



Measures for a sustainable development of Dimitrovgrad

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Rezime

Područje opštine Dimitrovgrad, smešteno u Istočnoj Srbiji, suočava se sa nekoliko poteškoća u pogledu ekonomskog razvoja, smanjenja broj stanovnika i promena prirodnih predela. Da bi odredili mere kojima bi se suprotstavili ovim negativnim pojavama, izvršena je analiza trenutne situacije. Pored SWOT analize, sprovedena je i analiza sistema koja se bazira na informacijama dobijenim iz intervjua sa različitim zainteresovanim stranama i utisaka od strane studenata za vreme boravka u Dimitrovgradu.

Analizom smo dobili dve osnovne i nekoliko manjih mera:

Prva mera se tiče neiskorišćenog potencijala u turističkim ponudama. Rezervacija i upravljanje smeštajnim kapacitetom i svim ostalim turističkim ponudama trenutno nisu koordinirane. Informacije o mogućnostima smeštaja i turističke ponude u celosti su jedva dostupne i stoga ih turisti ne tako često koriste. Da bi rešili ovaj problem predlažemo uspostavljanje privatnog turističkog subjekta koji direktno nudi, razvija i prodaje turističke ponude. Druga mera se fokusira na nedovoljno razvijenu poljoprivredu, gde kao jedan od uzroka vidimo nizak stepen saradnje između samih poljoprivrednika, što je glavni problem. Saradnja bi mogla biti povećana uvođenjem sistema, koji omogućava udruživanje proizvođača iste vrste proizvoda na način koji ih spaja i približava, ali ne u formalnom smislu. Ova vrsta udruživanja se zove esnaf i tradicionalan je vid udruživanja u mnogim delovima Evrope. Postati član esnafa moguće je jedino ako proizvođač dobije poziv i prihvaćen je od strane ostalih članova. To je grupa od poverenja. Esnafi mogu da postave zajedničke standarde o načinima proizvodnje proizvoda. Ovi proizvodi bi se mogli prodavati zajedno što omogućava jaču poziciju na tržištu. Poslednju meru čine predlozi koji treba da pomognu opštini da se suprostavi različitim problemima sa kojima se suočava.

Identifikovano je mnogo potencijala koji mogu da doprinesu razvoju područja. Iznenadjujuće je to što mnogi od njih nisu iskorišćeni, u većini slučajeva zbog društvenih normi, neefikasnog ili potpunog odsustva planiranja i nepravilnog usmeravanja raspoloživih resursa.

Abstract

The region of the municipality Dimitrovgrad, located in eastern Serbia, faces several difficulties regarding economic development, shrinking society and changes in landscape. In order to find measures to counteract these negative developments, an analysis of the current situation has been made. Besides a SWOT analysis, a system analysis has been carried out that bases on information that has been collected in interviews with different stakeholders and impression gained in excursions within Dimitrovgrad.

The analysis has led to 2 major and several small measures: The first measure tackles the unused potential for touristic offers. The booking and management of accommodation facilities and all other touristic offers are currently not coordinated and actively managed. Information about accommodation options and touristic offers are hardly available and hence, they are not booked by any tourists. To address this issue we suggest a private tour operating business that offers booking options and develops and sells touristic activities. The second measure focuses on the underdeveloped agricultural performance coming – as a main problem – from the low degree of cooperation among the different farmers. Agriculture could be enhanced by introducing a system, which enables a gathering of producers from the same type of product in a binding but not legally established way. This type of group is called “guild” and is a traditional group existing in many parts of Europe under this term. Becoming a member of a guild is only possible if the producer is invited and accepted by the other members. It is a group of trust. Guilds can set collaboratively standards for the way products are produced. These products can be sold together which allows a stronger position in the market. Besides these two main measures a set of different proposals are suggested for the municipality to tackle various problems within its boarder.

Overall, many potentials for development of the regions have been identified. It is surprising that many of them are not made use of, most of which is due to existing social norms, inefficient planning and misallocation of resources.

Acknowledgments

This field course gave us, ETH students with different educational backgrounds, an opportunity to apply our theoretical knowledge in a real world context. In these ten days we could gather an enormous load of information and experience, which has helped and will help to improve our analytical skills much further. For this unique insight we would like to thank the many people, which made this field course possible. We especially appreciate the cooperation with the mayor Dr. Vladica Dimitrov as well as other representatives of the municipality. For his unbelievable and very valuable engagement we especially thank Dr. vet. Sergej Ivanov. For the guidance and local knowledge we thank the head of organisation Florian Knaus and his wife Maja Knaus. Furthermore we thank the many local residents, which readily offered their hospitality and personal views, namely Aleksandar Vasov and Nikodija Velinov. Finally we thank the embassy of Switzerland in Serbia for their financial support.

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1. Introduction

The municipality of Dimitrovgrad is located in the eastern part of Serbia next to the border to Bulgaria. It is part of the Stara Planina mountain range, which stretches from the eastern part of Serbia to the Black Sea in Bulgaria. The diverse landscape consisting of forests, arable land, pastures and grasslands creates a unique biosphere and hosts a vast variety of different species. It holds an enormous ecological value. In the Serbian part, the largest amount of Stara Planina is covered by a Nature Park with the purpose to protect the existing nature, being one of the richest in Serbia.

In the region of Dimitrovgrad, besides industries, agriculture was once the most important economic sector. Accordingly, the landscape is marked by the rural practices, which were generally extensive and run on a small scale. The large number of domestic animals contributed to the typical landscape and to a solid daily income of the local population.

While the communistic economy was a fairly well functioning system with high industrial and agricultural production, that were exported globally, the economic situation after the communism remains difficult. The communistic economy provided many jobs in the industrial sector. However, it collapsed almost totally together with the communist regime and the due to the war embargo in the 90ies. Currently, Dimitrovgrad is among the municipalities with the lowest average income levels in all Serbia and unemployment rates are high. The agricultural sector has become unattractive due to the heavy work and low profitability. Alternative jobs are rare. Consequently young people decide to migrate to larger cities such as Belgrade and Sofia. Not only does the region face severe issues of depopulation but also the decreasing agricultural activities result in unwanted changes in the heterogeneous landscape: many biodiversity rich meadows and pastures are turning into shrub land and forests.

To improve the situation of the region there is a need of measures, which potentially stop the depopulation as well as the decreasing economic performance in the agricultural sector and other sectors. Appropriate measures would not only improve the situation of local population but also contribute to the conservation of the diverse landscape making this mountain range so valuable from an environmental perspective. Finding a set of measures that effectively improves the situation and takes care of the natural and social assets is the goal of this project.

2. Methods

We first obtained a political, economic, ecological and cultural overview of the region and its people through short field trips and interviews with representatives from the municipality as well as persons from industry and agricultural businesses (see list of participating persons in the appendix). The gathered information was used to get an underlying understanding of the socio-economic and ecological system. Based on group discussions about Strength, Weaknesses, Opportunities and Threats of the region, four targets have been identified that are central for a sustainable development of the region offering economic development while taking care of the ecological assets in the region. These targets were the basis for a system analysis following the FOS (2008) procedure in which we recursively identified the list of direct and indirect influences to those targets on a paper poster. This system analysis was done for each of the targets separately. Following, these subsystems were combined into one overall system scheme. In this process, the set of variables was reduced to 57, a maximum that still can be handled in the further steps. These factors were put into an influence matrix, in which we assessed the direct influence between all respective variables. The direct influence was either nonexistent (0), weak (1) or strong (3). It was not assessed whether the influence is positive or negative. Summing up the columns and lines of the influence matrix allowed us to compute the passivity and activity score of each variable. These values were normalized to a range of zero to one and then positioned in a chart that is called System Grid. Passivity and activity of a variable represent the sum of the scores of incoming (passivity) and outgoing (activity) influences in the system scheme respectively. In the system grid, the system variables can be categorized according to passivity and activity:

Accelerators are the variables which both influence and are being influenced by other variables. They are strong catalyzers of the system and can cause loops and unpredictable effects in the system.

Drivers are variables which have a strong effect on other variables but receive a relatively little influence from others. Drivers are the main levers for the system's behavior and thus perfect connecting points for measures. Those that can be controlled by external actors will be the focus of our analysis.

Indicators undergo a strong influence from variables and exert a little influence on them. They are good variables to observe the system state and changes within.

