SWOT-Analyses

Instructions for Municipal Forest Management

Supporting the implementation of forest sector reform in Georgia – ECO. Georgia

Report

Prepared by consulting company
PMO Consulting
19 November, 2024

Prepared

The structure of the manual report was prepared by "PMO Consulting" with **the support of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, supporting the implementation of the project "Implementing Forest Sector Reform in Georgia – ECO". within Georgia**

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November, 2024

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Note

The publication was prepared by PMO Consulting within the framework of the ECO. Georgia project, implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry of Economic Cooperation and Development (BMZ).

Brief summary

PMO Consulting prepared the document with the support of GIZ, which is a guide aimed at facilitating the implementation of municipal forest management (MFM) in Georgia using the SWOT-analysis framework. The document reflects the importance of using SWOT analysis to assess the strengths, opportunities, and threats associated with the management of forests of local importance in municipalities. Its goal is to support local governments in making informed decisions to create sustainable and fair forest management practices that meet both national and international environmental standards.

The guide emphasizes the need for inclusiveness to ensure that forest management strategies consider the perspectives and contributions of various stakeholders, especially women. The instructions are a structured approach to conducting a gender-sensitive SWOT analysis. The document aims to equip municipalities with effective forest management tools to ensure sustainability, social justice, and economic development.

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List of Abbreviations

CCA	Caucasus and Central Asia
CBD	Convention on Biological Diversity
CBFM	Community-Based Forest Management
CEDOW	Convention on the Elimination of Discrimination against Women
FAO	Food and Agriculture Organization
FSC	Forest Stewardship Council
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
LEPL	Legal Entity of Public Law
MFM	Municipal Forest Management
NFA	National Forestry Agency
PA	Protected Area(s)
RECOFTC	Regional Community Forestry Training Centre for Asia and the Pacific
SFM	Sustainable Forest Management
SWOT	SWOT Analysis: Strengths, Weaknesses, Opportunities, Threats
TPL(A)	Tusheti Protected Landscape (Administration)
UNFCCC	UN Framework Convention on Climate Change
WOCAN	Organization of Women for Change in Agriculture and Natural Resource Management

I. Introduction

1.1. Brief Project Background

ECO.Georgia Component 3 - Livelihood Opportunities and Local Self-Government in Forest Management - serves to develop the capacity of local authorities and citizens to participate in sustainable forest management. In doing so, communities in the target regions will be able to benefit from diversified income opportunities by improving the value chains of forestry and better access to forestry knowledge and skills.

Under Component 3, the development of SWOT-analysis instructions serves to make an informed decision about inclusion in MFM. Municipal authorities and their employees will be equipped with knowledge that will facilitate argumentative and informed decision-making, standard procedures for forest management planning and management, as well as increased opportunities for public participation. SWOT-analysis instructions will be another decision-making tool for municipal stakeholders to determine whether it is reasonable and attractive for them to take on the rights and obligations of forest management for a municipality.

The SWOT-analysis instruction manual is prepared within the framework of the project “Institutional Arrangement Process Design and SWOT-Analysis" instructions for the development of municipal forest management capabilities supported by Deutsche Gesellschaft für Internationale Zusamme narbeit GmbH (GIZ). The presented document reflects the instructions for detailed, gender-sensitive SWOT-analysis and methods for conducting it for the development of the effective management process of local/municipal forest in Georgia. It should be noted that the purpose of the manual is not to conduct SWOT-analysis.

1.2. Notion and Definition of SWOT Analysis

SWOT analysis (SWOT) is a widely utilized strategic planning tool that enables organizations or projects to assess their current position and evaluate various strategic options. Rather than solely examining internal capabilities or external conditions, SWOT analysis facilitates a structured comparison of alternative scenarios to support informed decision-making. In policy contexts, for instance, distinct SWOT matrices may be developed for each potential course of action, allowing decision-makers to strategically compare different outcomes and select the most advantageous path forward. When doing SWOT analysis, the strengths and weaknesses of the organization are discussed, as well as the opportunities and expected threats that the organization or project faces. SWOT-analysis is a framework for analyzing and identifying key challenges that affect a project or organization, considering its strengths, weaknesses, capabilities and threats. The purpose of this analysis is to use knowledge about the internal and external environment of the project and to formulate a project execution strategy accordingly. (2030 Agenda for Sustainable Development, 2015) SWOT-analysis can also be called a group identification method, which is often used when monitoring or evaluating a particular program, service, product, or industry and studying improvement measures. (Harrison, 2002)

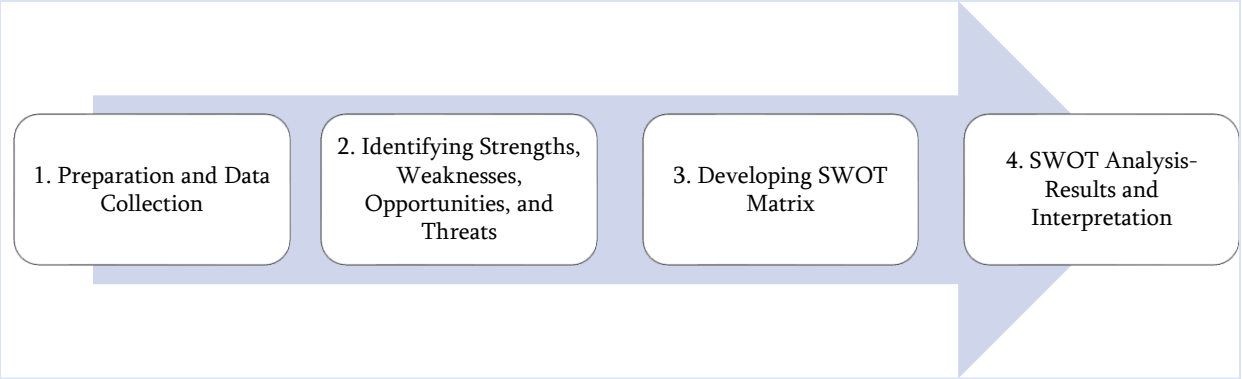
SWOT is an English abbreviation, each letter of which denotes a separate element of the analysis: S — strengths; W — weakness; O — opportunities; T — threats. Conducting SWOT-analysis requires a comprehensive analysis of the weaknesses and strengths of the project, as well as its environment:

→ **Strengths** are the internal factors that that enhance an organization’s or project’s capacity to achieve its objectives. This may include resources, opportunities that contribute to the achievement of the organization/project goals. In a development context, this involves assessing existing resources, skills, or capabilities that support readiness and effective implementation of initiatives, such as Municipal Forest Management (MFM). The focus is on identifying intrinsic capabilities that bolster project success and sustainability.

→ **Weaknesses** are internal factors that may prevent the organization/project from achieving its goals. Identification of vulnerabilities helps us identify areas that require improvement or adjustment.
→ **Opportunities** are external factors that an organization/project can use to its advantage. This may include market trends, changes in regulations, or emerging technologies that can be used for growth and improvement.
→ **Threats** are external factors that can cause risks to the organization/project. This may include, for example, a period of economic decline, increased competition, or changes in consumer behavior. (GÜREL, 2017)

The process of conducting a SWOT-analysis can be divided into several main stages, each of which is necessary for a comprehensive assessment. Four general steps can be taken to implement the SWOT-analysis process (see Figure 1).

Figure 1: General Steps to Implement the SWOT-Analysis Process



1. Preparation and Data Collection

Before starting SWOT-analysis, it is important to collect relevant data. This may include organizational or project reports, market research, consultations with stakeholders, interviews, and other sources of information that give us insight into both internal and external factors. The quality and completeness of the collected data has a significant impact on the accuracy and usefulness of the analysis.

2. Identification of Strengths and Weaknesses, Opportunities and Threats

Once data is collected, the next step is to identify and categorize information based on strengths and weaknesses, capabilities and threat groups. This stage involves critical thinking and analysis to ensure that each factor is accurately classified and consistent with the strategic goals of the organization or project.

3. Developing SWOT Matrix

The factors identified at the previous stage of the analysis are then organized into the SWOT matrix, which is a visual tool. The SWOT matrix allows for easy comparison and contrast perception of the four categories of SWOT-analysis above. The matrix is used to identify the connection between strengths and capabilities, which can be used as leverage. Also, the matrix is also used to perceive the correlation between weaknesses and threats that need to be addressed and resolved.

4. SWOT - Analysis Results and Interpretation

The final stage involves analyzing the SWOT matrix to formulate strategic initiatives tailored to the specific

objectives of the organization, project, or initiative. This process includes identifying strategies that maximize strengths and opportunities while addressing or mitigating weaknesses and threats. In contexts like municipal forest management (MFM), this analysis can extend to comparing separate SWOT matrices developed for different strategic alternatives—such as management by municipalities versus the National Forestry Agency (NFA)—to assess the readiness and suitability of each approach. Interpreting these results and outlining corresponding strategic actions ensures that the selected pathway aligns with broader development goals and enhances the project's effectiveness and sustainability.

Gender sensitivity in SWOT analysis is crucial to ensuring that assessment and follow-up strategies are inclusive and fair. Gender-sensitive analysis forms the basis for all gender perspectives, needs and roles to be taken into account, making SWOT analysis even more comprehensive. Gender-sensitive analysis can identify specific challenges and barriers that women and men face, such as access to resources, decision-making powers, etc. By identifying strengths and weaknesses, opportunities and threats that affect different genders, strategies can be more effectively tailored to address these differences, leading to sustainable outcomes as they equally address the needs of all members of society. Gender sensitivity coincides with global standards and commitments such as the Sustainable Development Goals (SDG 5: Gender Equality), ensuring that projects contribute to the broader international goals. (2030 Agenda for Sustainable Development, 2015).

1.3. The Importance of Informed Decision-Making and the Role of SWOT-Analysis to Ensure Sustainable and Equal Forest Management Practices

Informed decisions for the Management of Municipal Forests (MFM) are critical because it directly affects the sustainability and equality of forest management practices. The informed decision-making process is fundamental in different sectors and disciplines. Solutions based on comprehensive data analysis are likely to bring more effective and sustainable results, especially regarding complex systems such as forest ecosystems. In the context of MFM, informed decision-making helps to balance environmental, economic and social goals, ensuring the use of forest resources in a way that benefits both current society and future generations.

SWOT-analysis plays a crucial role in informed decision-making by providing a structured framework to assess internal and external factors affecting forest management. By identifying strengths and weaknesses, opportunities and threats, SWOT-analysis allows municipalities to make well-informed decisions that take into account both potential benefits and risks associated with various forest management strategies. In this context, developing separate SWOT matrices for each strategic option—such as municipal versus NFA management—can enhance the analysis. This approach allows for a direct comparison of distinct scenarios, clarifying which strategy aligns best with the objectives of sustainable and equitable forest management. For example, a SWOT matrix for a municipal management scenario might reveal strengths like a deeper understanding of local community needs, which could attract government funding aimed at local sustainability. Conversely, a SWOT analysis for NFA management could highlight established infrastructure and technical expertise but might also identify limited community engagement as a weakness, which could lead to conflicts around land use and resource allocation. Thus, using such comparison enables municipalities to assess the unique benefits and challenges of each option, supporting a strategic choice grounded in context-specific insights and long-term viability.

Moreover, the use of SWOT-analysis when making decisions ensures that forest management practices are not only sustainable but also fair. It allows for discussion of the perspectives of various stakeholders, including the perspectives of marginalized groups. Implementing MFM may disproportionately impact marginalized groups, as these communities often have differing degrees of access to resources and representation in decision-making processes. By incorporating social dimensions into the analysis,

municipalities can develop strategies that promote inclusiveness, gender and social equality, ensuring that all stakeholders have a voice in managing their local forest resources. In this way, SWOT-analysis helps to equate forest management practices with broader goals of sustainability and social justice.

