

**ALTERNATIVE FOREST USE;  
POPULATION/PRIVATE SECTOR ACCESS TO  
FOREST RESOURCES;  
PILOT PROJECTS AIMED AT SUSTAINABLE USE OF  
FOREST RESOURCES AND IMPROVEMENT OF  
LOCAL LIVELIHOOD**

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## ABBREVIATIONS

IUCN	International Union for Conservation of Nature
WWF	World Wide Fund for Nature
WB	World Bank
RA	Republic of Armenia
SPNA	Specially Protected Nature Area
MoA	Ministry of Agriculture
MoNP	Ministry of Nature Protection
SNCO	State Non-commercial Organisation
BMA	Bioresources Management Agency
FREC	Forest Research Experimental Centre
NRMPRP	Natural Resources Management and Poverty Reduction Project

## **SUMMARY**

The ENPI FLEG Program “Improving Forest Law Enforcement and Governance in the European Neighbourhood Policy East Countries and Russia” is being implemented within Europe and North Asia Forest Law Enforcement and Governance (ENA-FLEG) process (aimed at the implementation of the main priorities set out in the St. Petersburg Ministerial Declaration and Indicative Plan of Actions). The program is focusing on the active involvement of state, civil and private sectors in the improvement of forest management and law enforcement issues. The participatory countries are Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia and Ukraine, with the duration of February 2008- June 2011.

Implementation of the Program is led by the World Bank (WB) working in partnership with the International Union for Conservation of Nature (IUCN) and the World Wide Fund for Nature (WWF).

Activity plan and timetable are developed by the abovementioned organizations for the activities to be carried out in Armenia. Alternative forest use, population/ private sector access to forest resources and drafting pilot projects are the activities foreseen in the action plan to be implemented by WWF Armenia. The objective of the assignment was to analyze the alternatives of forest use and private sector/local population access to forest resources. The existing legal and institutional framework on alternatives of forest use, as well as local population and private sector access to forest resources were analysed. A list of private sector entities was made and forest adjacent communities were selected. Interviews were conducted with private entities dealing with use of wood and non wood forest resources and representatives of selected local communities. Proposals on the enhancement of access to forest resources by private sector and local population were drawn based on these surveys. 2 pilot projects were drafted on the alternative use of forest resources by the communities aimed at the improvement of local livelihood and sustainable use of forest resources.

## **1 INTRODUCTION**

### **1.1 ENPI-FLEG Program -Background Information**

The ENPI FLEG Program “Improving Forest Law Enforcement and Governance in the European Neighbourhood Policy East Countries and Russia” is being implemented within Europe and North Asia Forest Law Enforcement and Governance (ENA-FLEG) process (aimed at the implementation of the main priorities set out in the St. Petersburg Ministerial Declaration and Indicative Plan of Actions).

The participatory countries are Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia and Ukraine, with the duration of February 2008- June 2011. The program is focusing on the active involvement of state, civil and private sectors in the improvement of forest management and law enforcement issues.

Program activities cover development of national action plans, capacity building and training, awareness raising, assistance in enhancing regional and sub regional collaboration, and support for the implementation of the priority actions of FLEG. Alongside this, the program will carry out analytical work on illegal forest activities, their monitoring and related developments. Implementation of the Program is led by the World Bank (WB) working in partnership with the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wide Fund for Nature (WWF).

Activity plan and timetable are developed by the abovementioned organizations for the activities to be carried out in Armenia. Alternatives of forest use and access to forest resources by private sector/population are the activities foreseen in the action plan to be implemented by WWF Armenia.

### **1.2 Objective of the assignment and methods applied**

The objective of the assignment is to analyze the alternatives for forest use and private sector/local population access to forest resources. Particularly, it is necessary to analyze the existing legal and institutional framework on alternatives of forest use and local population and private sector access to forest resources, as well as describe the procedure for alternative forest use. The access of private sector and local population to forest resources should also be analyzed.

On the basis of the analysis pilot projects on alternative forest use by communities should be developed with the aim to improve local livelihood and sustainable use of forest resources.

Questionnaires were designed (Annexes 1,2,3) for the assessment of private sector and local population access to wood and non-wood forest resources as well as the ways to reduce the pressure on wood forest resources.

A list of private sector entities dealing with use of wood and non wood forest resources was made and forest adjacent communities were selected. Interviews were conducted with these private entities and selected communities using the questionnaires.

The report provides the results of the surveys and proposals on increasing the access to forest resources.

2 pilot communities were selected based on the results of surveys and pilot projects were designed aimed at sustainable forest use and local livelihood improvement.

## **2 LEGISLATIVE AND INSTITUTIONAL FRAMEWORK OF ALTERNATIVE FOREST USE AND PROCEDURES**

The legislative framework of alternative use of forest resources in Armenia is regulated by the RA Forest Code, Law of the RA on Specially Protected Nature Areas and a set of by-laws. The laws and by-laws related to the alternative forest use are presented below.

### **2.1 Forest Code and Related By-laws**

Forest Code of the RA, approved in 2006, contains a set of provisions related to secondary forest use.

The Article 35 of the Forest Code defines the types of forest use. Here, aside from harvesting of timber and secondary forest products, non-wood forest use for cultural, health, sport, recreational, tourism and other purposes are listed.

The Forest Code defines harvesting of non-wood forest products as harvesting and removal of fruits, berries, nuts, mushrooms, edible and medicinal plants as well as technical raw materials (Article 3). The same Article defines forest coupon as a document verifying the right of non-wood forest use. It is issued by the branches of Hayantar SNCO and contains information on the area allocated, in particular location, size, utilization volume, terms and prices. The Article 38 of the Forest Code defines the types and main principles of non-wood forest use. Particularly, it states, that harvesting of non-wood forest products, as well as installation of bee-hives, hay-making and grazing should be carried out on forest lands without causing damage to forest on the basis of forest use contract and forest coupon. Use of forest lands for the purpose of growing of agricultural cultures and establishment of plantations, can also be carried out on forest lands on the basis of forest use contract without causing damage to the forest on the basis of lease contract. The Article prohibits cutting trees, collection of rare, threatened and declining species registered in the Red Data Book of the Republic of Armenia as well as grazing in the areas allocated. The Provision No.3 of the same Article states, that the order of forest use in the state and community forests shall be determined by the authorized body of state management.

However, the respective regulation is not yet determined. The Regulation should define the peculiarities of registration and allocation, as well as formulation of non-wood forest use, rules of implementation, including the quantity and location of bee-hives, harvesting of wild fruits and nuts, wild berries, and mushrooms, harvesting of medicinal plants and technical raw material, definition of forest user rights and responsibilities, forms of supervision by the authorised body. It is important, that the Regulation defines the quantities on the use of non-wood forest products for personal needs by various forms that will secure legal base for the separation of non-wood forest use for personal needs.

The procedure of non-wood forest use in force is discussed in the Section 2.2 of the current report.

The Article 41 of RA Forest Code defines general principles of forest use for cultural, health, sport, recreational and tourism purposes. It specially emphasises the protection of natural values of the areas used for the mentioned purposes. According to the Provision No.3 of the same Article, the order on the use of state and community forests for the mentioned purposes shall be determined by the authorized body of state management. However, like other cases, this order is not yet determined. At present the forests are allocated according to the RA Government Decree No. 806, dated 24.05.07, on the "Definition of the order on allocation of state forests and forest lands for use". However, the regulation does not have provisions on the details of the rights and responsibilities of citizens or entities applying for use, as well as forest use program and timetable of main activities.

It is desirable, that this process is regulated by a separate regulation, specified in the Forest Code. It should include information on the forms of allocation of forests for cultural, health, sport, recreational and tourism purposes, terms of lease, personal data and professional qualification of applicants, detailed description of the area, requirements to forests and forest lands upon finalisation of leasing period, list and timetable of forestry and environmental measures, list and timetable of the activities carried out for cultural, health, sport, recreational and tourism purposes, as well as the order of calculation of damage and compensation of parties.

Article 42 of the Forest Code states, that the order of forest use in the forests of specially protected nature areas shall be determined by Forest Code and legislation of the Republic of Armenia on specially protected nature areas (See Section 2. 3).

Article 44 of the Forest Code defines the right of citizens to be in the forests and use non-wood forest products observing fire safety rules in the forests, without causing damage to flora and fauna and violating forest legislation. However, neither the Forest Code nor any by-law defines the volume of collection of non-wood forest products for personal consumption, computation of the crop extracted from the forest and form of supervision. These issues need to be clarified.

The Forest Code defines that the forest management plan, aside from full evaluation of the running of forest economy and forest use, as well as measures to be implemented for the running of forest economy for the coming 10 years, also contains information on non-wood forest products (areal and current quantity), as well as decision on possibilities for the use of forest lands for cultural, health and recreational needs (Article 14, item h).

Article 60 of the Forest Code defines the cases of forest legislation infringement. Particularly, cases of forest legislation infringement are unauthorized collection of wild fruits, nuts, mushrooms, berries and others in those forest areas, where it is forbidden, as well as infringement of terms and ways of collection. However, implementation of supervision over these infringements is not possible, due to the absence of relevant regulation on the terms, types and peculiarities of collection.

The National Forest Program, approved by the Government Protocol Decree in 2005, foresees development of 34 legal acts in the field of forestry. Among them the following acts deal with legal issues of non-wood forest use:

1. Regulation on forest use of state forests
2. Regulation on the use of forests and forest lands of protection and production significance for cultural, health, sport and tourism purposes
3. Regulation on non-wood forest use
4. Regulation on the use of state and community forests and forest lands of protection, production and special significance for hunting needs, use of fauna and organisation of supervision.
5. Regulation on accredited management of state forests
6. Regulation on community forest management
7. Regulation on leasing forest lands and forests
8. Regulation on implementation of inventory and monitoring of non-wood forest resources

The following regulations have been approved by the RA Government:

1. The Regulation on transferring state forests to community entities for accredited management without tender (RA Government Decree No.583-N, dated 04.07.2006).
2. The Regulation on allocation of state forests and forest lands for use (RA Government Decree No 806-N, dated 24.05.2007) that defines the order of allocating state forests and forest lands for use. According to it, forests are allocated for use with or without a tender on the basis of forest management plans in accordance with the RA Forest Code, other legal acts and current Regulation. The right for the use of forests and forest lands can be obtained by legal and physical persons.

Aside from the mentioned approved regulations, several draft regulations have been developed in the framework of FAO National Forest Program Foundation –Armenia cooperation during 2006-2007. Three of them deal with non-wood forest use.

1. Draft regulation on non-wood forest use in state and community forest lands.
2. Draft regulation on the use of state and community forests of protection and production significance for cultural, health, sport and tourism purposes.
3. Draft Regulation on forest use and forest preservation in the forests of production significance.

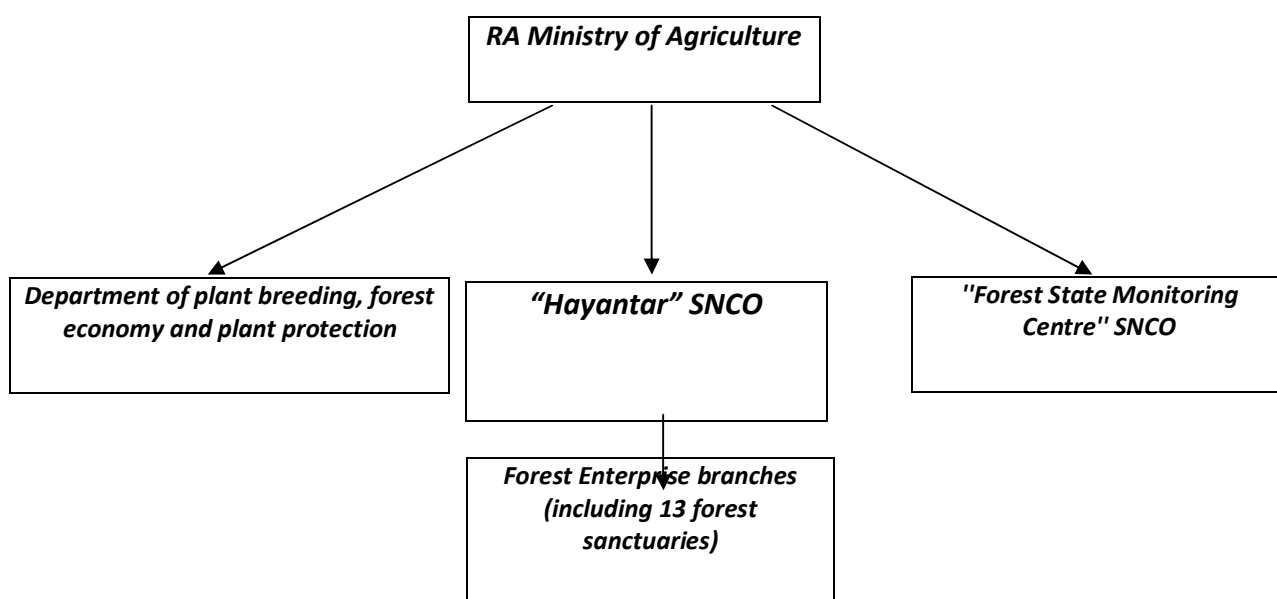
In summary, it should be stated that, though the RA Forest Code defines the main principles and provisions of non-wood forest use, it is necessary to develop and approve respective by-laws, that will regulate the details of non-wood forest use and secure the enforcement of forest legislation in that sphere.

## 2.2 Institutional Framework of Forestry Sector and Procedure of Alternative Use

According to the RA Government Decree No 7, dated 15 January 2004, RA Ministry of Agriculture (MoA) is the authorised state management body in the sphere of forest guarding, protection, reproduction and use. MoA implements RA Government policy in the sphere of agriculture and forestry.

The Ministry implements its authorities and functions through the Department of Plant Breeding, Plant Protection and Forest Economy, as well as “Hayantar” and “State Forest Monitoring Centre” SNCOs. (Scheme 1)

*Scheme 1. Forest Entities in the Structure of RA MoA*



The functions of the **Department of Plant Breeding, Forest Economy and Plant Protection** include development of state policy in the sphere of forest conservation, reproduction and use, as well as development of legislation and strategy, etc.

**"Hayantar" SNCO** is established through restructuring of "Hayantar" CJSC by RA Government Decree dated 25 July 2002. The main functions of the organisation include implementation of state policy in the sphere of forest conservation, reproduction and use, provision of guarding, protection, reproduction and effective use of forests. The sub item (c) of item 11 of Hayantar's Charter defines its functions, such as allocation of plots of forest fund for temporary use, signing forest use contracts, providing order for the extraction of standing small-size timber and forest cutting coupons, providing permission for non-wood forest use (excluding agricultural lands).

"Hayantar" SNCO implements its functions through totally 21 Forest Enterprises, which do not have a status of legal person.

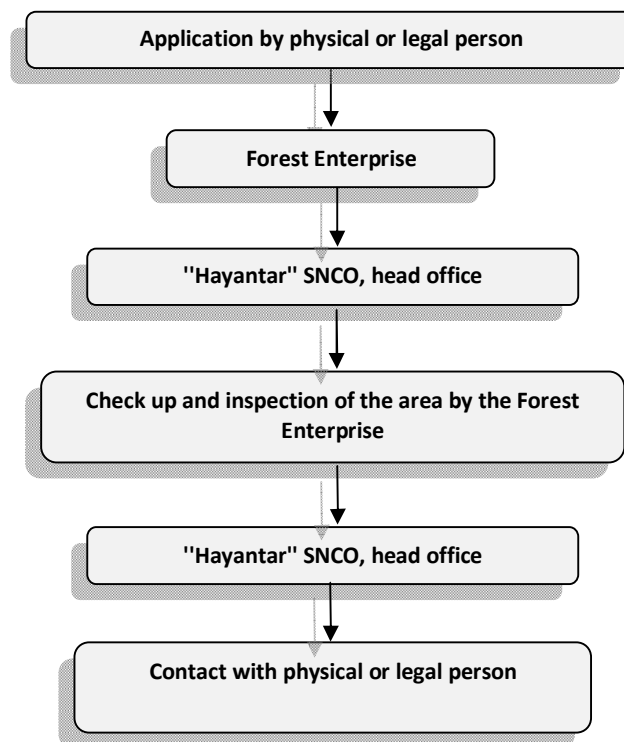
**"State Forest Monitoring Centre" SNCO** is established in order to provide systematic record, certification, analysis and provision of data on harvesting, transportation and realisation of wood and

non-wood forest products, as well as establishment of information base for state supervision over sustainable forest management.

