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OPPORTUNITIES FOR SUSTAINABLE FOREST MANAGEMENT IN YUNDOLA

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ABSTRACT

The forest management in Yundola has been studied under the project INTEGRAL - Future-Oriented Integrated Management of European Forest Landscapes by the funding Scheme: FP7 Seventh Framework Programme. This is one of the project case study areas in Europe. This is one of the objects of a test project in Europe. The results of the survey are the bases of the development of future scenarios for forest management and they make it possible to create the integrated management strategies for sustainable use of forest landscapes. The supply of all forest ecosystem goods and services is expected to increase in all case studies in the future. This causes an emerging need for a pro-active management approaches to handle trade-offs and strike a balance in order to address sustainability concerns in building the bio-based economy.

Key words: forest landscapes, sustainable management, INTEGRAL, forest ecosystem goods and services.

INTRODUCTION

This report describes the work carried out in the INTEGRAL project for Yundola, Bulgaria in Work Packages 3.3 and 2.3. Within the overall research design of the INTEGRAL project, WP3.3 is dedicated to identify and propose ways and means of governance that have the potential to trigger substantial policy changes and human actions that promote integrated and future-oriented forest management in Europe (Paligorov, 2014).

Twenty case studies in 10 European countries have been conducted to achieve this objective, using participatory backcasting as the main tool (http://www.integral-project.eu/project-outcomes.html). Backcasting "involves working backwards from a particular desired future end-point or set of goals to the present, in order to determine the physical feasibility of that future and the (policy) measures that would be required to reach that point" (Robinson, 2003, Gordon, 2009).

The rationale for back-casting approach adapted from Robinson is:

1. The ability to predict the future is limited by:
   a) Uncertainty on system conditions and underlying dynamics;
   b) Uncertainty on possibilities of innovation and surprises;
   c) Uncertainty due to the intentional nature of human decision-making;
   d) Therefore we need to look at multiple futures.
2. The most likely future might not be the most desirable future and vice versa;
3. Therefore we need to discuss on how to reach or avoid a certain future.

In the context of the method that is being followed in INTEGRAL in WP3.3, backcasting focuses on the fourth and final step. The earlier steps have been covered by other activities.

Looking back from the "future" (backcasting), questions regarding the policy objectives, policy instruments and their specifications that are needed and/or could be applied for addressing the alternative (or desirable) future scenarios will be addressed in

this WP. Specifically, coherent policy, institutional and economic arrangements, including collaborative institutions as well as consistent policy instrument mixes (e.g., good practice regulations, market-based payments for ecosystem services, information and new modes of governance and networking), will be explored and developed (Pillkahn,2008, Solberg,2014, Brown, 1998, Velushev, 2011).

This report presents the results of the back-casting process and the findings that have been made throughout the back-casting process in the case study area Yundola, Bulgaria of the INTEGRAL project. Specifically, this report describes:

- the participatory and problem-solving oriented policy back-casting process carried out in Yundola, Bulgaria,
- the research findings from the policy back-casting processes.

1. EXPERIMENT

1.1. BACKGROUND INFORMATION

1.1.1. Description Case Study Area

The area is placed in the south-western part of Bulgaria. This region of dramatic physiographic and biologic diversity includes a broad spectrum of vegetation and natural sightseeing and phenomena. It is mainly woodland landscape with forests in all parts of area (about 90%). There are very productive coniferous forests. Agricultural landscapes are presented by meadows located near the village of Yundola and the other surrounding villages. The whole forested area belongs to the Experimental Forest Department "Yundola" and is managed by the University of Forestry in Sofia as an outdoor educational and research facility.

The forests at the case study area are managed continuously by forest management plans that are valid for a decade. Current land use planning is generally consistent with the multipurpose forest management and with the conservation and sustainable development of forest landscapes in the modern socio-economic conditions.

Case study area Yundola is located in the Pazardzhik region around two local town centers – Velingrad (population about 25 000) and Belovo (population about 4 000). In the case study area are placed the villages Yundola, Saint Petka and Pashovi. Its territory is located on both sides of the border between the Rila and Rhodope mountains and is in the form of an irregular polygon with length of 10 km from east to west and width of 6 km from north to south. The overall configuration of the terrain around the village of Yundola formes an open "valley" oriented with its long axis from the northeast to the southwest.