This analytical framework can be used in both the private and public sectors, professional associations and academia. For example, Dillan (1988) conducted a SWOT-analysis to assess the profession of Australian agricultural economics (Dillan, 1988). Also, **The Food and Agriculture Organization of the United Nations (FAO) has officially recognized SWOT-analysis techniques as an important participatory assessment tool used for the collection, synthesis and analysis of information for the development of community forestry** (FAO, 1989).

Other examples include the report of the Asia-Pacific Regional Community Forestry Training Center (RECOFTC), which used this technique to assess the feasibility of potential community forestry expansion programs in developing Asian countries. Jiwan and Kendwang (2004) analyzed the results of SWOT-analysis related to agroforest systems established in Sarawak, Malaysia. Oswald et al. (2004) conducted a comprehensive SWOT-analysis to determine the strategic plans for forestry enterprises in Switzerland. (RECOFTC, 1999) (Jiwan & Kendawang, 2004) (Oswald, Riechsteiner, Thees, & Lemm, 2004)

In the context of MFM, SWOT-analysis is also particularly valuable in evaluating institutional arrangement and management practices. By identifying the best and most appropriate scenarios for institutional arrangement, municipalities can optimize resource utilization, improve performance, ensure effective governance and promote long-term sustainability. A structured SWOT-analysis approach provides a clear way to develop detailed instructions and training materials that can be used by municipal authorities to improve forest management practices (Helms & Nixon, 2010). In the context of MFM, comparing various scenarios through separate SWOT matrices for each institutional arrangement option provides a systematic approach to evaluate and select the most suitable strategy. Developing distinct SWOT matrices for different scenarios—such as municipal management versus management by the NFA—allows municipalities to assess each option's specific strengths, weaknesses, opportunities, and threats. This comparative analysis clarifies how each arrangement aligns with goals for resource utilization, governance efficiency, and sustainability.

The use of SWOT-analysis in MFM helps us not only to make informed decisions, but also to align municipal forest management practices with broader environmental and social goals. It ensures that the strategies are based on a realistic assessment of the internal capabilities of the municipality as well as the external challenges and opportunities they face. (Kangas & Pykäläinen, 2000)

1.4. Objectives of the Manual

The SWOT-analysis manual for municipal forest management (MFM) serves to develop comprehensive instructions for eight target municipalities to conduct gender-sensitive SWOT analysis in local/municipal forest management.

Based on the report prepared by Georgia’s Environmental Outlook (GEO) "Forest Management Capacity Analysis According to 8 Target Municipalities", which was prepared based on the report prepared by the project "Supporting the Implementation of Forest Sector Reform in Georgia (ECO.Georgia)”, municipal forests are in a very early phase in Georgia (Kavtarishvili, 2023). Today, we have only four practical examples in terms of municipal governance in Georgia. One in Akhmeta municipality, which has already gained a lot of experience, the other in Gori municipality, which is relatively new, another in Dusheti municipality, where the National Forestry Agency manages the protected landscape of Aragvi. These practices differ slightly. The fourth is Machakhela Protected Landscape, where the forests are currently

managed by Adjarian Forestry Agency but are supposed to be transferred to the Khelvachauri municipality for management. At least this is the provision of the Law on Designation and Management of Machakhela Protected Landscape.

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II. Overview of Status-Quo - Georgian Forest Context Review

2.1. Policy, Legal Framework, and Capacity Building

2.1.1. Existing Forest Policies and Legal Frames

The Forest Code of Georgia[1] provides for the management of forests by municipalities, although the majority of municipalities need reinforcement in the following areas for forest management: strategic approach, practical tools, economic and technical planning, awareness, professional skills and opportunities to actively engage in sustainable forest management. Today, operational municipal forest management practice is found only in Akhmeta municipality, the MFM practices for remaining three municipalities of Dusheti, Gori and Khelvachauri are being prepared. It is important to note that in the case of Dusheti, while the municipality oversees the management of the protected landscape, the forest within this landscape remains under the jurisdiction of the National Forestry Agency. Nowadays, municipalities can have municipal forests in municipal areas, and according to the Forest Code, by 2030, the criteria for determining "forest of local importance" and the procedure for transferring forest of local importance to a municipality must be developed and approved. The forests to be transferred to the municipality may also include the forests that are currently managed by the LEPL National Forest Agency (Kavtarishvili, 2023), as well as the territories that are covered with trees and meet the parameters of forest that are defined by the Forest Code, although they have not been granted with forest status.

The Forest Code of Georgia regulates legal issues related to forest management. According to the above mentioned, the forest of Georgia shall be managed on the basis of a system established in accordance with the principles of sustainable development, which ensures the improvement of the quantitative and qualitative indicators of forest, the protection of its biodiversity, the rational use of its economic potential taking into account the ecological value of forest, the participation of the public in forest management and the availability of forest resources for it. The 2020 Forest Code gave municipalities the opportunity to consider the needs of the local population and allow them to benefit more from the forest.

The Forest Code includes a requirement that "the Government of Georgia should develop the criteria for determining 'forest of local importance' before 1 January 2030 and the procedure for transferring forest of local importance to a municipality".[2] In addition, the Local Self-Government Code[3] attributes forest resources of local importance to municipalities and considers their management as the authority of

1 Law of Georgia; Forest Code of Georgia; 22/05/2020;
2 Law of Georgia; Forest Code of Georgia; 22/05/2020; Article 95;
3 Organic Law of Georgia; Local Self-Government Code; 05/02/2014;

municipalities. According to the Forest Code of Georgia, "Municipal Forest is a forest of local importance owned by a municipality, with respect to which management powers are exercised by municipality representative and executive bodies, in accordance with the Code and other legislative and subordinate acts." [4]

Example of Tusheti Protected Landscape (TPL)

As mentioned above, forest management by municipalities in Georgia is mainly carried out in several municipalities. One such example is Akhmeta Municipality, which oversees and manages Tusheti Protected Landscape (TPL) forest management through relevant agencies. TPL, which was created in 2003 by the Law of Georgia on the Establishment and Management of Tusheti, Batsara-Babaneuri, Ladogehkhi and Vashlovani Protected Areas (PAs), is under the jurisdiction of Akhmeta Municipality. In 2011, the NNLE Tusheti Protected Landscape Administration (TPLA) was created. The competence of the administration is limited to the management of TPLA. TPLA was transferred to Akhmeta Municipality in 2006, and in 2011 the Akhmeta Municipality Sakrebulo established NNLE "Tusheti Protected Landscape Administration" in Akhmeta Municipality.

Based on the example of TPLA, it should be noted that the purpose of the activities of the NNLE “Tusheti Protected Landscape Administration” is to protect the unique ecosystem of TPLA from destruction, promote tourism development, preserve and maintain the historical-cultural landscape. TPLA is authorized to engage in the entrepreneurial activities of an auxiliary nature, from which the profit shall be consumed to realize the goals of a non-entrepreneurial (non-commercial) legal entity. TPLA’s competence includes forest registration, planning and monitoring on the territory of Akhmeta Municipality, as well as the production of cutting provided for by Article 79, 80, 81 of the Law of Georgia "Forest Code" permitted in the protected landscape if necessary.

According to the legislation, the local population has the right to use wood resources in protected landscape forests. The experience of TPLA includes cases of illegal timber felling that have decreased significantly as a result of strengthening law enforcement and improving communication with local residents. It should also be noted that the Tusheti Protected Areas Administration is not able to actively respond to the issues related to the protected landscape, as its competence in relation to the protected landscape is limited to monitoring and providing information to the municipality. In addition, the changes made to the spatial planning of Tusheti protected areas included changing the status of certain forest areas. This in many places satisfied the vital needs of the local population on firewood and resolved the conflict regarding the use of forest resources. However, certain challenges still remain faced, including lack of financial or technical resources.

Forest management means the preservation and development of the beneficial properties of forest, environmental functions, the planning and implementation of measures for the use of forest resources, forest protection, tending and reforestation and afforestation. In the process of forest management, such methods shall be used that ensure the preservation and improvement of its biodiversity, productivity, self-restoration and vitality.

"The Forest Code of Georgia regulates legal issues related to forest management. According to the Code, Georgian forest, regardless of its form of ownership, shall be managed on the basis of a system established in accordance with the principles of sustainable development, which ensures the improvement of the quantitative and qualitative indicators of forest, the protection of its biodiversity, the rational use of its

4 Law of Georgia; Forest Code of Georgia; 22/05/2020; Article 5;

economic potential taking into account the ecological value of forest, the participation of the public in forest management and the availability of forest resources for it" (Kavtarishvili, 2023).

It is also important that examples of municipal forest management already exist in Georgia. These practices differ slightly. This experience is a good example for other municipalities, a kind of pilot project, a practice, which is a good starting point for other target municipalities.

It should also be noted that Forest Information and Reporting Systems of the Caucasus and Central Asia region have made significant progress recently. Based on the FAO's report in the decade since the 1993 MCPFE Helsinki conference, work has progressed to refine the meaning and management practices of sustainable forests. Later, this process also included the development of relevant criteria and indicators. After the collapse of the Soviet Union, the most countries of the Caucasus and Central Asia (CCA) took part in the relevant processes. Georgia is the only CCA country involved in the process of the Forest Europe. In Europe, within the framework of the Forest Europe Process (the Conference of Ministers on the Protection of Forests in Europe), a set of indicators was developed, with 34 quantitative and 11 qualitative indicators, which is the basis of the Forest Europe Reports and National Indicators set for 23 European countries (FAO, 2023).

The Forest Code of Georgia explains the processes and resources necessary for forest management. At this stage, the state forest management body in Georgia is the Legal Entity under Public Law called the National Forest Agency of the Ministry. If a municipal forest is transferred to a municipality, a representative body of a local self-government shall establish a forest management body and approve a municipal forest management plan. Today, several major public agencies are involved in the forest management of Georgia. According to the legislation, the forest of Georgia may be state, municipal or private property:

- The state forest management body is the **LEPL National Forestry Agency,** the main goals of which are: forest maintenance and restoration, sustainable use of components of biological diversity in the forest area. The main objectives of the Agency are: forest management, implementation of forest management and restoration measures, regulation of forest use, control in the forest area (except for license conditions) within the powers determined by legislation, forest registration implementation.
- The state forest within the framework of the protected area is managed by the **LEPL Agency of Protected Areas**. Based on the law on PA system of Georgia, the agency is authorized within its competence to: a) manage state reserves, national parks, natural monuments, protected areas, biosphere reserves, world heritage sites and wetlands of international importance; b) together with other organizations to manage protected landscapes and in exceptional cases – a separate zone of prevention, biosphere reserves, world heritage sites and natural monuments.
- The state forest located on the territory of the autonomous republic shall be managed by the **supreme representative body of the autonomous republic.**
- A municipal forest management body shall be established and a municipal forest management plan shall be approved by a **representative body of a municipality.**
- **The Ministry of Environmental Protection and Agriculture of Georgia** is an institution of the executive authority, which exercises the powers granted to it by the legislation of Georgia to ensure the implementation of public administration and state policy in the field entrusted to him/her.
- The State Sub-Agency of the Ministry of Environmental Protection and Agriculture of Georgia - **the Department of Environmental Supervision** shall ensure the exercise of state control in the field of environmental protection and the use of natural resources (except for the fulfilment of the conditions of a license for the extraction of mineral resources or the license for the use of subsoil) throughout the territory of Georgia.

