Appendix 4

ROBINWOOD

COMPONENT 3 – FORESTRY

SWOT ANALYSIS

EASTERN SLOVAKIA

General Characteristics of Forests in Prešov Self-Governing Region (PSGR) and Košice Self-Governing Region (KSGR)

1. General Characteristics - Forestry in PS-GR and KS-GR

Forests form an important part of the environment of the Slovak Republic (SR). According to the data of Lesoprojekt Zvolen, Forest-Land Resources (FLR) take 2, 008, 349 ha, which makes the forest coverage of approximately 41%. Thanks to it S.R ranks among the most forested countries in Europe.

However, the forest-land area does not provide the information on the real vegetation, since within FLR there are also pieces of land which are not covered by tree species (such as forest depots, roads, functional areas, forest nurseries and also pieces of land above the upper tree vegetation line– unforested parts of high mountain ranges). Also forested pieces of land can have different area with respect to the area of individual forest stories. For these reasons vegetation area is also given, which represents the data on Real Forest Area and which is different from FLR area. Forest pieces of land also do not include complex real tree vegetation, such as river-bank vegetation excluded from FLR, and pieces of land having forest nature which do not form FLR, so called White Areas. Forest Vegetation Area in Slovakia is 1, 928, 708.95 ha and Registered White Areas cover the area of 38, 014ha.

The Prešov Region spreads in the north-eastern part of the Slovak Republic. With the area of 8, 981 km2 it takes 18.3% of the state area and it is the second largest region in Slovakia. The long northern boundary is at the same time the state boundary with the Polish Republic. The region borders the Ukraine to the east, and there is the Košice Region in the south, it borders the Banskobystrický Region to the southwest on a short line and its western neighbour is the Žilinský Region.

Administratively, the Region is divided into 13 districts with 666 municipalities, 23 of which have the statute of town.

The Region’s relief is considerably broken. The largest areas are covered by the outer Carpathian units: Spišská Magura, Podtatranská brázda (Sub-Tatra Furrow), Spišsko-šarišské medzihorie (Spiš-Šariš Lower Highlands, Levočské vrchy (Levoča Mountains, Bachureň, Šarišská vrchovina (Šariš Highlands), Pieniny, Ľubovnianska vrchovina (Ľubovňa Highlands), Čergov, Busov, Ondavská and Laborecká vrchovina (Ondava and Laborec Highlands), Beskydské predhorie and Bukovské vrchy

(Bukovské Hills). The Fatra-Tatra Area with the Tatras, Podtatranská kotlina (Sub-Tatra Basin), Kozie chrbty (Goat Ridges), Nízke Tatry (Low Tatras), Hornádska kotlina (Hornád Basin) and Branisko also extends to the Region.

From the Slovenské Rudohorie Mountains there is Slovenský Raj (the Slovak Paradise) and Čierna Hora (Black Mountain) on the territory of the region, and northern borders of Košická kotlina (Košice Basin), Slánske vrchy and Vihorlatské vrchy (Slánske and Vihorlatské Mountains) also extend to the region. There are a number of Large- and Small-scale Protected Areas, of which Tatra National Park and Pieniny National Park are the largest regarding the area and significance.

Due to differences in the sea-level altitude and the relief division, the territory of the Region is divided into three climatic zones:

- Cold,
- Temperate,
- and Warm.

The average annual temperature reaches from 6.8 °C to 8.4 °C.

The Region is rich in mineral resources of which the most important are Salt Rock, Limestone, Building stone, Brick-Clay resources, and Zeolite and Manganese ore.

The Košice Region with the area of 6, 752 km2, is located in the south-eastern part of the Slovak Republic and covers 13.8% of its territory. It borders Hungary to the south, the Ukraine to the east, the Prešov Region to the north and the Banskobystrický region to the west.

According to the Territorial-Administrative Division the Region is divided into 11 districts: Gelnica, Košice I, Košice II, Košice III, Košice IV, Košice-surroundings, Michalovce, Rožňava, Sobrance, Spišská Nová Ves and Trebišov. Košice is the centre of the region.

