local self-governmental body Akhmeta Municipality Sakrebulo, on March 25, 2011. Currently Tusheti PL is the only protected area in the country managed at municipality level.

The big portion of the decision-making power stays with Akhmeta Municipality under which Tusheti PL Administration is operating. The Municipality decides on internal structure and staff positions of the Tusheti PL administration, elaborates and approves the internal rules, the salaries, appoints and dismisses its Director. The Municipality provides the administration with the state funds, mainly for management activities. The municipality approves the budget proposals elaborated by the
Administration. Additional funds may also come from the state, economic activities, grants and donations (Stanciu, E & Ionita, A 2013).

The Tusheti PL administration has the status of the non-profit, non-commercial legal person, which has its own belongings, rights and responsibilities, signs the contracts on its own name as well as has other responsibilities that are essential for its effective operation.

The Administration of Tusheti PL among others aims at protection, conservation and restoration of the unique and rich ecosystems of Tusheti, including forest ecosystems. Other functions of the administration include maintaining and tending of the national heritage, architectural monuments and historical and cultural landscape, supporting the development of tourism and educational activities, as well as local traditional agriculture (Order-37, 24/05/2013).

According to the law on “Protected Areas System” (No 136-IIs, 07/03/1996, Par. 18, part 4,2), the APA, within its competence is plenipotentary to manage Protected Landscapes together with other organisations; and through scientific-advisory boards collaborate with local self-governmental bodies in management and control of the Protected Landscape. The APA has handed over the management of Tusheti PL to the local Administration, but still provides technical support and expert advice to the Tusheti PL Administration. APA (with strong involvement of Tusheti PAs Administration) has been involved in development of the draft Management Plan of Tusheti PL (Stanciu, E & Ionita, A 2013).

Accordingly, there is following status quo currently: the management of Tusheti SNR and Tusheti NP is undertaken by the Agency of Protected Areas through its territorial administration, but the management of Tusheti PL is done by the Tusheti PL administration of Akhmeta local self-government. But for IUCN PA governance definition, the Tusheti PL governance type still remains the Governance by Government (see the endnote 1).

5.2. Forest Management in Tusheti Protected Landscape

5.2.1. International Approaches for Protected Area and Forest Management

Forest Management in Protected Areas

IUCN describes Forest’ Protected Area as: “a subset of all Protected Area that includes a substantial amount of forest. This may be the whole or a part of a Protected Area”. Following it defines that many Category V protected areas contain natural forests (old growth, ancient, pristine or virgin forests), as well as other kinds of woodlands and forests. Accordingly, forests and trees play a complex role in this specific category Protected Areas. But IUCN strictly excludes plantation forests from the definition of forest Protected Area.

Following, the guideline gives the statements and rules for different category Protected Areas. The document states that the management of forests in Protected Landscapes could be assisted through the work of the international non-profit organisation - the Forest Stewardship Council (hereafter - the FSC). The organization supports environmentally appropriate, socially beneficial,
and economically viable management of forests. The FSC gives credible guarantees that the product comes from a well-managed forest. It also supports the development of national and local standards to encourage forest stewardship at the local level, backed up by guidelines for regional certification standards. IUCN acknowledges that forests managed to FSC standards could be expected to make a contribution to Category V objectives (Dudley and Philips, 2006).

Sustainable Forest Management

The concept of sustainable forest management (SFM) starts from the so-called Earth Summit. The "Forest Principles" adopted at the UNCED in Rio de Janeiro in 1992 is the start of general international understanding of sustainable forest management (FAO, Sustainable Forest Management).

The United Nations describes SFM as: “[a] dynamic and evolving concept [that] aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations”. Sustainable forest management (SFM) can be viewed as the sustainable use and conservation of forests with the aim of maintaining and enhancing multiple forest values through human interventions. People are at the centre of SFM because it aims to contribute to society’s diverse needs in perpetuity (About sustainable forest Management, FAO).

A very important Pan-European process, where Georgia is actively participating is the FOREST EUROPE®. Through the commitments this process the concept of Sustainable Forest Management has been defined and continuously developed at the pan-European level. The FOREST EUROPE has led to achievements such as the guidelines, criteria and indicators for sustainable forest management.

The FOREST EUROPE signatory countries and observers participate in the Intergovernmental Negotiating Committee (INC) created to develop a legally binding agreement on forests in the pan-European region (FOREST EUROPE: What is Forest Europe?).

5.2.2. Basis for Sustainable Forest Management in Tusheti PL

The management of Tusheti PL forests has been lacking any framework for quite a long time. However, the draft Management Plan of Tusheti PL defined the first framework for sustainable management of the area, including forests (NCA CR & KNPA 2013). The document provides the zoning plan for the area:

- The protection (1st) zone – 4,191.11 ha (13.3 % of the area of the PL)
- The traditional use (2nd) zone – 27,140.97 ha (86.1 %)
- The historical cultural (3rd) zone – 94.26 ha (0.3 %)
- The sustainable development (4th) zone – 90.66 ha (0.3 %)

The definition of each zone, together with their aims and activities that are allowed of prohibited
are given. The approximate boundaries, the reasons of such zonation are parts of the document as well.