2.1.2. Needs for Capacity Development: Existing Policy Gaps in Management and Enforcement

Although Georgia has a strong forest management legislative base, there are inconsistencies and gaps in the application of this policy at the municipal level. These gaps often lead to fragmented management practices, lack of coordination between different government levels, and challenges in enforcing regulations. The lack of information, technology transmission and communication between the governing body and members of the public can also be perceived as a weakness. (Suh & Emtage, 2005)

- Although the Forest Code of Georgia provides for the basic instructions for municipal forest management, its implementation at the municipal level is often inconsistent. This discrepancy may be due to a lack of clarity in the roles and responsibilities of municipal government, as well as inadequate oversight and enforcement mechanisms.
- There is often a violation of the link between national forest management policies and local government structures. This flaw can lead to a discrepancy in management's goals, municipalities sometimes lack the authority or resources to implement national policies effectively.
- Lack of gender-sensitive policy: The legislative framework and international treaties in Georgia oblige the state to develop policies and legislation that will be non-discriminatory and ensure an equal and accessible environment for all. Article 11 of the Constitution of Georgia[5] establishes that no one can be discriminated. It is an autonomous right that can apply to any area regulated by the state. Although gender equality is recognized in national forestry policy, these principles are often not implemented in action plans at the municipal level. This gap hinders women's full participation in forest management and reinforces gender inequality in access to forest resources.

2.1.3. Need for Training: Insufficient Training Programs for Forest Management Staff and the Public; Insufficient Gender-Sensitive Training Programs

A significant weakness of the MFM of Georgia is the insufficient training of forest management personnel. This includes general training in sustainable forest management practices, as well as gender-sensitive training programs. Without proper training, municipal staff may not have the necessary skills and knowledge to effectively manage forests, which will lead to suboptimal management outcomes and will continue to drive the existing inequality. Gender-sensitive training programmes in forestry are essential to creating inclusive, fair and sustainable forest management practices. First, a similar type of training ensures that both men and women have equal opportunities to participate in forestry activities, including decision-making, management and benefit sharing. It is also worth noting that the inclusion of women and other marginalized groups in forestry training provides various perspectives and effective strategies for forest management (FAO, 2016).

There are limited opportunities for permanent training and professional development for municipal forest management personnel. This lack of training contributes to knowledge and skills gaps, especially in areas such as sustainable management practices, biodiversity conservation, and community engagement. On the example of TPL, the need for relevant specialists to be part of the pasture management processes remains on the agenda. Currently, pasture monitoring is entirely the responsibility of rangers, and despite the training they have received, they lack the qualifications necessary to conduct the monitoring process correctly and effectively. Another issue is the high turnover rate among staff. Although the pasture monitoring process is standardized and outlined in the relevant manual, it still requires appropriate qualifications, practical experience, and field assessment skills. Additionally, it is unlikely that specialists

[5] Constitution of Georgia

in protected area resources can use the "Pasture Management Tool" without specialized training, as it requires skills in geographic information systems. To enhance the capabilities of the selected personnel, it is necessary to implement appropriate training programs that cover pasture management, condition assessment, and the use of pasture management tools.

Based on TPL's experience, the local population welcomes support for the development of Tusheti, especially in relation to tourism. However, there are signs that the quality of some tourist services has recently declined. The standards of tourist services and the benefits derived from them could be significantly improved through targeted and tailored measures such as regular training, educational tours, and experience sharing.

In addition, according to the staff of the target municipality, in case of forest transfer, it will be necessary to establish a forest management authority – a non-profit legal entity. The number of staff required for the forest management authority will depend on the area of forest being transferred to the municipality. The municipal staff note that they need additional information on the provisions of the Forest Code, which they currently lack (Kavtarishvili, 2023).

2.2. Gender and Public Participation

2.2.1. Gender Roles in Forest Management

The legislative framework and international agreements in Georgia oblige the state to develop policies and legislation that will be non-discriminatory and ensure an equal and accessible environment for all. Article 11 of the Constitution of Georgia[6] establishes that no one can be discriminated. It is an autonomous right that may apply to any area regulated by the state.

Article 14 of the Convention on the Elimination of All Forms of Discrimination against Women[7] (CEDAW), which deals with the rights of rural women, emphasizes the important role of women in ensuring the economic well-being of families, including in non-commodity sectors. Despite the state's obligation to create effective policies and state programs for the realization of women's rights, we continue to face gender inequality in sectors such as forestry, energy, transportation, construction, and infrastructure, where gender-disaggregated data is typically not collected. Unfortunately, gender-blind policies in the forestry sector persist, and women's contributions remain undervalued, which hinders their participation in forestry policy planning and climate change management[8].

According to the World Economic Forum's Global Gender Gap Index (2023), Georgia is ranked 76th among 146 countries with 0,708 points. As of 2022, women make up 52% of Georgia's 3.7 million population and represent a majority. Moreover, in Georgia, there is no data collection based on gender regarding employment of women in the forestry sector, the income of forestry enterprises, and ownership information. We can only assess gender mainstreaming in forest management based on the available general information.

Based on the presented data, we can conclude that women are less employed in managerial positions in the environmental and forestry sector.

The gender mainstreaming survey on the example of Akhmeta Municipality has interesting results, according to which **the main findings of the gender study are the following:**

- Women living in Pankisi villages perceive that the population is dependent on the forest, but they do not realize it in everyday life. They primarily view the forest from a usage perspective.

[6] Constitution of Georgia
[7] Convention on Elimination of Violence
8 Research on gender mainstreaming in forest management. DEPA Consulting for GIZ, 2024

- Men and women living in the municipality participate in the collection of timber and non-timber resources of the forest. Men mainly engage in the collection of timber for construction and fuel purposes.
- Women are more actively involved in the collection of non-timber forest resources. In particular, women collect mushrooms, roses, raspberries, blackberries, blueberries, berries, various grass and tree leaves for medicinal purposes.
- The managers of Pankisi guesthouses are mostly women, they host guests mainly with forest products.
- Women are also involved in buying and selling forest products.
- Women face several challenges at the start of entrepreneurship: they do not have initial funding and financial knowledge is low. A prerequisite for starting a business or participating in grant programs often involves land ownership, which is difficult because women rarely own land.

On example of Akhmeta Municipality, we can conclude that the role of women is quite important in the use of forest resources, however, they are less involved in the decision-making process, which makes forest management less effective at the local level.

One more topic to be outlined regarding Gender equality is the unequal access to forest resources, gender bias in roles and responsibilities. Gender inequality can be identified differently in the context of forest resources and roles. Unequal access to forest resources is a multifaceted issue influenced by social, economic and political factors. In terms of economic barrier, is a significant challenge, from which women disproportionately suffer. Consequently, their ability to invest in technology, tools, or practices, which can improve access and management of forest resources, is limited. It is also worth noting that women often have limited access to formal employment opportunities in the forestry sector, such as timber cutting or ecotourism, which means that they cannot get the economic benefits that these industries offer.

Legal and political barriers to access to forest resources imply that in many cultures and legal systems, women have limited or no right to land and forest ownership. Women may face barriers to adopting and supporting services related to forest management, such as training programs, financial resources, and technical assistance. From a political point of view, it is worth noting that in many cases forest management policies and regulations fail to take into account gender differences and may not meet the specific needs and challenges of women.

2.2.2. Public Participation and Governance

Public participation in MFM is a crucial force as it ensures that forest management practices are based on the needs and values of the local population. In many municipalities, there is a significant involvement of both men and women in forest management activities, which increases the effectiveness and sustainability of these practices:

- Inclusiveness: The inclusion of both men and women in decision-making processes ensures that forest management strategies reflect different perspectives and needs that will lead to more balanced and equal outcomes. For example, the gender programs of community forestry in Nepal have shown that the inclusion of women in forest management decisions leads to better conservation outcomes and greater social equality (Agarwal, 2009).
- Empowerment: Community-led Forest management gives local residents the opportunity to master the resources they depend on, which helps to strengthen their sense of responsibility and accountability.

On the example of Georgia, in many regions we find a strong public dependence on forest resources. Therefore, community engagement and the use of traditional knowledge in forest management play an important role in sustainable forest management practices. For example, both women and men participate

in the collection of timber and non-timber forest resources such as berries and medicinal herbs in Akhmeta municipality. This engagement not only supports sustainable management, but also helps maintain local cultural practices (DEPA Consulting, 2024)

As mentioned above, forest management by municipalities in Georgia is mainly carried out in several municipalities. One such example is Akhmeta Municipality, which oversees the management of Tusheti Protected Landscape (TPL) forest. TPL, which was created in 2003 by the Law of Georgia "On the Establishment and Management of Tusheti, Batsara-Babaneuri, Ladogehkhi and Vashlovani" is under the jurisdiction of Akhmeta Municipality. In 2011, the Tusheti Protected Landscape Administration was established. The competence of the administration is limited to the management of TPD. TPL was transferred to Akhmeta Municipality in 2006, and in 2011 the Akhmeta Municipality Sakrebulo established the "Tusheti Protected Landscape Administration" in Akhmeta Municipality. **The experience of TPL includes cases of illegal timber felling have decreased significantly as a result of strengthening law enforcement and improving communication with local residents** (Kavtarishvili, 2023).

Based on the report prepared by GEO "Forest Management Capacity Analysis According to 8 Target Municipalities," which was prepared based on the report prepared by the project "Supporting the Implementation of Forest Sector Reform in Georgia (ECO.Georgia)", the strong side of MFM is shared by most of the target municipalities. Target municipalities note **that MFM means less bureaucracy in the process of providing local residents with timber**. The previous practice, which involved supplying materials to affected locals based on a conclusion from the municipal commission, was abolished five years ago. Currently, the process has become more complicated, leading to public dissatisfaction. It is important that municipalities have the ability to better provide firewood to socially vulnerable populations and improve overall access to both timber and non-timber forest resources (Kavtarishvili, 2023).

In the part of community participation, the significant strength is **the employment of the local population in the Municipal Forest Management Body**. For example, the introduction of sustainable forest management practices has created direct employment opportunities in activities such as planting, maintenance, harvesting and processing of forest products in Colombia. Community forestry projects have created jobs and supported the local economy by developing revenue-generating companies and forest products market opportunities. For example, in the initial phases of the project in Colombia, 66 direct jobs were created, which was directly benefited by 249 families. (UN, 2019)

Based on the example of TPL, as of 2023, the administration has 19 employees for the management of Tusheti Protected Landscape. In addition, representatives of all target municipalities emphasize the potential for the local population to create employment opportunities after the introduction of MFM. Since 2003, the strategy of the Tusheti Protected Landscape Administration has been aimed at developing close and positive ties with the local community. An indicator of the progress achieved includes the creation of alternative jobs and livelihoods, raising awareness about the protected area and its importance, promoting local culture and traditions through festivals, media outlets, brochures and other publications, facilitating the restoration of cultural monuments. When working with the community, the administration of TPL applies the following common principles: involvement of the community in the project development process and its consideration of its interests, transparency and informing the community, ensuring gender balance, ensuring youth participation, perception of local partner organizations not only as target groups, but also as partners, taking into account local characteristics (Kavtarishvili, 2023).

2.2.3. The Potential for More Inclusive Policy Development and Implementation Opportunities to Integrate Gender into New and Existing Policies

One of MFM's important opportunities is the potential to develop more inclusive policies, especially when integrating gender issues into both new and existing policies. As Georgia continues to develop forest management frameworks, the inclusion of different groups of society in the policy formulation process is crucial. This includes not only local communities, but also a more deliberate focus on gender-sensitive approaches that ensure that men and women benefit equally from forest management practices.