The functions of the Centre include implementation of forest state monitoring over illegal loggings. They are not clearly defined, some duplications with some functions of "Hayantar" SNCO, RA MoNP Bioresources Management Agency and State Environmental Inspection exist.

The current **procedure** for **short-term allocation** of forest areas for non-wood forest use is the following, Physical or legal person submits an application for certain type of forest use to the Forest Enterprise, addressed to General Director of "Hayantar" SNCO. After reception the application is sent to "Hayantar" head office for inscription and is sent back to the respective Forest Enterprise. The Forest Enterprise carries out checking and inspection of the area and fills in the inspection Act to be submitted to "Hayantar" head office. Then, if "Hayantar" grants its "no objection", the one-year lease contract is signed (Scheme 2).

**Scheme 2. Allocation of Short-term Lease**



The areas are not leased for the collection of fruits, berries, mushrooms and other **non-wood forest products**; it is just allowed to collect non-wood forest products in a certain area with a fee per kg set by "Hayantar" SNCO. The nature use fees, set in the RA Government Decree No 864, dated 30 December 1998, do not correspond to current market prices and need to be reviewed. In the situation, when a

certain fee is not set, each enterprise applies to the head office of “Hayantar” for the definition of the nature use fee.

Each forest management plan has a Section on non-wood forest use with a data on assessment of fruits and berries for given Forest Enterprise. The permissions for the collection of non wood forest products should be based on these data.

### **2.3 The Law on Specially Protected Nature Areas and related by-laws**

The law o SPNAs (Approved 27.11.2006) regulates the legal basis of the state policy in the sphere of natural development, rehabilitation, conservation, reproduction and use of the specially protected nature areas of the Republic of Armenia as ecosystems, nature complexes and individual objects of environmental, economic, social, scientific, educational, historical, cultural, aesthetic, health and recreational values.

The Article 25 of the Law on SPNAs states that the users of the SPNAs of the RA and their natural resources can be authorized state body (MoNP, RA), communities, as well as physical and legal entities.

A separate Article (26) in the Law defines permitted types of use within the SPNAs of different categories.

So, in terms of non-wood forest use, in state reserves only organization of cognitive tourism is permitted through the routes specified in the management plan, as well as haymaking and bee-keeping in the area of state reserve and plots specially allocated for the needs of the state reserve and the staff in accordance with the regulation by state authorised body.

In the reserve zones of national parks only organization of cognitive tourism is permitted through the routes specified in the management plan. Organisation of recreation, putting up tents in specially allocated places, organisation of cognitive tourism, as well as land leasing activities for recreational purposes and provision of consequent services are permitted within the recreation zone. Organisation of services and cognitive tourism for tourists and visitors, as well as use of mineral resources, water, flora and fauna in accordance to the RA legislation, land leasing for organisation of production not restricted by National Park conservation regime, organisation of agricultural production using ecological methods, etc are permitted within economic zones.

All the mentioned types of use should be implemented in accordance with the conservation regimes specified in Articles 16-20 of the Law on SPNAs. The objectives and peculiarities of conservation regime of the state sanctuaries are defined by their Charters and not by the Law on SPNAs (Article 18). It is also noteworthy, that most of the state sanctuaries of Armenia in the structure of "Hayantar" SNCO (13 Sanctuaries) do not have Charters, meaning that neither their conservation regimes and nor possible types of non-wood forest use are specified.

Upon approval of the Law on SPNAs the list of 10 legal acts deriving from the Law was approved by the Prime Minister (No. 109A, dated 14 February, 2007). These Acts were to be prepared and approved according to the timetable in order to secure the enforcement of the Law on SPNAs. A part of them has been prepared and approved, but the RA Government Decree on "Defining the Order of the Use of SPNAs" is still in the process of development though it had to be submitted by 20<sup>th</sup> April, 2008.

Currently there are several regulations approved earlier that regulate legal relations of various types of uses within SPNAs (e.g. Regulation on licensing and contracting for the use of fauna objects, Regulation on land allocation and urban development within SPNAs and forest fund lands). There are some attempts to join several types of uses in one Regulation (at the stage of processing). It should, among other issues, define peculiarities of each type of use, methodology for calculation of recreational load and allowed volumes. It is foreseen to submit the regulation for the approval by the RA Government coming months.

Two other legal acts included in the list approved by the Prime Minister are under preparation at the moment (were supposed to be submitted still in September 2008 in compliance with the timetable);

- RA Government Decree on the Approval of tendering order for accredited management of zones of Specially Protected Nature Areas, and
- RA Government Decree on the approval of contract template for accredited management of Specially Protected Nature Areas.

The approval of these Decrees is also important for regulating the sphere of non-wood forest use within SPNAs.

## **2.4 Institutional Framework in the Field of SPNAs and Procedure of Alternative Use**

There are several structural subdivisions and SNCOs in the structure of the RA Ministry of Nature Protection (MoNP) that are directly or indirectly related to non-wood forest use (scheme 3).

The main functions of the **Biodiversity Protection Division of Environmental Protection Department** in the structure of MoNP RA are state policy making in the sphere of environment, biodiversity protection, reproduction and use, as well as development of legislation and strategy.

The functions of **Bioresources Management Agency (BMA)** are provision of services for forest management policy, in particular state inventory of forests, forest management planning activities. BMA was established according to the Law of RA Government No 1236, dated 08 August, 2002. The main task of BMA is the provision of scientific research, conservation, reproduction and sustainable use of landscape and biological diversity of natural ecosystems, objects of flora and fauna, nature heritage of RA area, as well as support to state policy making and management in this sphere.

BMA implements the following functions in the sphere of alternative forest use in accordance with its Charter;

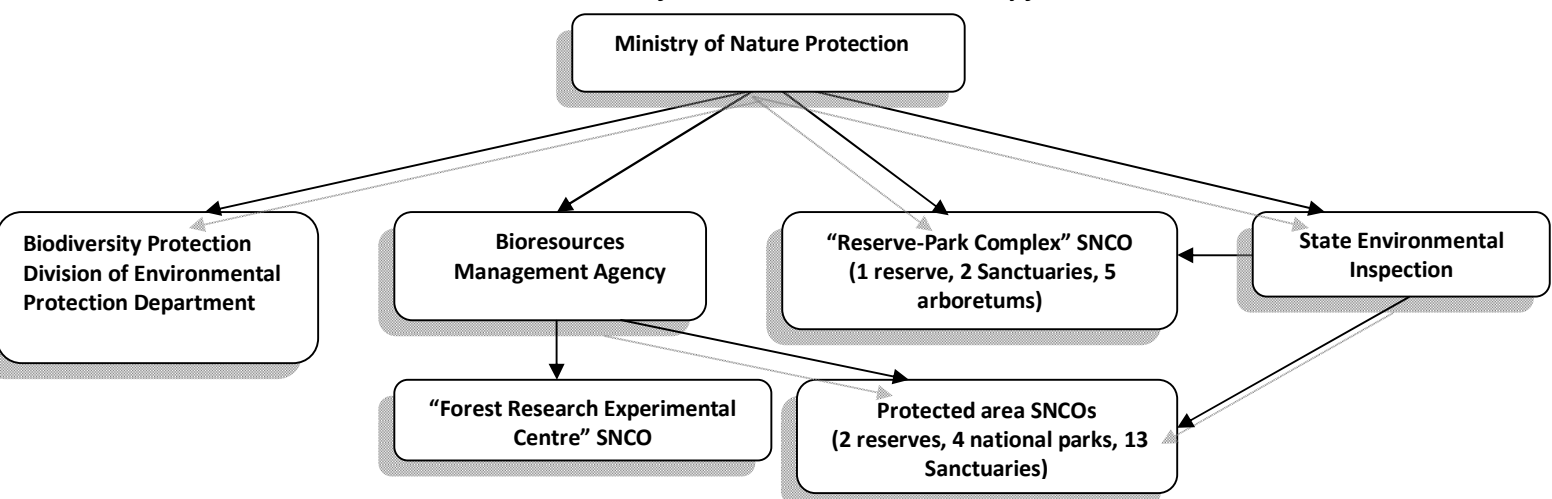
- Provision of scientific research, conservation, reproduction and sustainable use of natural ecosystems, including forests, landscape and biological diversity of natural ecosystems, objects of flora and fauna, nature heritage of RA area, as well as support to state policy making and management of the sector.
- Provision of measures aimed at sustainable use, rehabilitation and reproduction of flora and fauna objects.
- Implementation of state registry, inventory and monitoring of flora and fauna resources of RA, maintenance of database and cadastre.
- Provision of justifications for the approval of allowed utilization volumes of flora and fauna natural resources.
- Coordination of SPNA conservation and sustainable use activities.

The main functions of “**Forest Research Experimental Centre**” SNCO (established by Decree No 1587, dated 26 September 2009) are implementation of forest management planning, scientific-experimental and scientific researches, as well as training activities.

**State Environmental Inspection** (established by RA Government decree No. 1149, dated 25 July, 2002) implements control over the implementation of rules and requirements set forth in the environmental legislation, particularly over the norms and contractual responsibilities in the sphere of conservation and use of biological resources, including flora and fauna, conservation, use and reproduction of forests and SPNAs.

**Protected area SNCOs** (reserves, national parks, sanctuaries). RA "State reserve" SNCOs are non profit-making non-commercial state organisations having legal status implementing environmental, scientific and social-cultural activities. "National Park" SNCOs are non profit-making environmental, scientific-research, scientific-cognitive (eco- educational) organisations having legal status and operating in accordance with the RA Constitution, RA Civil Code, RA Law on SNCOs, Law on SPNAs, and other legal acts. These SNCOs have direct relation to the use of forest resources, including non wood forest resources.

**Scheme 3** Institutional Structure of RA MoNP, related to secondary forest use



In order to get permission for non-wood forest use (**collection of non-wood forest products**) within respective zones of National Parks a citizen should apply to the National Park addressed to the head of the NP. The National Park area is being checked and inspected, and if there is no danger from environmental point of view, the National Park issues its “no objection” for the collection of non-wood forest products. Having the “No objection”, the citizen then applies to Bioresources Management Agency in order to get permission. The citizen, at the same time pays the fee set in the RA Government Decree and organizes the collection. However, it should be mentioned, that a limited number of applications of this kind are submitted to BMA during a year.

In respect to the **allowed quantities** of non wood forest products to be collected, it is assumed, that annual allowable volumes should be assessed and reckoned for each National Park, and the permissions should be based on these assessments. However, the assessment is not always carried out.

There is information on biological diversity of national parks in the approved management plans for "Sevan" and "Dilijan" National Parks, but volume figures are missing. Therefore, the management plans cannot serve as a base for the definition of the allowable volume of the collection and provision of permissions.

In order to **lease areas** or make constructions in SPNAs, particularly in National Parks (mainly for recreational purposes), the persons interested should take part in the tender with the participation of interagency commission. The RA Government Decree No 1578 on the Formation of interagency competition commission for allocation of SPNA lands under lease and/or making constructions and defining its working procedure was approved 18 December, 2008. Following the mentioned Decree the competition commission was formed with certain staff members (Annex 1) and working procedure (Annex 2). The Regulation clearly states, that leasing and construction activities should correspond to the requirements of the RA Legislation regarding SPNA zones.

### **3 ACCESS TO WOOD AND NON WOOD FOREST PRODUCTS FOR PRIVATE SECTOR**

#### **3.1 Private Sector Using Forest Resources in Armenia**

The following main types of uses are distinguished in the sphere of use of wood and non wood forest resources by private sector in Armenia;

##### **1. Timber processing**

Mainly sawing-material, parquet, plywood and mostly furniture are produced. Both forest adjacent communities and big cities and other settlements situated far from forests are involved in furniture making. For example, there are more than 30 private entrepreneurs in the sphere of furniture making only in Argavand community.

##### **2. Collection and processing of forest fruits and berries**

Mainly jams, juices and comfitures are produced. The existing processing factories in forest adjacent communities either do not operate or operate with low capacity in the last years. Middle and large scale companies of Yerevan and surrounding communities hold the monopoly of the sector. These companies collect fruits and berries from forest areas located at 150-200km distance with the help of inhabitants of community adjacent forests.

##### **3. Apiculture**

The main product is honey. The volume of this form of non-wood forest use has decreased as compared with the recent years, stemming from a range of problems.

##### **4. Forest use with the purpose of recreation**

This form of non-wood forest use is widely common. Forests are used for organisation of recreation by the citizens personally or via tourist agencies. Forest areas are also leased by legal persons for recreational purposes.

#### **3.2 Private Entities Using Non Wood Forest Resources**

Several private entities involved in non wood forest use were selected for conducting interviews using a questionnaire (Annex 1). Table 1 provides the list of selected private entities, involved in processing non-wood forest products. According to the information from "Hayantar" SNCO, "Hayantar" does not receive applications for leasing forest areas for recreational purposes.

**Table 1 List of selected private entities, involved in processing of non-wood forest products**

<b>N</b>	<b>Name of the Company</b>	<b>Scope of Activity</b>
1	"Shush" LTD	cannery
2	"Arthur ev Edita" LTD	cannery
3	"Sis Natural" LTD	cannery

<b>N</b>	<b>Name of the Company</b>	<b>Scope of Activity</b>
4	"Tamar Tatik" LTD	cannery
5	Ancient Herbals	tea production
6	R fito farm	tea production
7	"Meghvabujcner" consumer cooperative	bee-keeping
8	"Gesp pchela" LTD	bee-keeping

Brief information on the above listed companies and details from the interviews with them are provided below.

### **1. "Shush" LTD**

The company is established in 2006 in the community Koghb of Tavush Marz. It is specialized in production of jams of ecologically pure products including walnut, cornelian cherry, blackberry and other species. The number of employees reaches 20 during the season, and around 100 families are providing necessary quantity of berries to the company. There is no cooperation with the Forest Enterprise.

The company is provided with all necessary conditions for the production (heating and water supply systems, refrigerator with the holding capacity of 15 tons). However the company does not operate during the last two years, due to marketing difficulties. The company can recommence its activities if a preferential loan is provided. The conversations with the leadership and specialists of the company revealed, that though the quality of the product is high thanks to the hard work of professionals and high quality of fruits and berries, there are still serious gaps in designing and marketing. Besides, the limited financial capacities do not enable "Shush" to withstand the competition with other medium and large scale entities located at far distances from the forest.

### **2. "Arthur ev Edita" LTD**

The LTD is located in Jujevan community of Tavush Marz and is producing bottled food (walnut, blackberry, cornelian cherry jams). The LTD has a licence. It has 15 employees during the season, and around 40 suppliers among community inhabitants. There is no cooperation with Forest Enterprises. The factory is supplied with necessary equipment (from Soviet period), but does not operate currently.

"Arthur ev Edita" LTD is facing the same problems as "Shush" LTD.

### **3. "Sis Natural" LTD**

The LTD is established in 2000. It started its activities with juice production without preservatives, colouring agents and other additives. Most of the juices do not contain sugar, which makes them more attractive in the market of health-food. Except from natural juices, the company also produces jams, comfitures, marinades and canned vegetables. The products of the LTD is consumed in both domestic

market and are exported to Russian Federation, Ukraine, Georgia, Australia, Hungary, England, Italy, USA and other countries.

The raw material is provided by private entrepreneurs from the forests of Armenia and Nagorno-Karabakh. There is no cooperation with Forest Enterprises. The interviews revealed the non awareness among LTD staff about the necessity of cooperation, as they buy the necessary quantity from community inhabitants.

