



## **Case study**

# **Providing wood harvesting services to private forest owners**

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## 1. Introduction

In 2013 many forest owners were affected from a series of legal changes in the Macedonian forestry law. These changes restrained the forest owners to supply their households with heating wood for the coming winter, from own forest.

Changes happened on few levels. The Ministry of Forestry gave permit to provide legally required activities in private forests only to engineers with license. At the same time, the State Forest Company (SFC) has lost the competences to perform activities in private forests. The number of engineers licensed to work on the field was not sufficient to cover all the needs of farmers in issuing approval to cut, timber marking, transport documents etc. And finally in the seasons pick, 50% of the engineers have lost their licenses due to brake of the law - they did not apply on time to change the title of the license in the required time frame.

Traditionally owners are requesting permits for wood harvesting services in September and October. Owners that were not members of the private forest organization (PFO) were not informed for the legal changes and were late to supply their households with firewood. For over a year the association of PFO in its business plan is analyzing the possibility to start new business in providing timber marking services to farmers.

Lack of information and time created big fire wood demand on the market while there were not enough engineers to serve all the private forest owners. This seemed like a good opportunity to support PFO in their analysis while helping group of owners. The village of Divlje was chosen as a case study to supply few households with fire wood while testing possibilities and procedures for the association.

## 2. Village Divlje and its forest owners

The village of Divlje is placed on 25 km southeast from Skopje, in a hilly region on 850 m altitude.



Position of village Divlje

In the past, the village had over 170 houses with more than 900 inhabitants. The primary school was full with kids. People were farmers, working on the land, planting wheat, corn, and maize and also having cattle. In 1960's village got electric supply and in 1975 the asphalt road was paved up to village. But in this period the process of migration from the village started. Most people in a search for a better life in the city or its surrounding started to inhabit villages in the valley: Petrovec, Trubarevo, Jurumleri, Mralino etc. Now days, only 40 people permanently live in the village, mainly old people.

In September 2013 forest owners from all over Macedonia were in a hurry to find licensed forest engineer to mark trees in their forests before the rain season. A group of farmers from village of Divlje were as well searching for the same service. They were not PFO members but found its contact and asked the association for advice and assistance. To speed up the process the farmers from Divlje organized themselves and offered to assist the engineer in the field work.

### 3. The service

The PFO contacted one of the licensed engineers and negotiated about the service for forest owners from Divlje. PFO and the engineer agreed for the service to be delivered in October, before the rainy season starts.

To facilitate the process it was agreed PFO to get financial bonus from the company. Besides that, the case was used to be monitored and used as field example to test the efficiency of the service. Whole process was carefully monitored and produced important outcomes such as: time consumed for the service, transportation and administrative costs and comparison with the income realized through the service. It was agreed to prepare field activity report and analysis that will be used by PFO as a base assessment to start up the business in providing service to farmers in timber marking.

Farmers from Divlje that never heard of the PFO become their members. As a first step 14 people came in the village store with the documents prepared to be checked. Two forest owners didn't have complete documentation. The spatial data for one of the farmer's property were not correct. According to Cadastre his property was on different location on the field than from the one he pointed on the field. The second farmer was not eligible for the service since in the property list 3/7 of the land was in the state ownership. In cases like that it is forbidden to issue harvesting permission until physical separation on the property is not finished.



Timber marking service was provided to 12 farmers with complete documentation. For 8 of farmers the service was provided in the forest, for other 4 the service was provided in marking trees on agriculture land. In total, 86.50 m<sup>3</sup> of wood was marked for harvesting.

#### 4. Service analysis

Results from the complete service provision served as base to produce analysis for the association of PFO as a new business opportunity.

This analysis is projected on annual basis taking the example of operation in Divlje as average. The average size of forest property, the quality of the forest, the distance of the field and other factors are probably less favored compared to other private forest properties in MK. If this analysis shows potential for positive financial balance, then for other areas in MK service provision to private forest owners must be more promising.



