

## Project Proposal

### Project for Apiculture Development and Improving/Ensuring Marketing of Apiculture Products



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Country	Georgia		
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## Preface

This Project is a continuation of the feasibility study that showed that the establishment of a beekeepers association in Javakheti National Park's support zone is feasible and beneficial to the residents of the zone and the Park as such.

The Project represents the component of Establishment Javakheti National Park in Georgia Project, and it aims towards providing assistance to the beekeepers of the support zone (villages: Sulda, Miasnikiani, Bozali, Dadeshi, Kartsakhi, Filipovka, Patara Khanchali, Efremovka, Zhdanovi and Sameba) in increasing the production volume and sale of products, as well as in improving its quality. The Project also implies awareness raising among the beekeepers of the support zone on modern apiculture technologies: production and bee care (modern means for prevention and treatment of diseases without affecting the product quality or bee health and the resilience of bee colonies). Besides, the Project also implies raising the awareness of the support zone non\_beekeeper dwellers on the healthcare characteristics of api products and the impact of their anthropological activities to the environment.

The mission of the Project is to improve the professional and entrepreneurial skills of the beekeepers in the Project implementation zone as a way toward additional income generation and attainment of environmental sustainability. With this purpose, the following activities are considered:

- Establishing the Beekeepers' Association;
- Organising trainings for the beekeepers;
- Provision of api product processing and packaging technical equipment to the Beekeepers' Association
- Empowering marketing potential of the api products;
- Introduction of a three year business plan of Association operation.

All above listed activities were determined on basis of the needs identified during the feasibility study and, according to the local beekeepers that will provide very significant assistance to them. These activities are derived from and contribute to the overall goal and objectives of the establishment of the national park and the strategy for support zone development such as sound economic growth, environmental awareness, promotion of the Park as such. The priorities and benefits are in full compliance with the support zone beekeepers' needs and their future goals. There is strong commitment of the beekeepers for a success of the project which will significantly contribute to the sustainability of the intervention.

The Project implementation methodology and specificity allows taking into consideration the opinions of the beneficiaries and using the third party contributions with the view of achieving the maximum success.

## 1. Project's Primary Information and Trend Analysis

The background information reflects the results of feasibility study that has been carried out in November, 2011 by the order of World Wide Fund for Nature Germany in Georgia.

### 1.1. Project Implementation Area

The Project area covers 7 villages located in Javakheti National Park Support Zone, in which, along with plant production and cattle-breeding, apiculture represents one of the major types of activity. The mentioned villages in aggregate have population of 4,074, with 1,596 households (see Table 1).

Table 1

<b>Village</b>	<b>Population</b>	<b>Households</b>
Sulda	1100	505
Miasnikiani	140	42
Bozali	206	75
Dadeshi	885	386
Kartsakhi	987	300
Filopovka	73	25
Patara Khanchali	683	263
<b>Total</b>	<b>4074</b>	<b>1596</b>

## 1.2. Level and Scale of Apiculture

Based on the preliminary study, 95 beekeepers were identified in 7 villages. Distribution of the beekeepers by villages is given in Table 2.

Table 2

<b>Village</b>	<b>Scale of Apiculture</b>					<b>Total</b>
	<b>Micro &lt;5</b>	<b>Small 5&lt; &gt;10</b>	<b>Medium 10&lt; &gt;20</b>	<b>Large 20&lt; &gt;40</b>	<b>Strong &gt;50</b>	
Sulda	4	2	3	3	2	14
Miasnikiani	2	1	0	2	1	6
Bozali	3	2	0	2	2	9
Dadeshi	5	6	3	3	4	21
Kartsakhi	3	0	0	0	0	3
Filopovka	11	6	5	5	4	31
P. Khanchali	3	5	1	1	1	11
<b>Total</b>	<b>31</b>	<b>22</b>	<b>12</b>	<b>16</b>	<b>14</b>	<b>95</b>

As Table shows, the majority of interviewed persons are micro beekeepers (hives <5), who are producing limited volume of honey just for their domestic needs and do not sell their product away. Average age of the support zone beekeepers is 47 and their average practical experience of being beekeeper is 21 years (as for the background and experience of the beekeepers please refer to 2.2.).

In total, 1,447 beehives (18-22% weak colonies) owned by the local beekeepers (15 hives per beekeeper in average) were registered in the support zone villages. Also, it should be taken into consideration that support zone hosts some additional 500 hives for the season. These additional beehives are brought by the traveller beekeepers from divers regions of Georgia.

## 1.3. Api products' Level of Production

The average productivity per beehive in support zone is 20-30 kg of alpine honey. See Table 3 for detailed information on number of hives and volumes of production per village.

Table 3

Village	Number of Beekeepers	Number of Hives	Average Production		
			Honey	Propolis	Wax
Sulda	14	173	3200	13	250
Miasnikiani	6	23	450	2	30
Bozali	9	132	2500	10	180
Dadeshi	21	356	6700	25	350
Filipovka	3	13	220	1	20
Kartsakhi	31	420	7200	30	550
P. Khanchali	11	330	6300	25	460
Efremovka	0	0	0	0	0
Zhdanovi	0	0	0	0	0
Sameba	0	0	0	0	0
Total	95	1447	26570	106	1840

As the data shows, propolis and wax are produced besides an alpine honey, but in extremely limited volumes. According to the local beekeepers, they don't even try to sell those products. They are exchanging wax for the wax cells (barter: 1 kg of wax for 0.7 kg of wax cells), and they just gift the propolis to their neighbours and relatives for preparation of folk cures and homeopathic medicines.

#### 1.4. Sale of the Products

The various categories of the local beekeepers have different ways of selling their products: micro beekeepers (hives <5) do not sell their products at all; small beekeepers (hives 5< >10) sell very small volume among their neighbours; medium beekeepers (hives 10< >20) sell mainly to neighbours and in assistance of their relatives; strong and large beekeepers (hives 20< >40 and more) sell their products through their relatives and in cooperation with the second hand dealers. The latter category of the beekeepers (according to the study – approximately 30 persons in the support zone) sells the major part of their products to the wholesalers. In many cases beekeepers export honey to Armenia in small units since they can achieve there a higher price.

The price of local honey, which is currently selling as raw materials, depends on the weather and environmental conditions during the season. If it is the high nectar flow<sup>1</sup> season, the price falls to EUR. 3.25-3.70- per KG. Maximum retail price within the recent years reached EUR. 6,- per KG. Average retail price for the last three years stably keeps at EUR. 4.65 per KG (in case of wholesale purchase – 55 kg can and more price is – EUR. 3.70-4.20 per kg), while in Yerevan price reaches EUR. 7.45-7.90 per KG (3,500 drams). That's why some producers try to export illegally to Armenia in small metal or large glass cans.

<sup>1</sup> High nectar flow mainly comes from weather condition: daily temperature close to 25-15C; low speed of wind/breath; no daily rain/clouds but short night rain and humidity

## **2. Problem Analyses**

The Project aims towards resolving the following main problems revealed by the study. Those problems are mainly caused by lack of financial resources and access to up-to-date information::

### **2.1. Infrastructure for Processing/Packing Apiculture Products**

Despite the fact that, although small in number, there still are large and strong beekeepers in the support zone, no signs of electrification or use of any other modern technologies in apiculture can be observed. In their activities the beekeepers use only mechanical tools and simple equipment. They are unable to pack the bee products and give them modern, marketable appearance.

In order to respond to this problem, the Project considers provision of the full honey processing, pre-packing and packing equipment (average productivity of 100 kg per hour; see Annex 6, List of Equipment) to the Association. The project will further advise beekeepers in the establishment of a “marketing infrastructure” to give access to other markets especially in urban areas. However, it should be noted that beekeepers are a heterogeneous group, not all have the interest and capacity for professionalizing processes. Still, equipment and services provided by the project and the association should be principally open to all.

### **2.2. Qualification of Future Members of Beekeepers’ Association**

There is a lack of professional qualification and skills (especially in advanced approaches using care/prophylactic solutions) in the field of apiculture in the support zone. Not a single of the beekeepers has received any training or formal education in apiculture. Their knowledge comes from their ancestors or relatives or neighbours. The beekeepers’ knowledge is not sufficient to control widely spread bee diseases by modern and environmental friendly solutions; they are also not prepared to timely detect diseases that have never been encountered yet in the region, but possible introduction cannot be excluded in the future. In consideration of the wide picture, most probably the Association members do not possess the administrative experience or business management skills (relations with tax authorities, for instance) either.

The Project, through the proposed training program (for details see Annex 1, Training Matrix), will allow local beekeepers strengthening and gaining the necessary skills.

### **2.3. Diversification of Production**

The beekeepers in the support zone produce only honey, wax and propolis. The potential for products like royal jelly, pollen and apitoxin remains largely untapped because of poor access to markets, and knowledge of consumer demands. Meanwhile, the demand for these products, even at the domestic Georgian market roughly triples annually for the last five years, and prices are also stably rising.

Professional trainings and consultations planned under the Project will allow local beekeepers broadening the assortment of the produce, hence reducing the generally high risks associated with their business. It also should be mentioned that the equipment and technical base necessary for production of royal jelly, pollen and apitoxin is not very expensive; therefore, the Project will provide besides to training in the basics of apiculture more sophisticated trainings to expand the range of products they can produce and offer. prod The trainings will also provide the information on healthcare characteristics of apiculture products; this will provide the beekeepers’ with abilities to communicate these issues to the retail customers, thus increasing the chances of retail sales, and increase consumer confidence in their produce.

## 2.4. Marketing the Products

Sale of the apiculture products produced in the study area is disorganised and happens largely in an ad-hoc manner. There is no joint marketing or any efforts for cost-saving through synergies. The current market structures and organization of producers limits the potential for beekeepers to gain revenues from value-adding marketing. The following chain would lead to better incomes

**Production → Distribution → Marketing → Sale,**

marketing links are inconsistent and distribution implies only transportation by the producers to their relatives; so the model looks like this:

**Production → Sale**

The current market structure and organization of producers limits the potential for beekeepers to gain revenues from adding value. Such deficiency of market mechanism further provides for the drawbacks as follows:

- The seasonal character of sales;
- No food product certification practices in place;
- No product packing, labelling and branding practices in place;
- The buyers are unable to identify the product composition and energetic value;
- The seller is unable to forecast and plan sales.

In view of resolving the abovementioned problems, the Project envisages providing assistance to the Beekeepers' Association:

1. solving the issues with certification of the products (gain food product producing certificate; set standards for beekeepers in the region for bee care, quality of products, registering barcode; and other formal procedures);
2. Supporting branding and marketing of the produce (dosing, packing, assistance in establishing links with the wholesalers, and allocation of the local selling spots);
3. Helping Association in establishing contacts with supermarket chains and distributors, in order to ensure the wholesaling of the products.