#### **4. "Tamar Tatik" LTD**

The LTD is established in 2002 in Oshakan community of Aragatsotn Marz. It produces dried fruits and jams using traditional methods. The raw material is obtained from private farmers and community inhabitants. The villagers collect the raw material from community adjacent forests mainly in Tavush and Suynik Marzes and Nagorno-Karabakh. There is no cooperation with forest Enterprises and no information on the possible form of cooperation.

#### **5. Ancient Herbals**

The company operates in the sphere of tea production since 1997. The necessary raw material is obtained from the forests of Tumanyan Region of Lori Marz. The company cooperates with the Forest Enterprise through a contract on leasing forest lands for non-wood forest use. 50 inhabitants of neighbouring communities are seasonally employed by the company on a contractual basis. The company possesses a factory and a drier Odzun community, where 15 members of the community are employed. 90% of the company products are realized in external market, where they have gained high demand. However, the company faces difficulties connected to the realization in domestic market and tax field.

#### **6. R Fito Farm**

The company operates for around 8 years in the field of tea production in Yerevan. The factory of the company is located in Ijevan Region of Tavush Marz. The company has 7 permanent and 20-30 seasonal employees. Around 2 tons of medicinal plants are collected annually (also from forests). Major part of the production is consumed in the domestic market. The company has got a certificate. There is no cooperation with the Forest Enterprises.

#### **7. "Meghvabujcner" Consumer Cooperative**

The cooperative is located in Noyemberyan city of Tavush Marz. Apiculture was considered as one of profitable and developing branches of agriculture before 1990s, when sovkhos-kolkhozes were destroyed and bee-hives were privatised.

Small-scale bee-keeping entities started to develop and associations were established starting from the beginning of 2000s. The bee-hives provided to the community, as well as trainings and seminars

organised in the framework of Natural Resources Management and Poverty Reduction Project have highly supported to the development of bee-keeping in Tavush Marz.

The cooperative possesses 120 bee-hives; average annual crop per bee-hive is 12-15 kg. There are currently 11-12 thousand bee hives in Noyemberyan Region, and apiculture is now getting a development tendency in the region. The head of the cooperative, who is also one of the active members of Republican Association of Bee-keepers, raised the issue of realization (the main market is in Yerevan) and the need for preferential loans. Previously one-year contract for instalment of bee-hives was signed with the Forest Enterprise, which was reviewed once a year. At present the entities install their bee-hives based on past years without any contract.

#### **8. “Gesp Pchela” LTD**

The LTD is established in 2002 with two permanent staff members in Yerevan. It cooperates with around 40 bee-keepers of the Republic. The raw material (honey) is mainly obtained from Suynik and Gegharquniq Marzes. The production (2-3 tons per annum) is realised in domestic market. There is no export of the product due to absence of certification.

### **3.3 Results of the Meetings and Interviews with Private Entities Using Non-Wood Forest Products and Proposals on the Enhancement of Access to Forest Resources**

The interviews with the private entities using non-wood forest products revealed the following;

- Around 90% of the non-wood forest products used by the mentioned 8 companies are collected from the forests of Armenia, and only 1-2 of them cooperate with the Forest Enterprise (management body).
- The companies are mainly not aware that according to the legislation, it is necessary to cooperate with forest management body for the use of non-wood forest products to receive relevant permission for the collection of certain amount of non-wood forest products and that they should pay for it the amount set.
- The cooperation between companies and communities is limited to temporarily hiring community inhabitants.
- Presently the companies do not have any problems connected with the acquirement of non-wood forest products, they can mainly get the quantity they need through local population.
- A part of the companies would prefer to get more information on the use of non-wood forest products, including legislative and procedural issues, new technologies of collection and processing of raw material and their application, storing technologies, as well as information on the consumption of their production at external markets.
- A part of the companies realizes its production mainly in the domestic market; however, they face problems due to low designing and marketing capacities.

- Among obstacles, the complications of the realisation of the production in external market aligned with the lack of information and marketing surveys, import of new products and certification procedure were mentioned. According to these companies, the incompleteness of the tax system and complicated bureaucratic procedures, as well as low developed infrastructures is also causing barriers.
- There is a need for loans with low interest rates in order to promote different forms of non-wood forest use and increase production volumes. There are no such loans at the moment.

The following proposals can be drawn based on the results of the surveys, as well as the analysis of legislative and institutional framework of non-wood forest use;

- There is a need for improvement in the sphere of non-wood forest use, in particular, it is necessary to prepare and approve legal acts deriving from the Forest Code and RA Law on SPNAs. This will enable appropriate law enforcement.
- It is necessary to increase the awareness of the companies on the need for cooperation with state forest management body for the use of non-wood forest products, to make the collection of non-wood forest products more regulated and cause less damage to the forest.
- Non-wood forest products reception stations (collection points) could be established within the communities (community or private entities), that will properly cooperate with state forest management body and processing entities to regulate the collection of non-wood forest products. These stations will get relevant permission from the Forest Enterprise, collect the resources from permitted areas with the help of community members and provide them to interested processing companies.
- It is necessary to support entities involved in the processing of non-wood forest products to export their products to external markets. Thus, it is necessary to provide them information of external markets, certification possibilities, marketing and other issues.
- It is necessary to pay special attention to the issues of control and monitoring by state bodies to secure that the collection of non-wood forest products for commercial gain is carried out only based on forest coupons.
- Loans with low interest rates are necessary in order to promote different forms of non-wood forest use and increase production volumes. These loans will be directed to reequipping the production and procurement of modern equipment. Once this type of loans are available, additional working places will be created for the local population in small and medium companies involved in the processing of non-wood forest products. This will promote decrease of unemployment level in forest adjacent communities, and will positively influence on the decrease of illegal cuttings.

- It is necessary to develop those types of non-wood forest use which are not common, such as collection and processing of mushrooms. For this purpose relevant information should be provided to local population and private sector.

### **3.4 Results of Meetings and Interviews with Private Entities Using Timber Products and Proposals on the Enhancement of Access to Forest Resources**

A questionnaire was developed to study the access to timber products and other issues for private sector using timber resources (Annex 2). It was used as a tool for interviews and discussions with a range of timber processing private entities and private entrepreneurs. 11 private companies in Tavush marz (“Ijevan wood processing enterprise” CJSC, “Khor Armat” LTD, “Ojakh” PE, “Gagik Evanesyan” PE, “T. Ghalumyan” PE, “MGAALAA” LTD, “S. Ghevondyan” PE, “A. Atoyán” PE, “Astghablur” LTD, “Henrik Avalyan” PE, “N. Ghazaryan” PE) and 4 private entrepreneurs in Argavand community of Ararat Marz (“Gurgen Simonyan” PE, “S. Avetisyan” PE, “Goharik Gevorgyan” PE, “Khachik Asatryan” PE) were selected.

Tavush Marz was selected as the Marz with the most forests and timber resources (40% of the total forest covered areas and 50% of the total volume of Armenia). The private entities of Tavush Marz get timber from the local forests. Ararat marz has no forests and the private companies get timber from the forest covered areas of Armenia (mainly from the Forest Enterprises of Tavush and Lori Marzes through private suppliers).

The interviews and discussions carried out revealed the following;

- The companies use 10-40% of their production capacities.
- Timber is acquired from Forest Enterprises though self-preparation, which is comparatively cheaper than buying the ones prepared by the Forest Enterprise. However, the fact that the Forest Enterprises of “Hayantar” SNCO do not have a status of legal person (they are branches), creates certain obstacles in the cooperation between private sector and Forest Enterprises.
- The interviewees prefer to obtain timber in the form of round wood reasoning that the boards are sold by the Forest Enterprise without assortment by diameter and length and for higher prices not corresponding to the quality offered.
- The companies and private entrepreneurs often use waste wood, which is procured from citizens- mainly from those who work with the Forest Enterprise on contractual basis. These persons get waste wood for lower prices.
- The cutting areas are usually allocated in spring and the utilization is finalised in autumn, consequently, the private entities do not have possibility to obtain timber for 4-5 months in a year.

- Private entities and entrepreneurs involved in wood processing of Argavand community buy sawn timber, also in half processed shape from resellers for higher prices and use them in furniture making.
- All the companies and entrepreneurs interviewed use beech wood as an industrial raw material (80-85%), also oak, pine maple and lime are used in smaller volumes.
- The assortment of furniture produced by the companies in Tavush Marz is wide – furniture, doors, parquet, necessary construction details, while Ijevan’s wood processing enterprise mainly produces plywood, that has high demand.
- According to the respondents the price for construction wood is very high. That results in high self-cost of the product made, which creates serious problems in the sphere of product realisation and production development.
- Companies operating within Tavush Marz are mainly familiar with the acting regulation on harvesting forest products within forest enterprise areas. This is of no interest for the private entrepreneurs of Agavand community, as they obtain only high-value timber, procured by private resellers only.
- The interviewees are generally informed about the fines for illegal loggings and find them rather high. They have no information on certain fines for certain species and diameters.
- Not all the companies interviewed in Tavush marz are interested in taking part in the auctioning of cutting areas, as there are some issues limiting the availability of timber and do not guarantee appropriate profit. One of the problems mentioned is that according to the instruction, user of the cutting area takes over the responsibility of exploitation requirements, such as tree cutting technology, splitting, extraction from forest, non damaging standing non marked trees, preservation of natural regrowth, cleaning of the cutting area, etc. The mentioned activities can only be carried out by skilled specialists, which are not present in those companies.
- Private companies are interested in construction wood which makes up 10-40% of the harvested volume at forest regeneration cutting area, depending on the dominant tree species. The users of the cutting area also have to collect and realise firewood, which is of no interest for them.
- Frequently after cutting it becomes evident that the trunks of mature beech trees (which however looked healthy) are damaged and of low quality (openings of different sizes), resulting in non correspondence in the expected and real volumes of construction wood. There are no relevant provisions in tendering regulation for such cases.
- A range of entities would like to increase their production volumes, for which they need preferential long-term loans. It would enable to technically reequip the companies with modern

equipment, increase the quality of the production and compete in domestic market. However, they are not confident, that even then, they would be able to acquire more timber from Forest Enterprise and most probably they would have to think about using the imported timber.

- The lack of forest extraction roads and their desperate state was also stressed. These issues are mainly solved by the user.
- The respondents were in favour of functioning on legal platform, provided that favourable conditions are created for the organisation of production and making timber available.

The following conclusions can be made and proposals drawn based on the analysis of wood processing private sector and acting legal framework, as well as the results of the discussions with wood processing private entities and private entrepreneurs;

- The status of Forest Enterprises (branch of Hayantar) as not legal person hampers the direct cooperation with private sector, thus availability of timber. It is proposed to grant Forest Enterprises of "Hayantar" SNCO with a status of legal person.
- The allocation of cutting areas through auctioning is not reasonable in Armenian Forest Enterprises, due to the absolute dominance of care and sanitary cuttings among annual cutting allocations, as well as the fact, that forest regeneration cuttings in the forests of production significance require strict professional approach and input, which is lacking in the private sector. The wood processing private sector is also lacking necessary vehicles, equipment and other technical means for utilising the cutting area, which means that it will have to procure timber from other users, who will offer non contributory conditions of sale. It is proposed to realise utilization through specialised organisations having state status, thus making timber comparably available and cheaper for the private sector.
- It is proposed to allocate cutting areas to Forest Enterprises in time (every December), so that the utilization can commence in January. It will enable private entities to work during the whole year. On the other hand, the timber that has been harvested in winter and products made from it have higher qualitative characteristics, moreover, cutting and extraction in winter causes less damage to young growth.
- It is necessary, that the annual allowable cutting volumes set by "Hayantar" SNCO are made predictable to enable private entities to make investments in the development of their companies and production of new products.
- It is proposed to review the prices for construction wood to harmonize it with the quality offered and apply a differentiated approach. It is also important to possibly minimise illegal marketing of timber to support creation of equal conditions for the producers in the legal field.

- The realisation of finished product is a serious issue, conditioned with the low solvency of the population and comparatively higher prices for the products. Almost all the respondents stress the importance of long-term loans with low interest rates, which will enable them to modernise their equipment, expand the assortment of products, increase the quality of the finished products and function at full capacity.

## **4 ACCESS TO WOOD AND NON WOOD FOREST PRODUCTS FOR LOCAL POPULATION**

### **4.1 Selected communities and results of interviews**

Three communities were selected from each of Tavush and Lori Marzes. They are considered as forest covered and the most used Marzes of Armenia in terms of utilization of forest resources. Koghb, Jujevan and Voskevan communities were selected in Tavush and Dsegh, Margahovit and Lernapat communities were selected from Lori Marz. Interviews were carried out in these communities using the questionnaire attached to this Report as Annex 3.

Below some general data is presented on these communities, non wood forest resources of their surrounding forests (data from interviews, forest management plans and other available sources), as well as results of our surveys. Koghb and Dsegh communities were selected as pilot communities in the result of analysis of data from different sources, as well as discussions with community members. More comprehensive data on these communities is provided in Annexes 4 and 5.

#### **4.1.1 Community Koghb**

Koghb is the biggest community of Tavush Marz. The total administrative area of the community is 4663ha. There are 1547 households in the community with 5090 residents, including 4382 currently living in the community. 250 families are included in the Poverty Family Allowances Program run by the RA Ministry of Labour and Social Issues.

There are three small-scale wood processing factories in the community, two of them are private, and the third is operating in the structure of local forest enterprise. The forest fruit and berry processing and jam-making small-scale factory used to operate until recent times.

Zikatar Sanctuary and Forestry Training Centre in the structure of Forest Research Experimental Centre SNCO are also located within the administrative boundaries of the community.

The community was specialized in horticulture during the Soviet period; peach, apricot, pear, apple and almond were growing. The average annual production for fruits was 2000 tons, grape- 500 tons.

According to the results of interviews with villagers from the last years, 25% of total income in Koghb comes from cattle-raising, 10-15% from farming, 15% from allowances and pensions, 20% from paid labour and 15% from abroad (migrant work and support from those who reside abroad, mainly in CIS countries), and 10-15% from the forest. The average family income (financial and other forms) is estimated around 70000 AMD per month.

Forests adjacent to the community are rich in forest fruits and berries. The total accessible forest area is around 3414ha (Map 1), with the expected crop of 170 tons, including 30 tons green walnut, 30 tons Cornelian cherry, 35 tons forest pear and 15 tons blackberry.

**Table 2** *Approximate Quantity of Fruits and Berries in the Forest Areas used by Koghb Community Inhabitants*

Fruits and Berries	In areas adjacent to Koghb administrative area (tons)	In Koghb Community Forest Lands (tons)	Total (tons)
Dog-rose	12.0	4.6	16.6
Green walnut	27.0	2.1	29.1
Dry walnut	1.8	0.8	2.6
Cornelian cherry	17.0	12.8	29.8
Wild apple	6.0	-	6.0
Wild pear	34.0	1.9	35.9
Hazelnut	0.7	0.14	0.84
Medlar	0.85	0.22	1.07
Blackberry	12.0	2.5	14.5
Raspberry	0.4	-	0.4
Chestnut	1.2	-	1.2
Total			173.31

The areas surrounding the community are rich in historical-cultural and nature monuments, among them Mshkavanq (13<sup>th</sup> century), Ageghtsi Church (5<sup>th</sup> century), Tavarageghtsi baziliqe church, Surb Nshan, Mkhitar Vardapet Chapel, Surb Araquel Chapel, Mountain Amurineri, as well as Plane tree included in the list of Nature Monuments approved by the RA Government.

Within the current survey 30 representatives of the community were interviewed. The results showed that non wood forest resources are widely used by the community, among them collection of fruits and berries, grazing and haymaking are more common. The resources are used for both personal consumption and for realization in domestic market. The majority of the community representatives collecting resources for commercial gain do not pay to the Forest Enterprise. Generally, most of the respondents are not familiar with the legislation and proceedings on non-wood forest use.