Buffers are neither strong influencers nor strongly influenced by variables in the system. They slow down system inherent dynamics.

Additional to the system analysis we performed a SWOT-analysis to systematically identify measures to achieve the set targets. In the SWOT-analysis the strengths (S) and weaknesses (W) of the region were identified and combined with opportunities (O) and threats (T) from outside the regional system. This led to a number of potential measures. For these measures, it was assessed, which types of variables in the system they tackle. Only those from which an impact could be expected (drivers), were selected and further defined. After a first draft, these measures were discussed with Sergej Ivanov in order to find out whether they are generally feasible and legal. His inputs were used to finalize the measures and describe them in detail.

3. Results

The following four basic targets have been identified as central for a sustainable development in the region:

- 1) The total number of tourist overnight stays
- 2) The number of small and medium sized businesses involved in agriculture
- 3) The sales volume of processed products
- 4) The heterogeneity of landscape in Dimitrovgrad

The subsequent system analysis revealed the factors defining the socio-economic system dynamics in Dimitrovgrad (System Flow, Fig. 1 and System Grid, Fig. 2). Values in society and traditions in farming products are strong drivers in society, determining the decisions of local people. Political stability, municipal policies and corruption are further strong drivers that are identical in terms that they can hardly be influenced by measures. Other factors like municipal policies, subsidy and grant schemes show more potential for change, as these values are further up the scale of passivity and are also more influenced by other variables within the system itself. The impacts can be both positive and negative.

An example of an accelerating variable would be the mechanization of agriculture or our target variable number of farming businesses. They have a strong and catalyzing effect on the system as a whole both in the negative, as well as in the positive direction with respect to our overall goal.

The sales volume of processed products has the highest score of passivity among the four targets, which means it was directly influenced by many other factors in the system. This variable has also a very low activity, meaning that it is one of the indicators of the system. The sum of the sales volume of processed goods is an optimal indicator to survey the agricultural development in the region in a potential monitoring system.

The natural succession is one of the variables that show both low activity and low passivity, meaning that it is influenced by a low number of variables and also influences just a few other variables. It is a slow process that slows down the system as a whole.

The measures discussed later in this report, addressing the potential for organizing small scale private tourist enterprises and the opportunities that exist by organizing small producers of agricultural products into Guilds both address values that are in the grid's sector of the drivers (Fig. 2). Measures increasing the total number of visitors, and the total number of beds available for renting out to tourists and the diversity of leisure activities would help reach target one. Organizing farmers in Guilds so the agricultural production traditions, sales channels, knowledge of production and the area used for agriculture are encouraged would both lead to an increase of the number of agricultural businesses, and to a higher heterogeneity of the landscape and higher sales volume of processed goods.