The location of the Case study area Yundola within NUTS classification is as follows:

Table 1: NUTS classification of Yundola case study area

NUT	Code	Description
NUTS 0	BG	Bulgaria
NUTS 1	BG4	Yugozapadna I Yuzhna Tsentralna Bulgaria (South-West and South Central Bulgaria)
NUTS 2	BG42	Yuzhen tsentralen rajon za planirane (South Central Statistical region)
NUTS 3	BG423	Oblast Pazardzhik (Pazardzhik District)
LAU 1	PAZ08	ObshtinaVelingrad (Velingrad Municipality)

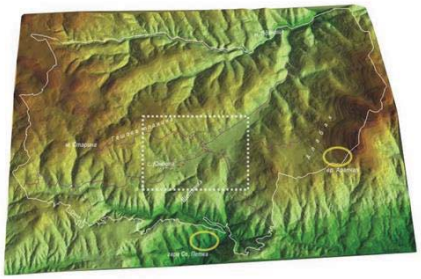

Figure 1: Case study area Yundola

1.1.2. The production possibilities of the area under different management regimes

Irrespective of the ownership of forests the wooded areas in Bulgaria are managed and utilized in compliance with forest management plans, which regulate each activity type in the forests. Forest management plans are prepared for ten years period for every State Forestry, Natural park, National park or other structural unit in the forest territories.

The restrictions are with varying degrees of severity depending on the status of forests. Within the biosphere reserves the restrictions are most drastic. With a view to mimic the processes in the wild, there is used no cutting principle including mortality. Even mortality is leave in forest. Within the other categories protected areas such as National parks, natural parks, protected landscapes and all protected forest stands within State Forestiers the restrictions are not so strict and allow the felling of dead, damaged and obstacle trees. The forests intended for wood production use the potential of forest land according to the data of forest inventory and forest management plan. The cutting rules are different according to the age classes of forest stands. THE OWNERSHIP STRUCTURE almost all forests in Yundola are State property (Paligorov, 2014).

The other types of properties comprise a negligible share of the total territory.

1.1.3. The main conflicts in the case study area:

a) The biggest conflict is between public opinion for the protection, management and use of forests and the wish for receiving higher yields on behalf of the state forest companies and forest owners.

b) The second is the conflict between the requirements for the implementation of environmental functions (including protection of water catchment areas) and the need to thicken the forest road network and increased logging and extraction of non-timber forest products.

c) In third place is the so-called "quiet conflict" that is between the institutions and their concerns related to illegal encroachment on forests.

1.1.4. The main drivers and main barriers for the future developments in the case study area:

The main drivers:

a) Presence of political will to implement the principles of multifunctional forest management in the region.

b) Developing and implementing policies securing the participation of all stakeholders in the preparation of forest management plans and activities related uses of forests.

c) Equalization of the different types of property under the law.

The main barriers:

a) Forest fires.

b) Storms.

c) Heavy snowfalls and wet snows.

d) Excessive fertilization.

Specific findings and conclusion:

- In almost all parts of the case study area, the taxological data of forest stands evidence of their high productivity as well as of their very good aesthetic qualities.
- The majority of forests in the area are accessible in all their parts. The development of mobile communications will create prerequisites for economic development in general and for recreation in particular.

- The main recreational activities practiced within the research area are: walking and stationary recreational in the nature environment, hiking, sunbathing, picking wild berries and mushrooms, villa holiday, outdoor games and winter sports.
- Forest plantations in the region can successfully meet their business functions simultaneously with the implementation of their environmental and social functions.
- There aren't any unexpected results of the research.

1.2. METHODOLOGICAL APPROACH

The methodological approach in Case Study Area Yundola was based on standardized interviews and qualitative analysis of documents with respect to the protocol on agreed conceptual and analytical framework.

In terms of interviews, two groups of respondents were addressed - forest managers and owners and stakeholders related to Case Study Area Yundola. Respondents were chosen from non-state private forest owners as well as branches of State Forest Ranges in the region. Different typical features of ownership and management (state/private/municipal) were represented. Sample of non-state owners were selected in order to include the small owners up to 2 ha. Sizes of branches of State Forest Ranges in region range between 5000 and 26000 ha. A total of 17 respondents were interviewed from 13 forest holdings operating in Case Study Area Yundola and in Velingrad Municipality. From stakeholders group were addressed representatives of the municipality (4), state administration authorities in forestry and environmental sector (5), timber and bioenergy holdings (2), forest owners associations (1), tourist association (2) and non-governmental organizations (3). Interviews with total of 17 stakeholder subjects were realised. Interviews with both groups were conducted in the format of individual interviews.