Though the community is gasified, many households are still using firewood. A part of them buys firewood from the Forest Enterprise (1200 AMD for one m<sup>3</sup>). Firewood is also purchased from private persons, as well as taken from the forest without documentation. The majority of respondents are definite that no damage is caused to the forest when taking the firewood, as most of it is being collected from the waste in the forest.

According to the majority of respondents (62%), collection of fruits and berries is the most profitable type of non-wood forest use in the community. The second profitable type of the use of forest resources is recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.).

The suitability of the area for organising recreational activities, presence of valuable historical and cultural monuments within the community area as well as the need for developing ecotourism were emphasised during the meetings with the community inhabitants.

#### **4.1.2 Community Jujevan**

Jujevan community is located in the former Noyemberyan region of RA Tavush Marz, at the left riverside of Aghstev valley, close to Vanadzor-Dilijan main road. The total administrative area of the community is 569.6 ha (without remote pastures and meadows). A small wood processing factory with small capacity and a saw mill and a fruit processing factory (with discontinuances) are operating within the community. Although only 15 Jujevan residents are currently registered as unemployed, the real number of unemployed residents is much higher. This is explained by the fact that although they possess privatized land, they do not cultivate and do not get income. 22 families of the community are included in the Poverty Family Allowances Program run by the RA Ministry of Labour and Social Issues.

According to the results of surveys among villagers from last years, 20% of total annual income in the community comes from cattle-raising, 8% from farming, 12% from allowances and pensions, 15% from paid labour and 35% from abroad (migrant work and support from those who reside abroad, mainly in CIS countries), and 8% from the forest (not counting timber). The average family income (financial and material) is estimated around 50000 AMD per month.

According to the surveys conducted in Jujevan community within Community Forest Management Project, the expected crop of forest fruit and berry species from the community administrative area is approximately 27 tons. The annual demand for firewood in the community is approximately 2500m<sup>3</sup>.

Within the current survey 25 representatives of the community were interviewed. The results showed that non wood forest resources are widely used by the community; among them collection of fruits and berries, grazing, haymaking and collection of medicinal plants are more common. A part of the resources collected are used for personal consumption and the rest is realized in domestic market and sold to private entities. The majority of the community representatives collecting resources for commercial gain do not pay to the Forest Enterprise. Generally, most of the respondents are not familiar with the legislation and proceedings on secondary forest use. Though the community is gasified, many households are still using firewood bought from the Forest Enterprise (1200 AMD for one m<sup>3</sup>), private persons or taken from the forest without documentation.

### **4.1.3 Community Voskevan**

Voskevan community is located in the former Noyemberyan region of RA Tavush Marz. The total administrative area of the community is 1948 ha. A small wood processing factory is operating in the community (Gagik Avanesyan private entrepreneur). 70 families of the community are included in the Poverty Family Allowances Program run by the RA Ministry of Labour and Social Issues.

Although only 10 residents of the community are currently registered as unemployed, the real number of unemployed residents is around 300, according to the community leader. Community inhabitants possess privatized land; however, they do not cultivate it and do not get income.

According to the results of surveys among villagers during last years 30% of total annual income in the community comes from cattle-raising, 20% from farming, 22-24% from allowances and pensions, 10% from paid labour and 35% from abroad (migrant work and support from those who reside abroad, mainly in CIS countries), and 2-3% from the forest. The average family income (financial and material) is estimated around 45000 AMD per month. One of the urgent issues of the community is gasification, which promotes the use of firewood for heating by households.

According to the surveys conducted in Voskevan community within Community Forest Management Project, the expected crop of forest fruit and berry species from the community administrative area is approximately 65 tons. The annual demand for firewood in the community is approximately 2900 m<sup>3</sup>.

Within the current survey 25 persons were involved in the interviews aimed at the study of access to wood and non wood forest resources. The results showed that the majority of community members use firewood collected from the forests of the community, they get involved in the collection of fruits and berries (seasonal) for both personal consumption and marketing, however the latter does not provide much profit.

There is no cooperation with the Forest Enterprise.

### **4.1.4 Community Dsegh**

Dsegh community is located in former Tumanyan Region of Lori Marz, not far from Yerevan-Vanadzor-Tbilisi main road, at the right riverside of Debed.

There was a wood processing factory operating during the Soviet period, where a wide assortment of chairs for children was produced. The factory stopped up functioning after privatization; however 12 of the former factory employees are currently private entrepreneurs in the field of furniture production.

Though the community is provided with gas supply and 95% of the households have access to natural gas, major part of community inhabitants is also using firewood (waste) which is cheaper.

Community generates income from animal produce and crop production, the income generated from secondary forest use makes up around 10% of a family budget.

The community is surrounded with the forests of Dsegh Forest Enterprise. Marts River basin is a peculiar floristic region and stands out for its high biodiversity potential. There are very good preconditions for developing ecotourism in Dsegh, which was also stated by the community members.

Development of tourism in the community can promote the enhancement of social-economic situation of the community.

**Table 3** *Approximate quantities of fruits and berries available in community forests used by the inhabitants*

N	Fruit and Berry Species	In forest areas adjacent to administrative boundaries of Dsegh community (tone)
1	Pear	12.6
2	Cornelian cherry	5.9
3	Dog-rose	18.8
4	Blackberry	24.5
5	Raspberry	0.35
6	Total	40.3

Within the current survey 25 persons were involved in the interviews aimed at the study of access to wood and non wood forest resources. The results showed that though the community is gasified, most of the community members use firewood for heating, and only ¼ gets it from the Forest Enterprise. Most of the respondents get firewood from private persons, as well as from neighbouring Lalvar Forest Enterprise.

¾ of the respondents believes that harvesting firewood (mainly illegally) does not cause any damage to the forest. The majority of community inhabitants is convinced that the main tool of decreasing illegal use of forest can be creation of alternative sources of income and increase the level of supervision.

71% of respondents states that the recreational forest use and tourism, as well as collection of fruits and berries are the perspective types of non-wood forest use for the community.

#### **4.1.5 Community Margahovit**

Margahovit community is located in the former Gugark region of RA Lori Marz, at the left riverside of Aghstev valley, close to Vanadzor-Dilijan main road. The total administrative area of the community is 7754ha. 238 families of the community are included in the Poverty Family Allowances Program run by the RA Ministry of Labour and Social Issues.

The main part of the community is provided with gas supply. Around 40% of the households use solely gas for heating and around 600 families use firewood for heating and household. Provided that a household uses 5m<sup>3</sup> of wood as a minimum, the wood demand of the community makes up about 3000 m<sup>3</sup>. The community inhabitants get the firewood from the forests (mainly from waste) of Margahovit Forest District of Gugark Forest Enterprise, and sometimes from the Enterprise. Fruits and berries are growing in limited quantities in the community adjacent forests.

Within the current survey 20 persons were involved in the interviews aimed at the study of access to wood and non wood forest resources. The results showed that the most applied types of non-wood forest use are haymaking, grazing and collection of fruits and berries. The latter is not profitable due to poor biodiversity of the area.

#### **4.1.6 Community Lernapat**

Lernapat community is located in the Southwestern part of Lori Marz, in the territory of former Gugark Region. The total administrative area of the community is 3668ha. The level of unemployment is high. There are many non-cultivated lands in the area due to the low soil fertility.

Cattle breeding and orcharding were the main well-developed branches of the economy during the Soviet period. The income from forest is low, which is explained by the low quantity of fruits and berries growing in the community adjacent forests. Major part of the community is gasified, most of the inhabitants consume natural gas, and a part of the community is still dependent on firewood.

Community forests of Lernapat are comparably poor in fruit and berry species; dog-rose is common, raspberry grows in some areas, while blackberry, pear tree, apple tree and other species are rare. According to the respondents involved in the current survey (15 persons) development of bee-keeping is prospective for the community, given that lime-tree is widely common in the community surrounding forests.

## **4.2 Proposals on the Enhancement of Access to Forest Resources by Local Population**

Based on the results of interviews aimed at the study of access to wood and non wood forest resources, the following conclusions can be drawn and proposals made.

- Non wood forest products are widely used by forest adjacent communities for both personal consumption and marketing purposes. In the case of realization, the communities mainly do not cooperate with the Forest Enterprise, i.e. organising collection without a forest coupon. The main reason is the low level of awareness on the legislation and proceedings in the sphere of use of non-wood forest products. There is a need to inform community inhabitants about the regulation on the collection of forest resources for commercial gain.
- Currently, the communities adjacent to forests do not have any problems in the sphere of collection and use of non wood forest products, as they collect the necessary quantity they need for both personal consumption and marketing purposes. In circumstances where alternatives of livelihood are missing, it is worth to mention, that the income generated from marketing non wood forest products provides considerable input into the total family budget. The cooperation with Hayantar and paying the defined taxes would definitely decrease the income.

- It is necessary to create preconditions for more organised harvesting in those communities, where large volumes of non wood forest products are collected for marketing to private entities. For instance, fruit and berry reception stations (collection points) could be established that would properly cooperate with Forest Enterprises to get forest coupons for the collection of certain quantity of forest products from certain areas (based on forest management plans and reckoned forest resources). These stations would act as mediator between private entities and communities. The private entities would apply to these stations with the quantity they need, and the stations would provide them the required quantity on a legal basis through community members and cooperation with Forest Enterprise. One reception station could work with several communities at the same time. When the collection of forest resources is regulated, less damage is caused to forest, given that the collection will be organized with the knowledge of Forest Enterprise within permitted areas and terms.
- Reasonable payments should be defined for use of non wood forest products to enable community inhabitants/ reception stations to pay for the actual volumes utilized. The nature use fees, set by the RA Government Decree No 864, dated 30 December 1998, do not correspond to current market prices and need to be reviewed. In the situation, when a certain fee is not set, each enterprise applies to the head office of Hayantar to define the nature use fee for each case.
- Even in gasified communities the inhabitants are still using firewood, as it is cheaper and sometimes free (when harvested illegally). In the reality, major part of firewood used by the communities is collected from waste wood. The current price for 1 m<sup>3</sup> firewood is 1200 AMD, which is rather high price for the communities to pay (stated by the Forest Enterprise staff as well). Reduction of the fee will enable community inhabitants to pay for the whole amount they use. Then, they will not apply to the Forest Enterprise for the permission for collecting only a part of the needed quantity. “Hayantar” SNCO have submitted a proposal to RA Government on decreasing the price for firewood as twice. The proposal is under respective discussions at the moment.
- Generally, in order to enhance the use of forest resources, it is necessary to enhance the social-economic situation of the communities and create possibilities for alternative livelihood based on regulated use of forest resources. One of such possibilities can be the use of forest for recreational and tourism purposes. It can provide additional income for the communities through provision of paid services.

## 5 PILOT PROJECTS AIMED AT SUSTAINABLE USE OF FORESTS AND IMPROVEMENT OF LIVELIHOOD OF COMMUNITIES

### 5.1 Pilot Project 1. Community Dsegh, Lori Marz of RA

<b>Name of Pilot Project</b>	<b>Development of ecotourism in Dsegh Community with the purpose to promote sustainable forest use and alternative livelihood</b>
<b>Location</b>	<b>Dsegh Community, Lori Marz of the RA</b>
<b>Budget</b>	<b>45000 USD</b>
<b>Duration</b>	<b>Six months</b>

#### **Brief Project Description**

The project is aimed at protection and sustainable use of Dsegh and neighbouring forests through development of tourism possibilities. It will in its turn provide possibilities for alternative income for the communities and will decrease the pressure on natural resources improving the condition of forests.

Queries and surveys carried out in Dsegh revealed the possibilities for developing ecotourism and cultural tourism in the community and surrounding forest areas. Presently tourism is non-organized and cannot provide income for community inhabitants, whereas the development of ecotourism possibilities will promote sustainable alternative use of forests (with the purpose of tourism education and awareness rising) through protection of these areas, as well as creation of alternative sources of income for the community through tourist services.

#### **Project Goal and Objectives**

The goal of the project is the protection and sustainable alternative use of forests adjacent to Dsegh community through development of tourism, which will provide an alternative source of income and will partly minimize the pressure on natural resources and forests particularly.

The Objectives of the Project are as follows;

- Establish tourism infrastructures in Dsegh community and neighbouring areas, such as provide necessary means to the information centre for visitors, eco-trails, observation points, information and warning signs, tourist shelters, other necessary equipment;
- Organize ecotourism training for community representatives;
- Secure additional income for community members against their services for tourists, including guiding through eco trails, provision of horses, accommodation, etc.;
- Establish contacts with tour-operators present them ecotourism possibilities and promote increase of visits to the area.

## **Project Area**

- **Dsegh Community**

Dsegh community is located in former Tumanyan Region of Lori Marz, 7 km from Yerevan-Vanadzor-Tbilisi main road, at the right riverside of Debed. The community is located 25 km and 145 km from Vanadzor Marz centre and Yerevan respectively. It is bordered by Qarinj, Tumanyan and Tsater community lands in North, by forest lands of Dsegh Forest Enterprise in East and by forest lands of Gugark Forest Enterprise in West.

The administrative area of the community is located at the altitudes of 850-2050 meters above the sea level, resulted in emphasised difference of climate conditions between lower, middle and upper zones. The administrative area of the community is 3901 ha as of 01.07.2006, including 1172 ha owned by community inhabitants, in particular 150 ha- residential buildings; 20 ha – areas of public use; 1002 ha – agricultural lands (441 ha meadows, 561 ha pastures).

Community owned lands take up 1149 ha, including 1090 ha agricultural lands, 48,9 ha lands of public use and residential buildings, 5,6 ha lands allocated for the protection of historical-cultural objects and 4,5 ha water objects. State owned lands take up totally 1580 ha, including 54 ha allocated for the protection of historical-cultural monuments, 4, 6 ha rivers flowing in the territory of the community, 5,4 ha other lands and 1516 ha forests. There are 751 households in the community with 2559 residents (1200 male and 1359 female), including 608 pensioners and 87 residents living on allowances. There is one secondary school in the community with 438 pupils and 39 teachers, a kindergarten, health centre, culture house, 3 stone processing factories and 10 small shops. The community is provided with drinking water and there are two water basins with the volume of 500 m<sup>3</sup> each.

There was a wood processing factory operating during Soviet period, where a wide assortment of chairs for children were produced. The factory stopped up functioning after privatization; however eight of the former factory employees are currently private entrepreneurs in the field of furniture and household goods production.

Though the community is provided with gas supply and 95% of the households have access to natural gas, major part of community inhabitants is also using fire wood (waste) which is cheaper.

Community generates income from animal produce and crop production. There are 920000 neat cattle, 1800 pigs, 200 bee-keeping houses, 2600 birds and 86 horses in the community. Up to 10% of the family budget generates from the use of non wood forest products.

- **Forests and their Current Alternative Use**

Forests start from Dsegh plateau (1200 m above sea level) and extend up to 2050 meters above sea level (alpine meadows). They are mainly represented by broadleaved species (oak, beech, hornbeam, lime, maple, elm, etc.), pine can be seen in few sites.

Community adjacent forests are not rich in forest fruit-berry species and crop. According to surveys (Forest Management Plan for Dsegh Forest Enterprise and field studies) the expected crop from accessible areas is around 8-10 tones, which is not sufficient for organisation of fruit processing industry. The crop is collected by the community residents for domestic use- preparation of preserves, jams, and juices.

Forests are currently used by local inhabitants and visitors as resort areas in a non-organised manner.

- **Preconditions for Tourism Development**

Marts River Basin is a peculiar floristic Region and stands out for its high biodiversity potential.

There are many springs in the forests. Some of them have the necessary conditions for organization of recreation. There are totally 16 springs at the roadside of Dsegh and Lorut and most of them are in good shape. Marts and Alarex rivers flow in the administrative territory of community and are rich with fish species attractive for amateur fishing.

Lake "Tsover" (local name) with a total area of 3, 1 ha is located 3,5km towards East from Dsegh and surrounded with forests. The area meets the requirements of Nature Monument and is now included in the additional list of nature monuments (subject for approval).