#### Projection

For starting any kind of new business there are always some minimum requirements that the company need to think from the very beginning. For the association of PFO to provide forestry services to their members the following minimum requirements are expected:

- Annual salary for the employee (engineer with license) providing service to farmers: 620 €/month gross (400 € net) x 12 months = 7.440 €
- Average wood quantity service per day: 14, 4 m<sup>3</sup> (based on the Divlje example)
- Season work days: 200 days (9 months x 23 days, rain days included)
- Average wood quantity realized in one season: 2880 m<sup>3</sup>



- Price of the service: 5 €/m<sup>3</sup>

Based on the Divlje example the possibility for business will be projected further.

#### 4.1. Data from Divlje field experience

##### 1.1. Time spent for the field work

For the whole service to all participants spent time was measured, starting by entering the vehicle and ending by exiting the vehicle after the work is completed. Measured was time for travel to the field and back, time for timber marking and time needed to deliver transport documents to the clients. At total, 41 hours were spent.

##### 1.2. Time for administration (paper work)

Time consumed to complete all administrative procedures requested by the law in the office was measured to 7 hours. Some of the paper work was finished in the field and is displayed in the field work time.

##### 1.3. Transport cost

Distance to go from the city to the field and way back was approximately 100 km. At total 7 field visits were done, so 700 km were calculated. The basis of calculating the transportation cost is 10 mkd/km (0, 16 €/km). That covers the cost for fuel (gas), costs for oil and depreciation costs. Based on this, transport costs for the field operation were 7.000 mkd (aprox. 114 €).

In total, for 48 working hours spent on the field (6 full days) 86,50 m<sup>3</sup> of wood was realized through the service delivered to farmers or 14,40 m<sup>3</sup>/day. The total transport cost for this service was 114 € or the average transport cost in value of 1, 31 €/m<sup>3</sup>.

#### 4.2. Annual cost projection

Projection for business of a small company registered to give services to forest owners was made. The requirement for the business is one employed person, possession of one field vehicle, basic field tools, computer, internet, printer and small office (or work from home).

- Salary: 620 €/month gross (400 € net) x 12 months =	7.440 €
- Accounting: 50 €/month x 12 months =	600 €
- Year account submission:	30 €
- Annual taxes (trade register, public TV fee):	130 €
- Maintenance of bank account, annual:	60 €
- Transport and other documents:	150 €
- Office materials:	100 €
- Vehicle registration:	160 €
- Vehicle service, average:	500 €
- Field transport cost (Based on 200 days x 14, 4 m <sup>3</sup> x 1,31 €/m <sup>3</sup> ) =	3.773 €
- Other costs:	300 €
<b>Total cost:</b>	<b>13.243 €</b>

### 4.3. Annual income projection

- Service: 200 days x 14, 40 m<sup>3</sup> x 5 € = **14.400 €**

## 5. Lessons learned

Data analysis showed that forest cases such as Divlje are less favorable areas to develop business for the PFO that are based on providing wood harvesting services. The forests in surrounding of the village are compiled of Sub Mediterranean oak forest associations, with species as: Hornbeam, Montpellier Maple, Downy Oak, Turkey oak, Field Elm. The average volume of wood is around 45-50 m<sup>3</sup>/ha. The management system is dominantly coppice forest. Some thinning in the surrounding forests implemented before was not successful due to wrong selection. Only oak trees were taken out and shrubs as hornbeam or dogwood are overgrowing the floor, not providing space for young oaks to grow. Traditionally farmers are harvesting small amounts of wood per year, between 3 to 7 m<sup>3</sup>, mainly for their domestic needs and use, not for selling. The transport of wood was practiced only by one truck, since people were used on the service provided by their neighbor from the village. In few cases the wood was transported on tractor, also with small quantity of wood loaded: 2-3 m<sup>3</sup> per tractor. Most time spent in this field operation was on issuing transport documents. Exactly 50% of the time was spent on transport documents (24 hours). It is one of the crucial moments of having positive financial aspect in this work. Organized farmers to transport wood in one or two days can be negotiated in order to try to decrease the price for the service. All the factors presented above were contributing to poor financial income for the activities done on the field, in coppice forests and specific farmer tradition. In some areas in Macedonia forest conditions for performing service to forest owners as business are much favorable.