In the territory of the Košice Region there are 4 large-scale Protected Areas declared with the National Park Slovak Paradise and Protected Landscape Areas Slovenský kras (Slovak Karst), Latorica and Vihorlat. Dobšinská Ice Cave and Geyser in Herľany are unique natural beauties. Water reservoirs Zemplínska šírava, Bukovec, Ružín and Dobšiná have economic and recreational importance. The territory belongs to the North Temperate Zone with the average annual temperatures measured at chosen meteorological stations reaching from 8.0 to 10.0°C (Košice-airport, Rožňava); northern parts are colder, south-eastern part, however, in some areas reaches even the temperatures of continental subtropes.

The largest river is Bodrog, which is the confluence of the rivers Ondava, Topľa, Latorica, Laborec, and it dewaters Easter Slovakia Lowlands. In addition to this river, the Hornád River is important but also the Slaná and Bodva rivers; the Tisa River flows through 5.2 km long part of the southeast corner of the territory.

In the Region there are energetic, ore and non-metallic raw materials. From the energetic ones there is an oil and natural gas in Michalovce and Trebišov districts. In the Košice-surroundings district in Ďurkov locality there are resources of Geo-Thermal Energy. Iron and silver ores are important ore raw materials in Rožňava district and Spišská Nová Ves. In the surroundings of Košice Magnesite deposits are important together with Rock Salt deposits in Michalovce district, and Talc and Gypsum in Rožňava and Spišská Nová Ves districts. In the Region there are located various kinds of building stones, brick-clays, Limestone, Kaolin, gravel sand and others.

Strong points	Weak points
• Favourable demographic development, • Main transport corridors enable connection with the national transport system, • High forest coverage of the territory, strong potential of forestry, • Development of traditional industries and crafts, • Free production capacities for new production location (territory, human resources), • International airports in Poprad, and Košice • Qualified labour force, • Favourable conditions for cross-border region and additional services development, • Relatively well-preserved environment, • Geo-thermal water and mineral spring resources,	• Insufficient industrial structure and relatively low level of technologies used, • Limited channels for investments in utilization of available supplies of minerals and wood substance, • High percentage of socially inadaptable inhabitants, • Insufficient service network provided, • Relatively low educational level of inhabitants, few people with university education, • Insufficient level of transport and technical infrastructure, • Insufficient funds to upgrade the production and introduce new technologies, • Strong dominance of basic industry over the finalization, • Insufficiently used production capacity of a considerable part of production companies in the region, • Absence of input and

• Convenient position for cross-border cooperation with Poland, the Ukraine, and Hungary	developing capital.
Opportunities	**Threats**
• Development of wood processing and furniture industries, • Legislative and supporting programmes being prepared for foundation of industrial parks, • Vicinity of the international airport in Poprad – possibility of transport mainly in the field of tourism development, • Finalisation of National Highway Network, • Possibilities of cross-border co-operation – creation of new jobs especially in cross-border region, • Utilization of natural potential for cross-border region, spa industry and geothermal energy for heating, • Development of small and medium businesses in the field of services, craft development based on folk traditions and skills, • Growing interest in rural tourism, • Gradual synchronisation of secondary school and university fields of study based on thorough labour market analysis, • Utilisation of natural potential of mineral and thermal springs in order to develop tourism and rural tourism.	• Qualified labour force leaving for other regions with better possibilities and payment conditions, • Existence of protected areas – barriers due to requirements of nature protection, • Relatively adverse communication, road and railroad connection – the absence of a highway and direct connection to the main railroad connections, • Lack of funds to complete building up technical equipment, • Absence of cooperation between educational institutions, Employment Offices and entrepreneurial sphere, • Demotivating environment for entrepreneurship, • Low transport accessibility of localities in the region regarding foundation of industrial parks, • Lack of interest of investors in region with low infrastructure level – communication barriers, • Insufficient support of direct input of foreign investments.