The Lake is replenished by underground springs and is rich with leeches widely used in medicine. A water pipe is constructed 10 km from the Lake to prevent swamping and preserve the integrity of the ecosystem.

There is a large variety of birds in the area. The area between Debed and Marts Rivers up to Qoshaqar Mountain is designated as key bird area and bird protection area. There are some endangered bird species in the area, such as Caucasian grouse, white-headed vulture and others; Caspian snow-cock can be seen in upper zones.

Armenian Society for the Protection of Birds (ASPB) NGO is operating in the community and carries out substantial activities in the sphere of awareness rising and protection of rare and endangered bird species of the region. The organisation is constructing a building in the centre of Dsegh. It will be used as a visitor centre providing comprehensive information on flora and fauna diversity, historical-cultural and nature monuments, ecotourism trails, as well as short-term recreation possibilities for tourists. The establishment of visitor center is financed by UNDP/GEF Small Grants Program, Rhone Alpes foundation, Birthlife Switzerland and ASPB. It is also planned to publish information booklet, creation of web page and a range of activities aimed at the development of ecotourism.

The community and its surroundings are rich in historical –cultural monuments, among them “Bazilik” (654), churches established in seventh century by Mamikonyan prince and renovated in the 19<sup>th</sup> century, cemetery with cross stones and memorials (7-13 centuries), “Qarasnic Mankac” Monastery (10-11 centuries), famous “Siro Khach” cross stone (12th century) and others.

House-Museum of Hovhannes Tumanyan, presenting the workmanship inheritance of the poet and lifestyle in 19<sup>th</sup> century is located in Dsegh. The visits of tourists to the area are stipulated by the abovementioned historical-cultural values and Tumanyan's Museum.

According to our surveys and discussions with community members, the community has favourable preconditions for tourism, and ecotourism in particular (nature-climatic conditions, forests, biological diversity, culture, etc.). Organization and development of ecotourism will promote conservation of rich nature and historical-cultural inheritance, as well as will provide additional incomes to be directed to the enhancement of social-economic situation of the community.

Support from local population is one of the important factors of the organization of ecotourism. Owing to long lasting operation of Hovhannes Tumanyan's House-Museum, the community inhabitants have some experience and skills in handling tourists. Tourist house, operating in Dzoraget during Soviet period has also contributed to that; visit to House-Museum of Hovhannes Tumanyan was a part of its tourist trails.

- **Proposed Tourist Trails**

One of the primary activities of ecotourism is identification of appropriate trails. These trails should include areas of cognitive, recreational and aesthetical interest. According to the results of our surveys, it is reasonable to create four trails in Dsegh, which would include historical-cultural monuments, recreational zones and areas rich in biological diversity.

Summarized description of the trails is provided below (Map 1):

**Tourist Trail N1 – “Tsover” plot**

The trail starts at Dsegh-Martas asphalt road and continues until stone processing factory, then turns to South through the field. Reaching the edge of the forest the crushed stone road leans to East, goes through the forest 200 m and reaches Lake “Tsover”.

There are 2 spring-monuments close to the Lake. The area stands out for beautiful scenery and is convenient for organisation of recreational activities.

The length of the trail is 3,5km. It can be passed on foot, riding a horse and by car.

There are many tourists from different regions of the country visiting the area every year, mostly in summer. They usually take tents or sleeping bags with them for the overnight stay.

Currently the area is not bind to any institution and according to the community leadership the number of tourists will increase if appropriate recreational conditions are secured. It is proposed to install trailor, tourist shelters, garbage bins and posters in the area, as well as procure tents, small boat and other equipment for efficient organisation of recreation.

Community representatives mentioned, that the establishment of recreation zone in “Tsover” area was raised many times, however it was never realised due to budget limitations.

### **Tourist Trail N2 – Martsaget Valley**

The trail starts at Dsegh-Marts asphalt road and continues till Bridge of Marts River, then turns to South-east towards Lorut community. It passes beautiful valley of Marts River with many spring-monuments provided with all the conditions for recreation. The area is rich in fruit and berry species, mushrooms and medicinal plants. Marts River is very convenient and attractive for amateur fishing.

The length of the trail until Lorut village is 17km. Those, who want, can then continue until Atan village (sub-alpine zone) or Ahnidzor village to visit Hrant Matevosyan’s house-museum. The trail can be passed by car, riding a horse and on foot.

### **Tourist Trail N3 – Dsegh and Its Suburbs**

The house-museum of H. Tumanyan is located close to the central square of Dsegh. The church established in seventh century by Mamikonyan princes and entirely renovated in the 19<sup>th</sup> century is in front of the museum. 300 meters towards East from the church the cemetery of Middle-Ages with churches and cross stones is situated. The remains of Bazilik Church established in 654 are located in the territory of the Cemetery. The trail then continues towards East, where one can find a cross stone, from where the path leans down towards “Qarasun Mankac” Monastery, located at the right riverside of Debed on the slope facing North. Moving 2 km towards East, a narrow path to the North from the road leads to Monastery “Bardzraqash Saint Grigor”. Moving 800 meters towards South from the intersection of path and road famous “Sirun Khachqar” is seen at the edge of rock.

Debed gorge, Lori ravine and lower valley of Marts River are visible throughout the whole trail.

The length of the trail is 6 km; some parts of it can be passed solely on foot.

### **Tourist Trail N4 - Qoshaqar**

To go to Qoshaqar one should turn to South from the second km of the road to Marts, enter the forest and go upwards. Many rare and relict plant species can be found in here. There is a natural observatory, with a view on beautiful Marts valley. All the tree species typical for the forests of Northern Armenia can be found here. There are many fresh springs, as well as many fauna representatives in this area.

Total length of the trail is 5.3 km. It can be passed riding a horse or by all terrain cars.

### **Expected Outcomes of the Project**

The following outcomes are expected from the implementation of the project:

- The visitor information centre built in Dsegh community, will be upgraded with necessary equipment, where the visitors will obtain information on biological diversity, including forests, birds, etc.;
- Four routes with respective infrastructures, signs, touristic shelters, other necessary equipment;

- A group of trained tour guides represented by Dsegh community members for the provision of paid services to visiting tourists;
- Additional source of income for community inhabitants through provision of respective services to tourists, such as rent of horses, tents and pavilions, provision of accommodation, sale of locally grown and prepared food (dairy products, honey, jams etc.) and other services;
- Contacts established with 2-3 tour operators, who will provide visits of tourists to Dsegh to get acquainted with the natural and cultural values of the area and organise their recreation.

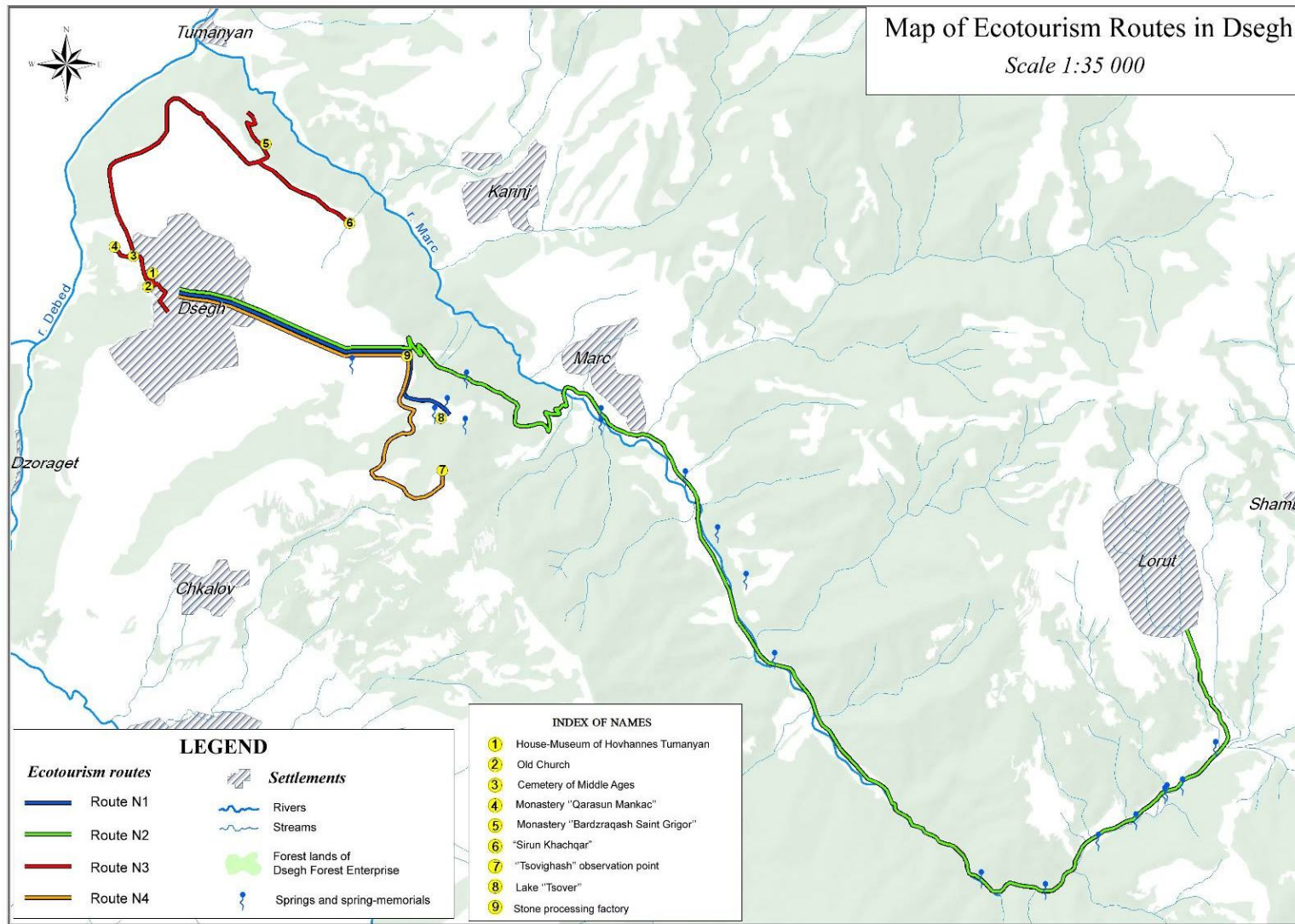
### **Sustainability of the Project**

Dsegh community leader assured community's support in implementation of the pilot project, including provision of workforce, transport and organisational assistance. The community will cover information centre maintenance costs. The conservation and use of "Tsover" area will be included in community's duties. Tourists will hire horses, get accommodation (Bed and Breakfast) and other paid services from community members. The visitor information centre to be still constructed and furnished will be owned by the community provided that the community will use it according to its intended purpose. The equipment and other means procured in the framework of the project will be delivered to the community provided that the community will use it according to its intended purpose.

## Project Activities and Budget

Activity	Budget, USD
<b>Support to visitor centre</b>	
Furniture (table, chair, etc.)	8 708
Equipment (computer, scanner/ printer, beamer, spotting scope)	4300
Stand for printed materials	236
<b>Ecotourism and Ecoroutes</b>	
Trailer at "Tsover" lake (1)	4 621
Tourist shelters at "Tsover" lake (2)	3 513
Tents for visitors (3-4)	980
Necessary items for organization of recreation (plates, cups, bottles, gas-stove, etc.)	800
Small boat for sailing in the lake (2)	900
Garbage bins (4)	950
Information and warning signs (10-15)	4000
Training on ecotourism development	1 000
Stationery for the training	150
Information and eco games	14 842
<b>Total</b>	<b>45000</b>

**Map 1 Proposed Eco-trails in Dsegh Community**



## 5.2 Pilot Project 2. Community Koghb, Tavush Marz of RA

<b>Name of Pilot Project</b>	<b>Establishment of non-wood forest product reception station (collection point) in Koghb Community and ecotourism development aimed at sustainable use of forests and enhancement of community's alternative livelihood</b>
<b>Location</b>	<b>Koghb Community, Tavush Marz of the RA</b>
<b>Budget</b>	<b>32, 959 USD</b>
<b>Duration</b>	<b>6 months</b>

### **Brief Project Description**

The project is targeted at the protection and sustainable use of forests of Koghb community of RA Tavush Marz and its surrounding areas through development of alternatives, which will provide possibilities for alternative income and minimize the pressure on natural resources improving their state at the same time.

Queries and surveys in Koghb community revealed the collection and processing of forest fruit and berry species to be the most profitable and prospective type of forest use (62% of respondents).

Koghb community adjacent forests are rich in forest fruit and berry species typical for Ijevan Floristic Region.

Social-economic needs of community inhabitants have been met mostly through natural resources for ages. Currently non-timber forest products are largely consumed by the community inhabitants mostly for domestic purposes and only a small proportion of yield is marketed to community inhabitants and resellers. The yield frequently gets spoiled due to lack of buyers. One of the solutions, according to the community members, is the establishment of forest fruit and berry reception unit, where the community inhabitants can deliver collected crop and free themselves from the trouble of finding buyers and avoid possible fusses with them.

Queries and surveys in Koghb Community revealed the possibilities of tourism, particularly development of ecotourism and cultural tourism in the community and its surrounding forest areas (33% of the respondents).

### **Project Goal and Objectives**

The Project aims at promoting preservation and sustainable use of Koghb community adjacent forests, providing alternative livelihood and additional income.

The Objectives of the Project are as follows:

- Establish fruit-berry collection point in Koghb community. It should establish contact with the Forest Enterprises of "Hayantar" SNCO and community members to provide legal collection of relevant quantity of non wood forest products. The collection point will provide community members with respective information on distribution and expected yield of forest fruits and berries, as well as demand, marketing price for each species and other issues. A business plan should be prepared for the collection point. Establishment of fruit and berry collection point will release the villagers from the burden of finding buyers and possible deterioration of the crop in case of non-selling. It also will secure additional income.
- Establish information and documentation service at the forest fruit and berry collection point for documentation maintenance and provision of relevant information to the community members. Training on deskwork and accounting will be organized for this purpose.
- Establish tourism infrastructure in Koghb community and neighbouring areas (including information centre, information and warning signs, other necessary equipment, etc.). Visitor program should be developed.
- Organize ecotourism training for community representatives. Secure additional income for the community members against their services for tourists, including guiding through eco trails, provision of horses, accommodation, etc.;
- Publish an information brochure about the non wood forest products and their utilization in the area of Northern Armenia and Koghb particularly.

## **Project Area**

### **Koghb Community**

Koghb community is located in the North-eastern part of the Republic, in former Noyemberyan Region of Tavush Marz, close to Yerevan-Ijevan-Tbilisi main road, at right and left banks of Koghb River. It has 197 km and 57 km distance from Yerevan and Ijevan Marz centre, respectively.

The community has border with Berdavan community lands in the Northeast, with community lands of Noyemberyan in the East, and with forest lands of Noyemberyan Forest Enterprise in the South, Northwest and Southwest. The second plot of the community is bordering with the Republic of Georgia in the North, with the Republic of Azerbaijan in the East, and is regarded as border area.

Koghb is the oldest and biggest community of Noyemberyan Region, as well as of Tavush Marz and has a history of over 1600 years. According to the notes by the Armenian historian Movses Khorenatsi Koghb was famous and being the centre of Koghbapor province and located on the main route Dvin- Tbilisi, it has reached a high level of development in the Middle Ages.

The administrative area of the community is 4663 ha as of 01.01.2006, and is divided into three plots- (I) community adjacent, (II) Ghiasi Qar and (III) Karmir Gyugh.

The total area of agricultural lands is 3380 ha and reserve lands 403 ha. The agricultural lands owned by community inhabitants take up 1013 ha, including 500 ha irrigable (60 ha irrigated in practice). There are 976 ha (including 724 ha privatized) arable lands, 7 ha fruit bearing orchards, 48 ha grape orchards, 355 ha meadows, and 2038 ha pasture lands within the administrative boundaries of the community.

The number of households of the community is 1547 with the population of 5090 (including 2682 male and 2402 female), number of pensioners is 958.