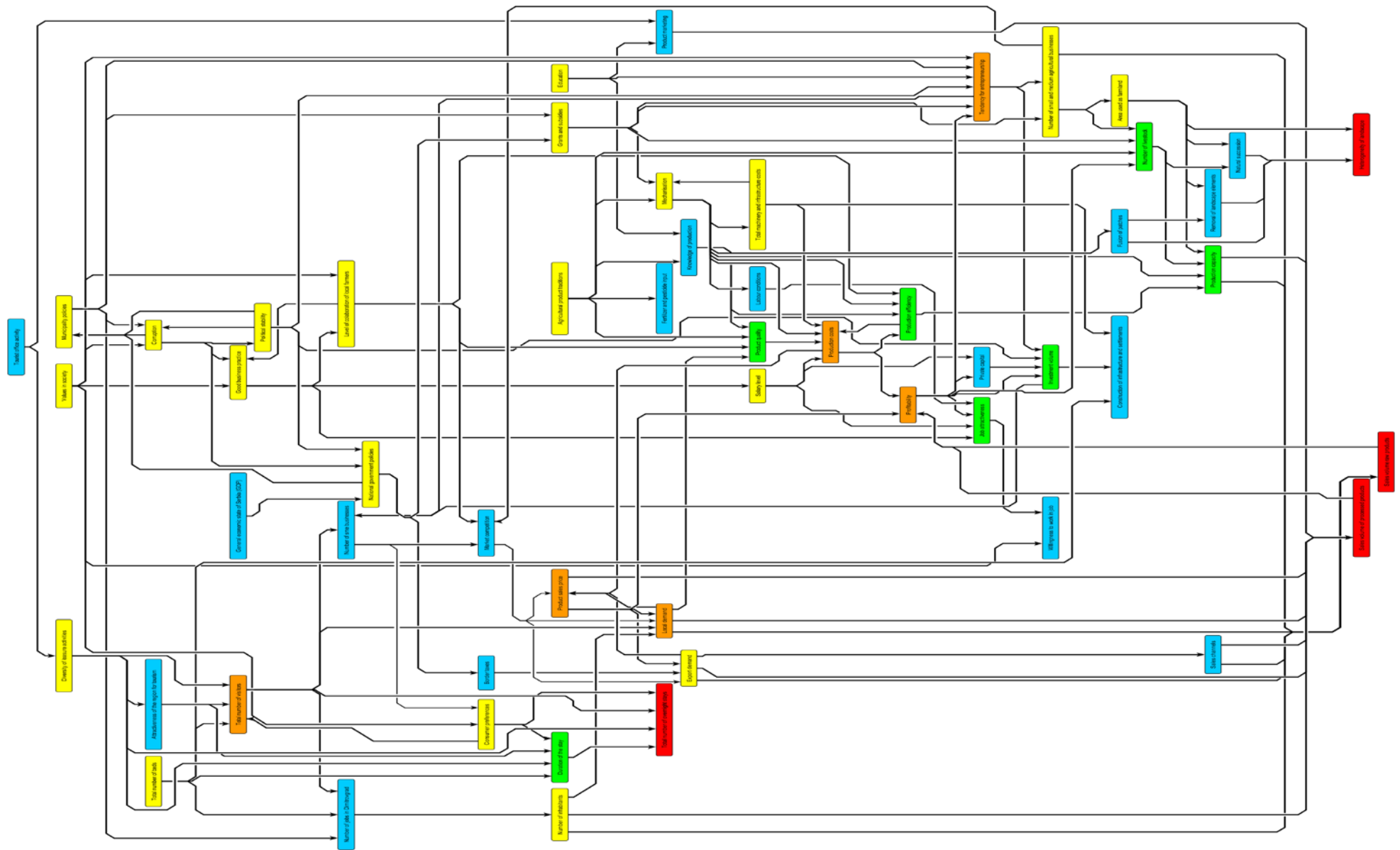


Fig. 1: Overall System Flow diagram

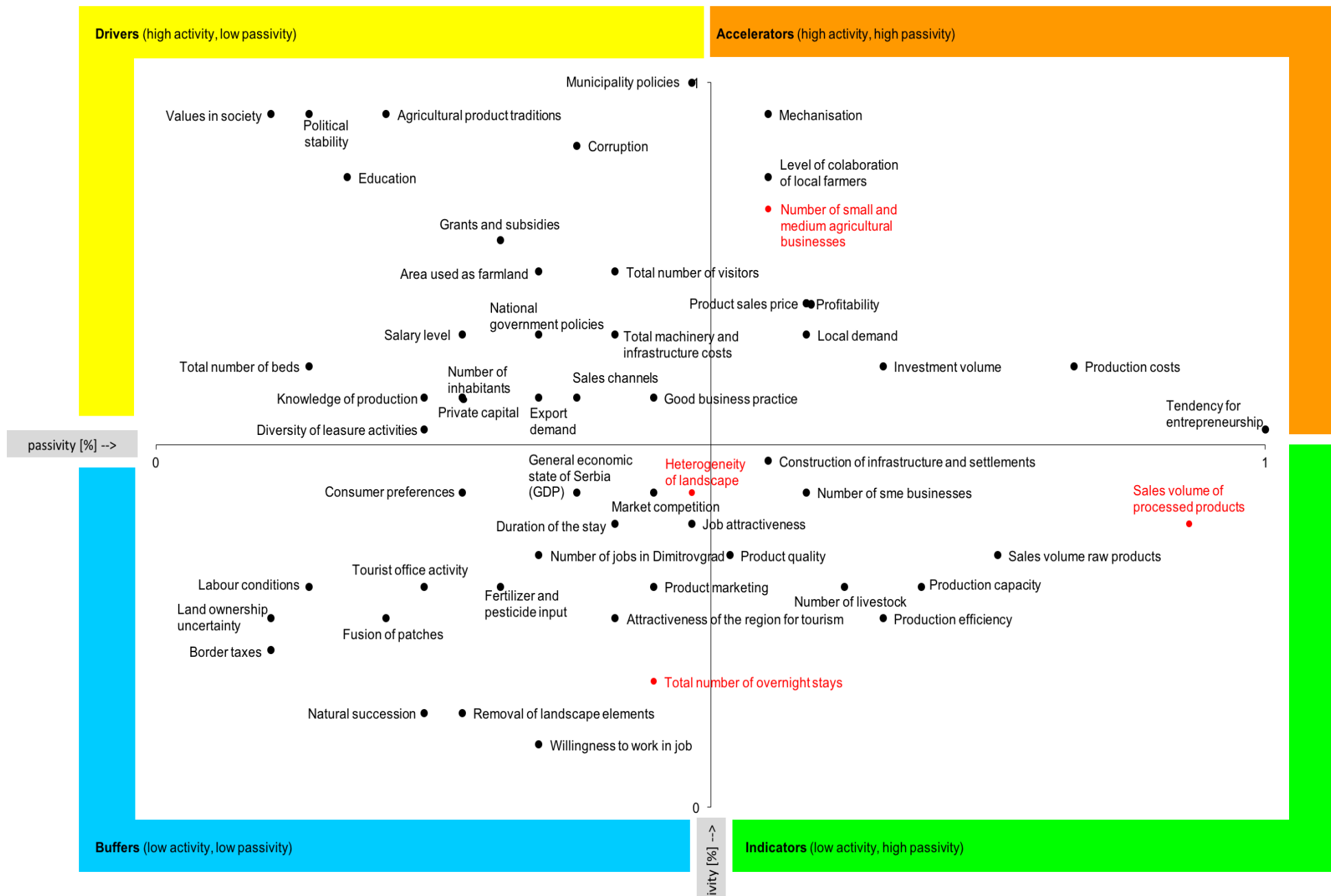


Fig. 2.: Overall System Grid

4. Measures

4.1: Shopska-Tours

Enhancement of the touristic sector by creating a private business that manages the touristic offers and infrastructure within the region

The sector of touristic activities in the municipality of Dimitrovgrad is currently underdeveloped: The potential of the region regarding accommodation, hospitality, leisure activities and the marketing of local products is not met mostly due to a lack of organization. Even though there are approximately 15 private accommodation facilities in the municipality and hotels in the city that are able to accommodate many people, the tourism is currently limited to transit guests (mostly Turkish living abroad) and an increasing number of Bulgarian tourists that stay for maximum one night. In order to increase the added value of the existing tourism and attract additional visitors, we propose the implementation of a webpage, which allows tourists to get an overview of the current accommodation options and book them directly there. This does not only apply for accommodations but similarly for leisure activities of which yet no information or booking options exist. Information about restaurants and bars is missing as well. The local tourist office, which would normally take over such tasks (for example in Switzerland), does not do so in Dimitrovgrad. It only represents the region on tourist fairs and prints leaflets with information but doesn't inform tourists about offers or provide booking options for guesthouses or hotels. Furthermore, it is not located in the city center but included in the sports center and is therefore hard to find.

The results of our analysis and the information gathered during the course indicates that the organization and provision of the information about the region as well as the coordination of accommodation facilities has a high potential to enhance tourism and therewith improve the economic situation in the region. To reach that goal, we propose to start a private tour operator business with an office in Dimitrovgrad's main street. As a main tool, this business uses a webpage with information about the available accommodations, local restaurants, activities, touristic packages, manifestations and regional specialties. This webpage is thought to be set up privately, not by the tourist office of Dimitrovgrad, in order to increase the financial incentives for the person(s) involved. The website and the tour operator office will both inform interested tourists about offers and organize their stay and activities.

The webpage and potential printed information material will include at least six topics:

- Accommodation
- Tourist activities
- Food, drinks and nightlife
- Local events
- General information about the region and its regional products

- Contact information

Accommodations section

The accommodations section provides information about possible facilities for overnight stays and is used as a booking platform. Since many of the accommodation owners may have no internet access, the operator of the webpage would be the contact person for the tourists as well as for the owners of accommodations. He would also manage the booking process.

The sections of the webpage that describes the accommodation includes pictures, a short description about the kind of the accommodation, full and half board options, price and special details. A contact form for booking, an embedded map as well as an online guestbook will be included too.

This section will be the core element of the homepage since it provides a simple way for interested tourists to book accommodations being the first condition for tourists to stay. Accordingly, it will be the most work intensive part regarding setup and maintenance.

Possible activities

This section provides information about the various options for leisure activities such as sightseeing attractions (Monastery, Stara Planina, Jerma Valley), hiking, biking, horse riding and fishing with detailed suggestions and maps.

Food, drinks & nightlife

This section gives information about restaurants, bars and clubs in the region. This includes photos, a short description, opening hours, contact information as well as an embedded map and an online guestbook.

Local Events

This section informs about annually reoccurring events in Dimitrovgrad (e.g. Agrobiodiversity Fair, 1st Mai festival, meat festival, etc.) and special events like anniversaries in the region.

General information about the region and its regional products

This section provides details about the history of the region. Furthermore, it informs about the production of agricultural and local products of the region and informs tourists about where these can be purchased.

Contact information

This section includes general contact information and useful links.

It is important to offer flyers and information brochures at the office. A further option is to show and sell products from the producers in the region. An office generally increases the visibility, the degree of organization and the perceived professionalism of the whole business.

Costs, profits and investments

First year of implementation:

In order to attract as many accommodation owners as possible, the service of the webpage is free during the starting phase. This setup of the page will be taken over by ETH students. The first source of income for the webpage operator would be a provision of 10% on top of the room charge, when rooms are rented over the homepage to Balkan tourists. International tourists are charged a fee of 15%. Organization of touristic activities or packages could be charged with the same provision of the total net package sum. This would cover some of the labor costs of managing the booking system and communicating with the tourists.

Given that we expect a potential of Bulgarian tourists to use some of these offers, it is mandatory to have a touristic information office in the center of the city. We estimate running costs for this information office at roughly 150€ per month and initial installation and furniture costs at 500€. This office should be opened daily and hence salaries should be paid which amount to about 250€ per month. The office could be opened from January 2017 onwards, properly installed and the person working could start in May. For 2017 this would lead to costs of ca. 2500€ for the office and 2000€ for the salary and 4500€ in total.

Second year of implementation:

After the homepage is fully implemented and the tour operator has gained some experience, a yearly fee of 20 Euros for all the accommodation owners that are listed on the homepage and managed will be charged. All the other fees will remain the same. In order to pay the running and salary costs, a yearly income of 1800€ (rent), 3000€ (salary) and 4800€ total need to be generated. With ca. 15 accommodations, a yearly steady income of 300€ can be generated. The remaining 4500€ need to be covered over the booking fees. Only calculating with Balkan tourists, the necessary earnings derived through the tourist office would have to reach 45'000€, which is impossible to achieve with overnight stays only. This indicates that a focus should be laid on setting up tourist offers that lead to additional costs and another focus should be laid on international tourists staying for longer periods. This will require some connections built up by people involved in the ETH field courses and institutes.

The total investment for the first two years of total 10'000€ will be covered by a crowd funding campaign, initiated by the former students of the course and the Institute members that visited Dimitrovgrad before.

Outlook and further development

The potential of the municipality of Dimitrovgrad and its beautiful landscape for a number of different leisure activities is huge. At the moment sports activities like horse riding, rock climbing and other organized activities are not really available but may attract tourists, especially from Western Europe. The website of the new tourism facility might encourage inhabitants of Dimitrovgrad to set up a business since the organization and spread of information can be achieved through the webpage. This support could be of help for the locals to take a step and start a business.

Furthermore, complete organized tour packages are a promising idea. Guided tours, such as nature tours, hiking tours, culture and culinary tours (ethno tours)

could increase the amount of touristic income among different actors in the region significantly. The tours would be all-inclusive, meaning that accommodation, food, transportation and activities are all included in the offer and therefore provide an income opportunity for numerous locals. Developing such tours, however, requires a large amount of effort, knowledge of the region and time for organization and is thus more labor intensive but also far more lucrative than the mere provision of accommodations. In the long run, this might create several full- or part-time jobs in the region.