Further, the draft management plan defines “Close-to-nature forest management” as the key objective for forest management. According to this, the forests cover about 10% of the PL and are situated mainly on steep slopes. Thus, their importance as the protection against erosion and for improvement of water retention is very high. They are also sustainably used by locals as a source of firewood and timber for buildings. The measures for this objective are following: (i) to make firewood and timber for local people available; (ii) to develop a functional system of prevention against bark beetle outbreaks according to different zones; (iii): to develop a functional system of prevention and protection against forest fires; (iv) to realise an inventory of forests and prepare rules for their economic use.

The other objectives are not directly dealing with the forest management, but have close links with this issue. Those are mainly dealing with the organizational structure and the methods of the management of the PL. According to the document there are many shortcomings in organization, budget, personal and expert capacities of the PL Administration. Close cooperation with the PAs Administration and with stakeholders and local people is essential for successful management of the PL.

The management plan for Tusheti Protected Areas covers only the Tusheti Strict Nature Reserve and the National Park, but as Tusheti is one whole ecosystem, it is an important document for the management of the whole area.

The document stresses the importance of cooperation with the Tusheti PL (administration and local municipality in general): harmonization of the processes and activities within the Tusheti PL with the goals and objectives of the Tusheti PAs is ensured through close cooperation between the Tusheti PAs administration and the Tusheti PL administration (local municipality) (Resolution No-16, 03/01/2014).

The above described documents create the main principles of protection, conservation and management of Tusheti PL in general. But the legal basis for carrying out practical activities on forest management has been created recently. The amendment to the Resolution of Georgian Government on Approval of the Rules on Forest Use (No 242, 20 August 2010, amendment of 12 September 2014) and the amendment to the Resolution of Georgian Government on Approval of the Rules on Transportation of Timber and the Technical Regulation of the Saw Mills in Georgia (No 46, 2014, amendment of 12 September 2014) identified Akhmeta municipality as the only manager of the forests in Tusheti PL.

To sum up, existing legislation related to protected areas and forest management, including the most recent changes created the legal tools for Tusheti PL administration for carrying out a forest management in the area.
5.2.3. Forest Management Practices in Tusheti PL

For several years the management of Tusheti PL, including its forests was facing the challenges, firstly related to identification of the responsible unit for carrying out practical management of the area.

As the flow of history shows, already from 2003 it was subordinated to Akhmeta municipality. However, till 2006 it was managed by the APA. Even in 2006, when it was transferred from APA to Akhmeta municipality for management, there was the gap in fulfilling legal requirements, which would ensure final hand-over of the area to local municipality. Due to this, the officials of the municipality were rejecting the management of the area, applying that the area was still in State Forest Fund. There was a need of finalization of official procedures in order to be officially authorized to manage the area. But despite this, the Tusheti PL administration was the only body, legally authorized to manage the area and take the decisions regarding forests (including issuing the tickets to the local population for firewood) The administration had only one person responsible for the area in 2006 (Stanciu, E. & Ionita, A. 2013).

Since September 2014 the Tusheti PL administration became the only responsible body for practical management of the Tusheti PL forests. According to the experts, the last forest inventory was conducted in Tusheti PL some 30 years ago. Since then, significant changes have occurred in forest distribution, its structure and species composition. Outdated forest management plans with no annual operation plans had left these forests almost with no management and therefore created preconditions of many threats, which may destroy local forests and reduce their capacity to fulfil most of important ecological functions properly (Mr. M. Machavariani, 2014, pers. comm., 24 August).

According to Tusheti PL administration, there is a lot to be done in the area. This requires the relevant knowledge and capacity. The administration currently consists of 9 employees. It lacks the capacity to deal with all the above listed issues and carry out proper forest management. The necessary infrastructure of the Administration is also very limited. There is general lack of knowledge and experience among the Tusheti PL staff. Accordingly, there is a need in raising the capacity in different topics (e.g. forest management, law enforcement, biodiversity monitoring etc.) (Mr. Z. Lagazidze, 2014, pers. comm., 18 September).

The administration of Tusheti PL has developed a concept on increasing the number of the staff and raising their qualification in the future.

5.3. Public Participation in Tusheti PL Management

Participation of different stakeholders is the key element when talking about Protected Areas management. Participation means that stakeholders are informed, involved and empowered to have influence on decisions, plans and actions that affect them (Appleton 2014).

Some of the authors are identifying the list of groups who has some kind of an interest or “stake”
in the Protected Areas: local communities, user groups, interested individuals, local government officials, and representatives of NGOs, commercial interests, many other groups, including protected area staff (Thomas and Middleton 2003).