Programs designed to strengthen local communities can provide them with the necessary skills, knowledge, and authority to play a more active role in forest resource management. This empowerment can lead to better forest management outcomes, as local communities often have unique perspectives and connections to the land that can enhance conservation efforts.

Empowering local communities in forest management can also contribute to rural economic stability. Community involvement in sustainable harvesting, collection of non-timber forest products, and other forest-based activities can improve household income and overall quality of life.

Local communities often possess valuable traditional knowledge about forest management, such as practices for harvesting and conserving forest resources. Strengthening these communities can help preserve and enhance this knowledge, ensuring its transmission to future generations and its integration into modern forest management practices (Agarwal, 2009).

2.3. Traditional Knowledge and Community Engagement

2.3.1. Traditional Knowledge: Local Knowledge on Forest Management

Strengthening the skills of forest management of the local population is one of the important concomitant processes and strengths of MFM. Based on the report prepared by GEO "Analysis of forest management capabilities according to 8 target municipalities", decentralization of forest management will result in strengthening local self-government (e.g., forest management experience will make it easier for the municipality to manage water resources). For example, the Forest Code of Georgia includes provisions on increasing the number of qualified forestry personnel, which ensures that municipalities gradually develop the expertise necessary for the effective management of their forests (Kavtarishvili, 2023).

The integration of traditional knowledge is critical components of effective and sustainable forest management, especially in the context where the local population has a deep, lasting relationship with the land. In Georgia, as in many countries of the world, local communities, including men and women, are actively participating in forest-related activities. This engagement is not only an expression of their dependence on forest resources for livelihood, but also an expression their cultural and historical connection to these landscapes.

For example, in the gender part, the gender mainstreaming survey on the example of Akhmeta Municipality has interesting results, according to which, from the gender perspective, the main finding is that in the municipality, men and women play distinct roles in utilizing forest resources. Men primarily focus on collecting timber for construction and fuel purposes, while women are more actively engaged in gathering non-timber resources such as mushrooms, berries, medicinal plants, and leaves. Women also manage most family guesthouses in Pankisi, where they often serve guests using forest products. Additionally, women are involved in the trade of forest products. However, they face significant challenges when starting a

business, such as a lack of initial funding, limited financial literacy, and difficulties related to land ownership, which is often a prerequisite for participating in business or grant programs.[9]

The active participation of the local community in forest management ensures the integration of local needs and values into the decision-making process. This is especially important in regions where forests play a crucial role in the daily lives of residents, providing materials for housing, fuel, food and medical plants. When communities are involved in forest management, they are more likely to support and adhere to sustainable practices because they see the direct benefits of these activities.

Traditional ecological knowledge refers to the wisdom, practice, and beliefs that indigenous communities have developed over the centuries that are closely related to their interactions with the natural environment. In the context of forest management, this includes a wide range of practices, from sustainable harvesting methods to the use of specific plants for medical purposes. For example, in addition to timber resources in the Chokhatauri municipality, locals will obtain non-timber forest resources such as medical herbs such as *Senecio platyphyllus*. This medicinal plant is obtained for export to Russia and Ukraine (Kavtarishvili, 2023).

In Georgia, traditional knowledge is deeply invested in many communities, especially in rural and local areas, where forests have been central to generational life. For example, practices such as selective cutting, which allow forests to recover naturally, or sustainable collection of non-timber forest products such as berries and medical plants, are passed on to generations and are inseparable from maintaining healthy forest ecosystems. For example, in the case of TPL, old community management skills were applied and implemented, which not only gave a boost to local self-governance but also contributed to the promotion of the landscape. Tusheti has historical experience with transitioning to self-governance, and it is noteworthy that the first protected landscape administration managed by a municipality was established here.

For example, in the mountainous regions of Georgia, including Tusheti, the tradition of protecting sacred forests have been preserved to this day. A sacred forest represents a religiously significant "sanctuary" and serves as an example of forest resource protection and sustainable use. These forests are often untouched areas distinguished by cultural significance and rich biodiversity. In such areas, there has either been no significant anthropogenic impact for a long time or none at all. The existence of the sacred forest phenomenon has served as a foundation for achieving success in working with the local community.

2.3.2. Community Empowerment, Potential Economic Benefits, and Programs for Enhancing Women's Roles in Forest Management

In the long run, sustainably managed forests contribute to sustainable economic growth to ensure the continuous supply of forest resources. This sustainability attracts investment and increases the economic sustainability of municipalities. Economic benefits include stable incomes from timber, recreation and tourism (Forest Management: Planning, Decision Making and Implementation, 2019).

Increasing access to foreign funding may also contribute to the transfer of modern forestry technologies to municipalities of Georgia. These technologies can be used to better monitor the condition of the forest, prevent illegal logging, and improve forest resource management.

Strengthening local communities in forest management can contribute to rural economic stability. Community involvement in sustainable harvesting, collection of non-timber forest products, and other forest-based activities can improve households' income and overall quality of life (Suh & Emtage, 2005).

Other additional opportunities may include: availability of more foreign financing or investment support; arrangement of a stable market for timber and non-timber resources; collective agreements with the

[9] See chapter 2.2.Gender and Public Participation

processing industry; formation of forest cooperatives; increase in the added value of resources (Suh & Emtage, 2005).

When it comes to women's empowerment programs in forest management, it is important that they address the challenges associated with women's participation in forest resource management, leadership and decision-making. These programs should play an important role for women in forest eco-systems, which in turn will eliminate the gender inequality that is very prevalent especially in this sector.

In this context, it is important to consider international practices related to programs for enhancing women's roles in forest management, which will demonstrate the relevance of such programs. First and foremost is the UN REDD+ and Gender Program (Global), which focuses on ensuring that women benefit from REDD+ initiatives aimed at reducing emissions from deforestation and forest degradation. By promoting gender equality, this program enhances the effectiveness of REDD+ projects and ensures that women are not left behind in climate change mitigation efforts (UNDP GENDER and REDD+ Policy Brief). Also, it is important to highlight, the international network WOCAN, which focuses on empowering women in agriculture and natural resource management, including forestry. WOCAN provides training and advocacy for women, and has influenced global policies and programs, improving women's participation and leadership in forest management.

2.3.3. Environmental Protection: Prevention of Further Loss of Pristine Forests

Environmental protection is another important opportunity in the context of MFM in Georgia. Protecting pristine forests from further degradation and improving soil conditions is crucial to maintaining the ecological integrity of forested areas. By focusing on these environmental goals, municipalities can ensure that their forest management practices contribute to long-term sustainability and biodiversity preservation.

Forest conservation, prevention of further loss of pristine forests is the primary environmental opportunity. This can be achieved by implementing strict protection measures, sustainable harvesting practices, and community-led conservation initiatives. As a result of better forest management practices, improved soil conditions can increase the productivity of forest lands, promote forest restoration efforts, and reduce erosion and other forms of land degradation.

Forests provide important ecosystem services such as water regulation, soil conservation, and carbon sequestration. These services promote agricultural productivity and reduce environmental degradation costs, which is a long-term economic benefit for municipalities (Forest Stewardship Council, 2023).

In the context of environmental impact in Georgia, a positive effect of using wood for heating can be observed in the reduction of harmful emissions released during the burning of wood in various types of stoves. According to a report prepared by GEO, representatives from the Lanchkhuti Municipality City Hall have indicated that in recent years, the process of gasification has relatively reduced deforestation for firewood collection. This is because, in the summer, the population uses gas for cooking and other needs. Therefore, the active gasification process can be positively represented in terms of its environmental impact.

According to the report prepared by GEO, representatives of municipalities believe that decentralization of forest management will lead to the strengthening of local self-government in other areas. For example, the experience of forest management will make it easier for the municipality to manage water resources and forest care will be a priority, therefore, this can be an indirect impact.

2.4. Resource Availability and Limitations

2.4.1. Limited Resources: Available Resources for Effective Municipal Management

When managing municipal forests, it is necessary to solve a variety of challenges arising from certain resource bases. **Physical-technical resources**, such as specialized forestry equipment (e.g., tractors,

sawmills) and all-terrain vehicles, are fundamental to the implementation of sustainable forest management practices. This includes timber extraction, preservation of forest health. Moreover, infrastructure such as roads and relevant buildings facilitate effective operations and access to forest areas. Technology also plays a crucial role; GPS systems and various software help us to plan, execute and monitor forest activities efficiently and accurately.

On the example of TPL, currently the TPL administration has only one forestry tractor to obtain timber resources. Accordingly, due to insufficient equipment and lack of human resources, a large amount of wood material remains in the forest and cannot be brought out. Additionally, a challenge is the processing of locally sourced timber, which has been partially addressed through donor funding for the purchase of a sawmill and the introduction of a paid service for its operation. It is noteworthy that financial resources are needed not only for equipment and staff but also for the continuous education and training of personnel, as well as for community engagement and adherence to environmental regulations.

Human resources play a crucial role in forest management, as the effective implementation of management plans requires specialized personnel equipped with both basic hand tools and advanced mechanical equipment. The Forest Code of Georgia includes specific legislative obligations regarding human resources. According to the Code, the forest management authority must ensure the mandatory involvement of qualified foresters and forestry specialists in forest management. Additionally, to implement the principles of sustainable forest management in Georgia, by January 1, 2025, the forest management authority must annually increase the number of individuals defined by Article 83 of the Forest Code. This increase should ensure that in each forest area, no more than 3,500 ha are managed by at least one qualified individual. It is also important to consider that, depending on the specific characteristics of the area (such as its size, accessibility, the population density of nearby communities, etc.), more than one individual may be needed to manage the 3,500 ha area effectively.

From the perspective of human resources, if we consider the example of TPL, in 2011, it employed 6 people, while today the staff includes 17 individuals. However, TPL faces certain challenges in the area of human resources:

- The insufficient corps of rangers lacks the necessary skills, resources, and equipment for effective patrolling and territorial protection. Additionally, there is a clear need for an on-site lawyer and a Geographic Information Systems (GIS) specialist. The TPL administration requires a staff training plan based on their vision that will include which and how many specialists are needed for the organization to operate more effectively.
- In the process of pasture management and monitoring, it is necessary to have qualified specialists who will have the appropriate knowledge and skills to effectively carry out pasture management. In addition, they need to regularly monitor the situation on the site and monitor the vegetation.
- In order to improve pasture management by the administrations of protected landscape, it is necessary to create a special service responsible for the management of the grazing process in the system (preferably at the level of the central apparatus), which will be responsible for both pasture management and monitoring.
- In order to increase the capacity of selected personnel, it is necessary to implement appropriate training programs that should cover the issues of grazing management and condition assessment, as well as the development of skills for the use of the pasture management tool.

The main risk of transferring forest management responsibilities to municipalities is that, at this stage, most municipalities lack the capacity to manage municipal forests independently due to insufficient budget allocations. Decentralization often results in the devolution of responsibilities without a corresponding transfer of financial resources, leaving local governments with significant new obligations but without the funding needed to fulfill them. Therefore, it is crucial to ensure that the transfer of municipal forests is accompanied by the provision of adequate technical, material, and financial support (Kavtarishvili, 2023).

Many municipalities do not have the necessary budgetary allocations to invest in forest management activities, such as forest restoration, forest monitoring and enforcement of forest protection laws. This financial restriction is a significant barrier. Local authorities will require not only central government involvement in the forest management control process but also dedicated budget allocations to effectively carry out essential activities such as forest restoration, continuous monitoring, and enforcement of protection laws. Without sufficient financial resources, municipalities are at risk of failing to implement sustainable forest management practices, which can lead to degradation and inefficiencies (Kavtarishvili, 2023). As seen in many decentralization efforts globally, the mismatch between responsibilities and budgetary provisions often hinders the intended outcomes of policy reforms (World Bank, 2021). Thus, greater coordination between the central government and municipalities is essential to ensure that municipalities are not overburdened by unfunded mandates.