There are two secondary schools (669 pupils, 102 teachers), two kindergartens, two libraries, art centre, medical dispensary, and music and art schools operating within the community. There are also three pharmacies, five barber's shops, eight shops, 60 trade outlets, two offices of technical services and a bakery.

The office of Noyemberyan Forest Enterprise is located in Koghb, and the "Zikatar" Forestry Training Centre is located 8 km from Koghb.

70% of the population is provided with drinking water and there are 8 water reservoirs of various holding capacity (1200 ton altogether). Though the community is entirely gasified, the major part of the population still uses comparatively cheap firewood mainly through self-preparation from the waste in the forest.

Major part of agricultural lands of the community is located within the 2nd plot, 15-20 km distance from the community. Some of these lands are not cultivated as they are border areas, and cereal crops are mainly cultivated in the other part. The level of fertility is low due to lack of irrigation. The average fertility of wheat, grape and potatoes is less than 1, 70 and 150 quintals respectively.

Livestock population has decreased considerably due to difficulties connected with storing forage (the number of registered livestock as of 01.01.2010 is 1170, including 485 cows). The number of pigs has radically decreased in the result of African plague (from 2750 in 2006 to 105 as of 01.01.2010). There are 100 small cattle, 11000 birds, 555 bee-families and 34 horses registered in the community.

According to the data from the village administration, the annual production of milk and meat is 500 and 80 tons respectively, mainly consumed locally. Egg production is 800 000, honey is produced 7-8 tons annually; a part of it is sold in the market.

The community sovkhos was specialized in horticulture during Soviet period; peach, apricot, pear, apple and almond were grown. Average annual production of fruits was 2000 tons, grape- 500 tons, wheat- 200 tons, vegetables – 150 tons, tobacco- 30 tons. In the 1990s, after liquidation of sovkhos economy and land privatization, local inhabitants lost their workplaces. According to the results of the survey carried out within community forest management project (NRMPPR) during

2006-2007, approximately 25% of the total income of the community generates from cattle-raising, 10-15% from farming, 15% from allowances and pensions, 20% from paid labour, 15% from abroad (migrant work and support from those who reside abroad), and 10-15% from forest. The average family income (financial and material) is estimated 70000 AMD.

### **Surrounding Forests and their Alternative Use**

The forests adjacent to Koghb community are located at the altitudes of 550-1700 m above sea level. The main forest forming species are beech, oak, hornbeam, and the accompanying species are oriental hornbeam, lime, ash, maple, forest cherry, pear, apple, Caucasian hackberry, and others. There are many manmade plantations of Greek walnut and pine in the area. Cornelian cherry, dog-rose, hawthorn, dewberry and common medlar are found in the sub-forest.

Firewood is widely used by community members mainly from beech, Caucasian hornbeam and oriental hornbeam. Among non wood forest products collection of medicinal plants is very limited (a main source of income for few households), large number of community inhabitants are involved in bee-keeping (555 bee-families are registered in the community).

Noyemberyan Region of Tavush marz is rich in forest fruit and berry species. According to the forest inventory data of Noyemberyan Forest Enterprise, as well as additional field surveys, the total forest area adjacent to the community as well as of accessible areas is approximately 3133 ha, including 2046 ha bearing fruit and berry species. The expected yield from these species is 138 tons, including Cornelian cherry- 30 tons, dog-rose- 16 tons, blackberry-13 tons, green walnut- 28 tons, dry walnut- 2 tons, pear- 25 tons, apple- 14.5 tons, chestnut- 1.5 tons. Community inhabitants have always utilised the yield; however the utilization was done in a non-systemized manner. The yield (mainly blackberry, green walnut and cornelian cherry) frequently becomes non-qualified for further processing due to lack of buyers and non realisation. According to major part of inhabitants, the solution of the problem is the establishment of forest fruit and berry reception unit, provided with refrigerators and other necessary equipment.

The mentioned quantity of yield is fully sufficient for the establishment of centralised processing factory. Provided that the yield collection is regulated and made available for the community inhabitants, it will provide additional income to the community.

### **Preconditions for Tourism Development**

Koghb community and its neighbouring areas are surrounded with forest covered slopes of Gugarac Mountain that stand out for their raggedness. The climate is moderate, relatively warm. Winters are mild with almost no frost; snow cover does not stay long. The average temperature in January is 0°C, springs are short and rainy, summers are comparatively cool and autumns are mild and long-lasting.

Community adjacent forests have high biodiversity potential, with a number of endemic and relict species. The 800 year old plane tree growing close to the area called “Chinari Dzor” is included in the list of natural monuments of the Republic of Armenia.

Koghb river valley stands out for its unique flora, and perfect preconditions for organisation of recreation and leisure. There are around 30 spring-monuments with comfortable shelters at Koghb river-side.

The community and its surroundings are rich with historical-cultural monuments, such as;

- Aygeghtsi- A church from 6<sup>th</sup> century, reminding a tripartite hall, located 2 km towards Southwest from Koghb community.
- Aygeghtsi- Old village at Koghb riverside.
- Amuriner (Azaplarer)- A cemetery with cross-stones, a holy place, located on Kozman Mountain of Kozman Mountain range towards West from Koghb community.
- Zikatar mountain- The altitude above sea level is 1646 meters. A majestic cone-shape peak of the mountain has a ruling position in the area. It opens up a magnificent view to Big Caucasus and Kur Plain.
- Zikatar ancient settlement- A mausoleum and trails of fortress of 2-1 ages BC were found in this area. “Zikatar Forestry Training Centre” is located in the area, which is the pivot point of one of Zikatar ecotourism trails. The rich material-technical base of the centre will ensure provision of high level services. Besides, the surrounding forest areas of Zikatar Reserve are notable for their high biodiversity potential.
- St. Astvatsatsin Chapel Church (13th century) - Located within the cemetery of the community.
- Mshkavanq Monasterial Complex (12th century) - Located 3 km towards South from the community, on the beautiful forest covered plateau of Gugarac mountain range. The complex is notable for its cross stones and epitaphs. According to specialists, Mshkavanq is one of the best samples of Armenian architecture.
- Vardigeghi St. Gevorg Chapel- church (13th century) - Located 2 km towards Northwest from Koghb community.
- Tvaraeghtsi Church (6th century) - Located 4 km towards Southwest from Koghb community, on the left riverside of Koghb.

### **Proposed Tourist Trails**

All four trails proposed start from the Cultural centre of Koghb community, which also hosts the history museum of the community, art school, and it is worthy to establish the information centre in this building. Community has agreed to allocate a quite comfortable room on the 2nd floor of the cultural centre, as well as to take part in the furnishing of the room and organisational matters.

### **Tourist Trail N1 – “Mshkavanq” area**

The trail starts at Cultural Centre of Koghb, hosting the history museum of the community, continues towards Noyemberyan Forest Enterprise office. Upon reaching the edge of the community, the road leans to left and continues upwards towards the top of forest covered mountain. Mshkavanq- with unique architectural solutions- can be found in a large glade. There are freshwater springs and shelters around the monastery. The area is rich in wild berries (wild pear, wild apple, blackberry, cornelian cherry, dog-rose, medlar, walnut, etc.).

The ancient cemetery with numerous cross stones is located 300 m from the monastery.

The trail is favourable for amateurs of both historical-cultural and recreation tourism. The length of the trail is 4 km. It can be passed on foot, with horse and all-terrain vehicle.

### **Tourist Trail N2 – “Zikatar” Sanctuary**

The trail starts at Cultural Centre of Koghb, continues towards Noyemberyan Forest Enterprise office until the edge of the community. The old village can be found in here, the ruins of the church are present. The crushed stone road continues towards West along the left riverside of Koghb.

“Tvaraeghtsi” dilapidated church is located on the 5<sup>th</sup> km of the route. From the 7<sup>th</sup> km the road turns to left, passes Koghb River and continues upwards towards Zikatar Mountain (peak is 1665m). The Sanctuary with the area of 150 ha and “Zikatar” forestry training regional centre are located on the slope facing North. The centre is equipped with computers, telephone line, has a library and a canteen. It has the best conditions for work and rest. The area is incredibly beautiful. Almost all tree and bush species typical for North-eastern Armenia grow in the area. The old mausoleum of Zikatar is also located in the area.

The length of the trail is 10km. The trail can be passed by all types of transportation.

### **Tourist Trail N3 – “Yew” Groove**

The trail starts at Cultural Centre of Koghb, continues through the main road to Yerevan until the crossroads of Voskevan community, then it turns to left, passes Voskevan and Koti communities and reaches Barekamavan community. 800m towards Southwest from Voskevan community the unique natural population of Bladder nut (*Staphylea pinnata* L.) can be found on the area of one ha. Famous St. Bardzryal chapel is not far from here. Coming back with the same road until Voskevan crossroads, the trail continues till Voskepar community through Yerevan main road. The “Yew” groove is located 3km towards West from Voskepar community, on the right riverside of Koghb. The surroundings are rich with forests of high density.

The famous St. Astvatsatsin church (VI-VII centuries) is situated in the territory of Voskepar community. Ruins of fortress from middle ages (IX- XII Centuries) can be found in the surroundings.

The length of the trail is 50 km. It can be passed by transport means.

#### **Tourist Trail N4 – “Khechqar” Plot**

The trail starts at Cultural Centre of Koghb, continues 6 km through the road to Ayrum train station and then turns to West (500 m) reaching «Hayots Ojakh» restaurant. The plane tree of almost 800 years growing here is registered in the list of nature monuments. There are many spring-monuments in the area, comfortable for organising rest and leisure. The surrounding areas are rich in cornelian cherry. The trail then turns to South and continues until Vardi Guyx plot through forest. St. Gevorg chapel is situated here. Following the forest road, the trail turns to East, to reach Koghb community. The length of the trail is 22 km, It can be passed by all-terrain vehicles.

#### **Expected Outcomes of the Project**

The following outcomes are expected from the implementation of the project:

- Forest fruit and berry reception unit (collection point) will be established in Koghb community with comfortable office for respective deskwork. The staff will be trained in preparing documents and accounting. The Unit will have a business plan. It will provide information to local population on current legal framework of alternative forest use, communication with forest enterprise, as well as distribution of various fruit and berry species and other necessary information;
- Establishment of fruit and berry reception unit will release the villagers from the burden of finding buyers and possible deterioration of the crop in case of non-selling. It also will secure additional income;
- Inhabitants will get precise information on the demand of certain species, their selling price and other issues, before commencing relevant activities;
- Tourist information centre will be established in Koghb community, where the visitors will obtain information on biological diversity, including forests, recreation possibilities, etc.;
- A relevant visitor program will be developed. Community inhabitants will have an additional source of income through provision of respective services for tourists, such as rent of horses, tents and shelters, provision of accommodation, sale of locally grown and prepared food (dairy products, honey, jams etc.);
- Four trails with respective infrastructures, observation points, posters, shelters, other necessary equipment will be established;

- A group of trained tour guides represented by Koghb community members will be formed for the provision of paid services to visiting tourists;
- Information brochure on non wood forest products growing in the Northern Armenia and particularly Koghb area will be published;

### **Support to Project Implementation and Project Sustainability**

The following support to the pilot project will be provided by Koghb community leadership;

- Provision of office area for the establishment of forest fruit and berry reception unit, deskwork and provision of information. Participation in the enhancement of the area and office renovation activities, provision of workforce and transport services.
- Provision of suitable room and some furniture to the information centre in Koghb Art House
- Conservation and use of eco trails will be included in community's duties. Tourists will hire horses, get accommodation and other services from community members.

### **Organisational Matters**

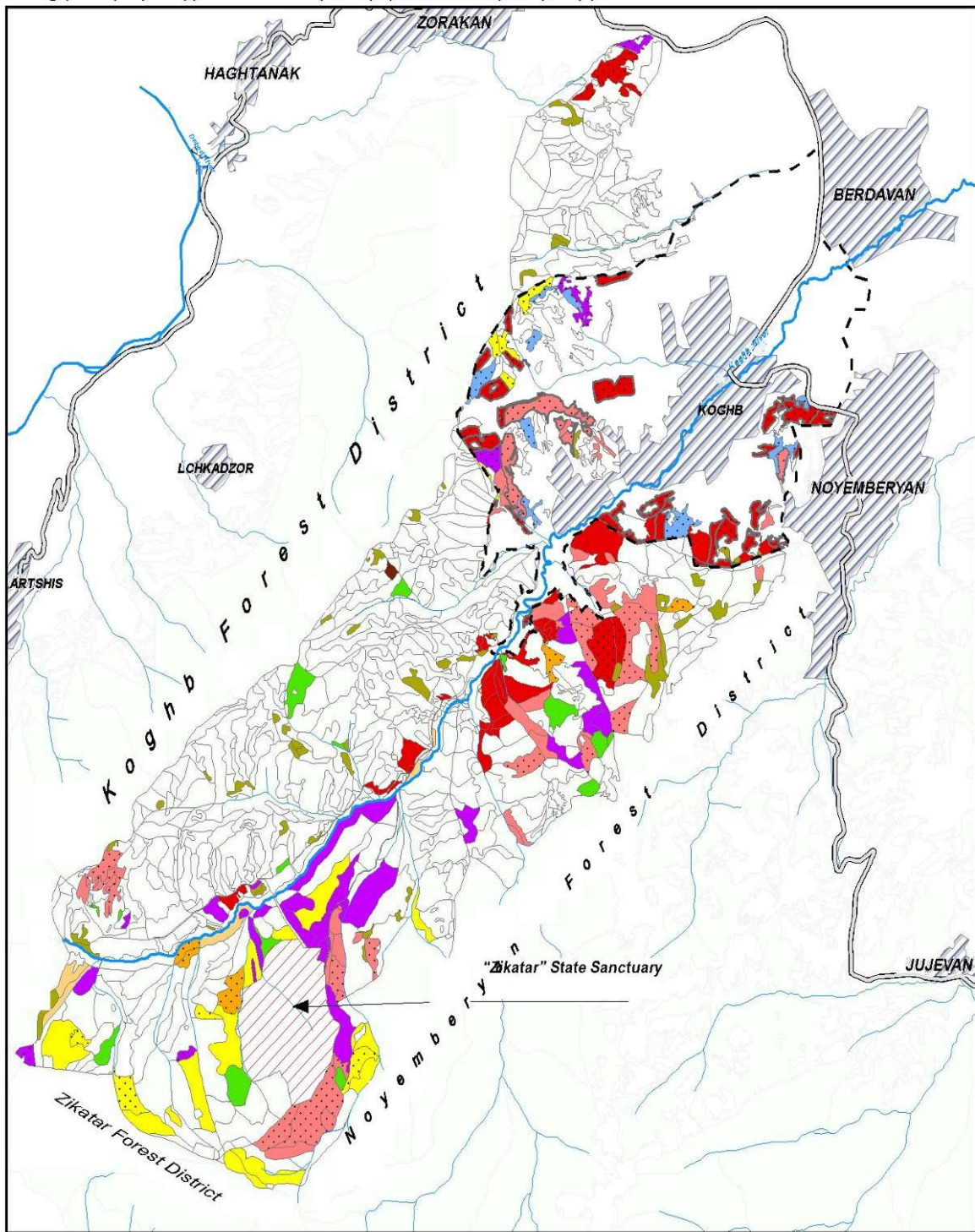
The collection point will be leased from a private person without payment with the purpose to use it by the community. The management of the collection point will be implemented by Koghb community through "Mshkavanq" community organization. The founder and owner of the "Mshkavanq" LTD is Koghb community.

The information centre area is owned by the community. It needs renovation, furnishing and equipment. All the equipment procured for the collection point and information centre in the framework of the Project will be donated to the community.