## 2.5. Other External Factors

- There are the micro-sources polluting the environment in support zone (synthetic caoutchouc soot emission and pesticides), which negatively influence the quality of the colonies' and api products. The beekeepers will be informed on how they can avoid/minimise the pesticide impact (training program will be covering these issues). Also the beekeepers will be informed how the uncontrolled use of pesticides can harm apiculture and environmental background in general. The local beekeepers will also be advised how to address the administrative authorise in case of detection of synthetic caoutchouc soot emission in nature. Aspects of Integrated Pest Management will be introduced through the cattle breeding component to the project region, however full coverage of farmers go beyond the scope of the project.
- The trainings planned within the framework of the Project will provide the beekeepers with the information on safe (non-toxic) deratisation solutions, which will allow them avoiding currently incurred damage by mice during the winter period.
- In discussion with the support zone beekeepers, the prevalence of several types of diseases affecting bee colonies has been discussed: bacterial, parasitic (invasive) and fungous diseases. All of them can be detected through observation of external signs. The training session planned under the Project will cover these issues and will allow



local beekeepers gaining knowledge on how to timely detect them. During the training they will also be informed on environmental friendly manner of treatment without negatively impacting on the quality of produced honey.

### **3. Goals, Objectives and anticipated results of the Project**

The carried out study demonstrated that the prospects of apiculture development in the support zone villages are quite good due to the local natural conditions (flowery vegetation, climate, tradition and other). However, due to a number of issues (mainly the small scale of apiculture), this sector is still underdeveloped and requires assistance from the third parties.

In order to provide the best possible assistance, the Project has set the following objectives:

- Establishment of the Beekeepers' Association, Raising the professional knowledge and skills of the Association members with regard to all aspects of production, quality management, and marketing;
- Promotion of apiculture production and improvement of quality of the products through creation of technical infrastructure;
- Contribute to the profile of the Javakheti region and its natural products
- Establishment of marketing system for the Association's produce;
- Introduction of three-year business plan of Association's activities.

Fulfilment of the above Project objectives will serve for the achievement of the following goals:

- Increase the local beekeepers' incomes (poverty reduction);
- Improvement of the background environmental conditions, achievement of environmental sustainability and conservation of biodiversity;
- Improvement of health conditions among the local population through promotion of consumption of the bee products;
- Introduction of innovative and modern production - that model can be duplicated in the other communities.
- Promoting the Javakheti region's qualities by selling labelled, certified bee products in other zones of the country

Expected explicit short-term outcomes of the Project are:

- Introduction and promotion of the environment and human health friendly business since the association shall be operating on that basis;
- 85 beekeepers will receive the theoretical and practical knowledge in beekeeping, which will allow them being more successful in their business and improve the quality of their apiculture products;
- 470 local villagers (local beekeepers and their household members) will have the higher incomes and, respectively, improved living conditions;
- Awareness on healthfulness of the apiculture products, role of the bees in the environmental sustainability and the impact of anthropogenic activities characteristic for the zone in nature will be higher within the Project coverage area
- Awareness of the risk of using agro-pesticides and burning rubber for human health, bee health, the quality of bee products

## **4. Scoping of the Project**

### **4.1. Establishment of the Beekeepers' Association**

The best legal form of uniting the local beekeepers is considered the Beekeepers' Association, a non-profit legal entity. Unlike other for profit legal entity, Association has more autonomy in its activities and the following advantages:

- Members' admission to the Association can be done on basis of only internal management decision (does not require notarisation and respective registration with the state authorities);
- Increasing the number of Association members does not require changing the legal status in the future (transforming into JSC or commandite society, etc.);
- Association has the simplified rules for registration of membership fees and does not require possession of cash-register machine;
- Due to the reason that the Association is non-profit organisation, profit tax is not levied and, accordingly, its accounting is simpler.

The Javakheti National park Support Zone Beekeepers' Association will be founded by 7 persons<sup>2</sup>, one from each village. The villages will elect their leaders. Group (meeting) of the 7 village leaders will elect the chairman and found the Association. After founding, the Association will unite all those beekeepers of the support zone, which will show desire to join it and share its goals. It is key for the sustainability of the association to introduce a cost-recovery mechanism covering administrative and maintenance costs as well to pay for staff employed for marketing, coordination of the harvest, ensuring the processes, and quality control.

### **4.2. Improving Technical Skills of the Association Members**

As mentioned above, the Project includes three types of training programs (see Annex 1, Training Matrix). The first type trainings will be for all Association members. The goal of this program is improvement of the professional skills of the Beekeepers' Association members through teaching them modern approaches in bee care, swarm management and apiculture in general. Trainings will also aim towards raising their awareness on general issues related to beekeeping and product marketing (on the retail level at a small scale).

The second type training program will be particularly for Association management. The training will allow them commencing entrepreneurship and implementing marketing plans (on a wholesale level).

The third type training program will be aiming towards raising the technical skills of working personnel, in order to enable them producing the planned outcomes by the provided infrastructure and in full compliance of sanitary-hygienic norms.

### **4.3. Encouraging Production Growth and Retaining/Improving Product Quality**

Growth of production of the apiculture produce shall be the natural process going along with the growth in sales consequently. Packed products with marketable appearance, which will be prepared by the infrastructure provided to the Association, are realistic prerequisite for increasing sales volumes. This will create an incentive for the beekeepers to contribute their efforts into the process and to increase production scale. As the feasibility study showed, the existing nectar frontiers in the support zone provide for such possibility. The beekeepers'

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<sup>2</sup> According to the Georgian legislation, establishment of the association requires the minutes of the meeting, which should be signed by all the participants together in the notary office in presence of the notary. Bringing together 85 persons might take quite a long time.

training program will give them the skills necessary for producing other bee products along with the honey and, respectively, broaden the produce range.

In order to improve the product quality, the Project plans following activities:

- Promotion of improvement of the environmental conditions (through raising the local awareness, informing beekeepers and responding to the discovered cases of environment pollution);
- Consultations and trainings for the beekeepers, in order to convince them to use for the prophylaxis and treatment of bee diseases only certified means with the prescribed dosage, which will not adversely affect the quality of the product.

In order to control the quality of the products, the Project plans to equip the Association with the portable lab/refractometer, which can be used for the detection of non-api basis (artificial) admixtures in the honey and identification of the adulterated product. The latter won't be pre-packed or packed and, respectively, won't be sold. It is of utmost importance that quality standards are strictly adhered to since environmental friendly production is a key feature of the marketing strategy.

The attached business plan, with purpose of quality control, envisages that the Association will seasonally carry out lab testing of the apiculture products and will respond based on the results.

#### **4.4. Developing Marketing System for Produce of the Association**

Through creation of the production infrastructure, the Project will ensure that the local honey will receive the modern marketable appearance (packed, labelled). With the purpose of branding, the product labels will indicate that they come from the Javakheti National Park support zone and, accordingly, the Park logo will be placed on the labels. For the local sales the Association will use sales points, so called market places, which will be established under the eco-tourism component.. A major challenge will be marketing and sales in urban centres. Linkages to the urban markets could be either ensured through a professional salesman, or be organized by a well-trained and qualified member of the association. Like this, a joint truck could supply retail points outside of the support zone area, by this circumventing the need to deal with wholesalers. A joint marketing under a joint label ("one-stop-shop approach") may have win-win-effects for all producers, as well as the national park and support zone institutions working under a common umbrella. This must not be limited to honey products but could be extended to all kind of Javakheti products (common logo) and may have positive effects on the tourism component as well.

The project will support beekeepers to establish contact with traders in urban centres such as supermarkets, souvenir and vine shops. Since the association, as per law, cannot make profit, beekeepers could be reimbursed for the products. The association will receive a management fee for the service provided. Future increase of the sales at the remote markets will promote the growth of awareness on and popularisation of Javakheti National Park. It is key for the success of the project that the association offers a product, which is a real alternative to currently available honey products in urban centres which are largely imports. The marketing approach should highlight on the following features of the product: ecologically sound beekeeping and honey production from a pristine, protected area – pure, healthy, tasty, natural and Georgian.

The project could recommend to the National Park Administration introducing a certification process – products carrying the Park logo must fulfil certain standards. However, such activity goes beyond the scope of the current component.

## 4.5 Support Income Generation

As the feasibility study has shown, there are approximately 1450 hives in the project area of which is producing on average 25kg honey annually. As calculated, each hive need EUR. 20,- (at current retail prices) per year to be treated and well protected from diseases. In that purpose beekeepers are spending money for purchasing simple chemical products for pest management (while focus in the training package will be on keeping the use of chemicals at a minimum):

In total support zone beekeepers are spending around EUR. 30 000,- per year for above purpose and this proposal within the attached business plan gives chance to association members reduce raw material's production costs by 20% buying those at wholesale price which makes saving approximately EUR. 6 000,- per year.

As a consequence of improved marketing, growth in sales is most likely increasing income of households. Joint marketing shall as well lead to synergies resulting higher income. While under current conditions cash-income is difficult to achieve, the new product will be fully marketable for cash.

Table A.

<b>R/C Streams in EURO</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Wholesaling revenue:	0	36744	49628
Retailing Revenue:	23256	32558	41860
Salaries:	0	1567	2372
<b>Total Income</b>	<b>23256</b>	<b>70869</b>	<b>93860</b>
Raw Material's Production Cost:	1674	5023	6698
Production costs	2419	7209	7814
Association Fee	651	977	1302
Association' Mark up from wholesale support	0	1102	1489
<b>Total Costs:</b>	<b>4744</b>	<b>14311</b>	<b>17303</b>
<b>Gross Margin:</b>	<b>18512</b>	<b>56558</b>	<b>76557</b>

Beekeepers, without intervention of planned activities as per this proposal are having the following revenue-cost structure, see Table B:

Table B:

<b>R/C Streams in EURO</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Wholesaling revenue:	0	19767	26721
Retailing Revenue:	11628	16279	20930
<b>Total Income</b>	<b>11628</b>	<b>36046</b>	<b>47651</b>
Raw Material production cost:	2093	6279	8372
<b>Total Costs:</b>	<b>2093</b>	<b>6279</b>	<b>8372</b>
<b>Gross Margin:</b>	<b>9535</b>	<b>29767</b>	<b>39279</b>

Project's impact directly to income generation can be explained as net margin, difference between gross margins-one without project intervention and one another after the project's successful completion:

	2013	2014	2015
<b>NET Margin in EURO:</b>	<b>8977</b>	<b>26791</b>	<b>37278</b>

Explanatory:

Wholesaling revenue (joint marketing through beekeeping association) - revenue generated by selling the product wholesaling, either out of "Market Place" or at larger amount (more than 55kg jars). Assumptions are given within the chapter 5.2 important Assumptions, Business Plan

Retailing Revenue (direct marketing through producer) - revenue generated by selling the product at market place or at fewer volume (less than 55kg jars). Assumptions are given within the chapter 5.2 important Assumptions, Business Plan

Salaries- wage will be paid to the association's management or its members who suppose to be hired for production. Calculations are given within the chapters 4. Association Management and 5.4.2 Planed Operation Costs, Business Plan

Raw Material's Production Cost- cost for buying bee treatment or curing solutions

Production costs- costs associated to labeling, packing or dosing the raw materials. See chapter 3.6 Pricing, Business Plan

Association Fee- will be paid as membership. See chapter 5.1 Association Income Sources, Business Plan

Association' Mark up from wholesale support- as one of revenue stream for the association. See chapter 5.1 Association Income Sources, Business Plan.