The number of documents were analysed during research. The primary data sources used for the analysis of documents were National Forest Policy and Strategy (2006-2013), the Rural Development Programme of the Bulgaria for 2007-2013. Data sources of National Statistical Institute of the Republic of Bulgaria, scientific articles and other published reports were also intensively analysed.

Description of current situation of the individual considered factors was smooth. Looking into the past, the most information was available in time horizon 5 to 10 years. Similarly, the time horizon of 20 years, related to radical changes in society of Bulgaria, is relatively well described, but we felt lack of information sources covering time horizon 50 years. Overview of time periods we were able to cover for the different factors provides Table 2.

Table 2: Overview of time periods covered; xxx = covered for all aspects, x = partly covered

	Present situation	*Up to past 5 years*	*Up to past 10 years*	*Up to past 20 years*	*Up to past 50 years*	*More than 50 years past*
Demographic development	XXX			X		
Public opinion and discourses	XXX				X	
Economic developments	XX	X	XXX		X	
Technological developments	X				X	
Ownership structure and tenure arrangements	X		X		X	

In the back-casting process 5 participatory workshops were held during the period June 2014 – March 2015. Each of these workshops take from 6 to 12 hours. For each workshop special set of printed materials were prepared for each participant. First workshop was intended to inform and to educate participants and stakeholder's representatives on the field of policy formulation back-casting process. Next workshop was intended to formulate the end point that is acceptable for each stakeholder's group, to present main results from different scenarios and to explore main scenarios obstacles and opportunities. The program was elaborated for each workshop and it has been send by e-mail to the participants up to 7 days before workshop organizing. During this time a lot of requests and proposals from participants were collected in the leading group. This helps to identify different groups in the participants and to organize workshops for discussing milestones, objectives and future policy actions. Between the participatory workshops more than 35 meetings of leading group and different subgroups were held, as a parallel sessions for scenario results discussing. It helps to organize participatory workshops for no long than 5-7 hours per day.

In the participatory workshops were presented all invited stakeholders group – state forest rangers and experts from Regional forest directorate, private forest owners, representatives of harvesting and woodworking industry, public authorities – police, fire protection, court of justice, municipality administration, Regional Environmental and Water Inspectorate, local Electricity Company and Road Agency, private foresters, members of Union of Bulgarian Foresters, members of Union of Hunting and Fisheries, teachers and scholars from Professional School of Forestry and Hunting, NGO's members of ecology organizations, local tourist and sport's organizations – number of representatives were between 17 and 34 and in subgroups between 7 and 12 participants, according to discussed results and policy actions+.

During the workshops results of 3 scenarios were analyzed and discussed. In parallel sessions were separated different subgroups, concerning to stakeholder's interests – society representatives and foresters, wood users and users of non-wood products and functions, representatives of ecology paradigm, economy interests and social interests subgroups.

RESULTS AND DISCUSSIONS

Briefly reflecting upon the desired end point of ES in relation to the current provision of ES in the case study area Yundola we can say that the intention was to increase logging and other useful functions of the forest without unbalancing the natural environment. For this purpose, were conducted numerous of preliminary simulations that showed the limits of environment sustainability and fixed value, which in any case should not be exceeded for the determination of the desired endpoint in all ecosystem services (table 3 and table 4). So, desires and claims of stakeholders expressed during the back-casting workshops were introduced precisely in these pre-established frameworks to ensure realism and reliability of the proposed scenarios:

- Scenario S0: NO MANAGEMENT (THEORETICAL) (NoM) – This scenario is theoretical and is motivated by the expectation on a society to drastic changes in climate and ecosystems such as forests the impossibility to adapt to them. Stakeholders cannot imagine to give up wood and products thereof, as well as non-timber forest resources, both local and national level. Forestry and

forest industry determined life and employment to nearly 20% of the population the country. This option implies the limitation of all activities in the forest and should be accompanied by financial subsidies for loss of income from forest owners. This is possible only in theory, because on the one hand, is very difficult to find funds to be compensated the owners and the other hand wood products of it and non-timber forest products cannot be completely replaced by other products. Second reason was the leading role of environmental factors, and especially climate changes.