**Table 4 Project Activities and Budget**

	Activities	Budget (in USD)
<b>1</b>	<b>Establishment of collection point and information centre</b>	
	Development of business plan for collection point	1600
	Development of visitor program	1500
	Renovation of collection point and information centre, installation of sewage system	4750
	Furnishing collection point and information centre (table, chair, etc.)	4109
	Procurement of equipment for the collection point and information centre (computer, scanner, etc.)	4400
	Procurement of barrels and wooden boxes for the collection point	1400
	Procurement of tents (3-4)	980
	A small boat for tours in artificial lake (1)	800
	Preparation and installation of signs (10)	2770
	Garbage bins (4)	950
<b>2</b>	<b>Trainings and publications</b>	
	Training on deskwork and bookkeeping	1250
	Training on ecotourism development	1 250
	Preparation and publication of brochure	7004
	Stationery for trainings	196
	<b>TOTAL</b>	<b>32 959</b>

**Map 1** Areas with Presence of Non Wood Forest Products Used by Koghb Community Inhabitants



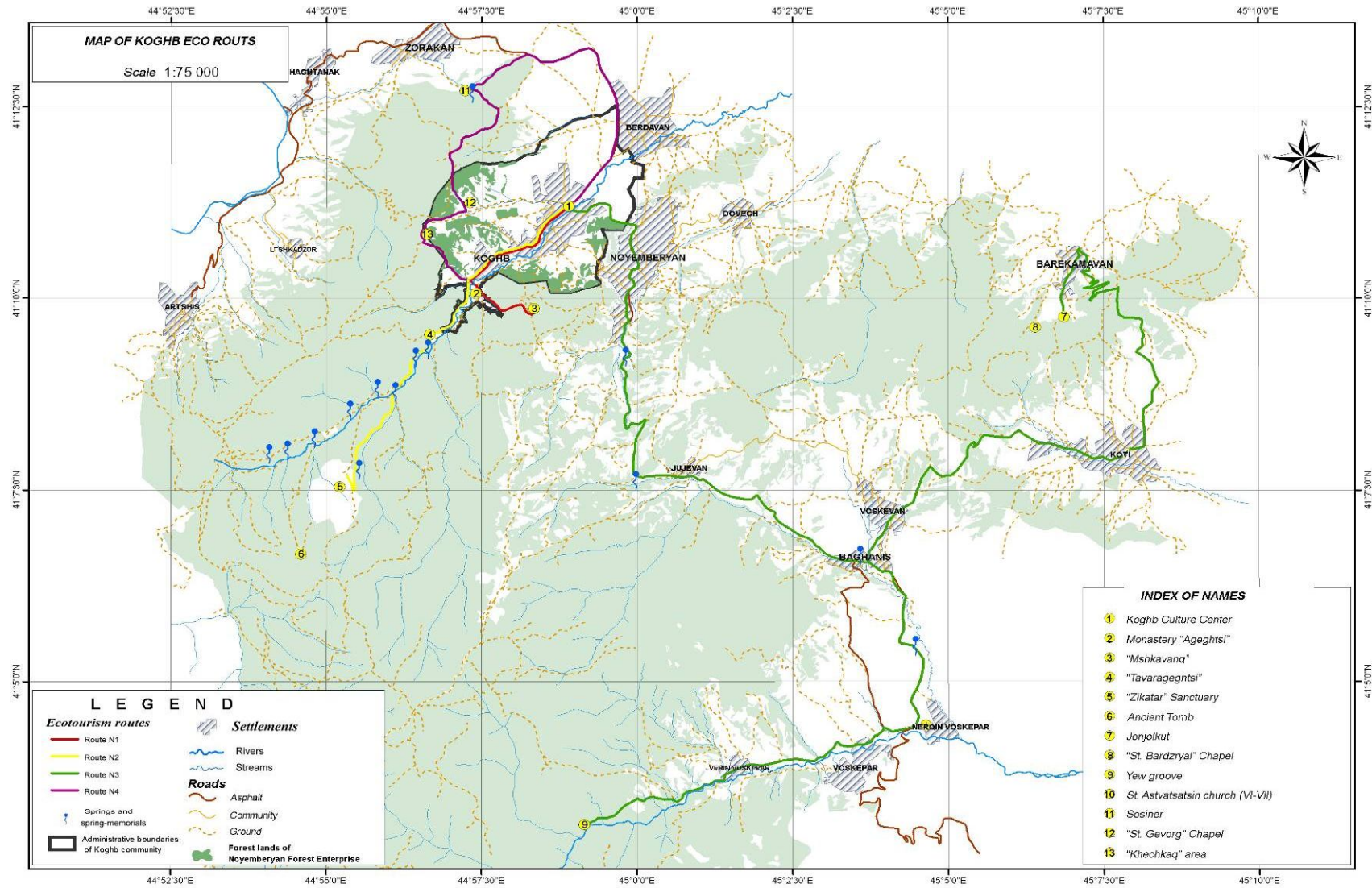
**LEGEND**

- Administrative boundaries of Koghb Community
- Settlements
- Roads
- Rivers
- Streams
- Forest compartments

**Fruit and berry species**

- |                  |   |
|------------------|---|
| Cornelian cherry | Mixed, with dominance of cornelian cherry |
| Rose             | Mixed, with dominance of rose             |
| Walnut           | Mixed, with dominance of blackberry       |
| Blackberry       | Mixed, with dominance of walnut           |
| Chestnut         | Mixed, with dominance of hawthorn         |
| Hazelnut         | Mixed, with dominance of pear             |
| Pear             | Mixed, with dominance of medlar           |
| Apple            |   |

Map 2. Proposed Eco-Trails in Koghb Community Area



# ANNEXES

**Annex 1 Access to non-wood forest resources by private sector and the ways of its enhancement**

**Questionnaire**

**1. Which types of secondary forest use are significant for the private sector?**

- a) Haymaking
- b) Grazing
- c) Collection of fruits and berries
- d) Collection of mushrooms
- e) Bee-keeping
- f) Collection of medicinal plants
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)
- h) Other .....

**2. Please, mention the types of secondary forest use you would like to obtain more information on.**

- a) Haymaking
- b) Grazing
- c) Collection of fruits and berries
- d) Collection of mushrooms
- e) Bee-keeping
- f) Collection of medicinal plants
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)
- h) Other .....

**3. Are you familiar with the legislation on secondary forest use?**

- a) Yes
- b) No

**4. Which type of forest use does your company apply?**

- a) Haymaking
- b) Grazing
- c) Collection of fruits and berries
- d) Collection of mushrooms
- e) Bee-keeping
- f) Collection of medicinal plants
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)
- h) Other .....

**5. Which types of non-wood forest products do you use /secondary forest use you apply?**

- a) Fruit- berries
- b) Organization of recreation, tourism
- c) Mushrooms
- d) Medicinal plants
- e) Other .....

**6. What is the origin of the non-wood forest products used in your industry?**

- a) Local
- b) Imported from outside

**7. Where do you collect non-wood forest products used in your industry?**

- a) Mainly from the forests of Armenia
- b) Grown in the communities
- c) Other .....

**8. From which marzes do you harvest non wood forest products you need, please justify.**

.....  
 .....

**9. Do you think that the harvest form different forests have different qualitative characteristics?**

- a) Yes
- b) No
- c) Other

**10. What are the obstacles in the field of acquirement of non wood forest products (organization of recreation and tourism, secondary forest use)?**

- a) Legislative
- b) Fiscal and organizational
- c) Lack of information
- d) Beaucroatic
- e) Lack of user market
- f) Poor developed infrastructures

**11. Please, describe the obstacles, if any.**

.....  
 .....

**12. What are the obstacles in the sphere of use of secondary forest products in the industry?**

- a) Legislative
- b) Fiscal and organizational
- c) Lack of information
- d) Beaucroatic
- e) Lack of user market
- f) Poor developed infrastructures

**13. Do you cooperate with the Forest Enterprise (National Park), and what type of cooperation is that?**

- a) Yes
- b) No

Type of cooperation .....

**14. Do you pay the Forest Enterprise (National Park) for secondary forest use?**

- a) Yes
- b) No

- 15. Does the Forest Enterprise (National Park) provide information on non-wood forest products you need?**
- a) Yes
- b) No
- 16. How can the level of secondary forest use be enhanced within the private sector?**
- a) Through tax reforms
- b) Improved procedures
- c) Provision of information
- d) Other .....
- 17. How do you consume your production from non wood forest products harvested from the forests of Armenia?**
- a) In the domestic market
- b) In the external market
- 18. How do you assess the participation/ supervision by state (Forest Enterprise, National Park) and local bodies in the sphere of secondary forest use?**
- a) Satisfactory
- b) Non- satisfactory
- 19. If you chose answer (b) of the Question No 18, please, explain the reasons and enhancement methods.**
- .....
- .....
- 20. Do you cooperate with community members?**
- a) Yes
- b) No
- 21. If you chose answer (a) of the Question No 20, please mention the way of cooperation.**
- a) Community members are involved as permanent workers
- b) Organisation of harvesting
- c) Cooperation with community organisations
- d) Other .....
- 22. Does your company cause any damage to forest during its use?**
- a) Yes
- b) No
- c) Don't know
- 23. Does your company implement improvement measures to forest during its use?**
- a) Yes
- b) No
- c) Other

**24. Is there a need to improve the accessibility of non wood forest products for your company and how can that be done?**

.....  
.....

**25. How can the private sector of secondary forest use be improved?**

- a) Tax reforms
- b) Improvement of proceedings
- c) Provision of information
- d) Establishment of new markets
- e) Other .....

*Sphere of activity of the private entity .....*

*(Conservation factory, processing factory, company of organisation of recreation, etc.)*

*Position within the company .....*

*Marz .....*

## Annex 2 Access to wood forest resources by private sector and the ways of its enhancement

### Questionnaire

1. Legal status of the private sector (CJSC, LTD, private entrepreneur, etc.):  
.....
2. Approximate quantity of timber acquired by your entity for further processing during last two years (construction wood, technological wood).  
.....
3. Please, list the main assortment produced. ....
4. Are you equipped with professionals necessary for the organization of production?  
.....
5. What is the proportion of production capacities used?  
.....
6. Where do you get the timber for processing?  
.....
7. Please, list the types of timber used by your entity (in %).  
.....
8. Are you familiar with the regulation on timber harvesting within the Forest Enterprise area?  
.....
9. Your opinion on the current prices of timber for further processing (by assortment).  
.....
10. Are you aware of the fines defined for illegal loggings?  
.....
11. Please, mention the problems connected with acquisition of timber for further processing.  
.....
12. Are you informed about the regulation on the auctioning of cutting areas and if so, would you like to take part in auctioning?  
.....
13. Your proposals on making timber more available for the private sector and increasing production capacities.

**Annex 3 Access to Wood and Non Wood Forest Resources for Local Population and  
Ways to Decrease the Pressure on Resources**

**Questionnaire**

**1. Which of the below-mentioned secondary forest uses is applied in the forests of your community?**

- a) Haymaking 0
- b) Grazing 0
- c) Collection of fruits and berries 0
- d) Collection of mushrooms 0
- e) Bee-keeping 0
- f) Collection of medicinal plants 0
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.) 0
- h) Other ..... 0

**2. What is the purpose of secondary forest use applied by you?**

- a) Personal consumption 0
- b) Realization in domestic market 0
- c) Harvest to respective specialized entities (conserve factory, processing factories, etc.) 0

**3. Are you familiar with the legislation and proceedings on secondary forest use?**

- a) Yes 0
- b) No 0

**4. Which type of secondary forest use can be profitable for your community?**

- a) Haymaking 0
- b) Grazing 0
- c) Collection of fruits and berries 0
- d) Collection of mushrooms 0
- e) Bee-keeping 0
- f) Collection of medicinal plants 0
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.) 0
- h) Other ..... 0

**5. Do you pay the Forest Enterprise for secondary forest use?**

- a) Yes 0
- b) No 0
- c) Other .....

**6. What is the proportion of income from secondary forest use in the overall family budget?**

- a) < 10% 0
- b) 10-30% 0
- c) 30-50% 0
- d) 50% > 0

**7. What are the obstacles in the field secondary forest use (please, describe)?**

- a) Legislative 0
- b) Realisation 0
- c) Lack of respective knowledge and skills 0
- d) No obstacles 0
- e) Description of the obstacle .....

**8. Do you have permission for realization/marketing of non-wood forest products?**

- a) Yes 0
- b) No 0
- c) Other .....

**9. What is the approximate quantity of non wood forest product do you harvest in one season (in kg)?**

.....

**10. Mention the type of secondary forest use you apply and the price per kg.**

.....  
.....

**11. How do you realize the non wood forest products harvested?**

- a) Personally 0
- b) Delivery to private entities 0
- c) Market to private entities 0
- d) Use for personal consumption 0
- e) Other .....

**12. Would you like to cooperate with the Forest Enterprise office, if the current income from forest is stable?**

- a) Yes 0
- b) No 0

**13. What kind of damage does the harvesting of non wood forest products cause to the forest?**

- a) Damage to trees and branches 0
- b) Damage to young growth 0
- c) Obstacle to seed regeneration 0
- d) Damage to flora and fauna 0
- e) .....

**14. Are there fruit-berry processing entities operating within your community?**

- a) Yes 0
- b) No 0

**15. How can the secondary forest use be promoted in the communities?**

- a) Through increase of level of public awareness on secondary forest use (publication of booklets, cognitive materials, organisation of seminars, etc.) 0

- b) Establishment of processing and conserving factories within the communities
- c) Allocation of state subsidies (preferential loans, tax privileges, etc.)
- d) Other .....

**16. Which types of secondary forest use have increased in volume during the last two decades?**

- a) Haymaking
- b) Grazing
- c) Collection of fruits and berries
- d) Collection of mushrooms
- e) Bee-keeping
- f) Collection of medicinal plants
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)
- h) Other .....

**17. Which types of secondary forest use have decreased in volume during the last two decades?**

- a) Haymaking
- b) Grazing
- c) Collection of fruits and berries
- d) Collection of mushrooms
- e) Bee-keeping
- f) Collection of medicinal plants
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)
- h) Other .....

**18. Mention the reasons of decrease of the volume of secondary forest use.**

- a) Financial
- b) Reduction of respective species
- c) Lack of knowledge and skills
- d) Other .....

**19. Who has to implement secondary forest use in the communities?**

- a) Forest Enterprise
- b) Community inhabitants
- c) Specialised community entities
- d) Private entities

**20. Does the community implement any measures aimed at rational use of forest resources?**

- a) Yes
- b) No

**21. If you chose answer (a) of the Question No 20, please list the measures implemented.**

.....  
 .....

**22. How much firewood does your family use annually?**

.....

**23. Where do you get firewood from?**

- a) From forest 0
- b) Purchase from the Forest Enterprise 0
- c) Purchase from private persons 0
- d) Other ..... 0

**24. Do you damage the forest when harvesting firewood?**

- a) Yes 0
- b) No 0
- c) Don't know 0
- d) Other 0

**25. How much do you pay for 1m<sup>3</sup> firewood?**

- a) ..... 0
- b) I do not pay 0

**26. What do you think, what is the proportion of community inhabitants, taking firewood from forest free of charge?**

.....

**27. Which are the tree species mostly used as firewood and why?**

.....  
.....

**28. What is the proportion of population (in %) that cuts construction wood for selling?**

.....

**29. How do you realize harvested construction wood?**

- a) To private wood processing entities 0
- b) Other 0

**30. Which are the tree species mostly used as construction wood?**

.....

**31. What do you think, how can the illegal use of firewood /construction wood be decreased in the community?**

- a) Create alternative sources of income 0
- b) Provide alternative firewood, e.g. gas 0
- c) Increase public awareness 0
- d) Other 0

**32. How would you assess the current status of forest preservation in your community?**

- a) Good 0
- b) Satisfactory 0
- c) Non-satisfactory 0

**33. What do you think, how can the current state of the forest be improved?**

- a) Increase supervision by Forest Enterprise 0
- b) Increase the number of forest guards 0
- c) Decrease use of construction wood/ firewood 0
- d) Implement forest regeneration measures in cut areas 0
- e) Other .....

**34. What do you think, is the use of forest resources rational?**

- a) Yes 0
- b) No 0
- c) Don't know 0
- d) Other .....