The project will support and advise the beekeeper association to market their products directly without being dependent on wholesalers. The aim is to make generate maximum income possible for the producers. However, a decision on whether a producer prefers selling the product directly or through the association should stay with them. A combination of both options could be as well in the interest of producers.

#### **4.5. Introduction of the Three-year Business Plan for Association Activities**

Business Plan as three years operation manual for the association is designed enclosed to this proposal (See Annex 2, Business Plan)

The business plan covers several issues as follows:

- Description of operation
- Description of product, production process, supply of materials, quality standards, packing & labelling...etc.
- Product marketing;
- Association Management;
- Financial plan of operation;
- Etc...

As considered, project implementer will support association in introduction of business plan. The process shall start by awareness of principles as per the business plan and that will defiantly involve project implementer to assist association in transaction management with material suppliers and key clients (see further explanation below, Annex 2, Business Plan).

Project includes delivering of permanent consultations to the association during the project and capacity development as well by provision of necessary trainings to association's stakeholders

## **5. Beneficiaries and Benefits of the Project**

### **5.1. Number of Beneficiaries**

The number of direct beneficiaries envisaged by the Project is 85 (see Annex 3); these are the beekeepers living in the support zone villages (see Table 2).

Due to the fact that one of the main goals of the Project is increasing the beekeepers' incomes generation, their household members are also considered the indirect beneficiaries, since they will consume the generated additional incomes. The study shows that the number of such indirect beneficiaries makes 470.

It also should be taken into the account that the Project will provide direct information (through the informational brochure, 1,500 copies) on the healthfulness of the apiculture products to the population of 7 villages – 4,074 persons (1,596 households). Promotion of this topic will presumably increase the consumption of the bee products by local population and this, in its turn, will improve their health conditions (for details on the healthcare characteristics of apiculture products see Annex 2, Business Plan). With the view of increasing the local awareness on actual anthropogenic stresses and the impacts caused by them in the environment, the brochure will also contain the information on these issues.

### **5.2. Criteria for Selection of Project Beneficiaries**

- The beekeeper must live and be involved in apiculture in one of the support zone villages;
- Minimum of one year ground experience being involved in apiculture;
- The beekeeper must have the capacity to produce in average 50 kg of honey per year (~equivalent to two hives);
- The beekeeper must comply to basic principles and common goals of the Association.
- The Beekeeper must be ready to pay annual membership fee to the Association.

### **5.3. Services / Technical Assistance by the Project**

The Project envisages provision of the following assistance to the Association and its members:

#### **5.3.1. Legal Assistance**

Founding the Association and registering it as a legal entity in accordance with the local legislation. This assistance includes:

- Development of Association Statute and its notarisation in process of registering it in Public Registry; the statutes need to be detailed in several aspects: the general formal rules of the association such as elections, arbitration, payments, and the operational rules to ensure for fair access to equipment and services, and to ensure origin of the honey.



- Creation of Association attributes (stamp, letterheads, etc.)
- Certification of the products (certification of origin, environmental standards ect.)
- Registration of the barcode.
- Assistance with bookkeeping, document control, reporting to the members, managing accounts.

### **5.3.2. Capacity Building**

The planned trainings (see Annex 1, Training Matrix) will be carried out in three stages during the 6 month period. Training schedule will be harmonised with the working schedule of local beekeepers. The trainings shall cover both theoretical and practical issues; for ensuring visualisation, the clips and short movies will be demonstrated.

The training session for the beekeepers will last 6 days in total, and will be divided into 2 two-day sessions. This is done to allow them better applying the theoretical knowledge in practice in their apiaries and coming back to the next session with the prepared questions. The trainings for management and working personnel will also be planned at the convenient for them times.

### **5.3.3. Procurement by the project**

The Project envisages transferring the technical means necessary for packing and processing the honey (see Annex 6) to the Association. Besides, as a pilot attempt the tare and packing materials will also be provided:

- Packing device
- Dosing apparatus
- Melting (de crystallisation) machine
- Electric table
- Wax liquefier
- 5,000 glass jars of 0.33 Lt
- jar lids
- Brand labels
- Paper boxes

### **5.3.4. Assistance for Development**

Assistance to the Beekeepers' Association implies development and implementation of the three-year business plan (see Annex 2, Business Plan). The Project aims towards increase in sales of the apiculture products of the Association, and this includes resolution of all legal, procedural and organisational issues. This will allow selling the Association's produce at the sales points. The service provider's role is to assist the association to negotiate prices, present their products and to prepare contracts. Single transactions must be handled from the beginning by the association.

The management of the Association shall try to retain and farther strengthen such links in the future.

The project will further advise the association in the establishment of a cost-recovery mechanism to make the association sustainable. Such recovery-mechanism will be based on a membership fee and the actual usage of equipment and other services provided by the association. While such fees will be charged from the day that the association is operational, costs for Salaries, spare-parts, will be covered by the project for year 1. All fees accrued during the first year shall be saved and be basis of the capital stock of the association.

### **5.3.5. Contributions by Beneficiaries**

The contribution of the beneficiaries in the Project implementation will be their commitment to achieve the defined goals and to ensure the success of the association. The expected income to be generated through improved and more professional honey production will be the main incentive for them to make the association a joint success. With this purpose, they have signed the confirmation of desire to participate in the Project (see Annex 3, Signatures) and expressed readiness to:

- Cooperate within the Association;
- Provide assistance to each other;
- Observe sanitary-hygienic rules during the production and improve quality of honey;
- Work to raise their qualification, participate in joint trainings and other events planned under the Project;
- Retain the sustainability of the Association and shortly after accomplishment of the Project achieve the financial independence and stability;
- Cooperate with Javakheti National Park Administration and support its development;
- Act in accordance with the principles that will not cause harm to the environment and support the biodiversity conservation.

In 2013, after official establishment of the Association, the members will pay annual membership fee (to be determined), and a top-up for the actual use of equipment and services. Currently, 85 beekeepers expressed their wish to join the Association (see Annex 3, Signatures) with a total of 1,400 hives. The number of hives will be monitored by the technical advisor who will occasionally visit the members. Since these are small communities a kind of social control mechanism will be anyway in place.

From 2014, after the Association will continue functioning independently and start providing various services to its members (discounts for the medicines, consultations, assistance in sales, etc.), it is expected that the membership fee will increase.

### **5.3.6. Contributions by Third parties**

Local government welcomes this initiative, and fully supports the Project methodology and implementation principles. The local community leaders in villages Sulda, Dadeshi, Kartsakhi and Patara Khanchali made commitment to assist the Association through providing the production space necessary for functioning the bee product processing/packing small enterprises; this will allow the Association saving the money. Ideally the facilities will be established along the main road in order to be visible to transit traffic as well. A small shop selling the products will be one of the main means for marketing of honey products. A similar shop in another National Park in western Georgia was a major success and ensured steady income for producers.

The Agency of Protected Areas and World Wide Fund for Nature:

- Javakheti National Park rangers will respond to the cases of environment pollution in the support zone. In particular, in case of detection of such, they will cut out the emission of rubber soot into the nature, and this will significantly improve the quality of apiculture products.
- Association will receive the right to place Javakheti National Park logo on the brand label (only for the apiculture products come from support zone). This will allow customers distinguishing these products from the others, and will have positive effect from the branding standpoint.



- Within the framework of this Project, the World Wide Fund for Nature will build in the support zone the sales points (so called market places) for the local products. These are meant to promote the retail marketing of the Association's products.<sup>3</sup>

## **6. Detailed Plan-Schedule of Project Implementation**

Core of this project will be implemented in a six-month period. In order to ensure sustainability of the intervention, the project will provide advisory services to the beekeeping association for an additional 6 months period especially with regards to business plan development and implementation, marketing and organizational issues and also for this period will finance office rent, heating/cooling and other utility and communication expenses. Advisory services will be provided on the spot, and on a needs-basis (on average 6 days per month).

Implementation of the project will be tendered through a national tender process<sup>4</sup>. So, short implementation period of times will be balanced by high implementation capability of implementing organization.

For the time span of the planned activities see Annex 4, Basic Project Plan.

## **7. Detailed Budget of the Project**

The budget of the Project reflects funds, which should be contributed by the donor organisation. It is divided in several budget lines, such as:

- Provision of Technical equipment
- Training and awareness rising;
- Legal assistance
- Trips and visits
- Staff
- Operational cost
- Teambuilding events
- Internal Monitoring and evaluation
- Profit of the implementing organisation

See Annex 5, Project Budget.

## **8. Sustainability of the Project**

### **8.1. Social Sustainability**

In order to support the social sustainability of the Association, the Project plans providing to the group social development assistance in two areas:

- Formal: that is set out in the Association Statutes – built on the principles of equality, transparency and justice; and

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<sup>3</sup> The feasibility study demonstrated that one of the main problems for the population of the support zone is remoteness of and treatment from the other traders at the markets.

<sup>4</sup> The selection of right implementer will be insured as per the requirements listed on a page 16, Criteria and Methods of Selection of Project Implementing Organization.

- Informal: the budget of the Project allocates funds for the excursion to protected area, excursion to the support zone of Mtirala National Park (with the purpose of getting acquainted with work/members of already existing beekeepers' association) and banquet upon the accomplishment of the Project.

The training course for Association members also implies demonstration of real life examples, which evidently show that achievement of the desired goals is much easier through joining efforts. The six-day training is the excellent chance for the beekeepers to meet each other, come closer and exchange opinions and experiences. Besides the trainings, the beekeepers will have a chance to meet at the founders meeting of the Association, where the chairman will be elected.

## 8.2. Economic Sustainability

The indicator for the economic sustainability is increase in incomes (chapter 4.5 Support Income Generation) of the beneficiaries from beekeeping activities, which is one of the expected outcomes of the Project. As mentioned above, the achievement of economic effect is planned through:

- **Reduction of the production costs:** the Association members will be able to purchase the bee care means and preparations at the wholesale prices, that allow saving about 20% compared to the retail purchases;
- **Diversification of production:** transfer of the technical skills to the beekeepers planned under the Project will allow them broadening the products assortment and reduce the annual fluctuation of the prices for apiculture products to the minimum;
- **Improved quality of bee products** Association members will learn about quality management through every step of bee production and –care, as well as post-harvest quality management
- **Growth in sales:** the Project will provide for new possibilities of selling beekeepers' products (supermarket chains and hypermarkets). For details see Annex 2, Business Plan.
- **Income diversification: incomes of participating families will diversify making them less vulnerable while generating cash-income. New employment opportunities will be rather limited but it is expected that the association will hire a few staff at least on a part-time basis.**

## 8.3. Environmental Sustainability

The environmental indicators of the Project are: support to improvement of the background status and conservation of the biodiversity. With this view, the budget of the Project allocates funds for raising community awareness activities (printing and distributing the brochures). At the same time, the beekeepers will get the instructions on how to act in case of detection of the pollution facts and how to eliminate the problem.