4.2: Guild branded production of Dimitrovgrad's high quality local traditional products

Dimitrovgrad offers a wide range of iconic products for both residents and visitors. As a result of market forces and poor collaborations however, the production of these goods is declining, and the number of producers decreasing. The economic viability of the produced goods is limited and producers are abandoning their traditional trades. With few alternatives existing outside the primary sector, it is vital that the agricultural sector re-invents itself. With abundant natural resources available, we see a strong potential for the agricultural sector to revive. However, this requires a new approach to both production and marketing, for which we propose the following:

“Guilds of Dimitrovgrad”

Guilds are product type based organized groups of producers with the aim to preserve artisan and traditional crafts and sustainable production practices for the range of products manufactured in the municipality, and increase market access and profitability for those producing them. The “Guilds of Dimitrovgrad” is an entity that encompasses all the Guilds (Fig. 4) and acts as a linkage between them, and does not engage in commercial activities. It is a group of producers collaborating in a structured manner, on a voluntary basis, with representatives of each Guild participating. A suggestion for a logo is indicated in Fig 3.



Fig. 3.: Potential logo for “the Guilds of Dimitrovgrad”

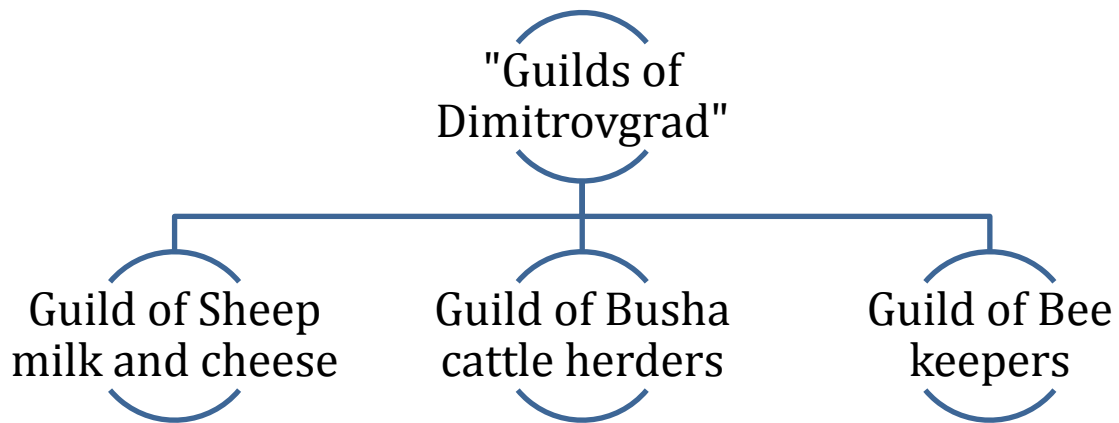


Fig. 4: Illustration of organization form of some exemplary guilds in Dimitrovgrad

The Goal of the overarching structure of ‘Guilds of Dimitrovgrad’ is to preserve uniformity of the product labelling of the individual Guilds and enhance their visibility, while the individual Guilds manage the respective producers. The enhancement of visibility is done via a webpage and flyers where all Guilds, their products, charters, and members are listed. The “Guilds of Dimitrovgrad” can also act as representative of all Guilds to the local government, tourist organization and the community. It is in the interest of all Guilds that their number increases in the municipality, building a stronger corporate identity for the products sold by the individual Guild members. New products would benefit from the reputation of the range of products already on offer, and established products gain extra recognition.

At one point in time it would be possible for the “Guilds of Dimitrovgrad” to organize labelling, packaging and quality testing for all the Guilds in a package and processing plant that is also equipped with a small laboratory. The reason for this is to hygienically vacuum wrap meat and cheese products, fill jars and bottles, and test the nutritional values so these can officially be put on the label, meeting official national or international standards.

The Guilds



Fig. 5: Potential logo for the Guild of beekeepers

Guilds are a collection of individual small and medium size producers of a specific product or product group (Fig. 5). These can be ‘Honey’ or ‘Sheep milk and milk products’, such as cheese. Producers producing multiple products, for instance milk and lamb, would be member of 2 Guilds, one for milk, one for meat.

The Guild is an entity that does not engage in commercial activities and is not legally established. Instead, it is a binding platform for coordinating individual producers of a product which is represented by the Guild. The

producers are selling the products, using the iconic branding of the Guild. Only members of the Guild can use this branding, however, members are not obliged to only sell Guild branded products. The Guilds function independently of local government or NGOs, but could collaborate with other market organizations, companies and the municipality to enhance economic opportunities or develop support measures, such as subsidies, for the producers. The Guild will have a Charter, i.e. a list of rules, applying to all members, including aspiring members. By not obliging to the rules of the Guild, the member can face penalties or a ban from membership. The enforcement of the Charter is done by an elected body, the “Guardians of the Guild”.

Products for which we identified the potential for Guilds to be formed are:

- Milk and milk products of traditional livestock (these include cheeses, yoghurt, kiselo mleko, butter, etc.).
- Meat, both raw and processed (in the form of sausages, smoked meat, etc.).
- Honey, propolis and wax
- Jams, confits and pickles (incl. Ajvar)
- Wool and wool products such as rugs and clothes
- Local alcoholic beverages, such as beer, wine and Rakija.

Local producers of other iconic products of the region, such as agricultural crops (‘Paprika of Dimitrovgrad’) or other crafts, such as woodworking can also form into Guilds.

The goals of the Guilds are to be set by themselves; however we expect these to include:

- Cluster products and producers to enhance bargaining and marketing power
- Organize sale and presentation at local/national markets
- Provide uniform labelling and product packaging to enhance product recognition at the markets
- Control the quality of the products of the members using the Guild’s branding
- Promote sustainable and traditional production practices
- Enhance knowledge exchange and innovation
- Build trust among individual producers
- Act as a point of contact for interested buyers and other organizations, such as NGOs
- Link individual producers with other organizations, such as local tour operators and restaurants
- Set prices of individual products
- Help provide or organize storage and processing facilities
- Facilitate bulk buying of raw materials and packaging (like jars, buckets, etc.).
- Provide individual producers with the product labels that are to be put on the final product.

The Guild has a representative, the “Guild Master”, this is an unpaid, rotating position within the Guild. The “Guild Master” represents the Guild in the “Guilds of Dimitrovgrad”. All products carrying the brand of the Guild can be recognized by carrying the label of the Guild on the package.

Guild Membership

Membership is on a voluntary basis, and can only be obtained via invitation. Two or more existing members can invite a new member. This is to make sure trust and camaraderie within the Guild is maintained. Aspiring new members of the Guild will be given a period in which they are assisted in reaching the quality standards set by the Guild. Once these are reached, the aspiring member becomes a full member, and can use the Guild’s branding for their products. The Guild does not have a membership fee, costs associated with Guild activities will be shared amongst the members, as described in the Guild’s Charter.

Guild Branding

The primary objective of Guild branding is to enhance market infiltration for the branded products. Guild branded products stand for very high quality, tradition, fairness and locality. Tourists and other consumers can be sure Guild branded products meet high standards while retaining their local uniqueness. Guild branded products are directly linked to their individual producers and honest and open about their origin. The quality of one branded product also reflects on the products of all other Guilds.