Management of protected areas in Georgia foresees close cooperation with Non–governmental organizations and general public. According to the Law on Protected Areas System Administration (management body) of each protected area is allowed to establish scientific advisory councils which may ensure direct participation of local governing bodies, local NGO’s and different groups of local population (Law No 136-IIs, 07 March, 1996).

Such a body has not been created at the Tusheti PL administration yet. However, the public participation was ensured at the stage of elaboration of the management plan of Tusheti PL. The representatives of the Ministry of Environment and Natural Resources Protection, as well as the representatives of relevant Ministries and Agencies, together with the NGOs, representatives of local municipality, the administration of Tuisheti PAs were involved in the process of development of the draft Management Plan.

Taking into consideration the fact that area has the Protected Area status, the requirements regarding public participation should be strictly followed also for forest management planning and implementation.
Conclusions

The Tusheti Protected Landscape is the only case of locally-managed forests in Georgia. At the same time, it is an IUCN category V Protected Area. Therefore, consideration of the aspects related to the Protected Area category while planning and implementing forest management activities is essential. The main goals of the Protected Area, such as protection of nature; protecting the nature-cultural landscape of national importance that has high aesthetic value and developed by the harmonic relationship between human and natural environments; preservation of critical habitats; and the development of recreational resource use activities - must be followed and fulfilled.

While analysing the process of the forest management arrangement in Tusheti PL, it is clear that identification of the most appropriate management model and responsible institutions from the very beginning is crucial. Specifically for forest management this should include the legal status of the organization which will be assigned to manage the forests and very concrete rules of transferring the forest. Delays in this regard can cause serious impacts to the ecosystem and biodiversity. In Tusheti PL there was a choice between registering the area as the forest of local significance and transferring the area to the local municipality for management. The period for taking this decision took quite a long time, during which the area faced the gaps and challenges in forest management.

As seen above, the Tusheti PL administration lacks the capacity to carry out proper forest management. Lack of human resources and capacity is very common for all municipalities in the country. After creating the central-type system for forest management, the local municipalities were excluded from this work. Accordingly, the municipalities do not have relevant human resources and capacity when it comes to management of forests and other natural resources. For example, carrying out the activities regarding forest management planning (forest inventory, elaboration of forest management plan etc.) requires special experience and expertise. Creating a viable forest management plan and implementing activities identified in the management plan (e.g. carrying our conservation measures, meeting the needs of local population on timber forest resources etc.) also needs to reflect relevant expertise and experience. Finding proper staff for implementing the forest management activities and building their capacity is one of the main challenges for local municipalities.

Finally, the process of transferring the forest management to the local municipality based on the case of Tusheti Protected Landscape can serve as an important lesson for any further plans of decentralization of forest management in Georgia.
Annexes

Annex 1. Map of Tusheti Protected Landscape

Source: Administration of Tusheti Protected Areas
Annex 2. Schematic Map of Forest of Akhmeta (1963)

Source: National Forestry Agency

Source: National Forestry Agency
Annex 4. Map of the Forest of Tusheti Protected Landscape

Source: Administration of Tusheti Protected Areas
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- Georgian Law on Licenses and Permits of Georgia (No. 1775, 24 May 2005)
- The Resolution of Georgian Government on Approval of the Rules on Forest Use (No 242, 20 August 2010)
- Resolution of Georgian Government on the Rules and Terms of Issuing of Forest Use License (No-132, 11 August 2005)
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- Georgian Code on local Self-government (No1958-IIs, 05 February 2014)
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- Appleton M. Lecture on Protected Area Governance/public participation. The international Academy for Nature Conservation, Isle of Vilm, Germany. September 2014
- What is Forest Europe? Available from: http://www.foresteurope.org/about_us/foresteurope

For the purposes of this study the “locally managed” means the case where the forest is managed by the municipalities. The study does not cover Tbilisi City forests.

Experts from Nature Conservation Agency of the Czech Republic (NCA CR) & Krkonose Mts National Park Administration (KNPA) working on preparation of Tusheti PL management plan.

Experts from Nature Conservation Agency of the Czech Republic (NCA CR) & Krkonose Mts National Park Administration (KNPA) working on preparation of Tusheti PL management plan.

IUCN identifies four broad protected area governance types: (i) Governance by government; (ii) Governance by private property owners (iii) Governance by indigenous and local communities and (iv) Co-management (shared governance) (Dudley, 2008).

For the purposes of the guideline, IUCN uses the UNECE/FAO definition of forests.

The Ministerial Conference on the Protection of Forests in Europe is the pan-European political process for the sustainable management of the continent’s forests. FOREST EUROPE develops common strategies for its 46 member countries and the European Union on how to protect and sustainably manage forests.
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