Recommendations:

With respect to the current decline of processing industry we recommend to :

- increase the support for small and medium entrepreneurs in the field of finalization of wood processing industry.

- Prepare the enlightenment regarding the utilization of the biomass and biological waste.

- Compost sites, biomass combustion
- Introduce biomass heating system in inaccessible areas with no gas distribution network
- Integrate legislation
- Identify forest and farm land owners
- Subsidies and preference of PSGR and KSGR with regard to withdrawal of structural funds
- Prepare power engineering and Forest Development Plan.
- Improve the cooperation between forest owners, NGOs and individual cadastres.

2. Biodiversity

In terms of Biodiversity and fauna and flora ratio in our forests, individual growth and vegetation is mapped sufficiently. It is related to monocultures as well as individual mixed kinds of forests.

In Eastern Slovakia low awareness of fauna and flora among inhabitants and possibility of forest utilisation, for recreational and relaxation purposes as a secondary forest function is a problem.
The planning of forest and nature development is insufficient. There are lots of forest products, which are not gathered at present (raspberries, strawberries....) at all.
Complex Development Operational Plan needs to be elaborated to support forest and forestry. There is also a complex problem regarding climate changes and insufficient preparation of forest management for this change.

Strong points	Weak points
- Possibilities of forest promotion and utilisation for relaxation-conditional functions - Stakeholder associations and NGOs, which want to deal with nature protection - Voluntary activity - Hunters' associations acting as professional forest protectors / guardians. - Relatively untouched nature	- Insufficient state support regarding NGOs - Poor co-operation between individual partners - Insufficient communication between the owners, protectors/guardians, and society. - Issue of insufficient awareness of public in the field of environment protection. - No alternative is prepared in case of the territory climate change
Opportunities	**Threats**
- Possibilities of environmental tourism - Possibility to establish co-operation between individual representatives of NGOs, unions and associations - The need to prepare Forest	- Insufficient communication regarding possibilities of communication - Problems arising from competition, also between NGOs

Development Plans - Possibilities of forest development for economic purposes in the area of tourism as secondary effect	

Recommendations.

- Support for NGOs and associations by the means of small gants
- Promotion of the nature uniqueness to general public – schools and inhabitants of the region
- Prepare planning document for forest and nature development
- Sustainability and development of forest as an integral part of natural unit.
- Future preparation of forest with respect to weather changes

3. Forest Certification

At present Slovakia falls short of EU countries in the field of Forest Certification -certification documents that the forestry is controlled in accordance with the requirements for sustainable forestry according to modern ecological principles. Ultimately - this fact discriminates domestic wood processors, as well as furniture manufacturers when, there is a condition of significant supranational business chains to certify wood products. In such a case - Slovak production is not competitive any more.

Strong points	Weak points
- Sufficient amount of quality tree species for industrial processing - Quality processing companies	- There are no forests certified according to EU standards
Opportunities	**Threats**
- Growing competitiveness in the field of forest processing	- Taking the market over by other companies and big producers

Recommendations:

- To prepare legislation and particular forest certification

4: Processing Industry

Macro-Economic view

Complex wood-working production belongs to traditional industries within the Slovak economy such as forestry, wood processing, and furniture production. Manufacturing programmes consists of a wide spectrum of Round-wood products and Round-wood, to lumber and veneers and to wooden packages and furniture.

The Contribution of complex woodworking to the gross domestic product in 2002 achieved 1.8%, which is a slight decrease compared to the previous year. In 2002, the forestry created 0.5 % of he total GDP of the Slovak economy, whilst the contribution to the creation of GDP decreased compared to the last year. Wood processing created 0.7 % of the total Slovakia's GDP and kept its contribution to the GDP at the same level as last year. The situation is similar also in cases of production not classified elsewhere and furniture production, which created 0.6 % of the GDP in the year 2002, and its contribution to the GDP remained unchanged compared to 2001.