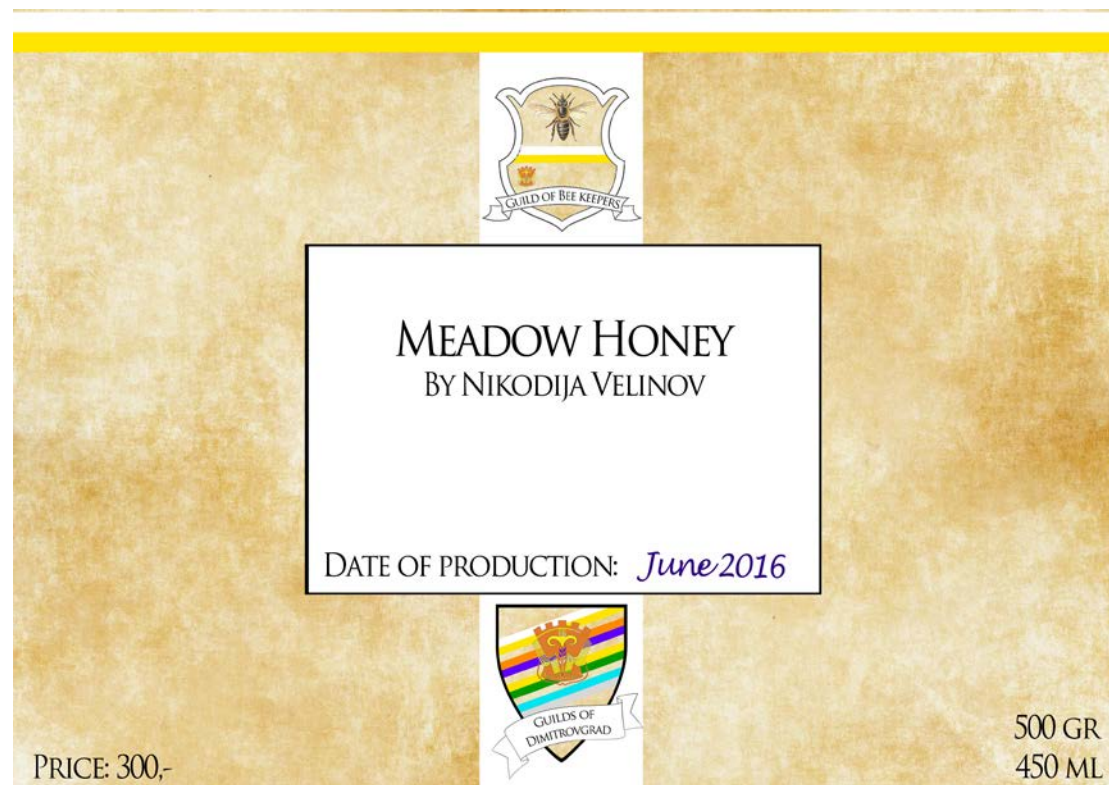


Fig. 6: An example of how a Guild branded label of a product could look like

Members of the Guild can sell their products using the brand of the Guild (Fig. 6) once the product meets the Guild's standards for quality and production. The packaging of the products of all the Guilds will be as uniform as possible, carrying the same underlying design. This to maximize product recognition, and enhance market opportunities. The "Guilds of Dimitrovgrad" will guard branding and packaging standards, the Guilds are responsible for meeting these standards. All packaging materials and labels need to be directly recognizable as being part of "Guilds of Dimitrovgrad", as well as from which Guild the product originates. The designs of the labels and packages should stand for the values they represent: Tradition, high quality, local production, honesty and timelessness. Consumers should be able to easily recognize from which producer the product came and when it was produced.

Guilds: Establishment and short term goals

Guilds will start small; with 4-5 founding members that set up the Charter and ensure product standards are defined and complied with. The Guild Master is chosen for a fixed first term and starts collaborating with other Guilds via the "Guilds of Dimitrovgrad" to explore local market opportunities. The founding members also act as the Guardians of the Guild until the Guild becomes larger. The founding members also determine what packaging becomes standard within the Guild. Once the Guild is able to reach consistency in both quality and packaging, new aspiring members can be invited, and the Guild membership size slowly increases.

The Guild can also encourage eager non producers to become producers of the Guild's branded products via active mentorship and sharing of resources and knowledge. For instance, an aspiring sheep farmer could be provided with 5 sheep from each member, so a herd can be created. Once a stable and productive herd is established, these animals can be returned to their donors or converted into a gift.

We envision three Guild development stages:

- *Stage one:* Establishing a strong local presence for a wide range of Guild branded products. The primary market for these products is the tourist sector, local culinary establishments, municipal residents and other visitors of the region. Collaborations with the tourist sector are created and the "Guilds of Dimitrovgrad" is made into a powerful platform for branding consistency. We envision branded products to reach Belgrade and Sofia via returning residents or visitors to the region. However, the Guilds will not yet actively seek access to these markets, until production capacity and quality are sufficient for extending beyond the local market.
- *Stage two:* Extending beyond the regional level and into national markets
- *Stage three:* Extending beyond Serbia

Guilds: middle and long term goals

After ensuring that the Guild operates well on a regional scale, opportunities for reaching out to new markets on a national and even European scale can be

explored. How this goal could be reached will be presented using two Guilds as an example.

Sheep milk and cheese Guild:

Currently sheep farmers sell their milk locally or to large processors, or produce small quantities of cheese on their farms, which they sell locally. Being part of the Guild would enhance the marketability of these products. However, for sheep farmers to add extra value to their milk production, they could turn it into a different cheese with higher added value, Kačkavalj. This was once one of the most present and iconic local cheese specialties and traditionally made of sheep milk. Today this has disappeared from the market and been replaced with cow milk Kačkavalj, or Kačkavalj made of palm oil, both of low quality. Unlike the white cheese, Sir, which can be made on the farm, Kačkavalj needs to be produced in a dairy. More recently sheep farmers have tried to produce the sheep Kačkavalj again, unfortunately these attempts failed due to three major reasons:

- 1) Cow milk is less expensive than sheep milk. Dairies need to invest in buying the milk but will only get returns after the cheese is sold, which is about 6 months later. Dairies hesitate to take such risks in investing in sheep milk. As this milk is more expensive, the product would require targeted marketing for selling the more exclusive final product. Currently the dairies are unable and/or willing to do so.
- 2) Individual sheep farmers have only small flocks and therefore small amounts of milk, too small quantities to be processed into a batch of Kačkavalj.
- 3) Farmers don't trust in dairies. If farmers would hire the dairy to produce the sheep Kačkavalj for them, they are afraid that the dairy would cheat by mixing cow milk into the cheese. This would reduce its quality, and enable the dairy to secretly take some of the high value production, and thus undermine any marketing activity farmers themselves would undertake when promoting the cheese as traditional sheep Kačkavalj.

The Guild could play an active role in re-establishing the production of sheep Kačkavalj. In order to internalize the risk and remove problems of distrust, the sheep milk and cheese Guild could run their own dairy. This allows the Guild to set their own rules and standards (e.g. organic production standards) and even certify the production officially. A few unused dairies are present in the municipality. The Guild could organize its members and together rent or buy one, and deliver accumulated quantities large enough to suit the processing capacity of that dairy.

The sheep Kačkavalj cheese still has a high emotional value attached to it, with potential high local, regional and national demand, as it stands for a traditional specialty. Running an own dairy would make sheep milk producers also independent from external milk processors and their fluctuating price politics and thus enable them to make long term plans and safer investments, while the Guilds branding would add the Kačkavalj to the range of other Guild products already promoted, using the same channels to reach customers.

The following example calculations aim to assess the profitability of a sheep milk Kačkavalj from the milk of 600 sheep.

600 Sheep will provide approximately 20 tons of milk yearly, which can be sold for 1€ per kg, so the total worth of the milk is 20.000€. 20 tons of milk will allow for the production of around 3.5 tons of Kačkavalj, which in turn can be sold for 12€ per kg to local stores, (where it has a costumer price of 15€/kg). The total worth of Kačkavalj for selling to the stores is therefore 42.000€ before costs.

The major identified costs are the salary of the meister (employed to work in the dairy for 4 months a year), which is about 3000€ yearly, as well as about 3000€ for transportation. The value added by the Dairy would there for be 42.000 – 20.000 (milk) - 3.000 (salary) - 3.000 (transportation) = 16.000€ per year.

An abandoned dairy can be rented for about 500€ per year. But investments have to be made as well. For an old dairy to get renovated and equipped again it takes about 6.000 to 10.000€, the first two years of rent will be for free. Another possibility is to buy an old dairy for about 10.000 to 20.000€ and renovate it for the same price. In three years, the investment would be paid off.

An alternative way to add value to the sheep milk is on-farm production of Sir, something that is widely practiced in the region. Given the same production of milk by 600 sheep, an annual total of 20 tons of milk would allow for the production of 5700 kg of Sir. With an average on farm selling price of 5€/kg, this would represent a value of 28.500€. Although no major costs are involved in producing the Sir, it means that farmers producing Sir only add 8500€ of value on top of the value of the sheep milk, a 42.5% increase. Producing Kačkavalj would result of an added value of 80% after subtracting the production costs, with the added benefit that most of the work required for making the cheese is done by the meister, instead of the farmer.