The most important environmental sustainability factors are bees themselves, and support to their swarming. Bees are one of the most important links in biodiversity conservation process, since they perform pollination/fertilisation and initiates food chain, ensure reproduction and rehabilitation of the plants. Therefore, swarming the bee colonies, which is easy and quickly possible within the Association, is a step forward in itself from the environmental sustainability point of view.

## **9. Project Key Performance Indicators**

The main indicators used for evaluation of the success of final outputs of the Project will be:

- Establishment of sustainable and cost-recovering association;
- Improved qualification of the beekeepers;
- Set up of pilot production;
- Marketing the products
- Income generation and general satisfaction level of the beneficiaries;
- Awareness raised on environment and healthcare characteristics of the apiculture products among the local population.

## **10. Scheme and Methods for Project Implementation Monitoring**

The goal of the Project monitoring is ensuring the right implementation in accordance with the pre-planned settings. Since this is the short-term and small budget project, carrying out the monitoring by the client himself seems to be optimal; this will allow saving extra expenses associated with outsourcing monitoring and evaluation to third persons. The monitoring results will be used in final evaluation of the Project. Monitoring will pay due attention to the issues like: assessment of the activities aiming towards the assistance of apiculture, and their social and economic efficiency; investigation of the direct and indirect impacts and evaluation of sustainability of the Project. After the intermediate monitoring, the recommendations and proposals will be submitted to the implementing organisation, in order to ensure improvement of the works to be carried out.

The planned monitoring of the Project implementation will be carried out in two stages: the first time after submission of the intermediate report (June 30, 2013) and second time after accomplishment of the Project, after submission of the final report (September 30, 2013). The monitoring will cover the performance of the implementing organisation and the description of the supplied equipment. Financial monitoring will be carried out on basis of the invoices and the compliance with the expenses envisaged by the budget line will be checked.

After accomplishment of each stage, the implementing organisation will notify the client in writing about commencement of the new stage in writing or orally (see the Project implementation schedule, Annex 4, Basic Project Plan). The final evaluation of the Project will be carried out by the donor, who will evaluate the direct and indirect achievements of the Project.

The monitoring methodology used for evaluation of efficiency of the Project implementations (see Indicators, p. 13) will include:

1. Interviews with randomly selected interrogates from the 4 groups:
  - Beneficiaries;
  - Community leaders;
  - local dwellers (awareness of the community members on environmental issues);
  - Association management.
2. Checking the documents:

The client will monitor compliance of works timelines with the planned schedule and check the achieved results applying the following method (see Table 4).

Table 4

Indicator	Outcome	Term	Information Source
Establishment of the Association	Legal; registration	Second month	Excerpt from the Entrepreneurs' Registry / Statutes of the Association
Number of the Association members	60 members	Third month	List of the Association members
Participation of the Beekeepers in the planned trainings	Regular attendance, 80%	Fourth month	Training attendance list (signed by the participants), photos
Pilot production	5,000 cans	Fifth month	Samples of the product, photos
Wholesale realisation of the Association's honey	Agreement with one of the supermarkets	Sixth month	Agreement

## 11. Criteria and Methods for Selection of Project Implementing Organisation

The Project Partner will be selected through a competitive bidding process. Selection of the implementing organisation will be conducted on basis of value-for-money. The main criteria in the process will be that the implementing organisation must have:

- Proven evidence of experience in implementing similar projects in the fields of apiculture, agronomy and private sector development;;
- Competence and experience of key staff involved in the project implementation in related fields,, practical experience and skills;
- Financial capacity and sustainability;
- Experience and ability of implementing the Project in the region, with non-Georgian speaking population.

## 12. Methodology of Project Implementation

- The Project is based on the following methodological approaches aimed towards ensuring achievement of the expected outcomes: Raising awareness and knowledge;
- Versatile approach and support with the purpose of increasing production and improving marketing;
- Introduction of new visions and approaches through small scale activities in the developing environment;
- Building new, socially sustainable community-based organisation.

## 13. Risk Assessment

The critical situations and risks associated with the Project and its implementation include:

- Beekeepers not paying sufficient attention to the trainings and not applying the theoretical knowledge in practice;

- Failure of the pilot production and spoilage of the api products due to lack of experience;
- Postponing pilot production to the next season due to the lack of time;
- Vandalism and theft;
- Epidemical diseases of the bees;
- Conflict and boycott within the Association.

The probability of event of the above risks is minimized by the activities set out in the Project scoping.

Since the project is for many households a unique opportunity to generate cash-income and to diverse livelihoods, there is great interest in the communities to bring this intervention to a success. Besides to the equipment and training package, the project will advise the association for a period of 12 months especially on marketing issues and introducing the cost-recovery mechanism. The cost recovery mechanism must be introduced from day one of the project and must be functional when the project is phasing out.

## **ANNEX 1**

# **Planned Trainings**

#	Title of Training	Topics	Duration	Category of attendants
1	Biology of bees	<ul style="list-style-type: none"> <li>• Bee calendar</li> <li>• Bee colony</li> <li>• Worker, drone and queenbees, their obligations and roles</li> <li>• Fertilizing queen bee</li> <li>• Colonies without queen bee and colonies without fertilized queen bee</li> </ul>	4 days	All Association members – 85 persons
2	Beekeeping technologies and equipment	<ul style="list-style-type: none"> <li>• Hive types (Danann, traditional, etc.)</li> <li>• Assembling various types of hives and their advantages</li> <li>• Apiary equipment, rules for use and advantages and disadvantages</li> </ul>		
3	Apiculture development in rural areas	<ul style="list-style-type: none"> <li>• Feeding colonies and collecting nectar</li> <li>• Factors for commencing and developing apiculture</li> <li>• Selecting place for apiary</li> <li>• Blossoming plants</li> <li>• Production</li> <li>• Healthcare characteristics of bees other than api products</li> </ul>		
4	Settling colony into the hive	<ul style="list-style-type: none"> <li>• Using baiting method</li> <li>• Capturing box, shaking down swarm from the branch and methods</li> <li>• Dividing colony, multiplying and merging colonies</li> </ul>		
5	Bee pathologies/diseases detection and effective treatment means	<ul style="list-style-type: none"> <li>• Bacterial diseases</li> <li>• Parasitical (invasive) diseases</li> <li>• Fungal diseases</li> <li>• Predators and rodents</li> </ul>		
6	Basic methods and practices of apiary management	<ul style="list-style-type: none"> <li>• Controlling swarm</li> <li>• inspecting hive</li> <li>• Control of laying eggs and metamorphosis</li> <li>• Eliminating theft between the beehives</li> <li>• Feeding colonies and supplying bees with water</li> <li>• Making records and storing data</li> <li>• Registering apiary operations</li> <li>• Dynamics and registration of colony development</li> </ul>		

#	Title of Training	Topics	Duration	Category of attendants
7	Seasonal works at the apiary	<ul style="list-style-type: none"> <li>• Spring</li> <li>• Summer</li> <li>• Autumn</li> <li>• Winter</li> </ul>	All Association members – 85 persons	All Association members – 85 persons
8	Manipulating colonies and getting bee products	<ul style="list-style-type: none"> <li>• Bee products</li> <li>• Healthfulness of api products</li> <li>• Production of api products and methods</li> <li>• Used tools and equipment</li> <li>• Storing api products and processing methods</li> </ul>		
9	Apiary economics	<ul style="list-style-type: none"> <li>• Georgian legislation and state approaches</li> <li>• Country policies</li> <li>• Structure and infrastructure of apiculture</li> <li>• Marketing potential</li> <li>• Certified apiary production: Benefits and constraints of producing according to a transparent standard</li> </ul>		
10	Pollination of plants and flowering plants	<ul style="list-style-type: none"> <li>• Classification of plants and support to their reproduction</li> <li>• Composition of honey</li> <li>• Environmental factors to be taken into consideration</li> <li>• Pesticides</li> </ul>	2 days	Association Management – 7 persons
11	Product marketing	<ul style="list-style-type: none"> <li>• Product branding</li> <li>• Packing products</li> <li>• Planning sales</li> <li>• Price policies</li> <li>• Evaluation of market environment</li> <li>• Managing transaction</li> </ul>		



#	Title of Training	Topics	Duration	Category of attendants
12	Enterprise management	<ul style="list-style-type: none"> <li>• HR management</li> <li>• Accounting</li> <li>• Preparing report</li> <li>• Relations with tax regulatory authorities</li> <li>• Planning &amp; procuring the production process</li> </ul>	2 days	Association Management – 7 persons
13	Production technology and rules for use of the equipment	<ul style="list-style-type: none"> <li>• Sanitary-hygienic norms</li> <li>• Operating the equipment</li> <li>• Safety at working place</li> </ul>	1 day	Production operators – 5 persons

**ANNEX 2**

**Business Plan**

**2013-2015**

**Beekeepers' Association of  
Javakheti National Park Support Zone**

**Akhalkalaki Municipality**

**2012**

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## Preface

This business plan represents the three-year operational vision of starting up Javakheti National Park Support Zone Beekeepers' Association, which aims towards demonstrating the feasibility and viability of this Project.

The goal of the Association is to develop successful production and sales of bee products, in order to support the development of apiculture in the support zone and ensure the involvement of local population in this business. Initially, the Association will unite 85 beekeepers of the support zone, who own up to 1,400 hives in aggregate (15 hives per person in average) and, in consideration of current capacities and conditions, are able of producing the following quantities of the raw materials:

- 15,000 kg of honey
- 800 kg of wax
- 60 kg of propolis
- 40 kg of pollen
- 5 l of Royal Jelly royal jelly
- 0.6 l of apitoxin

The goal of the Association is uniting local beekeepers and resolving the problems facing them through joint efforts and cooperation. Further goals of the project would be giving individual beekeepers and the association a business vision, improving quality of bee products as well as a joint procurement and marketing concept.

The mission of the Association is that production steps and processes which are under control of beekeepers environmental friendly manner. In addition, it is intended to create the precedent of successful operation of eco-farming and development of environment friendly business that does not represent any hazard for environment or population.

The expected outcomes of the Association activities are improved economic status and increased incomes of the beekeepers through increased sale of their product, reduced production costs and increased production volumes.

As a key to the success, the Association is planning to brand apiculture products produced in ecologically pure environment; with these purposes, the Javakheti National Park logo and the respective markings will be placed on the product labels. A labelling fee will be paid to Javakheti National Park.

## 1. Description of the Planned Activity

The legal form of the organisation is association will unite all the local beekeepers expressing wish and sharing the Association operating principles.