If the value added per one employee is compared, we find out that woodworking developments belongs to the industries with below the average value added per employee. In woodworking complex - clearly the highest value added per employee is in the wood processing sector, which, however only achieves 84.7% of average in economy.

Furniture production and production not classified elsewhere achieve 57.9% of value-added per employee's average with the lowest value-added per employee in forestry, which achieves only 43.5 % of average in economy and belongs to the industries with the lowest value-added in Slovakia. Generally, it can be evaluated that production intensity of woodworking complex is rather high or value-added is lower than Slovakia's average.

In wood processing inputs of SKK 0.71 are necessary per output of one crown. The situation is even slightly worse in production not elsewhere classified and furniture production, where the inputs of more than SKK 0.80 are needed per output of one crown.

In 2002 there were 38,873 people employed in woodworking development, which is the 3.1% ratio 14 per all employees in Slovakia. As compared to 2001 a slight decrease of number of employees can be noted, which was caused by the decrease of number of employees in forestry as well as in wood processing. On the contrary, the number of employees in production not elsewhere classified and furniture production has increased.
In 2002, an average of 10,353 employees worked in the wood processing sector, which was only 0.8% of all employees in the economy. In forestry there were 15,075 persons employed on average in 2002, with the actual figures showing possible further decrease of employee numbers this year. The situation is reversed in production not elsewhere classified and furniture production. In 2002, 13,445 employees worked in this industry, which represents the growth of 1.4% compared to last year and actual survey results show further increase of employment in this industry.

The average monthly wage in the woodworking industry increased by 9.4% last year to SKK 12,214 (20 and more employees), which represents the real wage growth of about 6.0% after netting out the inflation. To compare - the dynamics of the real wage growth in the economy of Slovakia in 2002 amounted to 5.8 %. The average wage in chemical complex was 9.6% lower than the average in economy in 2002.

Production not elsewhere classified and furniture production achieved the highest average wage in woodworking complex with the average monthly wage of SKK 12,966 in 2002, which means it was 4.0% lower than the average in economy.

Forestry and wood processing did not amount to the average wage as well. The average wage in forestry was SKK 12,446, which is even more than in wood processing, although the value added per employee could indicate the contrary ratio between average wages.

Individual industries of woodworking complex have recently been developing differently, compared to the development of industrial production as well as to each other. While in 1999, the whole economy was marked by the slight decrease in production as a result of reform steps, which had already been implemented, and later set for slight growth, wood processing was also marked by a slight decrease, however the production showed no further growth.

We can talk about stagnation or only about the slight growth in wood processing. The situation is different in cases of production not elsewhere classified and furniture production. This production recorded a decrease only at the turn of 1999/2000, and since the end of the year 2000 it has recorded a significant growth, continuing up to the present especially with exportation and primary raw material purchase as the main priority.

As far as sales are concerned the development was identical. In 2002 all industries achieved increases in sales. Forestry recorded the lowest increase in sales by only 3.46%. The highest increase in sales was in production not elsewhere classified and furniture production with the increase of 23.1% in 2002. The sales increased by 11.39% in 2002 in the area of wood processing.
According to present development the sales in all industries are expected to exceed their level last year in 2003. Foreign trade deficit belongs to chronic problems of the Slovak Republic, and wood-working complex contributes to its reduction. In 2002 foreign trade surplus was SKK 18.6 billion, which reduced foreign trade deficit by 19.2%.

In 2002, the export of woodworking industry achieved SKK 40.3 billion, which was almost 6.6% of Slovak export. In the same year the import of woodworking complex achieved SKK 21.7 billion, which was 3.0% of the total import of Slovak economy.
All three of the industries making up woodworking complex were developing identically and they achieved foreign trade surplus. Positive development was recorded in foreign trade, in wood products and production not elsewhere classified and furniture production. In these two industries foreign trade surplus gradually increased. In 2002, foreign trade in wood products finished with the surplus of over SKK 6.5 billion and foreign trade in furniture and production not elsewhere classified finished with the surplus of over SKK 10 billion.