Bush cattle Guild:

The area around Dimitrovgrad has vast meadows and pastures, which were formerly used for hay making and grazing sheep, goats and cattle, but have been abandoned during the last few decades, as people left the primary sector. These grasslands are now getting lost due to natural succession, and could be used again for livestock grazing. This would enhance both the economic activity of the region, and help sustain the unique and attractive landscape and its biodiversity. Traditionally cattle grazing for meat was done with Bush cattle, a rare and unique traditional local breed that has recently been reintroduced to the municipality, and is thus being preserved. Their meat is of outstanding quality and can be sold at a premium price. The fact that the number of Busha farmers is increasing proves that organic Busha meat production is feasible and profitable. A few (5 or 6) Busha farmers can be found in Dimitrovgrad, producing around 150 heads of cattle for the market. There is a lot of potential to both increase the number Busha cattle farmers and the number of cattle in the region.

The major challenge for new farmers is the establishment of a herd. One Busha cow costs around 800 Euro, a huge investment for a starting farmer. Aspiring Guild members could be supported with the establishment of the herd, for instance with existing members lending Busha cows to a starting farmers for one or two years, so they can reproduce, and be given them back at a later stage. With all Guild members having similar goals in mind, and not being in direct competition with each other but sharing market access, there is a strong

incentive to enhance the Busha meat production of the region as a whole, so new markets can be sufficiently supplied and higher returns can be pursued.

Busha cattle - due to its meat quality - are already sold to specialty markets in Dimitrovgrad, such as restaurants or local butchers meeting tourist demands, and to some buyers in Belgrade. However, current production volumes do not allow for a consistent supply, and production needs to be increased to sufficiently supply these and new markets, which could include exports to the EU or Switzerland. Many obstacles exist for entering these markets at the moment, and only long term planning within a collaborative setting such as a Guild allows for individual producers to exploit these opportunities.

Health standards in the EU and Switzerland are considerably higher than in Serbia and none of the local slaughterhouses is currently officially able to meet these standards. Those that do are too far away, the cattle and meat quality would suffer from transportation. Although the closest slaughterhouse has everything in place to meet the standards required for Busha meat to enter the European market, they are not willing to obtain the right certificates. The Guild, presenting a large number of producers and cattle, would be able to convince the slaughterhouse to collaborate, especially when backed by the municipality. This is something individual producers would not be able to do.

Guilds could also negotiate with the local authorities to set up innovative subsidy schemes to make it easier for farmers to start their own herd of Busha cattle, although we would not recommend Guild members to rely on subsidies for the day-to-day run of the business, instead they could use the Guild's branding to maximize profits together.

4.3 Further propositions to the Government

As a result out of the system and SWOT analyses, some measures directed at the municipality or governmental organizations were also developed. They are briefly described here.

- Consulting for farmers

Problem:

- There is a lack of consultancy providing farmers with the latest knowledge concerning crop and fruit production in Dimitrovgrad.
- The farmers know too little about the possibilities of the existing consulting opportunities or are hindered by the large distances to available consultancies in Pirot.

Measures:

- Free farm visits by specialists from Dimitrovgrad for consultancy of the farmers
- This presumes employment of experienced farmers or specialists from the agriculture station in Pirot
- Inform farmers about the offers using different channels (tv, meetings, etc.)

Authority in charge:

- the section of agriculture in the local municipality.

- Farmer education
 - Measures:
 - Offer regular courses for advanced farmer education to inform them about new agricultural business practices.
 - Make courses a prerequisite for subsidies or give extra subsidy points to motivate the farmer to participate
 - Exchange of experiences between farmers
 - Collaboration with secondary dairy school and the agricultural station in Pirot
 - Provide study tools and visit successful projects
 - Authority in charge:
 - Organized and subsidized by the municipality in Dimitrovgrad

- Summer school for children
 - Measures:
 - Visiting farms, learning about the farmer's work
 - Get thrilled about becoming a farmer and increase identification with local farming traditions
 - Children help the farmers with easy but time-consuming work as compensation for their time
 - Authority in charge:
 - Organized by the library team

- City central park
 - Measures:
 - Park area with trees and benches as a venue for locals and tourists to enhance the attractiveness of the city
 - Little city farm with local animals and rare regional breeds
 - Small botanical garden to raise the awareness for biodiversity and attract tourists
 - Set a monument and an information board about the cultural heritage of this region (e.g. dance, autochthonous breeds)
 - Authority in charge:
 - Financed and organized by the municipality, maintenance by public work

Conclusions

While Dimitrovgrad and the Stara Planina region have a rich natural diversity and an interesting cultural and historic background, it is not using its full natural potentials. The region has thus not yet attained a sustainable development, it is under-utilized. The municipality faces challenges such as population decrease, high unemployment, and low level of investment. Our interviews and system analysis have helped us identify several root causes for that situation. We came up with measures that could help the municipality harnessing the region's advantages. However, some major challenges remain:

- The uncertainty of the political system and stagnant economic situation of Serbia do not provide a suitable environment for long term plans and investments, disfavoring sustainable development.
- The lack of individual initiative since the social transition has stalled the region. There are nevertheless many opportunities for farmers to develop their business practices and successful examples exist. Cooperation and trust would be strong catalyzers for progress.
- The allocation of the municipality budget does not adequately support the need of the region. Much more subsidies directed to small and middle sized farmers and tourist houses to modernize their infrastructure would help the region to make use of their landscape.
- The relative small size and remoteness of Dimitrovgrad do not attract businesses nor investors. A typical town of this size should rather emphasize its agricultural traditions and touristic features.

We suggest that the municipality of Dimitrovgrad uses the findings in this report and implement measures that will hopefully bring the region forward. We believe that key propositions such as the formation of Guilds and the Shopska tours idea will be strong contributions. Stara Planina already has rich natural and traditional features. It is the will and motivation of the local people that is the key to bring the region to a promising future.

Zaključak

Područje Dimitrovgrada i Stare planine, uprkos tome što ga karakteriše bogata prirodna raznovrsnost, kao i zanimljivo kulturno i istorijsko nasleđe, ne koristi svoje prirodne potencijale u potpunosti. Region još uvek nije dostigao nivo održivog razvoja u pravom smislu te reči. Opština se suočava sa različitim izazovima kao što su smanjenje broja stanovnika, visoka stopa nezaposlenosti i nedostatak investicija. Razgovori sa lokalnim akterima, kao primena metode analize sistema, pomogla nam je da identifikujemo nekoliko osnovnih uzročnika koji su doveli do ovakve situacije, kao i da predložimo mere koje bi pomogle opštini da iskoristi prednosti područja. Ipak, ostaje nekoliko ozbiljnih izazova:

- Nestabilnost političkog sistema i ekonomska stagnacija Srbije ne obezbeđuju odgovarajuće uslove za dugoročne planove i investicije, što otežava održivi razvoj;
- Nedostatak samoinicijative pojedinaca usled „pospanosti“ do koje je dovela društvena tranzicija. Ipak, postoje mnoge mogućnosti za poljoprivrednike da razviju svoju poslovnu praksu, a uspešni primeri već postoje. Saradnja i poverenje mogu da budu jak katalizator napretka;
- Raspodela opštinskog budžeta ne podržava potrebe regiona na odgovarajući način. Više podsticaja za male i srednje poljoprivrednike i turistička gazdinstva za modernizaciju njihove infrastrukture bi pomoglo da region bolje iskoristi potencijal predela;
- Udaljenost Dimitrovgrada od većih gradova kao i sama veličina grada ne privlači privredu ni investitore. Tipičan grad ove veličine treba da potencira svoju poljoprivrednu tradiciju i turističke karakteristike.

Predlažemo da opština Dimitrovgrad iskoristi rezultate iz našeg izveštaja i da sprovede mere koje bi, nadamo se, unapredile region. Verujemo da ključni predlozi, kao što su formiranje esnafa/strukovnih grupa i ideja o turističkoj organizaciji "Šopska tours", mogu da doprinesu razvoju područja. Stara Planina pruža svoje bogato prirodno i tradicionalno nasleđe, a volja i motivacija lokalnog stanovništva je ključ koji može pružiti nadu u svetliju budućnost.