The main activity of the Association includes:

- Dosing, packing and giving marketable appearance to the alpine honey and bee products produced by the member beekeepers;
- Assisting the member beekeepers in wholesaling of the produce;
- Coordinating the retail sales of the produce;
- carry out quality control and improvement of local apiculture products - certification;
- Development of marketing strategies and carrying out respective measures;

- Creating the basic infrastructure providing the member beekeepers with the bee care solutions and equipment;
- Mobilising the beekeepers and promoting the business in the support zone.
- Monitor and the quality of products and establish the Javakheti brand as a premium product, which helps beekeepers generate added value for their activities

The Association office will be located in Dadeshi Community Centre: area of 65 m<sup>2</sup> with already connected water and power infrastructure. The mentioned office, based on the agreement with Village Dadeshi head of the administration will be allocated for the Association for three years free of charge. A rent will be paid in the following years. The project will provide support in necessary renovation works of facilities in order to store honey under good, cool, light-protected conditions;

Association is not profit organisation and all the operational revenues will be used for reinvestment, purchase of technical equipments, product marketing, payment of staff, subsidising the provision with bee care products) and beekeeping development in the support zone. The profit of the Association does not constitute the personal profit of its management, employees or any other members, and cannot be used for these purposes. Any profit will be used for maintenance works, procurement of equipment, or be used to increase the capital stock.

## **2. Description of the Planned Products**

Within the first year, the Association plans to produce (pack) only alpine honey in 0.330<sup>5</sup> l jars. For the following years it is planned to increase the range of the products and start processing wax, propolis, pollen, Royal Jelly royal jelly, giving them the marketable appearance. All the above apiculture products are healthy for humans.

### **2.1. Products**

#### **Honey – 0.330 l jars**

Honey is the food product made by bees (*apis mellifera*). The bees collect blossom nectar, which after delivery to hive is being subjected to complicated physical and chemical processes and enriched by the biologically active substances produced by the bees. The flavour and aroma of the honey depend on the flowers, from which bees collect the nectar. The bee honey is a concentrated high-caloric product, which, by its composition, significantly differs from other sweet substances. Honey, as a food product, is characterised by bio activity, which it can retain for the centuries.

#### **Propolis – 50 gr packs**

Propolis or bee-glue. The bees collect from the plants gluey substance, add wax, pollen and substances excreted by them and after special processing all this turns into the biologically active complex. They call propolis bee-glue, because the bees fill cracks in hive, enforce the cells, separate extraneous bodies falling into the hive by it. However, the propolis is not only building material, but also protects overcrowded hives from the infections. The thin layer of propolis covers hive entrance block, frames and the surface of cells, thus creating the antiseptically environment. This takes approximately 20-30 gr of the propolis. The strange creatures getting to the hive are killed by bee venom, but if bees are unable to pull away the enemy, they just plaster it by the propolis and the body will be kept without corrupting for several years. The beekeepers collect propolis while supervising bee families and after completion of the harvest.

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<sup>5</sup> 0.33 liters of honey make 0.5 kg

### **Pollen – 5 gr packs**

The pollen is a substance collected by the worker-bees from stamen. The more diverse pollen, the higher its efficiency is. Pollen contains 50 biologically active compounds, up to 240 active substances, including all the irreplaceable amino acids, which are necessary for ensuring normal flow of biological processes in human body and improving its viability. The pollen contains all those microelements that are in human blood. The scientists also discovered the DNA reductive nuclease in it.

Vitamins: A, B1, B2, B5, B6, B12, H, D, E, PP, K

Microelements: K, Fe, Cu, Co, Ca, P, Mn, Zn...

### **Royal Jelly – 5 gr packs**

Royal Jelly Royal Jelly is made by worker-bees from pollen and honey and is secreted from the special glands. The bee family uses it for feeding mother bee. Royal Jelly is the most healthful product out of bee products. It is unique due to its composition: proteins – 30%, fats – 55%, hydrocarbons – 17% and mineral substances – 1%. There is no other so balanced product in the nature. The Royal Jelly proteins contain 22 amino acids, 20 of which are irreplaceable. It is analogous to human blood plasma, and this conditions its 100% digestion. Besides this, it contains almost all vitamins. It has antibacterial, antiviral and anti-radiation effects. It also stimulates the growth process and regulates metabolism. Royal Jelly contains water, fats, proteins, hydrocarbons, more than 100 mineral substances and vitamins. It contains 29 amino acids, all of them irreplaceable. As for minerals, it contains K (in especially large quantities), Ca, Na, Zn, Fe, Cu, Mn. Vitamins: thiamine B1, riboflavin B2, pantothenic acid B3, pyridoxine B6, niacin PP, biotin H, folic acid. Besides this, the insulin-like substance, heterocyclic substances, biopterin and neopterin, free nucleotides and nucleic acid, acetylcholine were discovered in Royal Jelly. Due to its extensive vitamin-mineral complex, Royal Jelly is the best bio stimulator, regulates metabolism processes, strengthens ferment activity, improves histotrophic nutrition, relieves angiospasm, reduces levels of cholesterol and triglycerides in blood, is the best adaptogen, increases tolerance of organism towards physical and psychological pressure. This product stimulates the proper functioning of entire endocrine system (hypothalamus-hypophysis-adrenal body). It has clearly expressed immunomodulatory properties.

### **Apitoxin – produce only if ordered**

Bee venom or apitoxin is the secretion of bee's big and small toxin glands. It is biologically active substance and contains pheromones (biologically active substance), proteins, ferments (phospholipase, hyaluronidase, acid phosphatase, lipophospholipase), biologically active amines (dopamine, histamine, noradrenaline, acetylcholine). They are responsible for local (inflammatory response, oedema, pain) and general (hypotension, enhancement of secretive and motor functions of intestinal tract) reactions. It also contains melittin and apamin. The effects of bee venom on the human body are diverse. It influences systems of all organs. Improves microcirculation in brain, functioning of liver and heart, and has clearly expressed pain relieving effect.

### **Wax – 100 gr packs**

The wax is multi-component product; it contains about 300 healthfulness substances. Its composition is following: ethers – up to 75%, acids – up to 15%, hydrocarbons – up to 15% and water, dyes, aromatic, mineral, antibacterial and other substances – 1-5%. It is strong antioxidant and absorbent. The carotene content in it is 400 times higher than in carrot and 76 times higher than in meat. In US the wax is highly recommended food product. The wax is processed in the wax glands of worker-bees. After excretion from the small pipes, it solidifies and transforms into white transparent plastin. Colour of the wax depends on contents of pollen and propolis, which contains yellow dye – chrysene.

All the above products planned for production by the Association are always demanded in any society. Especially demanded are the products made in ecologically pure environments, like protected areas and sanctuaries. It is planned to respectively label the products, with the purpose of making them distinguishable from the other similar ones. Therefore, we expect that the Association's products will easily find their space on the market and establish themselves there.

## **2.2. Raw Materials and Means of Production**

### **2.2.1. Sources of raw Materials**

Initially the Association will use honey and other raw materials produced by its own members. Association's registered member will provide association's management information about estimated volume of bee product they expect to harvest. year. Members will provide this information two weeks prior to harvesting and delivery the materials to the processing facilities. Estimated harvesting volume should be transparent and it may be checked by association to avoid processing and label product that may not be initially produced at supportive zone.

Taking into consideration the fact that there are about 5,000 hives in the district and there are currently no proper bee product facilities available in the region, processing facilities shall be open to beekeepers outside the support zone in order to increase the Association revenues. Migrant beekeepers shall have access to services of the association as well. In this case, the association will just provide processing and packing service that would not mean to use Javakheti National Park's trade mark and logos on it. Those branding attributes will be applied for the members' product only

### **2.2.2. Means of Production**

Initially, the jars needed for packing the natural honey will be purchased at the local market (locally produced or imported from turkey), while after increasing the production volumes, the tare will be purchased only at the local market. Currently, the JSC Mina is producing glassware, but the volume of minimum order makes 10,000 jars. JSC Mina also imports small quantities of glass jars from Turkey.

The equipment and materials (melting/de crystallisation) device, dosing machine, jar lids, labels, paper boxes, etc.) necessary for packing honey and the bee feeds and medicines will be purchased at the local markets through the dealers (for instance: Agro Georgia), or by the direct order of the project implementing organisation (see Annex 6).

### **2.2.3. Dosing, Packing and Basic Quality Standards of Honey**

Harvesting honey from the hives begins in the end of July and continues until August. The primary processing and dosing of honey shall start at the same period. Preparation shall commence one month earlier.

### **2.2.4. Quality Standards**

Basic standards, which the Association will apply are as follows:

Composition:

- None of the bee products shall contain any admixtures and preservation agents. The antibiotics and toxic agents shall not be present (FAO, WHO standards);

- At none of the storage, dosing or packaging stages the temperature of honey shall not exceed 18 centigrade (FAO, WHO standards);
- The humidity (water content) in the honey shall not exceed 18%;
- Fructose and glucose – 60%;
- Pollen – 15%
- Shall not contain heavy metals and pesticide particles (FAO, WHO standards).

#### Hygiene norms:

Quality management: Association will sensitize the beekeepers about the need to handle the bee products with care, safeguard quality; during processing and storing, the association handles the products with quality management principles in mind (temperature, humidity, contamination, dust or bleached labels, etc). At a later stage, certification for every step in the food chain of Javakheti honey (and other bee products) is envisaged in order to have an independent quality seal.

The Association management will ensure that no adulterated honey will come into the production cycle. For this purpose, the refractometer will be used: the honey contents will be periodically tested at apiaries, and necessarily before launch raw honey in the production process. In case of discovering the adulterated honey, the beekeeper will be warned and consulted on the measures for improving the honey quality, and the counterfeited raw honey will be returned to the owner.

It is planned to test the detailed composition of honey once per season at the external lab (State Lab for Testing Food Product Composition, Ministry of Agriculture lab, or JSC Multitest Lab), where biological, bacterial, microelement contents, general contents and ferment testing of the sample costs approximately EURO 400

The Project implementing organisation will inform Association management on European Food Safety Authority (EFSA) standards and norms with regard to honey. Association management will take these norms in consideration in the honey production process.

The label will represent as well a certificate of origin. A control mechanism must be introduced to ensure that beekeepers of the association do not convert honey from other parts of the region to Javakheti products. This will be a major challenge and only a self-control mechanism seems to be feasible since all should have the interest that consumers have trust in the products.

### 2.2.5. Packing

The honey tare shall be made of glass, respectively packed and harmonised with the local legislation and international norms. It shall indicate:

- The name of product;
- Name, address and full contact information of the producer;
- Weight;
- Country of origin;
- Expiry date;
- Unique serial number of the product;
- Nutrition values and composition.

Due to the fact that apiculture products are rapidly deforming (quality is deteriorating) under the light and sun rays, EFSA recommends to protect the pre-packed product from the direct light; for this purpose, at least 60% of the outer surface of the ware shall be covered (label, package, non-transparent lid, etc.).