The situation is a little bit different in the area of foreign trade in forest products. The foreign trade finished with the surplus of over SKK 2.0 billion, however, the surplus decreased significantly, especially due to decrease in export. However, the dynamics of price development in woodworking complex was slighter compared to the price index increase of industrial producers. The differences were striking in price development of industrial producers and prices of wood products and products not classified elsewhere and furniture. The price index of industrial producers in the 2001 and 2002 period increased (6.6 % and 2.1%), which compared to price development in sector of wood processing, provides different view to price development because of price decline in the given period. A slightly different price development was recorded also in production not elsewhere classified and furniture production, where prices declined in 2001 but in 2002 they started to grow.

With respect to financial results of companies with 20 and more employees - woodworking complex was quite successful in 2002. Wood processing and production not elsewhere classified recorded increases in revenues. Forestry recorded decrease in revenues, however, the profit in the sector increased by 94%. Wood processing also made a profit but production not elsewhere classified and furniture production reported a

loss during the accounting period. In woodworking complex there were total of 268 businesses with 20 and more employees. In forestry there were 46 businesses running. From them 38 made profit and 8 reported a loss. In wood processing there were 112 businesses running of which 74 were profitable and 38 were loss-making. In production not elsewhere classified and furniture production there were 110 subjects with 20 and more employees of which 74 made profit and 36 reported a loss.
The position of woodworking complex within the Slovak economy can be summarized into the following points:

- The industry provides low contribution to the Slovakia's GDP creation and value added rate per one employee is low.
- The employment in forestry and wood processing has declined over recent years, on the other hand it has increased in production not elsewhere classified and furniture production.
- Average wage in woodworking complex is below the average of the Slovak economy.
- The most dynamic production growth was recorded in production not elsewhere classified and furniture production.
- The industry contributes to the reduction of Slovak trade deficit.
- In 2002, the ratio of the number of profitable businesses in the total number of businesses in the industry (20 and more) was lower than in industrial production.

Attributes

Woodworking and furniture production industries do not belong to key industries of the Slovak economy, however due to sufficient raw material base they belong to its important sections. The main attributes of forestry-woodworking complex can be summarized as follows:

- **Independence from import of material inputs**

In terms of input raw materials Slovakia has a significant comparative advantage with respect to sufficient raw material base, which makes it possible to develop further based on domestic renewable wood resources.

- **High ratio of small and medium businesses**
[more than 80% are s r.o. businesses (with liability limited)]

Woodworking industry has a rich tradition together with furniture production in Slovakia. The production of these traditional wood processors and furniture producers ceased during transformation period in 1990s, and especially due to privatization. Instead of them - new ones were established by the means of purchasing or leasing the parts of original production capacities with smaller number of employees.

The industries provide possibilities for small and medium entrepreneurial activities to be developed, mainly in furniture and construction-joinery productions since smaller operations are more flexible and they work with lower overhead expanses thus being able to adapt to market requirements faster. In the industry limited liability companies are the main profit-makers while joint-stock companies are significant loss-makers and it resulted in a bankruptcy of a lot of traditional producers.

- **Low rate of product finalization in woodworking industry**

After economic transformation saw-mills in Slovakia gave up establishing traditional saw-mills and the investors aim at building complex production facilities, nevertheless, their dis-integration is typical for woodworking industry, conflicts between supply and demand of wood producers and wood processors cause that significant part of wood is exported.

- **High export performance compared to other industries …**

resulting from the export of wood after converting and re-export, while gradual export increase is visible also in furniture production and mainly thanks to the entry of foreign investors.

- **Dependence on purchasing power of Slovak inhabitants**

Wood products have the nature of long-term consumption. In the past period the consumption of furniture in Slovakia was significantly limited by economic climate in terms of inhabitant real purchasing power but also civil engineering decline and related housing construction. However, Slovak consumers are relatively conservative which means they prefer utility and useful products to designer products. Amendment to the Act on mortgage loans, the institute of State Housing Development Fund, building societies as well as other market-based mechanisms together with increasing housing construction create conditions to increase the consumption of furniture industry products and wood utilization in industrial activity.