Besides all negative factors, comparing calculations of costs and income shows that is possibly to run this kind of business. Running the business with the same projection as the field practice shows potential of positive balance of 1.157 € by end of the year. Success of the business depends on the minimum quotations of wood service of around 3.000 m<sup>3</sup>. Besides the license for private forest management, the engaged engineer needs to have management skills and follow the spent time very carefully.

Investments that are needed for startup are: field vehicle (10.000 €), computer (500 €), basic tools (500 €). Any increase of the service in wood quantity increase positive balance at the end of the year. **The analysis showed that with good organization of activities, provision of wood harvesting services is cost effective. The association of Private Forest Owners from Macedonia can continue being sustainable and create additional income by provision of wood harvesting services.**

### Annex 1: List of the farmers served

1. Trajan Smilevski, KP 1428 (forest), 7 m<sup>3</sup> hornbeam and oak;
2. Gjorgji Gelevski, KP 1312 (forest), 7 m<sup>3</sup> hornbeam and oak;
3. Stojance Gievski, KP 667 (forest), 5 m<sup>3</sup> hornbeam and oak;

4. Stevce Gievski, KP 666 (forest), 7 m<sup>3</sup> hornbeam and oak;
5. Nikolce Andovski, KP 4419/2 (pasture), 9,50 m<sup>3</sup> oak;
6. Doncevski Cane, KP 3954/1, (forest), 8,50 m<sup>3</sup> oak;
7. Gjorge Spasovski, KP 4382, (forest), 7 m<sup>3</sup> oak;
8. Stevan Todorovski, KP 4324, (forest), 3,50 oak;
9. Ljubomir Petrusovski, KP 4803 (pasture), 9 m<sup>3</sup> oak;
10. Stojance Pavlovski, KP 4641 (arable), 5 m<sup>3</sup> oak and maple;
11. Todor Petrusovski, KP 949 (forest), 14 m<sup>3</sup> oak, hornbeam, maple;
12. Dimitrija Blazevski, KP 4795 (arable), 4 m<sup>3</sup> oak, hornbeam, maple, pear;

## **Annex 2: Field day reports**

### Day 1, 10 October 2013

- distance total 100 km;
- time spent 10 hours, 6 parcels finished;
- 44 m<sup>3</sup> wood approved to cut;
- paper administration at the office 2,5 hours;

### Day 2, 13 October 2013

- distance total 100 km;
- time spent 12 hours, 4 parcels finished;
- 40,50 m<sup>3</sup> wood approved to cut;
- 2 transport documents issued for 19,50 m<sup>3</sup>;
- paper administration at the office 4 hours;

### Day 3, 15 October 2013

- distance total 100 km;
- time spent 8 hours;
- 4 transport documents issued for 27,75 m<sup>3</sup>;

### Day 4, 19 October 2013

- distance total 100 km;
- time spent 3 hours;
- 1 transport documents issued for 7,70 m<sup>3</sup>;

### Day 5, 24 October 2013

- distance total 100 km;
- time spent 3 hours;
- 3 transport documents issued for 14,00 m<sup>3</sup>;

### Day 6, 25 October 2013

- distance total 100 km;
- time spent 5 hours;
- 3 transport documents issued for 16,10 m<sup>3</sup>;

### Day 7, 20 November 2013

- distance total 100 km;
- time spent 3 hours;
- 1 transport documents issued for 4,20 m.





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CNVP, a The Netherlands based foundation, is a legacy organisation of SNV in the Balkans. Established through a legal demerger, CNVP will continue the SNV forestry and rural development programme in the Balkans and beyond.

CNVP envisions:

- Local communities achieving their own development goals;
- Maximising the production and service potential of forests through Sustainable Forest Management and locally controlled Natural Resource Management;
- Forests contributing to equitable local economic development supporting rural livelihoods;
- Forests contributing to wider societal interests and values including biodiversity conservation and wellbeing;
- Connecting natural values and people!

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