Development and registering<sup>6</sup> of the respective label design is the responsibility of the implementing organisation. The label, along the mandatory information, shall also bear the logo of Javakheti National Park. The label shall also indicate that the honey collected at Javakheti National Park area is produced in the support zone. This information will be indicated on the label only in cases, when it will be certainly verified that the honey is actually produced at the support zone (the place of origin to be verified by the Association management).

After accomplishment of the Project, the electronic versions of design and packing, along with the contact details of the printing company, will be transferred to the property of the Association, in order to enable it printing as many copies as necessary for sustaining production process.

### **3. Product Marketing**

According to the 2009 data of the State Department of Statistics of Georgia, annual per capita consumption of honey makes 1.3 kg, which is one of lowest values in the world. However, the statistical data show the growing trend: in 2005 this value made 800 gr, and in 2002 – 650 gr. There are no statistical data on consumption of the other bee products by the population.

As the feasibility study showed, the export opportunities for honey from Georgia is extremely limited, and only small quantities (as a raw material and not as a ready product) are exported to Turkey, US, Greece, Denmark, United Arab Emirates. It must be stated that export of Georgian honey as a ready product is quite a distant perspective due to the existing barriers (quality certification, vet certification, limitations in international trade, etc.). Therefore, the sales plans of the product for the short term period (up to 5 years) shall be oriented on the national market, where the demand for honey and other apiculture products steadily grows. It also should be mentioned that market demand for Royal Jelly, pollen, wax and apitoxin, which are not produced/sold at the moment in support zone, roughly annually triples at the domestic Georgian market for the last 5 years, and the prices are also stably growing. No processed bee products, other than honey, can be purchase in a supermarkets or shops in Georgia.

#### **3.1. Target Market and Consumers**

The target market for the Association products:

1. Visitors of Javakheti National park;
2. Travellers using Turkey-Georgia (the customs check point will be opened in 2014) Georgia-Armenia (checkpoint already existing) connection roads passing through the support zone villages;
3. Citizens of Georgia, who will receive the products through distribution networks (from 2014-2015).
4. Tourists, who must not have necessarily visited Javakheti National Park but buy in souvenir/vine shops products from Georgia as souvenir.

In the first and the second cases it is retail sales by the Beekeepers' Association members themselves<sup>7</sup>. The Association will be just coordinating and consulting them. The coordination implies ensuring the just access to the market places for the beekeepers, or a representative of them selling products on behalf of the association.

After drawing up the market place operational plan (it is planned under the parallel Tourism Development Project), the Association will be able to improve/change the market place use

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<sup>6</sup> Local copyright legislation enables any interested party to register its own design, name, label and other attributes at Georgian Copyright Protection Association

<sup>7</sup> According to Georgian tax legislation, retail sales of agricultural products by natural persons is released from taxation, does not require having the cash register and keeping accounting records.

system in accordance to the mentioned operational plan. However, it is decided that the Association will have the fixed trading points at the both market places in any case, in order to allow it ensuring retail sales of the apiculture products. It is as well intended to open a small shop in the building of the association that products can be purchased on the spot.

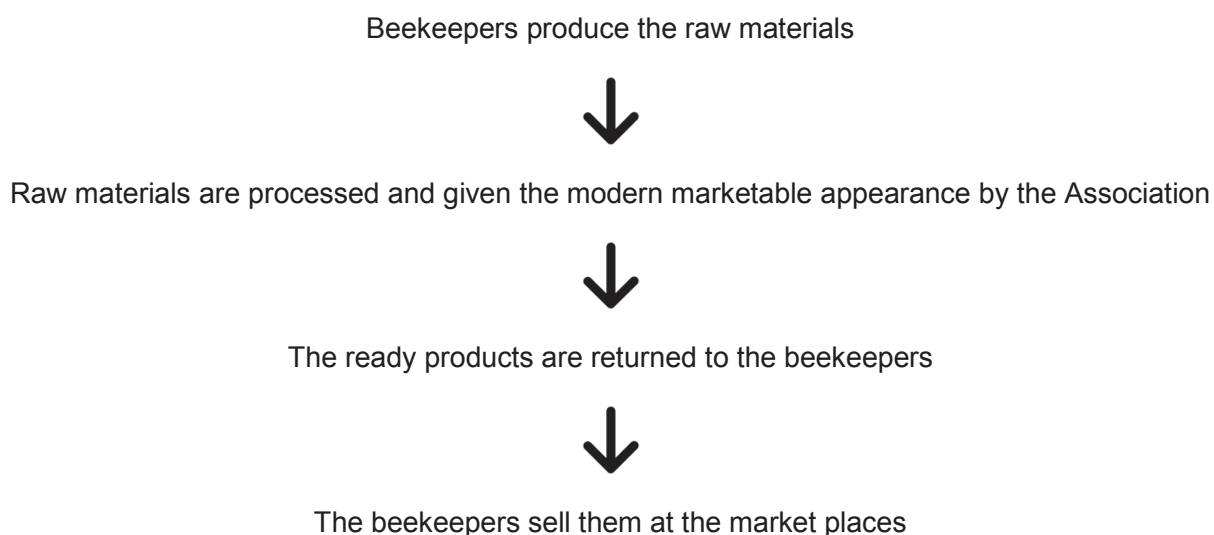
The third case implies the wholesaling the bee products produced in the support zone. With this purpose, the Project implementing organisation will assist the Association in introducing Javakheti bee product sales in supermarket chains, souvenir shops and vine shops.. As mentioned above, **the Association in this case will play the role of middleman**, because it will have the legal status, the knowledge in marketing and negotiation, and all the necessary certificates in accordance with national legislation.

### 3.2. Sales Diagram

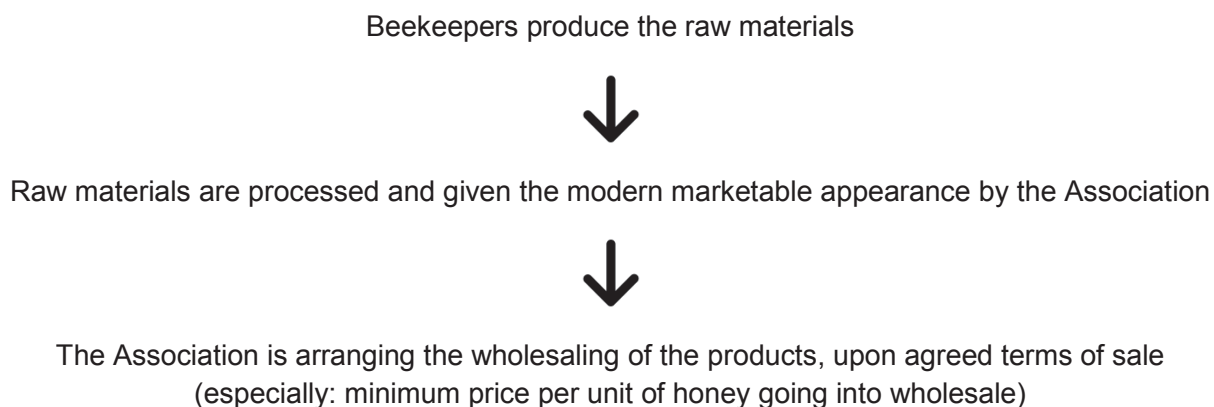
As mentioned above, the retail sales at the market places will be carried out by the member beekeepers themselves, and they will be provided with the consultations and trainings. Meanwhile, in the wholesaling process, the main role will be played by the Association managers, who will also take the respective trainings (for more details see Diagram 1).

Diagram 1

#### Retail sales:



#### Wholesales:





The Association retains 3% of the revenues and the rest goes to the beekeeper

### **3.3. Sales Points and Distribution**

As mentioned above, the Association members, as a first option, will use for selling their products the market places constructed by WWF in the support zone. They will sell honey, wax, propolis and pollen. How to set the prices for the products will be discussed in the context of development of the associations' statute. This process will be moderate this process. Since the popularity of the National Park grows every year, and in the future bigger number of tourists is expected, it is logical to assume that the sales volumes at the market places will also be growing. It should be mentioned that Armenia-Georgia and Turkey-Georgia connection roads pass through the support zone villages. The customs checkpoint at border with Turkey will open at Village Kartsakhi (planned for 2014), and this will further support growth of sales, since transit traffic through the zone will increase.

The wholesaling of the products will be performed by the Association, or in an initial phase by a professional. The wholesaling of the alpine honey (from 2013) is planned to Populi supermarket chain, establishing connection with which will be done through one of the distribution companies (for instance, Geo Distribution Ltd., Omega Ltd., Trade-2000 Ltd. Etc). it is also planned to establish contacts with the other supermarkets.

### **3.4. Competitors**

Setting: the products produced by the Association will be delivered to the market in a processed form.

There are more than 500 beekeepers producing Javakheti alpine honey in Akhalkalaki district. In total they own over 5,000 bee colonies. They produce more than 50 tons of honey. As a rule, these farmers sell their honey directly from their farm gates, or in small lots through the markets. They represent the potential raw material providers to the Association for its dosing and packing (logo and brand will not be used in such cases). This will respectively increase the Association's revenues and will promote the sector development in the district.

There are 6 small and medium honey producing companies outside of the region. These are: Metaplia Ltd., Putkari Ltd., Pepe Ltd., Kartuli Putkari Ltd., Breti Ltd. and individual entrepreneur Roland Zirakishvili. The mentioned companies are distributing their products to the supermarket chains for the last 2 years. This was achieved through growth in the production and ensuring stability (non-seasonality) of the supply.

It should be mentioned that none of the above companies has the advantage of offering the customers controlled / certified honey produced in a protected area. Therefore, in the future competition, the preference will most probably, be given to the honey produced by the Association with a label that stands for nature protection, ecology and healthy bees

For the first year, it is planned that 5,000 jars of honey will be produced. There is a potential of the sales growth and already at the second year the products will be introduced at one of the supermarkets. For the third year it is planned to further extend the number of sales points.

It also should be mentioned the products that are planned for the production in the following years – pollen, wax and Royal Jelly – have no competition at the local market currently, and neither legal import of these products is registered<sup>8</sup>.

### 3.5. Planned Sales

According to the most pessimistic estimates, as of 2013, the Association members are capable of producing the following quantities of the raw materials (with the prospects of 10-15% of annual growth):

- 15,000 kg of honey;
- 800 kg of wax;
- 60 kg of propolis;
- 40 kg of pollen;
- 5 l of Royal Jelly
- 0.6 l of apitoxin (production will take place only if ordered).