Annex 1: Interviews

Interview with Dr. vet Aleksandar Igov, agricultural office

The task of the 3 members of the Agricultural board of the Municipality is the development of agriculture and the rural areas of Dimitrovgrad. Of the 48'000 ha land 7'500 are arable and more than half of the land is privately owned, with pastures and meadows being the dominant landform. Mainly the domestic animals consist of cows, followed by sheep, whereas goat keeping is underdeveloped. A major focus lies on the breeding and keeping of autochthonic breeds, for pedigree animals the municipality and the government grants subsidies. Since the last 10 years, the number of farms has been decreasing and more large scale farms have developed, therefore the number of animals per farm has increased. The municipality aims at promoting mainly small and middle sized farms to avoid monopolization. 2-5% of the municipality's budget is spent for agricultural and rural development. One measure is to lend the publicly owned herd of 300 sheep to farmers, who return the same number of sheep after 3-5 years to the municipality, whereas the animals that have been born during this time range remain with the farmer. Other measures include direct payment, for example for artificial insemination of cows, or for the financing of agricultural equipment, as most farm machinery is very old. However, it is necessary that farmers apply for subsidies, which often includes a lot of paperwork, so not all do make an application. Moreover, the framework conditions of the subsidies often prevent that all farmers are able to receive subsidies equally, for example there are little subsidies granted but for cattle. Besides animal keeping, the growth of crops plays only a minor role, mostly they are produced for own usage as animal fodder or for human consumption. Export only plays a minor role, some milk products are processed in the two local dairies and some meat gets sold on the markets, but there is no selling of products outside of Serbia. The main problems of the farmers are the difficulty to sell the products, the unprofessional approach of the food processors and the lack of standards and control measures. Also, it is problematic that young people mostly choose not to work in agriculture, but prefer to leave the rural area for big cities. Another major complicacy is the political instability of the country, as the multiple changes of ministers for agriculture lead to a frequent change in the agenda of the ministry. Furthermore, most of the state subsidies go to other areas of Serbia and mainly focus on large-scale farms with intensive production and high output.

Interview with Marija Stavrov, the tourist organization

The Sports and Tourist Center's main goal is to promote sports and tourism in Dimitrovgrad. It consists of two people and the head of the STC and receives 100% of their funds from the Municipality with 20'00 € per year in subsidies. The main tasks are to represent the region at Tourism Fairs in Beograd and Sofia and to organize manifestations, for example football matches or the festival for the special dried and smoked meat. There is a big hotel in the city Centre, a motel on the Highway and several smaller private houses. The number of tourist did not change much in the last ten years but has decreased significantly since the 1980ies, with the number of visitors in 2005 being only 11% of visitors in 1985.

At this time, there were more transit tourists from Poland, who were passing Dimitrovgrad on their way to the coasts in Bulgaria. Most tourists only stay very shortly with an average visiting time of 1.5 days. The biggest group of visitors come from Sofia, as the region is specifically attractive for them because of the closeness, the cheap prices and the possibility to smoke in the many bars and restaurants of the town. Furthermore, the beautiful landscape of the Jerma and Stara Planina natural parks and historical Monuments such as the Monastery in the Jerma valley make the region interesting. Tourists from Beograd are not very common as the Serbian capital is much farther away than the Bulgarian. The STC has a development strategy for the years 2009-2018, with only 10% being realized up until now. The most recent project is to build a Mountain house in Senocos village. The problems there is the insufficient water supply in the village and the opposition from the villagers themselves, who are afraid of losing their water to the mountain house and who are generally ill disposed towards touristic development. The tourist office does not cooperate with the local entrepreneurs who own hospitality facilities and it is not satisfied with the overall quality of the accommodation, which is on average at 3-4 stars. The major problems are lacking funds, as much more subsidies from the Municipality go to Agriculture, and the missing support and cooperation from the villagers.

Interview with Sasa Mancev, local economic development office

According to Sasa Mancev the decay of Yugoslavia had quite a negative impact on the economic situation in Serbia. Due to privatization in a lot of different sectors like the rubber or textile industry, the unemployment rose. In 2002 the bankruptcy of a privatized rubber plant in the area of Dimitrovgrad lead to the dismissal of around 2000 employees. Since then the economic level of the time around 1989 could never be reached again. The global financial crisis in 2008 was therefore just another negative impact which reduced the GDP of Serbia by 3%. Today the public sector is the biggest employer which provides more or less constant working conditions. From the total around 9000 residents only about 1000 have an employment, whereby 50% work for the public sector. The rest works mostly in small enterprises in the fields of tourism, hospitality, the local market, transportation and small farms. Compared to other municipalities of similar size, Dimitrovgrad has a large budget of around 5 mio €. Around 1.5 mio € come from the boarder taxes paid by trucks which cross the border to Bulgaria. Regarding the distribution of the money, the salaries make with 50% the biggest part of the expenses followed by 30% for the development and maintenance of infrastructure like roads, water supply, waste water treatment and public buildings. Another 11% are reserved for social support and 3% go into subsidies, business loans and tourism. To encourage foreign investors to create industrial companies in Dimitrovgrad the municipality built a working zone with complete infrastructure. The municipality itself however does not actively look for investors, but relies on more experienced people from Pirot. The biggest chance for the region would be an expansion of the rubber industry from Pirot with a new plant in Dimitrovgrad, bringing many jobs back to the region. An option for further economic development is also seen in the IT sector as it has low expectations for its working place. However limiting factors for investors are not only the political unstable situation in Serbia, the distance to Belgrade and

the border to Sofia but also the education level of local workers. As possible measures the lowering of taxes and the establishment of business institutions is seen as promising.

Interview with Biljana Rangelov, office for environmental protection

Biljana Rangelov works for the municipality in the environmental protection sector. She talked about the waste treatments in Dimitrovgrad.

The communal service collects solid waste and also produces compost from bio-waste. There is a regional dumpsite in Pivot. 98% of the households are connected to a sewage system. The water is treated both mechanically and chemically. The plant needs maintenance, for which at the moment the money is lacking: it started to smell a few years ago. Dimitrovgrad is one of only 3% of Serbian towns owning such a waste water treatment system.

Air pollution is not severe because there are no factories, however in winter, people use firewood. In summer, the majority of air pollution comes from the highway.

30% of the area is protected since 2004. In the Stara Planina nature park bush fires are a big problem. There are two main rivers in the area but the monitoring in these rivers is lacking and not continuous. The municipality budget for environmental protection is around 60'000 Euros per year, which is mainly used for the waste water treatment facility.

It is not the responsibility of the environmental protection sector to monitor private land or to maintain programs for good agricultural practices.

Regulations are copied from EU but some are not possible to implement (e.g. habit of making lunch in the backyard).

Interview with Nikodija Velinov, Hunter and Beekeeper

Nikodija started hunting at the age of 15 and was also former cooperative manager. He is a member of the hunting association having 450 members and overseeing a hunting area of 40k ha. Out of this area 5% is permanently protected from hunters. In the hunting area, there is small and big game as well as predators: rabbits, roe deer, red deer, wild boar, badgers, wolves, foxes, and the recently immigrated but already numerous jackals. On five hunting days per year (all within one month) rabbits are hunted. From January to March, roe deer males and from April to September roe deer females are hunted. However, for 2016 only 12 roe deer males and 12 females may be hunted, respectively, totaling 24 heads. The 12 males are hunted by tourist as taxes for shooting males are too high for locals. The number of roe deer to be hunted is newly fixed for every year, depending on the population which is estimated in a census (currently about 500 heads). 20 years ago, the population was about 2000. Last year, total heads to be shot was set to 40. In prior years, the number killed was too high (primarily due to illegal hunting, the main problem) which lead to a decreased population number. Both Serbian and Bulgarian hunters claim that game crossing the border never returns.

A major problem during the establishment of the protected area was that people were unaware of the rules on hunting. Once people received fines the problem was reduced. However, illegal hunters seldom receive punishment.