**35. What do you think, what is necessary for rational use of forest resources?**

- a) Organised use, according to the Law 0
- b) Training /increase of knowledge on rational use of forest resources 0
- c) Cooperation with the Forest Enterprise 0
- d) Other .....

**36. Apart from the above mentioned types of secondary forest use, what other possibilities are there in your community?**

.....

*Community, Marz* .....

*Age* .....

*Sex* .....

*Education* .....

## Annex 4 Results from the survey in Kogh Community

### 1. Which of the below-mentioned secondary forest uses is applies in the forests of your community?

a) Haymaking	16%
b) Grazing	19%
c) Collection of fruits and berries	48%
d) Collection of mushrooms	2%
e) Bee-keeping	7%
f) Collection of medicinal plants	0%
g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)	8%
h) Other .....	

### 2. What is the purpose of your secondary forest use?

a) Personal needs	52%
b) Realization in domestic market	32%
c) Harvest to respective specialized entities (conserve factory, processing factories, etc.)	8%
d) No reply	8%

### 3. Are you familiar with the legislation and proceedings on secondary forest use?

a) Yes	11%
b) No	89%

### 4. Which type of secondary forest use can be profitable for your community?

a) Haymaking	0%
b) Grazing	3%
c) Collection of fruits and berries	62%
d) Collection of mushrooms	0%
e) Bee-keeping	7%
f) Collection of medicinal plants	4%
g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)	24%
h) No reply	11%

### 5. Do you pay the Forest Enterprise for secondary forest use?

a) Yes	0%
b) No	100%
c) Other	0%

### 6. What is the proportion of income from secondary forest use in the overall family budget?

a) < 10%	50%
b) 10-30%	28%
c) 30-50%	9%
d) 50% >	0%
e) No reply or 0	13%

### 7. What are the obstacles in the field secondary forest use (please, describe)?

- a) Legislative 8%
- b) Realisation 52%
- c) Lack of respective knowledge and skills 0%
- d) Lack of respective areas and information 18%
- e) No obstacles 22%
- f) Other .....
- g) Description of the obstacle .....

**8. Are there fruit-berry processing entities operating in your community?**

- a) Yes 92%, however, not operating in the last 1-2 years
- b) No 8%

**9. How can the secondary forest use be promoted in the communities?**

- a) Through increase of level of public awareness on secondary forest use (publication of booklets, cognitive materials, organisation of seminars, etc.) 9%
- b) Establishment of processing and conserving factories within the communities, and fruit- berry reception points 62%
- c) Allocation of state subsidies (preferential loans, tax privileges, etc.) 23%
- d) No reply 6%
- e) Other .....

**10. Which types of secondary forest use have increased in volume during the last five years?**

- a) Haymaking 0%
- b) Grazing 5 %
- c) Collection of fruits and berries 30%
- d) Collection of mushrooms 2%
- e) Bee-keeping 0%
- f) Collection of medicinal plants 4%
- g) Recreational forest use (establishment of recreational zones/ improvement of areas surrounding springs, creation of conditions for recreation, tourism, ecotourism, etc.) 15%
- h) No reply 44%
- i) Other .....

**11. Which types of secondary forest use have decreased in volume during the last five years?**

- a) Haymaking 26%
- b) Grazing 16%
- c) Collection of fruits and berries 5%
- d) Collection of mushrooms 0%
- e) Bee-keeping 8%
- f) Collection of medicinal plants 2%
- g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.) 3%
- h) No reply 46%
- i) Other .....

**12. Mention the reasons of decrease of secondary forest use.**

- a) Financial 52%
- b) Decrease of respective species 6%
- c) Lack of knowledge and skills 14%
- d) No reply 28%

**13. Who has to implement secondary forest use in the communities?**

- |  |     |
|--|-----|
| a) Forest Enterprise                                   | 12% |
| b) Community inhabitants                               | 62% |
| c) Specialised community entities and private entities | 20% |
| d) No reply  | 6%  |

**14. Does the community implement any measures aimed at rational use of forest resources?**

- |             |     |
|-------------|-----|
| a) Yes      | 5%  |
| b) No       | 81% |
| c) No reply | 14% |

**15. If you chose answer (a) of the Question No 20, please list the measures implemented.**

Establishment of the forest orchard in the administrative area of the community

**16. How much firewood does your family use annually?**

- |                               |     |
|-------------------------------|-----|
| a) Up to 4m <sup>3</sup>      | 8%  |
| b) 5-6 m <sup>3</sup>         | 20% |
| c) 7-8 m <sup>3</sup>         | 46% |
| d) 9-10 m <sup>3</sup>        | 12% |
| e) 10 m <sup>3</sup> and more | 6%  |
| f) No use                     | 8%  |

**17. Where do you get firewood from?**

- |  |     |
|--|-----|
| a) Purchase from the Forest Enterprise | 34% |
| b) Purchase from private persons       | 28% |
| c) From forest without documents       | 18% |
| d) No reply                            | 19% |
| e) Other .....                         |     |

**18. Do you damage the forest when taking firewood?**

- |             |     |
|-------------|-----|
| a) Yes      | 13% |
| b) No       | 75% |
| c) No reply | 12% |

**19. What kind of damage is caused to the forest when harvesting firewood?**

- |  |     |
|--|-----|
| a) Tree cutting  | 12% |
| b) Damage to young growth when transporting the firewood | 5%  |
| c) Damage to flora and fauna                             | 0%  |
| d) No damage is caused                                   | 64% |
| e) No reply  | 19% |

**20. How much do you pay for 1m<sup>3</sup> firewood?**

- |                  |      |
|------------------|------|
| a) 1200 AMD      | 32 % |
| b) 5000-7000 AMD | 41 % |
| c) I do not pay  | 11%  |

d) No reply 18%

**21. What do you think, what is the proportion of community inhabitants, taking firewood from forest illegally?**

a) Up to 10%	18%
b) 11-20%	30%
c) 21-30%	16%
d) 31-40%	8%
e) 41-50%	2%
f) 50%-and more	0%
g) No reply	26%
h) Average	17.7%

**22. What do you think, where do the inhabitants get firewood from?**

a) Standing trees	12%
b) Waste	77%
c) No reply	11%

**23. Which tree species are mostly used as firewood?**

a) Beech	25%
b) Oak	5%
c) Hornbeam, Oriental hornbeam	59%
d) Other species	0%
e) No reply	11%

**24. What do you think, how many community members do cut construction wood for commercial gain?**

a) Up to 10	24%
b) 11-20	10%
c) 21-30	0%
d) No reply	66%

**25. How is the harvested construction wood realized?**

a) To private wood processing entities	62%
b) No reply	38%

**26. Which tree species are mostly used as construction wood?**

a) Beech	70%
b) Oak	12%
c) Pine	4%
d) Other species (lime, maple)	2%
e) No reply	12%

**27. What do you think, how can the illegal use of firewood /construction wood be decreased in your community?**

a) Create alternative sources of income	53%
b) Provide alternative firewood, e.g. gas	6%

- c) Increase public awareness on the damage to environment from illegal cuttings 14%
- d) Other (reduction of current prices for gas and electro energy) 11%
- e) No reply 16%

**28. How would you assess the current state of forest preservation in the community adjacent forests?**

- a) Good 19%
- b) Satisfactory 35%
- c) Non satisfactory 23%
- d) No reply/ don't know 23%

**29. How can the state of the forest be improved?**

- a) Through increase of supervision by Forest Enterprise 21%
- b) Increase motivation (material) of forest guards 28%
- c) Rehabilitation of cut areas 18%
- d) Awareness raising among inhabitants 18%
- e) Other (active involvement of community inhabitants in forest preservation activities, organisation of joint check-outs, etc.) 8%
- f) No reply/ Don't know 16%

**30. What do you think, does the management of forest resources correspond to the requirements of forest legislation?**

- a) Yes 13%
- b) No 22%
- c) Don't know 65%

**31. Which of the below-mentioned types of alternative forest use is more profitable and prospective for the community?**

- a) Organisation of tourism and ecotourism 26%
- b) Collection and processing of forest fruits and berries 62%
- c) Difficult to answer 12%

## Annex 5 Results from the survey in Dsegh Community

### 1. Which of the below-mentioned secondary forest uses is applies in the forests of your community?

a) Haymaking	10%
b) Grazing	18%
c) Collection of fruits and berries	29%
d) Collection of mushrooms	3%
e) Bee-keeping	10%
f) Collection of medicinal plants	3%
g) Recreational forest use (establishment of recreational zones, tourism (in particular establishment of springs in Marts River basin, amateur fishing, ecotourism, etc.)	19%
h) No reply	8%

### 2. What is the purpose of your secondary forest use?

a) Personal consumption	54%
b) Realization in domestic market	27%
c) Harvest to respective specialized entities (conserve factory, processing factories, etc.)	5%
d) No reply	14%

### 3. Are you familiar with the legislation and proceedings on secondary forest use?

a) Yes	4%
b) No	96%

### 4. Which type of secondary forest use can be profitable for your community?

a) Haymaking	3%
b) Grazing	10%
c) Collection of fruits and berries	21%
d) Collection of mushrooms	3%
e) Bee-keeping	12%
f) Collection of medicinal plants	3%
g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.)	41%
h) No reply	7%

### 5. Do you pay the Forest Enterprise for secondary forest use?

a) Yes	0%
b) No	100%
c) Other	0%

### 6. What is the proportion of income from secondary forest use in the overall family budget?

a) < 10%	46%
b) 10-30%	42%
c) 30-50%	10%
d) 50% >	2%
e) No reply or 0	2%

**7. What are the obstacles in the field secondary forest use (please, describe)?**

- |   |     |
|---|-----|
| a) Legislative  | 10% |
| b) Realisation  | 65% |
| c) Lack of respective knowledge and skills  | 0%  |
| d) Lack of respective areas and information   | 7%  |
| e) No obstacles   | 18% |
| f) Other .....  |     |
| g) Description of the obstacle - mainly connected with renting forest areas, delays, difficulties, etc. |     |

**8. Are there fruit-berry processing entities operating in your community?**

- |        |      |
|--------|------|
| a) Yes | 0%   |
| b) No  | 100% |

**9. How can the secondary forest use be promoted in the communities?**

- |   |     |
|---|-----|
| a) Through increase of level of public awareness on secondary forest use (publication of booklets, cognitive materials, organisation of seminars, etc.) | 7%  |
| b) Establishment of processing and conserving factories within the communities, and fruit- berry reception points                                       | 46% |
| c) Allocation of state subsidies (preferential loans, tax privileges, etc.)   | 40% |
| d) Other .....  |     |
| e) No reply   | 7%  |

**10. Which types of secondary forest use have increased in volume during the last five years?**

- |  |     |
|--|-----|
| a) Haymaking   | 0%  |
| b) Grazing   | 0 % |
| c) Collection of fruits and berries  | 16% |
| d) Collection of mushrooms   | 0%  |
| e) Bee-keeping   | 14% |
| f) Collection of medicinal plants  | 3%  |
| g) Recreational forest use (establishment of recreational zones/ improvement of areas surrounding springs, creation of conditions for recreation, tourism, ecotourism, etc.) | 23% |
| h) Other .....   |     |
| i) No reply  | 34% |

**11. Which types of secondary forest use have decreased in volume during the last five years?**

- |   |     |
|---|-----|
| a) Haymaking  | 16% |
| b) Grazing  | 8%  |
| c) Collection of fruits and berries   | 0%  |
| d) Collection of mushrooms  | 0%  |
| e) Bee-keeping  | 4%  |
| f) Collection of medicinal plants   | 0%  |
| g) Recreational forest use (establishment of recreational zones, tourism, ecotourism, etc.) | 0%  |
| h) Other .....  |     |
| i) No reply   | 72% |

**12. Mention the reasons of decrease of secondary forest use.**

- |              |     |
|--------------|-----|
| a) Financial | 32% |
|--------------|-----|

- b) Decrease of respective species 18%
- c) No reply 50%

**13. Who has to implement secondary forest use in the communities?**

- a) Forest Enterprise 6%
- b) Community inhabitants 70%
- c) Specialised community entities and private entities 10%
- d) No reply 14%

**14. Does the community implement any measures aimed at rational use of forest resources?**

- a) Yes 5%
- b) No 67%
- c) No reply 28%

**15. If you chose answer (a) of the Question No 20, please list the measures implemented.**

No comments

**16. How much firewood does your family use annually?**

- a) Up to 4m<sup>3</sup> 6%
- b) 5-6 m<sup>3</sup> 20 %
- c) 7-8 m<sup>3</sup> 32%
- d) 9-10 m<sup>3</sup> 20%
- e) 10 m<sup>3</sup> and more 12%
- f) Does not use 3 %

**17. Where do you get firewood from?**

- a) Purchase from the Forest Enterprise 22%
- b) Purchase from private persons 39%
- c) From forest without documents 23%
- d) No reply 16%

**18. Do you damage the forest when taking firewood?**

- a) Yes 20%
- b) No 62%
- c) No reply 18%

**19. What kind of damage is caused to the forest when harvesting firewood?**

- a) Tree cutting 25%
- b) Damage to young growth when transporting the firewood 6%
- c) Damage to flora and fauna 0%
- d) No damage is caused 57%
- e) No reply 22%

**20. How much do you pay for 1m<sup>3</sup> firewood?**

- a) 1200 AMD 31%
- b) 5000-7000 AMD 50 %

c) I do not pay 19%

**21. What do you think, what is the proportion of community inhabitants, taking firewood from forest illegally?**

a) Up to 10% 3%  
b) 11-20% 25%  
c) 31-40% 20%  
d) 41-50% 12%  
e) 50%-and more 3%  
f) No reply 11%  
g) Average 29.8%

**22. What do you think, where do the inhabitants get firewood illegally from?**

a) Non-authorized cuttings 29%  
b) Waste 63%  
c) No reply 8%

**23. Which tree species are mostly used as firewood?**

a) Beech 20%  
b) Oak 14%  
c) Hornbeam 60%  
d) Other species 0%  
e) No reply 6%

**24. What do you think, how many community members do cut construction wood for marketing?**

a) Up to 10 32%  
b) 11-20 15%  
c) 21-30 5%  
d) 30 and more 0%  
e) No reply 48%

**25. How is the harvested construction wood realized?**

a) to private wood processing entities 71%  
b) no reply 29%

**26. Which tree species are mostly used as construction wood?**

a) Beech 62%  
b) Oak 20%  
c) Pine 3%  
d) Lime 3%  
e) Other species 2%  
f) No reply 10%

**27. What do you think, how can the illegal use of firewood /construction wood be decreased in your community?**

a) Create alternative sources of income 44%  
b) Provide alternative firewood, e.g. gas 10%

- c) Increase public awareness on the damage to environment from illegal cuttings 14%
- d) Other (reduction of current prices for gas and electro energy) 18%
- e) No reply 14%

**28. How would you assess the current state of forest preservation in the community adjacent forests?**

- a) Good 5%
- b) Satisfactory 23%
- c) Non satisfactory 48%
- d) No reply 24%

**29. How can the state of the forest be improved?**

- a) Through increase of supervision by Forest Enterprise 31%
- b) Increase motivation (material) of forest guards 34%
- c) Rehabilitation of cut areas 16%
- d) Other ..... 19%
- e) No reply/ Don't know 19%

**30. What do you think, does the management of forest resources correspond to the requirements of forest legislation?**

- a) Yes 3%
- b) No 31%
- c) Don't know 66%

**31. Which of the below-mentioned types of alternative forest use is more profitable and prospective for the community?**

- a) Organisation of tourism and ecotourism 62%
- b) Collection and processing of forest fruits and berries 31%
- c) Difficult to answer 7%

## **6 REFERENCES**

1. RA Forest Code, 2005
2. RA Law on Specially Protected Nature Areas, 2006
3. Forest Management Plan for Dsegh Forest Enterprise, 2009
4. Forest Management Plan for Noyemberyan Forest Enterprise, 2007
5. Draft Community Forest Management Plans for Koghb, Jujevan, Voskevan, Dsegh, Margahovit and Lernapat Communities (2006-2009)