Out of the above volumes, the Association will assist the beekeepers in retail and wholesale realisation of the following quantities (see Table 1):

Table 1. Planned sales

Product in Volume	2013	2014	2015
Honey (kg)	2500	7500	10000
Wax (kg)		300	500
Propolis (kg)			35
Pollen (kg)			20
Royal Jelly (kg)		5	5.75

### 3.6. Pricing

The cost price of the prepared apiculture products is calculated by the following method:

**Cost price = depreciation of the fixed assets<sup>9</sup> + variable costs + current market price of the honey (as raw materials)**

In case of packing the 5,000 jars of honey planned for 2013, the production cost of 1 jar will make:

- Depreciation of the fixed assets –  $13,000 \times 20\% / 5,000 = \text{EURO } 0.052$
- variable costs –  $0.72 \text{ (tare/pack./label)} + 0.02 \text{ (power, water)} = \text{EURO } 0.74$
- Current market place for 0.5 kg of honey – **EURO 2.33**

Total ~~ **EURO 3.10**

The cost price of the prepared products will also include fixed fee for the use of Association owned production means – EURO 0.24 per jar (as one of the revenue stream of the Association). Also, the assumption is made that in the coming years, the Association won't need

<sup>8</sup> The products are not consumed as such; they are used in tinctures, ointments, etc.

<sup>9</sup> For electric machinery and equipment, price of which exceeds EURO 465 (Equal GEL 1000), depreciation of the fixed assets makes annual 20%. Exchange rate for October, 2012 - EUR 1,- ~EURO 2.15

the technical equipment of the price exceeding EURO 465<sup>10</sup> and, respectively, the totals look like this (see Table 2, Cost price of the Products and Sale Prices):

Table 2. Cost price of the Products and Sale Prices

		Average market price		Association's Sales price	
Product (packed & labelled)	Self-cost	Retail	Wholesale	Retail	Wholesale
Honey (500 gr)	3.34 <sup>11</sup>	4.19	2.80	4.66	3.72
Wax (100 gr)	0.35	0.70	0.56	0.70	0.56
Propolis (50 gr)	1.05	1.86	1.40	2.33	1.63
Pollen (50 gr)	1.05	1.86	1.40	2.33	1.86
Royal Jelly (5 gr)	10.47	14	11.63	18.60	11.63

During the first year of operations, the variable costs of pilot production (cans, labels, packages..etc) will be fully subsidised from the project budget. Hence, the beekeepers that will get involved into the pilot production in 2013 will not have to pay for the variable costs (tare, label, packing...). From 2014, the Association will start producing only after the clients – member/non-member beekeepers – fully cover the variable costs, cost of fixed asset depreciation and service fee. It should be mentioned that in case of growth of the production volumes, all the above costs will respectively decrease (economy of scale) and the cost price will be less. This will make the products more competitive in terms of price. Also, for the future, in case of increased production, the Association will be able to purchase packing materials and tare at cheaper prices. As for the following years, rent for facilities must be factored into the calculation.

The sale prices of products were defined on basis of the principle that the new product is introduced at a slightly higher price than the price for existing similar products. If the additional value of Javekheti products is accepted by consumers, the price might increase. The higher prices also reflect the advantage that the raw materials are collected in protected and ecologically pure environment.

In order to reduce the cost price to the minimum, from 2013 the Association will start helping member beekeepers in purchasing modern and efficient bee care solutions at a cheaper price through the seasonal veterinary warehouses/shops. The Association will supply shops directly from the providers, like Primavet Sofia (Bulgaria), Vanilla (France), etc. Connecting the Association with the providers is the obligation of the Project implementing organisation. The Association will gain no profit from the mentioned activities. The member beekeepers will be able to purchase bee care solutions at 20% less than the market prices, and this will significantly reduce their business costs.

<sup>10</sup> According to Georgian legislation, technical equipment, price of which is less than EURO 465 is not subject to property tax and shall be excluded from the fixed assets at the same year.

<sup>11</sup> This amount, along with the self-cost, includes Association's fee for packing one cane – EURO 0.24. It also should be underlined here that in case of enlarged production volume of self cost would decrease as depreciation of the fixed asset's share in value chain

### **3.7. Marketing Strategy**

The marketing strategy of the Association is as follows:

- Packing the products and giving them modern marketable appearance;
- Creating the own niche at the market through implementing uninterrupted control of product quality;
- In case of purchase of the large lots of the products, providing the discounts;
- Supplying the products to the regular customers on a consignment basis;
- Searching new sales markets for the products;
- Arranging advertising campaign and managing relations with the target group to support sales.

## **4. Association Management**

### **4.1. Association Structure**

The legal form of the union is association; its administration will consist of three persons: chair, head of production and accountant. These persons shall have the respective knowledge and skills to fulfil their tasks. Salaries must be covered after the first year by revenues achieved through services provided by the association.

It should be mentioned that that the Association management and production staff will receive trainings for improving their qualifications and ensuring compliance of their knowledge and skills with their job descriptions.

The Association does not possess its own office. For the first three years the house of the chair or the premises, where the production will take place, will be used as the office. At project start, a contract must be signed to ensure allow for a long-term solution which is a pre-condition for any investments in buildings, infrastructure and equipment. Investments are especially important to comply with hygiene standards.

The association will incorporated several key personnel as follows:

- General Manager
- Technical Manager /Quality Control
- Production Chief
- Marketing & Business Developer (depending on the marketing approach)
- Accountant

During peak of the harvesting and processing season casual labour will be recruited.

## **5. Financial Plan**

### **5.1. Association Income Sources**

- The annual membership fee that will be paid by the member beekeepers – EURO 0.47 per each beehive in their possession in 2013, EURO 0.70– in 2014 and EURO 0.94 – in 2015.
- The honey packing fee for the member beekeepers – EURO 0.24 per jar of honey; after the Association starts producing other bee products as well, the packing fee will be determined separately for each of the products;
- The api products packing fee for the non-member beekeepers; same as above, but at a 10% higher price;

- The mediation commission fee for linking beekeepers with the wholesalers – 3% of the price of the sold products.

The cost-recovery scheme will be tested in year 1 of the project. Fees may have to increase to accommodate for rent, investments and Salaries of staff. The cost-recovery mechanism will be introduced from the beginning of the project, regularly monitored and adjusted to the needs, if necessary. The project will advise and train the association in this regards throughout the life-time of the project.

## 5.2. Important Assumptions

Planned production and sale prices

In 2013-2015 the Association plans to produce (pack) the following quantities of the api products for the member beekeepers (see Table 3, Planned Production):

Table 3. Planned Production

Product in Volume	2013	2014	2015
Honey (1 can – 500 gr)	5,000	15,000	20,000
Wax (100 gr pack)		3,000	5,000
Propolis (50 gr pack)			700
Pollen (50 gr pack)			400
Royal Jelly (1 kg)		5.00	5.75

It is expected that the capacity for production and processing will significantly increase in the first three years since it is most likely that more households will engage in honey production. With improved linkages to markets the demand for the honey will increase accordingly.

Certain part of the above products will be sold by the member beekeepers locally, while the Association will assist them in wholesaling the rest (see Table 4, Wholesales):

Table 4. Wholesales

					Total Revenues	
Product	2013	2014	2015	Wholesale Price	2014	2015
Honey (1 can – 500 gr)	-	8,000	11,000	3.72	29 760	40 920
Wax (100 gr pack)		-	1,000	0.56	-	560
Propolis (50 gr pack)		-	-	1.63	-	-
Pollen (50 gr pack)		-	-	1.86	-	-
Royal Jelly (1 kg)		3	3.5	2326	6978	8141
Total					36 738	49 621
Association revenues (3% of sales)					1 102	1 489

The Association also plans providing services to non-member third parties and estimates to receive from them orders for packing 5,000 jars of honey in 2014 and 10,000 – in 2015.



### 5.3. Estimated Returns

Estimated returns were calculated based on the planned production and the service fees of the Association (see table 5, Revenues of the Association).

Table 5. Revenues of the Association

Type of Revenue in EURO	2013	2014	2015
Packing bee products for members (jars)	1 200	3 600	4 800
Membership fee (hive)	651	977	1302
Mediation commission		1 102	1 489
Packing bee products for non-members		349	2 558
<b>Total revenues (EURO)</b>	<b>1 851</b>	<b>6 028</b>	<b>10 149</b>

### 5.4. Total Costs

#### 5.4.1. Single Start-up Costs

- Fixed assets: EURO 13,000.00
- Current assets: EURO 4,250.00
- Installation and assemblage of Equipment: EURO 1,500.00
- Repairing and furnishing production site: EURO 15,000.00
- Other costs (founding association, production certificates, design, etc.: EURO 3,150.00

Costs for the rental of the building must be reflected in the business plan although no rent needs to be paid for the first three years. Total start-up costs will approximately amount to EURO 36,900.00

#### 5.4.2. Planned Operation Costs

Based on the mission and functions of the Association, it was estimated that the current expenses of the Association for 2013-2015 will be as follows (see Table 6, Planned Expenses and Table 7, Staff Salaries).

Table 6. Planned Expenses

Description	2013	2014	2015
Marketing	0.00	2 200	3 200
Measures for product quality control/improvement	0.00	550	900
Purchase of the material means	1700	1 550	3 400
Utility payments	151	161	277
Salaries	0.00	1 567	2 372
<b>Total</b>	<b>1 851</b>	<b>6 028</b>	<b>10 149</b>



Table 7. Staff Salaries

		2014			2015		
#	Staff	Duration	Monthly Payment	Total	Duration	Monthly Payment	Total
1	General Manager	4	93	372	6	93	558
2	Technical Manager /Quality Control	3	70	210	6	70	420
3	Production Chief	3	70	210	6	70	420
4	Marketing & Business Developer	10	60	600	10	60	600
5	Accountant	2	33	66	4	33	132
6	Daily Production Operators/workforce for different kind of needed work	–	–	109	–	–	242
	Total:			1567			2372

## ANNEX 3

### Letter of Agreement

We, undersigned, confirm that we are interested to participate in the apiculture development project within the frame of the project “Establishment of Javakheti National Park in Georgia” and to be the members of planned “Beekeepers’ Association”.

We confirm our desire to collaborate with the members of this association to develop apiculture and to reach the common prosperities in this sphere. Also we are ready to support each other in beekeeping, in manufacturing works, in marketing and in prevention of diseases.

We also agree, that we will give maximal efforts to manufacture ecologically clean products and to comply to all the norms which are introduced by the experts within the scope of the Javakheti National Park project. Also we agree to upgrade our skills and take part in all relevant activities within the scope of this project.

We will make every effort to achieve the strong financial independence of the association in the nearest future.

We are ready to collaborate with the administration of the Javakheti National Park and we support development of the Javakheti Protected Areas’ System. We are ready to act in accordance with principles, which don’t damage the ecology of our region, enhance protection of the biodiversity and increase the population of Javakheti Protected Areas.

Name, Surname	Tel.	Personal/ID Number	Number of family members	Village	Date	Signature

## Original Letter and Signatures - scanned copies:

Министерству по защите окружающей среды, агентству заповедных территорий и всемирному фонду  
по защите природы WWF филиалу Германии в Грузии

### ПИСЬМО О СОГЛАСИИ

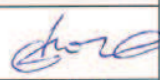


Мы ниже подписавшие свидетельствуем, что заинтересованы принять участие в проекте создать „джавахетский национальный парк в Грузии. „ в пределах запланированных проекте по развитию пчеловодству и быть членом в проекте „объединение пчеловодства.., который установлено в пределах этого проекта.