- Scenario S1: ECOLOGY AND CLOSE TO NATURE (ECO) Active management - Biodiversity maintenance – In phase 1 it was found high influence of factor – public opinion on the management and protection of forests. The tendency is that role of the NGOs will increase, which is the core of the selection of this scenario. The systematic strengthening of the sustainability and ecological stability of forests are necessary. Particularly, sustainability and close-to-nature forestry were applied in state forests during the last 25 years. With worsening state of forest and fear for sustainability there was not much to choose from. Specifically, finer ways of management increased the range of changes in damaged stands with non-original tree species, and increased range of transfers from clear cut to shelterwood and selection system with the ambition for their natural regeneration. As frequency of calamities increased, applied was more massive artificial forest regeneration with motivation to plant tree species suitable to the area and resistant to the impacts of climate change. Some territories were even left to the successive self-development. Tending interventions were oriented either towards significant strengthening of ecological stability of even-aged stands, or towards introduction and preservation of even-aged forest's conversion into more diverse one (uneven-aged forest with natural composition of tree species).
- Scenario S2: TRADITIONAL MANAGEMENT (BUSINESS AS USUAL – BU) Active management – worsened state of forests - This is the most likely scenario, which is recommended and desired by all stakeholders. This scenario allows to sustainable development to forestry and to the woodworking and furniture industry, which is highly developed in the region. This option implies the use of preservation of the state of forests in the long term, and is based on the sustainable increase in demand for wood and other forest products. This scenario was developed based on the understanding of the public for the balanced development of forests and forestry, which is based on sustainable timber production and climate change that are within the now established. It is imperative to keep the current state of the forests. The amendment of the timber market is sustainable for the benefit of slow and gradual increase in demand. To maximize the benefit can happen if provide easy access to financial resources. This will allow improving the technologies used in forest. The systematic strengthening of the sustainability and ecological stability of forests are necessary. Particularly, sustainability and close-to-nature forestry were applied in state forests during the last 25 years.
- Scenario S3: MAXIMUM POTENTIAL BENEFIT (MPB) Active management –

Maximum wood production – This scenario reflects the understanding of society to increase potential yields from forests. As a result of climate change and its positive impact on forests in Yundola is possible to increase the sustainable use of forests, reaching their maximum performance. Perception of this scenario has as necessary prerequisite the preservation of the condition of forests and increasing demand for wood and non-timber forest resources. Maximum timber production mandatory is based on the use of the modern equipment and technology, a prerequisite for which is easier access to financial resources for investment. The positive developments in timber and biomass markets result in increasing income for forest owners. Improving economic situation of forest owners expected due to increased policy coherence and mutual cross sectorial coordination. Better accessibility of compensation for financial loss resulting from nature protection restrictions and/or fulfilment of other ecosystem services (e.g. water management, clean water, CO2).

Table 3: Overview of the provision of ES in the case study area under different conditions for 30 year's period

	Provision under different scenarios					
Ecosystem service	**Current situation**	**Desired end point**	**Scenario 0**	**Scenario 1**	**Scenario 2**	**Scenario 3**
TOTAL VOLUME (m3)	*high*	*high*	*extremely high*	*high*	*average*	*low*
CUTTING VOLUME (m3)	*average*	*extremely high*	*very low*	*low*	*low*	*high*
DRY MATTER BIOMASS (t)	*high*	*high*	*extremely high*	*high*	*average*	*low*
TOTAL DIVERSITY (summary index)	*high*	*extremely high*	*average*	*low*	*average*	*low*

Table 4: Overview of the provision of ES in the case study area under different conditions for 50 year's period

	Provision under different scenarios					
Ecosystem service	**Current situation**	**Desired end point**	**Scenario 0**	**Scenario 1**	**Scenario 2**	**Scenario 3**
TOTAL VOLUME (m3)	*high*	*high*	*extremely high*	*high*	*average*	*very low*
CUTTING VOLUME (m3)	*average*	*extremely high*	*very low*	*low*	*low*	*average*
DRY MATTER BIOMASS (t)	*high*	*high*	*extremely high*	*high*	*average*	*very low*
TOTAL DIVERSITY (summary index)	*high*	*extremely high*	*average*	*low*	*average*	*very low*