2.4.2. Ability to Attract Additional Financial Resources

The emergence of additional finance and microfinance programs can also be considered one of the opportunities (Suh & Emtage, 2005). There are examples of attracting additional financial resources in the case of TPL if we consider Georgia's example. For instance, the Caucasus Nature Fund (CNF), a charity foundation established in 2007 under German law, which has been supporting protected areas in Georgia since 2009, launched a project to strengthen and support the activities of the Tusheti Protected Landscape Administration under the Akhmeta Municipality. This grant program is implemented within the framework of financial cooperation between the governments of Germany and Georgia, with funding provided by the German government (BMZ) and facilitated by the German Development Bank (KfW). Under this project, the fund has committed to allocate a grant of 200,000 euros to co-finance TPL administration's operational plan and cover expenses for the years 2022–2024.

2.4.3. Environmental Protection: The Impact of Climate and Other Changes

Climate change poses a significant threat to Georgia's forest ecosystems. Changes in temperature and precipitation, along with the increased frequency of extreme weather events, can lead to environmental hazards, including increased susceptibility to pests and diseases, more frequent and intense forest fires, and disruptions in forest regeneration processes. These impacts could significantly reduce forest productivity and biodiversity, undermining the long-term sustainability of municipal forests.

On the example of Georgia, the main threats related to TPL ecosystems are: illegal forest logging, forest fires, forest pests and diseases, as well as other threats, including climate change, waste and unsustainable management.

As the temperature rises, the sediment regime becomes more volatile, the risk of uncontrolled forest fires increases. Commercial use of forest resources can strengthen this risk, especially if forest management practices do not include adequate fire prevention and control measures. For example, in Georgia, the fire in the Borjomi region in 2021 highlighted the vulnerability of forests to climate change. Fires caused significant damage to the forest ecosystem, indicating the urgent need for municipalities to invest in infrastructure of fire prevention and response.

Forest fires pose a significant threat to Tusheti protected areas. Fires are mostly caused by natural causes and therefore the situation can be complicated against the background of climate change, be an increase in the number of tourists can also be the threat of potential fires, therefore it is necessary to monitor the problem and strengthen the protection service so that they can detect and liquidate fire in a timely manner.

On the example of TLD, poaching remains one of the most difficult to solve. The actual scale of poaching in Tusheti protected areas is not known. The main target of poaching in Tusheti is chamois and wild goat . It seems that the local population is less likely to hunt in Tusheti and mostly not local species. Illegal fishing methods pose a serious threat to the only fish species found in Tusheti-Trout.

2.5. Challenges in Forest Management: Political, Economic, and Social Barriers

2.5.1. Economy: The Impact of Economic Instability

Instabilities in the national and global economies can affect the availability of funding for forest management activities, market demand for forest products, and the economic viability of forest-dependent communities. Economic instability can also lead to increased pressure on forest resources, as communities may resort to forest logging and other mining activities as a means of survival during economic downturn.

- **Economic instability can lead to a decrease in government and donor funding for forest management programs, which will lead to budgetary constraints that impede the ability of municipalities to implement necessary conservation and management measures.** For example, for sustainable forest management, the presence of appropriate equipment and road infrastructure is necessary. Currently, the TPL administration has only one forestry tractor to obtain timber resources. It should be noted that a large amount of timber material remains in the forest and cannot be pulled out due to insufficient equipment and human resources. The challenge is also the processing the timber obtained on the site. which was partially resolved by donor funding for sawmill and with the introduction of paid service. In fact, resources for such targeted funding can be limited during economic crisis.
- Increasing resource extraction: Economic pressures can force communities to increase forest resource extraction, which will lead to excessive extraction and degradation of forest ecosystems. This can exacerbate environmental problems and reduce the long-term economic benefits of sustainable forest management.

2.5.2. Politics: Shortcomings in Management, Lack of Political Will

Political factors, including management deficiencies and lack of political will, are significant threats that could undermine the success of MFM initiatives. Ineffective governance, corruption and volatile policies can lead to improper implementation of forest management plans, regulatory failures and non-compliance with environmental laws. These issues can lead to unsustainable practices, degradation of forest resources, and marginalization of local communities.

The negative consequences of political interference, unstable policies and regulations, and the irrelevant implementation of the program are considered potential threats in the academic literature. Regulatory failure or sovereign risk was also considered one of the main threats to the program. In other words, some respondents involved in the SWOT-analysis process on the introduction of a community forest governance system for the Philippines had the opinion that rights to forest resource extraction may change due to the introduction of new environmental regulations in the future. Other challenges in the sustainability of the program were the lack of timber processing facilities and the unfavorable condition of the transport infrastructure (Suh & Emtage, 2005).

In addition, the risks of corruption are high in the forest management process and it is difficult to provide effective control mechanisms. The poor condition of the forests adjacent to the municipalities is likely to be associated with more costs for municipalities than with benefits. The GEO report reveals that representatives of the City Hall often see the risks of corruption. Risks associated with corrupt practices include the allocation of firewood on a "neighborhood" basis. (according to the mayor, corruption should be related to the fact that those who do not have the opportunity to buy firewood may be asked to obtain firewood for free).

2.5.3. Cultural Barriers: Traditional Gender Roles that Restrict Women's Participation

Cultural barriers significantly limit women's participation in various sectors, including forest management. These barriers often stem from deeply rooted social norms and views that dictate what is “appropriate” behavior for men and women. Traditional norms often treat women as male subordinates, limiting their access to decision-making processes and leadership positions. This hierarchical structure can prevent women from voting in forest governance or community initiatives. Forestry and natural resource management are often seen as male-dominated areas, cultural norms prevent women from entering these professions or engaging in related activities.

To overcome these cultural barriers and strengthen women's participation in forest management, several strategies can be used:

Gender Sensitive Education Programmes: Providing access to education and technical training for women will significantly strengthen them with the knowledge and skills needed to participate in forest management.

Advocacy: Raising awareness about the importance of gender equality through community campaigns can help change cultural norms.

Support for Women's Networks: Encouraging the formation of women's groups and networks in forestry can ensure women's participation in decision-making.

Overcoming traditional gender barriers requires joint efforts to change the challenge of cultural norms, provide education and training, and reform legislative and institutional frameworks. By discussing these issues, women can gain the right to play a more active and influential role in forest resource management, which will help achieve more sustainable and equitable results for their communities.

III. Preparations for SWOT-Analysis

3.1. Setting Goals: Defining Goals of SWOT Analysis, SWOT Framework and its Application in Municipal Forest Management Process

The first crucial step in conducting SWOT-analysis for municipal forest management (MFM) is **to clearly define the scope and objectives of the analysis.** Setting well-defined goals helps to focus the analysis on the most relevant aspects of forest management to ensure that the accepted strategies are valid and are in line with the main goals of sustainable forest management. (Suh & Emtage, 2005)

In the context of MFM, the objectives of a SWOT analysis may include assessing the current state of municipal forest resources, identifying areas for improvement in management practices, and developing strategies that are consistent with broader environmental and socio-economic goals. These factors may influence the decision as to whether MFM makes sense for a particular municipality. It is important that the scope of the SWOT-analysis is uniquely defined in order to include not only the ecological and economic aspects of forest management, but also social dimensions such as community engagement, gender equality, and impact on different gender groups. Collecting gender-based data is especially important to ensure that the analysis accurately reflects the different ways in which forest management practices can affect men and women. These data may reveal the benefits of access to resources, participation in decision-making, and forest management activities, which will allow municipalities to develop more equitable strategies.

In addition, SWOT-analysis should be tailored to the internal capabilities of the municipality, such as access to resources, management skills and existing infrastructure, as well as external factors such as economic trends, social attitudes, and environmental challenges. Strengths and weaknesses, which are somewhat

internal and controlled, should be highlighted by the use of existing advantages and the reduction of internal constraints. Meanwhile, the capabilities and dangers that arise from external factors must be recognized for use in favorable conditions and to avoid potential risks (David, 1999). In addition, analysis should account for the municipality's obligations, such as those related to forest control and supervision, as these responsibilities may pose reputational or even legal risks if illegal forest activities cannot be effectively managed. By incorporating obligations alongside internal capabilities, municipalities can better anticipate challenges tied to compliance. Recognizing and addressing these potential risks ensures a more comprehensive understanding of both internal strengths and weaknesses and external opportunities and threats, allowing municipalities to prepare proactively for responsible forest governance.

Setting clear goals for SWOT-analysis at MFM ensures that the process is systematic and focused, leading to the development of strategic recommendations that are practical and sustainable. It also guarantees that the analysis covers all critical factors, including gender and social considerations, which are vital to promoting inclusive and equitable management practices in forests.

The inclusion of social and ecological factors in the analysis is crucial for the SWOT-analysis to provide additional assessment, a part of local forest management (MFM) economic and policy perspectives. This allows us to adopt a holistic approach that is consistent with the goals of sustainability and inclusiveness.

Social aspects

The social dimension of forest management is critical because local communities, including marginalized groups, are often directly dependent on forests, which is a source of livelihood for them. Social factors include the active engagement of community (especially vulnerable groups), gender inclusion and social equality.

Social factors in the analysis can be integrated by identifying the needs and priorities of stakeholders (including the consumers of non-timber forest products) and discussing gender-specific roles in forest management. For example, in the study "Gender mainstreaming in forest management" DEPA Consulting for GIZ, 2024, states that women play an important role in the collection of non-timber resources such as medicinal herbs and berries, but their representation in the decision-making process is often limited. Data collection should include gender-based data to analyze how management decisions affect different social groups. Moreover, participatory methods such as focus group discussions and community consultations should be used in the preparation phase to ensure diverse perspectives.

Environmental aspects

One of the main focuses in forest management and related SWOT analysis should be on environmental sustainability. Forest ecosystems in Georgia are at risk of climate change, illegal logging, and loss of biodiversity. Therefore, the inclusion of environmental criteria during SWOT analysis ensures that management strategies focus on protecting ecosystems, strengthening biodiversity, and mitigation in climate-related risks.

Key environmental aspects include assessing the impact of biodiversity and forest degradation on local ecosystems, understanding the role of forests in carbon sequestration, and climate change mitigation. This involves determining forest health criteria such as the diversity of tree species, soil quality, and the ability to contain water. Local environmental challenges, such as forest fires and pest infestations exacerbated by climate change, should also be evaluated during SWOT-analysis.

In both the preparatory phase and implementation of SWOT-analysis, it is advisable to develop a comprehensive set of social and environmental criteria. For social aspects, criteria may include:

- The level of community engagement and participation in decision-making.
- Gender inclusiveness with specific metrics of women's involvement in forest management.
- Equal access to forest resources for marginalized groups, ensuring that all stakeholders benefit from forest management practices.

For environmental aspects, criteria must be determined:

- Biodiversity conservation, such as the preservation of species wealth and habitat.
- Climate Risks for Forests, including monitoring forest health and taking measures to prevent deforestation and degradation.

To address the integration of social and environmental aspects within the SWOT analysis, these dimensions can be incorporated within each quadrant of the SWOT matrix—Strengths, Weaknesses, Opportunities, and Threats—to ensure a balanced and thorough evaluation (see Figure 2 below). Including social and environmental factors as specific bullet points under each category allows for a structured assessment of how these dimensions influence the municipality's forest management capacity and strategy. For instance, Strengths could highlight strong community engagement or biodiversity conservation efforts, while Weaknesses might identify limited gender representation or resource constraints that impede sustainable practices. Similarly, Opportunities may include external funding for environmental initiatives or programs aimed at empowering marginalized groups, whereas Threats could encompass climate-related risks and socio-economic disparities affecting local stakeholders.