Red deer is protected, total heads are estimated to be only 100. Further, there is one bear couple in the area for five years now, which is protected by the law. Wild boar can be hunted from May to August, but only around crop fields. From September to January, they can be hunted in forests too. The total heads of wild boars hunted is about 120 per year. Wild pigeons, ducks and other birds are hunted, too. Italian tourist come here for bird hunting. Although there were efforts to bring in animals to boost bird populations in the past, there are no plans to further increase wildlife populations via breeding programs or via the release of wild animals imported from elsewhere.

The hunting association employs five people. The chair, the manager, two rangers, and a secretary. These are financed by the annual membership of 70 EUR. Non-members can hunt for a EUR 20 tax.

There are 3 female hunters in the association. Roe deer may only be hunted when a ranger is present. It is easier and cheaper to hunt wild boar. Illegal hunting is frequent, hunters are rarely captured. Policemen often hunt illegally. Rangers are in charge of enforcing hunting rules. If somebody is found carrying a gun off-season, the gun is confiscated and a penalty may follow. However, the rangers often don't report if they catch somebody hunting illegally as court processes last 2-4 years and in the end nothing happens. Illegal hunters are often members of the association hunting off-season.

There are approximately 20 wolves in the area, way less than jackals. However, wolves kill more deer offspring than jackals. On average, 40 jackals and 2 wolves are killed by hunters. The annual membership is reimbursed in case a member shoots a wolf and reduced by 10 EUR or 5 EUR for eliminating a jackal or a fox, respectively. Each weekend in February predators are being hunted. Predators not only kill game but also farm animals.

Hunting is done in groups, the meat is shared and used for personal consumption. A tax for shooting an animal is due. Further, a EUR 3 tax per kg meat has to be paid to the association.

Individuals to become members of the hunting association have to do a course, pass an exam, and obtain a medical certificate. There is a beginner phase before people become full members. One or two lectures per year are organized where members choose a topic to be discussed.

There are many birds and insects in the area. Birds of prey are not being hunted. 3 types of vultures got extinct in the area due to accidental poisoning intended to kill wolves.

A deer census is performed twice a year. All hunters participate. Animals on an area of 500 ha are being rounded up and pass a counting point. Next year a census for roe deer is due. If few individuals are counted, the quote might be reduced to zero. Cold winters are no problem for deer. There is enough food, during severe winters additional food is provided by the hunter association.

Since 1993, the vegetation and ecosystem changed. There are less pastures, more shrubs and trees, which is good for deer, but there is too much hunting. Wild boar are going higher up the mountains now.

Hunting is usually performed by 5-10 hunters. They know the deer routes, circling the deer from two sides. According to Nikodija, hunters should have less bullets by law. Penalties should be enforced more rigorously, hunting days should be decreased.

The number of members in the association is decreasing. Hunters need to pay a 500 EUR tax once, non-members need to pay annual tax for gun ownership. It is not easy to obtain a gun.

Many men run away from their wives. Hunting itself is less important than the company of fellow hunters. Hunting is usually done in the morning, at 1300 eating and drinking starts.

Interview with Darko Djordjevic, Stara Planina Nature Park

Serbia has a total of 400 protected areas, which cover a total of 500.000 hectares, of which Stara Planina is the biggest, with over 100.000 hectares. It has a very high value, as the area is still wild, not polluted and undeveloped. Recently there has been a change, tourism has become more nature oriented, with hiking, biking, fishing, etc. taking place. The management helped to facilitate this by developing hiking routes, picnic spots, a visiting center, a domestic animals center and by reconstructing houses in larger villages to accommodate tourists. Around 5000 tourists visit the area each year.

The Serbian forestry office is in charge of the protected area, employing one chief manager, 4 keeper managers and 23 keepers. These keepers control timber harvesting, fishing, illegal construction and hunting. The first 5 years of managing the park were difficult, as people didn't understand the need for protection, perceptions have since changed. During the initial phase the management was only paid 80% of the wages, and were not given any additional funds for managing the park itself. Since then the park has established means to further fund itself, getting money from businesses within the park that use the park's resources and ecosystem services. Hydropower plants and the ski centers have to pay a charge, hotels pay one per bed. Even fishermen are paying. Now the park receives around 30 million dinar per year, and has extended hiking trails and other infrastructure, while also conducting studies on butterflies and water quality. Erosion control takes place via planting new trees, around 50-100 hectares per year. Young fish have been set out in the rivers and illegal fishing has been reduced.

Illegal hunting is still a major problem. One keeper manages around 5000 hectares, with some parts of the protected area managed by other organizations. The keepers have also installed camera traps to catch illegal hunters, and they plan to install more, which will be powered by solar power. Hunters have become more scared of the camera traps, as they cannot see where they are set up. Hydro power plants kill around 10% of the fish, which needs to be compensated. Fish stocks are established using electro shocks. Funds obtained from hydro power operators is used to keep fish stocks stable. The fees handed out to law breakers are not taken by the park management, but taken by the state.

The state of Serbia needs to fulfill 10-12% protected area to be able to enter the EU. Currently 8% of Serbia is protected. Another problem the management faces is the lack of keepers. With the park being part of two ministries, and a World Bank ban on extending employment in the public sector it is a lot of hassle to get extra personnel. To circumvent this limitation the park now hires external firms to do some of the maintenance work. The zonal plans are considered good, the major disturbances are just outside the most important zones. Further

developments of hotels have been halted as it required a change of statutes, and nobody wanted to touch that. The protected area is not engaging with as many ecotourism project as are needed. NGOs develop most of the project, while the park gives money and camps.

People living within the protected area have the same rights as those living outside it, and also need licenses for hunting and fishing. However, Darko sees the potential in going towards a Biosphere Reserve, where part of the management and planning is done by local communities, fitting also the local needs. People were first annoyed with all the rules that came with the area protection, now they consider it good to live in such an area, and see tourism potential. The star project provides funds for refurbishing houses for renting out. After initial reluctance to join and receive the grant money, it took off in the second year.

Farmers are important for maintaining the grassland, however, they only graze the high pastures when subsidies are given. When these ran out, only farmers in the villages close by kept grazing further up the mountains. There are still problems with illegal hunting because the area that needs patrolling is too big, even with part of the area being given for management to the hunting association. Hunting is difficult to control, especially because keepers are sometimes also corrupt. An average keeper makes around 200 euro/month.

Plans for the bottling of drinking water are on hold, although potential exists at the artificial lakes. Since the last 30 years the forest have returned on the hill sides, and drinking water is clean again. The lakes do not provide adequate amounts of fish for exporting, only sports fishing with a license is taking place right now.

One of the main problems Darko faces is the reduction of domestic animals grazing the high pastures. The region was once known for its animals and cheese. The cheese was even served in the White House at one time. Cheese was produced in every house, now people left and forgot their houses. Darko wants life to return to how it was before, grazing produces healthy food. There are some projects with Bulgaria, there they have funds for pasture management, if you give people money they will graze the pastures. They had some initiatives, like giving each keeper their own fully equipped horse or buying traditional sheep for a state/public farm. Belgrade didn't want to fund these ideas though. Other problems faced by Darko is the lack of punishment people face when breaking the law, for instance when building illegal structures. Although construction might be halted, the foundations remain in place as the management needs to hire a firm to remove them. It would be better if judges and building inspectors did their jobs.

Darko still sees a glorious future, although it needs a lot of work, things are already quite good. The potentials of making the area a Biodiversity resort might lead to better things, as it provides villager input.

Annex 2: List of contributors to the field course

- Florian Knaus
- Maja Knaus
- Dr. vet. Sergej Ivanov
- Prof. Dr. Jaboury Ghazoul
- Ivanko Momcilov, Aca Stojadinov, Martin Krstev, Zoran Cvetkov, Sinisa Stojkovic, Goshko Dimitrov
- Aleksandar Vasov
- Dr. vet. Aleksandar Igov, Biljana Rangelov and Sasa Mancev
- Prof. Bojan Zlatkovic, Milos Popovic
- Ivan Ivanov
- Snezana Simeonov
- Marija Stavrov, Dejan Cvetkov
- Nikodija Velinov
- Ivica Kostov, Andrijana Petrov
- Darko Djordjevic
- Daniela Radojkovic
- Students: Swen Bos, Simon Gross, Cyrill Hess, Raphael Hörler, Gregor Lang, Martin Mosimann, Hanna Schiff, Kaibin Tang, Theresa Venegoni, Basile Verhulst, Sophie Welsche