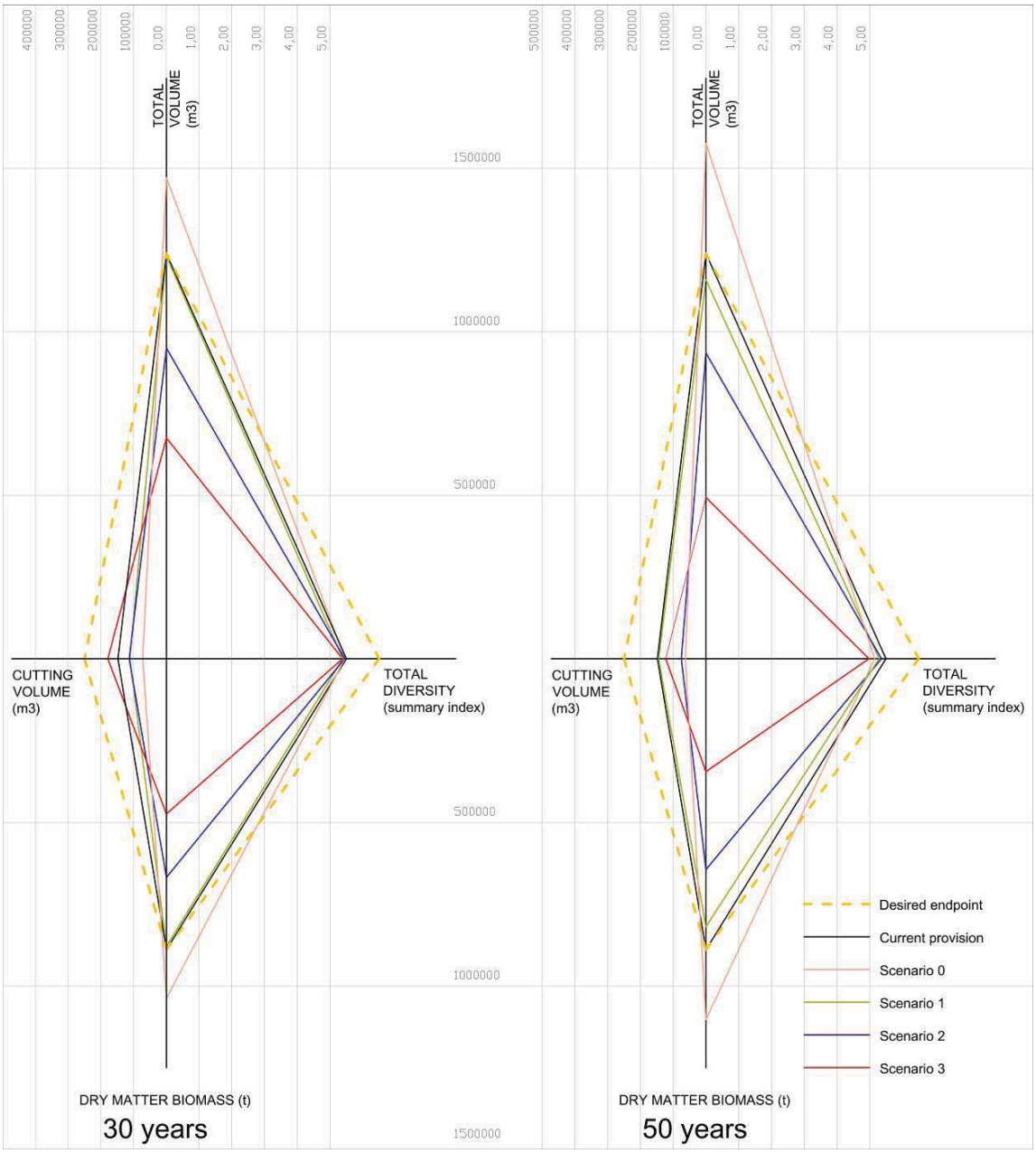

Figure 2: Overview of the provision of ES in the case study area under different conditions for 30 (from the left) and 50 (from the right) year's period

The graphs on the Fig. 2 are trying to visualize and explain to what extent each specific scenario reaches the desired endpoints.