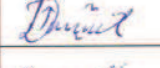


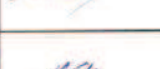

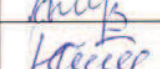

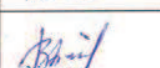
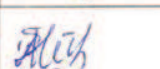


Подтверждаем наше желание в сотрудничестве с членами этого объединения, развивать пчеловодству и получить коллективный благополучии в этом сфере. А также мы готовы помогать друг-друга по уходу за пчел, по производству продукции, по маркетингу и борются вместе с заблуждениями.

Мы соглашаемся, что максимально будем стараться что произведенная нами продукция будет экологический чистым и будем соблюдать все нормы, которые будут предлагать эксперты в пределах этого проекта. А также согласны повышать квалификацию и принимать участие в других мероприятиях в пределах этого проекта.

Максимально будем стараться, чтобы достигать твердости и финансовый независимость в ближайший времени.

Мы готовы в сотрудничестве с администрации национального парка джавахети и поддерживаем развития систему заповедных территории джавахети. Мы готовы действовать по тем принципам, который не повреждает экологию, улучшить защиту биоразнообразия. В нашем регионе и поощряет популяризацию заповедных территории джавахети.

имя, фамилия,	телефон	Личный номер	Сколько членов в семье	село	дата	подпись
Моссе Аветисхан	790 42 32 60	0700404 434	5	Бозали	19.12.11	
Атем Вартикан	790 63 33 25	0700404 434 0700404 434	5	Бозали	19.12.11	
Унан Вартикан	795 32 66 79	0700404 434	6	Бозали	19.12.11	

имя, фамилия,	телефон	Личный номер	Сколько членов в семье	село	дата	подпись
Алберт Абдужаман	599 17 37 98	0700104043	6	Бозгал	19.12.11	
Сагател Апсали	595 212253	0700104 4321	4	Сулга	22.12.11	
Давид Апсали	593 693884	0700104 066	593 69 6	Сулга	22.12.11	
Аршак Апсали	557 751383		5	Сулга	22.12.11	
Рубен Абдужаман	790 462317	0700102 7626	5	Бозгал	22.12.11	
Арарат Джаманян	599 952341		4	Сулга	22.12.11	
Феликс Сейранян	558 683144	07001004 308	3	Сулга	22.12.11	
Сергей Бадгабарян	593 275624		3	Миясникин	22.12.11	
Сосик Начарян	595 300716	0700104 990	7	Миясникин	22.12.11	
Целак Вартикан	557 751350	070010424 79	5	Сулга	22.12.11	
Арарат Суксали	593 726893	0700104 0466	4	Сулга	22.12.11	
Керик Куджасян	595 269151	0700101 9266	2	Сулга	22.12.11	
Серге Апсали	790 366042	0700104 9490	6	Сулга	22.12.11	
Карен Вартикан	598 111225	07001009 265	2	Сулга	22.12.11	
Агаси Нахатетян	790 953445	0700104 4304	4	Миясникин	22.12.11	
Бадгасар Абгарян	790 994368	0700104 3754	7	Миясникин	22.12.11	





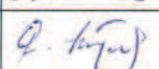
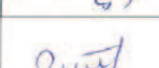
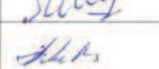


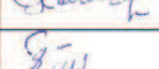
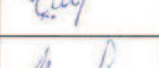
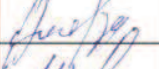


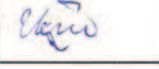



имя, фамилия,	телефон	Личный номер	Сколько членов в семье	село	дата	подпись
Вард Абрахам	790 105169	0700104 4672	5	Мясникован	22.12.11	А.А.А.
Григор Абрахам	790 177281	070010311 64	3	Мясникован	22.12.11	Григор
Сяврик Мартинян	599 248395	0700103 3984	3	Бозан	22.12.11	Сяврик
Шаваш Казарян	599 948368	07001033 878	4	Бозан	22.12.11	Шаваш
Тамара Казарян	790 949368	0700104 1795	2	Бозан	22.12.11	Тамара
Макапет Макапетян	599 452875	07001031 768	6	Бозан	22.12.11	Макапет
Шуря Мовсесян	593 996049	0700103 6380	7	Дадеш	23.12.11	Шуря
Манвел Мовсесян	593 107874	0700103 7708	5	Дадеш	23.12.11	Манвел
Валерик Саргисян	599 142719	0700105 0928	5	Дадеш	23.12.11	Валерик
Самурик Аслонян	790286692	07001006 970	4	Дадеш	23.12.11	Самурик
Арапет Саргисян	59383 7612	07001000 452	6	Дадеш	23.12.11	Арапет
Римеден Акопян	593 843038	0700104 5465	7	Дадеш	23.12.11	Римеден
Галуст Симонян	599 733581	07001033 049	4	Дадеш	23.12.11	Галуст
Левик Арутюнян	595 302472	07001009 050	6	Дадеш	23.12.11	Левик
Армен Курдзарян	555 530204	07001039 426	13	Дадеш	23.12.11	Армен
Татевос Курдзарян	555 309022	070010439 29	6	Дадеш	23.12.11	Татевос
Роберт Абрахам	595 550379	07001001 477	6	Дадеш	23.12.11	Роберт

имя, фамилия,	телефон	Личный номер	Сколько членов в семье	село	дата	подпись
Исрик Камцян	790 691382	07001004 180	6	Дадеш	23.12.11	Исрик
Григор Мартirosян	593 966823	07001002 061	7	Дадеш	23.12.11	Григор
Мянбер Сарсян	790 113632	07001038 998	5	Дадеш	23.12.11	Мянбер
Врарат Тумасян	555 187723	07001046 085	5	Дадеш	23.12.11	Врарат
Армен Тумасян	595 652525	07101053 440	8	Дадеш	23.12.11	Армен
Вачаган Акопян	790 138737	070010373 85	9	Дадеш	23.12.11	Вачаган
Шаварш Мовсесян	490 423856	07001044 781	8	Дадеш	23.12.11	Шаварш
Сергей Мартirosян	599 101673	0700103 9731	7	Дадеш	23.12.11	Сергей
Микаел Стамболцян	557 177558	070010162 23	6	Дадеш	23.12.11	Микаел
Васаршак Мовсесян	595 487524	070010400 79	6	Дадеш	23.12.11	Васаршак
Катинаван Симонян	558 594225	0700103 5425	4	Дадеш	23.12.11	Катинаван
Шура Симонян	577 355126	070010305 06	6	Дадеш	23.12.11	Шура
Говорд Минцян	595 768558	070010413 79	6	Карзах	24.12.11	Говорд
Артиуш Гуноян	555 777553	070010252 21	6	Карзах	24.12.11	Артиуш
Саркис Манцян	790 179886	070010298 20	6	Карзах	24.12.11	Саркис
Саша Кебалян	555777 437	070010108 43	11	Карзах	24.12.11	Саша



имя, фамилия,	телефон	Личный номер	Сколько членов в семье	село	дата	подпись
Нариш Мамикян	593 611305	07001041 362	5	Карзах	24.12.11	Симс
Баграт Мессосян	591 165475	070010386 52	7	Карзах	24.12.11	Симс
Айда Матссян	790 527565	0700104 3552	6	Карзах	24.12.11	ЛП
Вардан Зурнаджян	593 992427	0700103 7184	9	Карзах	24.12.11	Т. Зурнаджян
Рафик Агабабян	790 117446	0700103 2455	8	Карзах	24.12.11	Агабабян
Налет Керопян	790 280993	07001007 808	3	Карзах	24.12.11	Монис
Ашотик Керопян	790 607995	0700101 3364	4	Карзах	24.12.11	Ашот-1
Акоп Керопян	790 143145	07001009 659	5	Карзах	24.12.11	Акоп
Гарсет Погосян	591 347433	0700101 0208	11	Карзах	24.12.11	Гарсет
Копин Степанян	790 137741	070010251 37	6	Карзах	24.12.11	Степанян
Тамар Степанян	595 769669	070010436 13	3	Карзах	24.12.11	Тамар
Вазген Абаджян	790 460001	070010316 58	5	Карзах	24.12.11	Вазген
Арменик Барбарян	591 692835	070010138 25	5	Карзах	24.12.11	Барбарян
Вера Миртчан	790 318101	0700103 4114	7	Карзах	24.12.11	Вера
Гензел Рвакян	790 187332	07001001 639	5	Карзах	24.12.11	Гензел
Сергей Маркарян	790 683244	07001025 176	1	Карзах	24.12.11	Маркарян

имя, фамилия,	телефон	Личный номер	Сколько членов в семье	село	дата	подпись
Сасун Алврян	595 567234	0700104 0906	4	Карзах	24.12.11	
Галх Метаман	595 126981	0700103 4687	5	Карзах	24.12.11	
Мартирос Доходян	593 903271	07001012 070	5	Карзах	24.12.11	
Перник Никосан	595 166957	07001002 441	7	Карзах	24.12.11	
Григор Асранян	595 790 958765	07001000 181	6	Карзах	24.12.11	
Адам Овсрян	595 3024 97	07001032 013	9	Карзах	24.12.11	
Степан Кеиан	598 255872	0700102 5184	6	Филиповка	24.12.11	
Варсик Арсан	593 575566	0700103 8679	2	Филиповка	24.12.11	
Нацаван Бангосан	— —	07001025 229	7	Филиповка	24.12.11	
Карпет Есоян	555 915719	3200101 2509	2	М/Хамчали	25.12.11	
Оваким Авагян	8361 226264	32001004 780	5	М/Хамчали	25.12.11	
Мартин Есоян	593 988465	32001022 498	6	М/Хамчали	25.12.11	
Гамлет Маитесян	8361 225152	32001003 284	3	М/Хамчали	25.12.11	
Торос Мепирян	599 186269	32001007 016	7	М/Хамчали	25.12.11	
Роберт Есоян	8361 225160	32001008 079	5	М/Хамчали	25.12.11	
Алексон Есоян	568 600590	32001027 899	2	М/Хамчали	25.12.11	





## **ANNEX 4**

# **Project Implementation Plan**

Activities	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Final needs analyses																								
Recruiting and mobilizing project staff including establishment of links with the third stakeholders																								
Mobilizing beekeepers																								
Selecting/registering beneficiaries																								
designing training curriculum																								
Founding association and electing chairman																								
Organizing trainings																								
Conducting trainings																								
Intermediary report																								
Preparing and distribution of awareness raising leaflets																								
Assessing the received knowledge and skills among beneficiaries																								
Purchasing and installing technical equipment																								
Pilot production and sales																								
Introducing business plan																								
Preparing final report																								
Establishing links with the potential clients of bee products																								
Establishing contacts with potential providers of api treatment/prophylactic solutions																								
<b>Coaching, backstopping &amp; monitoring (12 months)</b>																								