By embedding these aspects within each box of the SWOT matrix, municipalities can analyze how social and environmental factors interact with other strategic elements, creating a holistic view that aligns with sustainability and inclusivity goals. At later stages, municipalities can further analyze these factors to prioritize strategies that reinforce both social equity and environmental resilience, thus ensuring that forest management practices are not only effective but also ethically and ecologically grounded. This approach provides a foundation for strategic recommendations that are comprehensive and targeted to local needs and conditions.

Figure 2: General Objectives and Content of SWOT-Analysis for MFM in Target Municipalities; Template of SWOT Matrix

Goal: Identification of strengths and weaknesses, opportunities and threats for implementation of MFM in Georgia, for a specific municipality

Strength is an internal positive resource that contributes to the success of an activity.

It represents an opportunity or asset owned by a municipality that can be used to achieve forest management goals.

The policy aims to leverage these strengths to improve performance and effectiveness.

For example: an experienced forest management team; strong community support; well-developed infrastructure; legal framework and compliance mechanisms; established partnerships with environmental ngos;

Weakness is an internal negative condition or factor that can prevent the success of an activity.

It represents an area where the municipality lacks the necessary resources or capacity, potentially causing inefficiencies or challenges in achieving forest management goals.

The policy aims to address and mitigate these weaknesses to prevent them from progressing.

For example: Resource Constraints (Financial, Human, Technical); irrelevant trainings and education; outdated equipment and technology; limited gender inclusivity and representation; weak enforcement capabilities: limited enforcement capacity for forest protection (e.g., against illegal logging);

Opportunity is an external factor or situation that presents a chance to improve the success of an activity.

It includes favorable conditions or emerging trends that the municipality can use to improve forest management practices.

The policy aims to use these opportunities to create a more favorable environment for the achievement of management objectives.

For example: access to new sources of financing; Partnership with environmental non-governmental organizations; climate action and carbon sequestration programs; growth in eco-tourism and sustainable forest product markets;

Threats are potential external events or conditions that can have a negative impact on the success of an activity.

This represents a risk or challenge that could significantly hamper the municipality's forest management efforts.

The policy aims to anticipate and mitigate these threats to minimize their impact.

For example: effects of climate change: increased frequency of extreme weather events such as forest fires or floods; unauthorized use of forest resources by the local population; policy and regulatory changes; illegal logging and poaching activities;

Figure 3: Potential Topics of SWOT-Analysis for MFM in the Target Municipalities

Availability of resources	Land, labor, capital, necessary management skills, technology and more.
Physical Environment	Climates, weather, forest fires, pests, potential diseases and more.
Infrastructure Factors	Roads, transport, wood processors and more.

Economic factors	Forest maintenance costs, transportation and Recycling costs, livelihood issues, potential product markets, and more.
Social factors	Landowners' attitude towards forestry, the level of awareness of the population, Financial vulnerability of the population. etc.

3.2. Preliminary Analysis Preparation: Identifying Key Stakeholders and Collecting Data

The SWOT-analysis preparation stage for municipal forest management includes the process of identifying key stakeholders and collecting relevant data. These steps are necessary to ensure that the analysis is comprehensive, inclusive and reflects the different perspectives and needs of the municipality. A well-conducted preliminary analysis is the basis for a successful SWOT-analysis.

Identification of Key Stakeholders

The first task in the preparation phase is to identify the key stakeholders involved in MFM and reflect them in the analysis. Stakeholders typically include municipal authorities, local communities (including representatives of various demographic groups), environmental organizations, forestry experts and relevant government agencies, such as the National Forestry Agency and the Ministry of Environmental Protection and Agriculture of Georgia. Engaging a wide range of stakeholders is crucial to fixing different points of view, strengthening the sense of ownership and ensuring that SWOT-analysis takes into account the perceptivity and priorities of all relevant parties.

A particular emphasis should be placed on engaging local women, especially those active in community leadership roles, such as members of municipal councils, city hall representatives, and participants in women's rooms. These groups often bring unique perspectives and insights into the community's needs, particularly around sustainable livelihood opportunities and social well-being. Their involvement is essential to accurately capture the diverse ways in which forest management impacts various community members and to strengthen the social inclusivity of forest governance strategies.

It is especially important to ensure the participation of gender-based stakeholders, as men and women often perceive the impact of forest management differently. For example, women may be more dependent on non-wood forest products or more involved in community level forest activities. By collecting gender-based data and engaging men and women in the analysis process, municipalities can ensure that SWOT-analysis accurately reflects the different ways in which forest management practices affect different gender groups. This approach not only increases the inclusiveness of analysis, but also promotes more equitable and effective forest management strategies.

In the process of stakeholder analysis, it is possible to include the **"Impact-Interest Matrix**", a strategic tool used for stakeholder mapping and categorization, their level of impact on the project and their interest in the results of this project. In the context of municipal forest management (MFM) in Georgia, especially in target municipalities, this matrix helps us determine which stakeholder should focus on Particularly focused, which side goals should be met the most, which should be informed and more.

Figure 4. For MFM, the Stakeholder Impact-Interest Matrix - Potential Distribution

Note: *This distribution may differ for each municipality, so a detailed analysis is required, taking into account the characteristics of each municipality.*

Interested Party	Impact	Interest	Definition / in Connection to MFM
National Forestry Agency	high	high	As a major government body responsible for forest management, the Agency has a significant impact and interest, which requires active participation in decision-making.
Municipal Government	high	high	Directly responsible for the implementation of forest management at the municipal level.
Ministry of Environmental Protection and Agriculture of Georgia	high	high	The Ministry has significant implications for environmental policy and high interest at the national level without the state of forest resource, which requires participation to ensure compliance with national strategies.
The State Sub-Agency Department of Environmental Supervision (DES)	high	high	DES plays a crucial role in forest supervision/protection, ensuring compliance with environmental regulations and controlling illegal activities within municipal forests, which gives it significant influence over the success of forest management practices. DES has a high level of interest in MFM as it is responsible for monitoring and enforcing legal standards, preventing illegal logging, and ensuring environmental sustainability. Active involvement is required to maintain regulatory compliance, support sustainable practices, and uphold environmental protection standards in line with national policies.
Local Communities	high	high	Local communities have a keen interest in forest management outcomes, especially with regard to livelihoods and access to resources, which require regular updating and consultations with them. It should be noted that these needs and interests are gender differentiated.
Environmental NGOs	medium	high	These organizations are highly interested in promoting sustainable practices and must be informed to use their advocacy and community engagement efforts.
Private Forest Enterprises	medium	high	These stakeholders have an average impact on policy implementation and a high interest in their work due to the perpetuity of their work.

Academic and Research Institutions	medium	Medium	By bringing valuable insights and innovations, these institutions must be informed to ensure that forest management strategies are based on the latest research.
General Public	low	high	The public has a great interest in forest management, especially in terms of environmental quality and access to resources, which requires transparency and regular communication with them.
Tourism and recreational businesses	medium	medium	These stakeholders enjoy well-managed forests, but have moderate influence and interest. The new regulations require them to be monitored to ensure that the activities of these businesses are aligned with the goals of MFM.
International donor organizations and financial institutions	high	medium	These organizations provide critical funding and support, so their impact is high. The level of interest is average and depends on the national goals of the country. The new regulation generally requires the involvement of this side to provide resources and bring them in line with international best practices.
Agency of Protected Areas	medium	low	The agency must ensure that their broader conservation efforts do not contradict municipal goals.

Data collection

The next step in identifying stakeholders is to collect data. Data collection shall be both **qualitative and quantitative** to ensure a comprehensive understanding of the current state of forest management received from various sources. Key data sources include already existing documents, forest management plans, environmental impact assessment (EIA), budget figures (e.g., from NFA and DES to estimate future costs, including for forest operations, business service yards), other existing socio-economic research and community studies. The data collection process should encompass a comprehensive assessment for each municipality, gathering information on physical and technical resources—such as the availability of forestry equipment and infrastructure—and on human resources, including the number of forestry personnel and their qualifications.

In addition to traditional data sources, municipalities should consider using innovative primary data collection methods, such as **Open questionnaires and focus group discussions**. Based on these methods, it is possible to obtain more detailed information, especially about public perception and the socio-cultural dimensions of forest management. Oral discussion in the group is the most productive if free thinking is promoted. All participants are advised to express their ideas in a way that is open and sincere. Moreover, gender-based data collection is crucial to understanding how current practices affect different groups and how future strategies can be tailored to meet gender-specific needs. (McNutt, 1991)

By carefully identifying key stakeholders and thoroughly collecting relevant data, municipalities can ensure that their SWOT-analysis on forest management is comprehensive, accurate and in line with the broader goals of sustainable and fair forest management.

In general, similar approaches are used in academic and international literature for the implementation and implementation of SWOT-analysis. We can divide this approach into three phases: (Peyron & Amm, 2015)

- → **Phase 1:** Using existing documents, reports, secondary data to identify the strengths and weaknesses of the project, as well as opportunities and threats;
- → **Phase 2:** Use of open questionnaires, focus group discussions and/or in-depth interviews with experts to verify initial information from key stakeholders and identify additional information.
- → **Phase 3:** Understanding the results and identifying strategies based on the analysis of the relationship between strengths and weaknesses and threats.

3.3. International Standards and Good Practices

The inclusion of international standards and good practices is crucial in conducting a comprehensive SWOT-analysis in municipal forest management (MFM). These standards provide benchmarks that precede the assessment. By adjusting local practices to globally recognized frameworks, Georgian municipalities can ensure that their strategies are sustainable, fair and inclusive.

Principles of Sustainable Forest Management (SFM)

The Sustainable Forest Management (SFM) principles, as defined by the Food and Agriculture Organization (FAO), highlight the balance between resource use and ecosystem preservation. In the SWOT-analysis process, municipalities should evaluate their current practices in accordance with both international SFM principles and Georgia's own criteria and indicators (C&I) for SFM, which extend beyond FAO's standards to address local policy and management needs. These national criteria, applied at both the policy level and by management bodies like the NFA, offer a framework specifically tailored to the ecological and social context of Georgian forests. Municipalities should identify strengths by assessing alignment with SFM principles in biodiversity conservation, resource sustainability, and community engagement. For example, a strength might include a robust legislative framework that supports sustainable practices, while a weakness could be the limited integration of SFM principles into local enforcement policies. Opportunities might involve leveraging international support to enhance SFM implementation, and threats could include external pressures that challenge the sustainable use of resources. FAO has officially recognized SWOT-analysis techniques as an important participatory assessment tool used for the collection, synthesis and analysis of information for the development of community forestry. (FAO, COMMUNITY FORESTRY: Participatory assessment, monitoring and evaluation, 1989); (FAO, Sustainable Forest Management (SFM) Toolbox, 2024). Similarly, Georgia's own SFM criteria and indicators provide municipalities with additional, locally relevant benchmarks to strengthen forest management practices in alignment with national sustainability objectives.

Convention on Biological Diversity (CBD) Aichi Biodiversity Goals

Aichi's biodiversity goals define specific biodiversity conservation goals, including the sustainable use of forest resources at CBD Aichi Targets. When conducting SWOT analysis, municipalities can use these goals to assess their performance in the preservation of forest biodiversity. Strengths may include existing conservation programs, and weaknesses may include insufficient protection of endangered species. Opportunities may arise by equalizing local conservation efforts with international biodiversity goals, and the threat may include habitat loss due to developmental pressures or climate change.