- **Sufficiency of labour power and critical source of job opportunities in some regions in Slovakia**

With respect to relatively low demanding technological devices especially in woodworking industry, but also in connection with the tendency towards furniture production automation, the industry can cover a great part of labour power with lower qualification. Seasonal character of the industry also has an impact on employment when, naturally, part of the Prešov and Banskobystrický Regions are covered.

- **Low economic power of Slovak businesses and high level of indebtedness**

The businesses in both industries do not have enough capital, businesses in bankruptcy have not already undergone the process of liquidation, which results in the fact that the number of loss-making businesses is almost twice as high as the number of profit-making ones (limited liability companies) and the loss they make absorbs the whole profit which is made by new or recovering companies.

Accrued losses of past industries cause the lack of funds to start up new capacities and discretion of the banking sector in industry funding resulting from high number of undue loans in the past causes that businesses are financed by supplier loan. Capital input of foreign partners seems to be inevitable; the investments are necessary especially in the field of technologies.

- **Insufficient commercial activities of businesses in the industry and weak wood and wood product promotion**

Economy transformation and transition to market economy resulted that domestic investors lost their traditional markets. The input of domestic investors in collapsing businesses did not provide in sufficient extent the input to foreign markets, which is given by their low competitiveness. In fact, only a foreign investor is able to provide the input to foreign markets. Similarly the promotion of wood as raw material for various purposes of use (furniture production, construction material, fuel,…), which pre-determines its export and the value added is carried out outside the territory of Slovakia.

- **Foreign investors input**

Break-up of traditional furniture companies in Slovakia enabled foreign investors to enter Slovak market. At present, world brands in Slovak businesses ensure - the export of Slovak production to foreign markets, and their further development in Slovakia means the increase in employment, improvement of quality management and business performance in the industry.

Strong points	Weak points
- Sufficient number of experts and raw material - Independence from import of material inputs - High ration of small and medium businesses (limited liability companies represent over 80%) - High export performance compared to other industries	- Low rate of product finalization in woodworking industry - Low rate of product finalization in woodworking industry - Dependence on inhabitant purchasing power in Slovakia - Low economic power of Slovak businesses and high

- Input of foreign investors and cheap labour force	level of indebtedness - Insufficient commercial activities of businesses in the industry and weak promotion of wood and wood products
Opportunity	**Threats**
- Increase in competitiveness in the field of forest and forest products processing - Development of small and medium businesses - Increase in employment	- Input of large companies which will destroy small and medium businesses

Recommendations:

- State support for small and medium businesses
- Tax holiday for production finalisers.

5. Forest management and planning

Nowadays the education of a new generation of forest managers is necessary. New forestation is needed as a flood protection element as well as for biomass creation. It is necessary to adjust and change forest structure according to climate changes and general changes of conditions for the needs of wood processing industry.

In private sector there is a lack of managers for long-term forest utilisation development plans. The awareness of the people in Slovakia on possibilities how to use biomass and wood and industrial products is low. We should introduce new courses for people in the region. They should synchronise requirements of private sector, entrepreneurs, inhabitants, experts and NGOs. In the short-term duration it should be forest certification. Forest development as well as secondary aim in tourism development and entrepreneurial activities in the field of tourism. Raw material processors should contribute a certain % to the forest revitalization as such, to secure cash flows for forest revitalization.

Strong points	Weak points
- Relatively preserved nature - Quality human resources - Sufficient labour forces - Sufficient infrastructure	- Low awareness of inhabitants on possible forest utilization for agricultural tourism - Forest management expert advisers - Property matters are not settled
Opportunities	**Threats**
- Education of new local advisers - Better utilization of properties for agricultural tourism - Increase in employment.	- Lack of funds for education and payment of local managers - Lack of funds for agricultural tourism development

Recommendations:

- Introduction of new advisers of forest managers in regions
- Support of forest tourism development
- Preparation of the educational institution for forest managers