Good Practices in Community-Based Forest Management (CBFM)

Community-based Forest Management (CBFM) highlights the role of local communities in sustainable forest resource management. In SWOT-analysis, municipalities should assess the degree of community involvement in forest management. The strong side can be strong community engagement and traditional knowledge, and weakness can include the exclusion of community disabilities or marginalized groups. Opportunities include expanding community roles and integrating local knowledge into management plans, and threats may include cultural barriers or conflicts regarding resource use (Acosta, 2002).

Forest Europe Criteria and Indicators for SFM

The pan-European criteria and indicators of SFM created by Forest Europe provide a comprehensive framework for assessing forest management practices in many dimensions, including forest health, productivity and socio-economic benefits reflected in the Forest Europe criteria. In SWOT-analysis, municipalities can evaluate their practices with these criteria to identify strong and weak areas. For example, strengths may include compliance with health and vitality indicators, and weaknesses may include gaps in monitoring and reporting. It is possible to find compliance with European standards for funding and partnerships. Notably, the C&I of SFM in Georgia are fully aligned with Forest Europe‘s C&I even reaching beyond them when it comes to environmental aspects.

Future Options:

Forest Stewardship Council (FSC) Certificate:

The FSC certificate provides a globally recognized standard for responsible forest management, which includes biodiversity criteria, community rights, and FSC principles of sustainable practices. During SWOT-analysis, municipalities can evaluate their practices according to the FSC criteria to identify gaps in meeting these standards. For example, strengths may include existing policies that comply with FSC requirements, and weaknesses may include insufficient adherence to sustainable resource use practices. The opportunity lies in obtaining an FSC certificate to gain international recognition and access to the market, and the dangers may include the risk of losing a certificate due to non-compliance. Although FSC certification could be of interest in the distant future, particularly for timber export, it is unlikely to be relevant for Georgia in the coming years, in the long-term. This is especially true for municipalities, where surrounding forests are often highly degraded and may not meet the necessary standards for certification. Nevertheless, Georgia’s own criteria and indicators (C&I) for Sustainable Forest Management are based on FSC principles, allowing municipalities to align with similar standards without pursuing formal certification.

UN Framework Convention on Climate Change (UNFCCC) :

The UNFCCC and its REDD+ mechanism focus on reducing forest deforestation and forest degradation emissions, offering a framework for integrating climate goals into forest management. In SWOT-analysis, municipalities should investigate how forest management practices contribute to climate change mitigation. The strong side may be ongoing efforts to preserve carbon-rich forests, and weakness may include a lack of climate-adapted management practices. Opportunities include access to REDD+ funding for forest conservation projects, and threats may include the impact of climate change on forest health and productivity.

IV. The Process of Identifying SWOT-analysis Components for Municipal Forest Management

4.1. Identification of Strengths and Weaknesses

Based on the background information provided, **several internal strengths** can contribute to the effectiveness of Municipal Forest Management (MFM). These strengths highlight the resources, policies, and societal factors that municipalities can leverage to promote sustainable forest management. The examples envelope:

- Established Policy Framework and Legal Foundations: Georgia's robust legal framework, particularly the 2020 Forest Code, provides clear guidelines for sustainable forest management. It ensures that municipalities have the legal authority to manage local forests, aligning with principles of sustainable development, ecological protection, and social equity.
- Gender Roles and Legislative Support for Gender Equality: Georgia's commitment to gender equality is enshrined in its Constitution and international treaties like CEDAW. This framework ensures equal opportunities for women in forestry, promoting their participation in management, decision-making, and access to forest resources.
- Existing Examples of Municipal Forest Management: Already implemented initiatives, such as Akhmeta Municipality's management of the Tusheti Protected Landscape, illustrate the benefits of decentralized forest management. These examples show how municipal control can enhance conservation efforts, reduce illegal logging, and serve as blueprints for other regions.
- Strong Public Participation and Community Engagement: Engaging local communities, including both men and women, in forest management is essential for sustainable practices. This participatory approach aligns strategies with community needs, leverages local knowledge, and strengthens conservation efforts through increased accountability and support.
- Traditional Knowledge and Cultural Practices in Forest Management: Significant community involvement, including both men and women, strengthens MFM practices by aligning them with local needs. The integration of traditional ecological knowledge and the direct involvement of local residents in management activities promote effective, culturally resonant conservation practices.
- Employment Opportunities and Economic Benefits from MFM: The introduction of MFM has the potential to create employment opportunities within local communities. Examples from the Tusheti Protected Landscape show that sustainable forest management can create jobs in planting, maintenance, and forest product processing, thus contributing to local economic development. The employment of community members in forest management bodies fosters ownership and supports local economies.

Identification of **weaknesses** is essential for understanding internal limitations that may hinder the effectiveness of MFM. Georgian context was discussed above in the background information. Addressing these weaknesses will enable municipalities to devise strategies that enhance sustainability, inclusivity, and compliance with national policies. The examples envelope:

- Limited Physical and Financial Resources: Many municipalities might lack adequate resources for effective forest management, including necessary equipment, infrastructure, and financial support.
- Insufficient Human Resources and Training: A shortage of skilled personnel, coupled with limited opportunities for training and professional development, constrains MFM capabilities. Municipal forest management requires specialized staff with expertise in sustainable practices, yet

municipalities often lack access to advanced training in forestry and geographic information systems (GIS).

- Policy Gaps and Inconsistencies in Management: Despite a strong legislative framework, policy gaps and inconsistencies at the municipal level might impede the effective implementation of MFM. Discrepancies between national policies and municipal enforcement lead to fragmented management practices, and unclear roles and responsibilities can create obstacles. Additionally, the lack of gender-sensitive policies at the municipal level might limit the integration of inclusive practices, thus reinforcing gender inequality in access to forest resources.
- Gender Inequality in Access to Resources and Decision-Making: Gender inequality in forest management might be a significant weakness, particularly in rural areas where cultural and social norms limit women's access to forest resources. Women in most cases face challenges related to limited ownership rights and restricted access to economic opportunities within forestry, which hampers their ability to contribute to and benefit from MFM. This inequality restricts the full utilization of the workforce and diverse perspectives in MFM strategies.
- Insufficient Gender-Sensitive and Sustainable Forestry Training Programs: Municipalities might lack gender-sensitive and sustainable forestry training programs, which are essential for equitable forest management practices. Gender-sensitive training promotes inclusivity by providing equal opportunities for both men and women to participate in forestry activities, decision-making, and benefit-sharing. Additionally, training gaps in sustainable practices hinder the development of resilient MFM strategies, reducing the effectiveness of forest management.

By addressing these weaknesses, municipalities can enhance their capacity to manage forests sustainably and inclusively, ensuring alignment with national goals and local community needs.

4.2. Identification of Opportunities and Threats

Opportunities represent external conditions and emerging trends that can enhance the efficiency and sustainability of Municipal Forest Management (MFM) practices. These opportunities can be leveraged to address current weaknesses, improve governance, and empower local communities, especially women, in forest management roles. Based on the background information provided in the previous chapters, several opportunities can be identified based on the Georgian forest context:

- Development of Inclusive Policies for Forest Management: Georgia has the opportunity to enhance forest management by developing more inclusive policies that integrate gender equality. This approach ensures that both men and women benefit from forest resources, leading to more effective conservation efforts and sustainable outcomes. Programs that empower communities to participate in policy-making can strengthen local governance and leverage unique perspectives for better forest management practices.
- Community Empowerment and Economic Stability: Sustainable forest management has the potential to boost local economies by creating stable income sources through timber production, tourism, and non-timber forest products. Strengthening local communities' involvement in forestry can lead to improved household incomes and support rural development. Additionally, foreign investments in modern forestry technologies can enhance monitoring and reduce illegal logging activities.
- Programs Enhancing Women's Roles in Forest Management: Targeted programs can address challenges related to women's participation in forest management, leadership, and decision-making. By empowering women in forestry, these initiatives help eliminate gender inequalities and ensure that women play a significant role in managing forest ecosystems. International programs like UN REDD+ and WOCAN serve as models for integrating gender considerations into forestry.
- Protection of Pristine Forests and Biodiversity: Protecting Georgia's remaining pristine forests is crucial for maintaining biodiversity and ecological integrity. By implementing sustainable

harvesting practices, community-led conservation initiatives, and strict protection measures, municipalities can prevent further degradation and promote forest restoration. This will improve soil conditions, reduce erosion, and enhance carbon sequestration.

- Leveraging Ecosystem Services for Economic Benefits: Forests provide critical ecosystem services such as water regulation, soil conservation, and carbon sequestration, which can contribute to agricultural productivity and reduce environmental degradation costs. Municipalities can capitalize on these services to ensure long-term economic and environmental sustainability.
- Attracting Additional Financial Resources: Georgia has the potential to secure external funding from international donors, microfinance programs, and foreign investments to support sustainable forest management. For example, grants from organizations like the Caucasus Nature Fund can finance local forest conservation projects. This funding can be used to acquire necessary equipment, support training programs, and enhance forest management capabilities.
- Decentralization and Strengthening Local Governance: Decentralizing forest management to municipalities can strengthen local self-governance and improve their capacity to manage resources such as forests and water. By aligning local management with national policies, municipalities can efficiently utilize their resources for sustainable development.

Identifying a potential **threat** for municipal forest management (MFM) in Georgia is a critical aspect of SWOT-analysis. This part presents external threats that may impede the effectiveness of forest management practices and harm the sustainability of municipal forests. By recognizing these threats, municipalities can develop strategies to reduce their impact and protect the communities dependent on both environmental and forest resources. The examples for Georgian forest context envelope:

- Climate Change and Environmental Degradation: Georgia's forests face threats from rising temperatures, changing precipitation, and more frequent extreme weather events, increasing the risk of fires, pest outbreaks, and ecosystem disruptions. The 2021 Borjomi fire highlighted these vulnerabilities.
- Illegal Logging and Unsustainable Resource Use: Illegal activities like logging and poaching in protected areas such as Tusheti threaten biodiversity. Weak enforcement exacerbates over-exploitation, damaging these critical ecosystems.
- Economic Instability and Funding Shortfalls: Economic downturns reduce funding for forest management, forcing communities to over-extract resources for survival. Limited resources, like forestry equipment, hinder effective management.
- Political Challenges and Corruption: Inconsistent policies, lack of political will, and corruption undermine forest management. Poor governance leads to ineffective enforcement, with favoritism in resource allocation, such as firewood distribution.
- Social and Cultural Barriers to Women's Involvement: Traditional gender norms limit women's participation in forest management, especially in leadership roles. Addressing these requires targeted education and support for women’s networks.
- Infrastructure and Technical Resource Gaps: Insufficient infrastructure and lack of specialized equipment hamper effective forest management. High turnover among trained staff weakens municipalities' capacity for sustainable practices.
- Increased Forest Fire Risk from Tourism: The rise in tourism, combined with climate change, heightens the risk of forest fires, particularly in areas like Tusheti. Inadequate fire prevention and response measures pose additional threats.
- Economic Pressures on Resource Extraction: Economic hardship can drive unsustainable resource extraction, leading to long-term ecosystem degradation and reducing the benefits of sustainable forestry.
- Weak Coordination Between Authorities: Disconnects between national policies and local enforcement lead to fragmented forest management, with municipalities lacking clear guidelines and resources.

- Resistance to Gender-Sensitive Practices: Cultural resistance limits the integration of women into forestry, despite existing legal frameworks supporting gender equality. This restricts the benefits of inclusive management approaches.

V. SWOT Matrix, SWOT-Analysis Results and Their Interpretation

This chapter is dedicated to interpret the results of the SWOT-analysis instructions reviewed for municipal forest management (MFM) in Georgia. By considering the instructions for creating systematic analysis of potentially identified strengths and weaknesses, opportunities and threats, this chapter provides the basis for understanding the impact of these factors on forest management. Note that this is not a comprehensive SWOT analysis, rather an example for developing guidelines for the analysis.

The interpretation process involves prioritizing these factors based on their potential impact on the sustainability and effectiveness of MFM. In addition, this chapter discusses the SWOT matrix as an analysis visualization tool, helping to identify strategic options that can be used to improve forest management practices. Through this process, municipalities can develop effective strategies that will use strengths, reduce weaknesses, exploit capabilities and avoid threats.

SWOT matrix is a powerful tool used to organize and visualize SWOT-analysis results. By placing the identified strengths, weaknesses in a matrix of capabilities and threats, municipalities can clearly see how these factors interact and influence each other. This visual representation makes it easier to identify key strategic options and prioritize actions that will have the most significant impact on municipal forest management (MFM). The SWOT matrix presented below is based on the instructions and discussions presented above.

The SWOT matrix is divided into four squares, and they are analyzed and interpreted as follows:

1. Strengths - Opportunity (SO) Strategies: This square focuses on using internal strengths so that the project can take advantage of external capabilities. For example, a municipality with a strong community engagement (strengths) can use existing foreign funding (opportunity) to further strengthen local communities in forest management roles.
2. Weaknesses - Opportunity (WO) Strategies: This square aim to overcome internal weaknesses using external opportunities. For example, a municipality with limited resources for effective forest management (weaknesses) may seek foreign investments or grants (opportunities) to correct these shortcomings.
3. Strengths-Threat (ST) Strategies: The focus here is on using strengths to protect against external threats. For example, a municipality can use strong policy frameworks and regulations (strengths) to reduce the risks of corruption and unauthorized timber felling (threats).
4. Weaknesses-Threats (WT) Strategies: This square refers to the most difficult situations where there are both internal vulnerabilities and external threats. The goal is to develop strategies that minimize both. For example, for a municipality with insufficient training programs (weaknesses), which is facing the threat of forest fires caused by climate change, it may be a priority to develop comprehensive training and emergency response strategies.

Figure 5. Example of SWOT Matrix in Georgia for MFM

***Note:** This distribution may differ for each municipality, a detailed analysis is required, taking into account the characteristics of each municipality. Note that this is not a comprehensive SWOT analysis, rather an example for developing guidelines for the analysis.*

Strengths	Weaknesses
• Existing Policy Framework - Existence of legal foundations • Strengthening enforcement of law enforcement and public participation • Traditional knowledge • Attracting additional financial resources	• Limited resources • Shortcomings in management and enforcement of existing policies • Gender inequality: unequal access to forest resources, gender bias in roles and responsibilities. • Insufficient training programs for forest management staff and the public; Insufficient gender-sensitive training programs
Opportunities	**Threats**
• The potential for more inclusive policy development and implementation. Opportunities to integrate gender into new and existing politics • Community empowerment, potential economic benefits, and programs for women in forest management roles • Environmental Protection: Prevention of further loss of pristine forests	• Impact of climate and other environmental changes • Impact of economic volatility • Politics: Shortcomings in management, lack of political will • Cultural barriers

A SWOT-analysis of municipal forest management (MFM) in Georgia reveals a complex relationship of strengths, weaknesses, opportunities and threats that shape the future of forest management in the country. For example, the positive side is that Georgia's existing policy framework provides a solid legal basis for sustainable forest management, which is backed by the enforcement of the law and active participation of the public. In addition, the strength of traditional knowledge in local communities, along with the potential to attract additional financial resources, pushes municipalities to develop forest management practices.

However, based on the example discussed, significant challenges remain. Limited resources, gaps in the management and implementation of existing policies, and gender inequality are significant obstacles. These weaknesses are supplemented by insufficient training programs, both in general forest management and gender-sensitive approaches, which impede the effective implementation of sustainable practices and fair distribution of resources.

There are opportunities to address these challenges through more inclusive policy development, community empowerment, and targeted environmental protection initiatives. Integration of gender issues into forest management policies and empowering communities, especially women, can lead to economic benefits and more sustainable practices. Nevertheless, these opportunities are threatened by external factors such as climate change, economic instability, political gaps, and rooted cultural barriers. These threats underscore the need for a proactive and strategic approach to forest management that will leverage strengths and opportunities to mitigate weaknesses and threats.

To develop effective strategies for Municipal Forest Management (MFM) in Georgia using SWOT analysis, it is essential to align strengths with opportunities, overcome weaknesses, and mitigate threats. Start by identifying how existing strengths, such as a solid policy framework, strong law enforcement, community

involvement, and traditional knowledge, can be used to capitalize on opportunities. For example, leverage the robust policy framework to lead the integration of gender issues into new and existing policies, ensuring more inclusive and equitable forest management. Additionally, use community empowerment initiatives and the potential for additional financial resources to strengthen economic benefits and enhance forest conservation efforts.

General instructions for developing strategies based on SWOT-analysis:

- To develop effective strategies for Municipal Forest Management (MFM) in Georgia using SWOT analysis, it is essential to align strengths with opportunities, overcome weaknesses, and mitigate threats.
- Begin by identifying how existing strengths, such as a solid policy framework, strong law enforcement, community involvement, and traditional knowledge, can be used to capitalize on opportunities. For example, leverage the robust policy framework and already established gender mechanisms and platforms—such as gender focal points at local Sakrebulo, women's rooms, and dedicated platforms for meetings with local women—to integrate gender issues into new and existing policies. This ensures a more inclusive and equitable approach to forest management that actively involves and addresses the needs of women in the community. Additionally, use community empowerment initiatives and the potential for additional financial resources to strengthen economic benefits and enhance forest conservation efforts.
- Focus on eliminating or minimizing weaknesses to reduce threats. Identified gaps in resources, policy enforcement, and gender inequality can be addressed by developing comprehensive training programs for forest management personnel and the community. These programs should include gender-sensitive components to ensure that all community members are equally empowered to participate in and benefit from forest management. Strengthening these areas will help mitigate threats posed by climate change, economic instability, and political shortcomings, thereby increasing the sustainability of MFM initiatives.
  Finally, create actionable strategies that include detailed action plans highlighting high-impact areas and setting priorities. These strategies should also include contingency plans for potential future challenges, such as changes in environmental conditions or political support. By exploring various scenarios, such as severe weather events or economic downturns, municipalities can develop emergency plans that ensure the continuity and adaptability of forest management practices. This proactive approach will allow municipalities to effectively respond to unforeseen challenges and maintain progress toward long-term sustainability goals.

Social dimensions—such as community engagement, gender inclusiveness, and equitable resource access—can be integrated across each element of the SWOT Matrix or through a dedicated, supplementary analysis.

a. <u>Embedding Social and Ecological Dimensions within Each SWOT Element:</u>

One practical approach is to address social and ecological factors within each quadrant of the SWOT matrix. For instance:

- Strengths: Include existing social strengths, such as robust community engagement and knowledge-sharing networks that promote sustainable forest practices. Additionally, highlight ecological strengths, like well-preserved biodiversity and strong conservation practices that enhance ecosystem services such as carbon sequestration and soil conservation. For example, community-led conservation initiatives have proven to be effective in preventing deforestation and promoting soil health (FAO, 1989).

- Weaknesses: Identify social weaknesses, such as limited representation of marginalized groups, including women and indigenous communities, which can hinder effective MFM. Ecologically, weaknesses may include inadequate infrastructure for monitoring forest health, which exacerbates challenges like illegal logging and loss of biodiversity. Studies suggest that failing to engage diverse social groups and address environmental gaps reduces the effectiveness of sustainable forest management (Agarwal, 2009).
- Opportunities: Examine opportunities for enhancing both social inclusiveness and ecological protection. This could involve securing international funding for gender-sensitive forestry projects and initiatives aimed at biodiversity conservation. Programs that empower local communities to sustainably harvest non-timber forest products can improve household incomes while preserving forest ecosystems. Additionally, enhancing training programs on sustainable forestry can leverage traditional knowledge, promoting both community well-being and environmental resilience (FAO, 2024).
- Threats: Recognize external threats that combine socio-economic and ecological challenges. For example, climate change poses significant risks to Georgia's forests, increasing susceptibility to pests, fires, and degradation, which directly impacts local communities dependent on forest resources. Socio-economic disparities and cultural resistance can further complicate management efforts, especially if local stakeholders are excluded from decision-making. Addressing both social and environmental risks ensures a comprehensive approach to sustainable forest management.

This method ensures that social dimensions are evaluated within the context of broader strategic factors, providing a comprehensive view of how social dynamics influence each area of SWOT analysis.

b. <u>Creating a Separate Social and Ecological SWOT Matrix:</u>

Alternatively, a separate SWOT matrix dedicated solely to social dimensions could provide a focused analysis of social factors influencing MFM. This supplementary matrix would specifically evaluate:

- Strengths: Social assets, such as community solidarity or existing knowledge-sharing networks.
- Weaknesses: Barriers like gender disparities, low community awareness, or lack of resources for marginalized groups.
- Opportunities: Potential for partnerships with NGOs, increased awareness of social equality, or policy frameworks supporting inclusive governance.
- Threats: Risks of social conflict, potential exclusion of certain groups, or cultural resistance to new management practices.

Developing this additional matrix would enable municipalities to analyze social factors more deeply, thus supporting strategies that not only address environmental sustainability but also advance social equity and inclusivity. Additionally, SWOT matrices can be applied to compare different strategic options for forest management. This setting will be useful if there are, for instance, two or more different strategic options. This allows comparison and taking informed decisions about which pathway to follow. For example, municipalities could use separate matrices to evaluate the strengths, weaknesses, opportunities, and threats of various approaches, such as adopting Municipal Forest Management (MFM), implementing a co-management model, or leaving management to the National Forest Agency (NFA). By comparing these matrices, decision-makers can better assess the implications of each pathway and make informed decisions on the most effective strategy to pursue.

When municipalities are faced with strategic decisions on how to manage their local forests, a single SWOT analysis may not suffice due to the complexity and diversity of potential management models. To make informed, context-specific decisions, municipalities can use multiple SWOT matrices to compare and contrast different strategic options. As mentioned, assessing the feasibility of (1) fully embarking on MFM,

(2) adopting a co-management model, or (3) continuing with management by the National Forestry Agency (NFA) requires distinct analyses to capture the strengths, weaknesses, opportunities, and threats unique to each scenario. Full MFM (Municipal Management) focuses on local autonomy and community benefits but faces challenges with limited resources, while co-management leverages both local and national expertise, distributing financial burdens but requires strong coordination. As for the third example, NFA-only management offers stability and established processes but risks reducing community engagement and responsiveness to local needs.

VI. Brief Summary

In conclusion, this document serves as a critical tool for Georgian municipalities to make structured, informed decision-making processes for local forest resource management using SWOT analysis. By identifying key strengths and weaknesses, opportunities and threats, it provides a framework for sustainable forest management that is inclusive and fair. Emphasis on gender-sensitive practices, community engagement and policy development ensure that the needs and voices of all stakeholders, especially women, are considered in the decision-making process.

The guide for municipalities emphasizes not only the importance of using the existing legal framework and public knowledge, but also the examples of specific countries and experiences in international practice. The manual reviews all the stages of the SWOT analysis process in detail.

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