In terms of Total volume production Scenario 1 takes us close to the "target". This is a stable situation for both the 30 and the 50 year period of time. The same applies to other related stand components characterising the wood production: the main crop (m^3); the total volume per hectare (m^3/ha), etc. Scenario 2 shows gradually and evenly away from the planned end point, but the progression is very minimal. Scenario S3 "away" almost two times faster from the end point in the first 30 years compared to Scenario S2, but in the period from 30th to 50 th year "returns" in a stable position, and so the values of all scenarios arrange at regular intervals from the endpoint.In terms of the cutting volume (m^3) of all stands we found another arrangement of values in various scenarios. For a 30 year's period the highest values are established for

Scenario S3, which is quite logical and this is predetermined by designated management approach, but for a 50 year period, the Scenario S1 became most approaching to the end point. This is surprising at first glance, but it is logical because of the limited regeneration potential of forests in the Case study area. Scenario S2 remains stable in value terms, even between the 30th and 50th year shows a slight growth. Therefore, this scenario is not suitable for more than 30 years.

In terms of Dry matter biomass (t) Scenario S1 as an "environmental scenario" most closely approximates to the desired endpoint. Scenario S2 achieves the most significant value increment between '30 and '50 year, while the third scenario is the most stable in this respect. This shows the correct determination of the end point, which allows preservation of the forest by excessive felling. It is exactly the same distribution of values in terms of Carbon content (t) of all stands.

In terms of Total diversity (summary index) the most stable trends shows Scenario S2, but relatively the strongest decline occurred in Scenario S3. However, in absolute terms, the decline was about 10%, which is not alarming because the region's biodiversity is not very big anyway. The other indicators relating to mental and emotional aesthetic qualities of the environment such as the Index of the height differentiation (TMh) and the Index of horizontal structure (R), etc. did not change much in the different scenarios that lead us to the conclude that the selected management approaches will not damage the forest landscapes aesthetically.

Reflecting upon the desired end point of ES in relation to the provision of ES within the different scenarios for the case study area Yundola we can say that:

- Scenario S1 is the only one that shows growth in terms of timber production and this occurs at the expense of very small reductions in other ES. From an environmental perspective, this is the optimal and progressive scenario.
- The comparison of the graphics very clearly shows that the most sustainable results were found in Scenario S2. The values for 30 and 50 years are almost identical and this scenario is the most sustainable and can be applied for the next 50 years as a robust scenario.
- Scenario S3 is close to the edge of the sustainability of the natural environment. It provides maximum yield, but only for the next 30 years, after which all indicators for ecosystem services start to decline significantly. Therefore, this scenario is not applicable in the long term and leads to depletion of natural resources.

All participants in the process commonly agreed that the best roadmap to the vision concerning nature conservation was rewilding of the area (protect natural areas in the territory) - Scenario S1 - ECOLOGICAL AND CLOSE TO NATURE (ECO). In other words, behind the innovative idea of making Yundola area a wilder place with much more space for wildlife, wilderness and natural processes, were expectation of strong economic, societal and environmental benefits to the area. Second reason was the leading role of environmental factors, and especially climate changes.

CONCLUSION

Priorities for the development of forests (state of the problem; restrictions and threats; possible solutions) identified by the Task Force in the Velingrad municipality:

Priority №1. Sustainable management and use of forests – SWOT analysis

- Status of the problem - unawareness of the population (except those working in SFE и SHE, private forest owners, RDF,

RIEW, they are in direct contact with it) about the real state of the forests for their protection, security, the importance of forests for local people.

- Restrictions and threats - issues related to security, organization of activities in forests and interactions between owners, managers and users.
- Possible solutions – improving the links between owners, managers and users, the inclusion of various programs and projects for the conservation of forests, increasing control on forest conservation, increasing public awareness and personal responsibility of people for the protection and maintenance of the protected areas and the important bird areasin the municipality.

Ideal Goal 1: Improving the condition of forests, their sustainable management and use.

- Operational objective 1. Maintain up to date and accessible database and maps of forests and biodiversity in the municipality.
- Operational objective 2. Maintenance and modernization of existing forest nurseries to produce seedlings for reforestation, selling Christmas trees.
- Operational objective 3. Completing the meetings for cooperation between owners, managers and users, including those working in the SFE/SHE/EEF (State Forestry Enterprises/ State Hunting Enterprises/ Experimental forest enterprises), private forest owners, RDF (Regional Directorate of Forestry), RIEW (Regional Inspectorate of Environment and Water).

Priority №2. Development of Velingrad municipality, tourist area - a sustainable tourism destination - SWOT analysis

Sustainable tourism development leading to increased tourism potential, income and employment in the tourist area, the development of sustainable, diversified, high added value, specific for the region of Velingrad high quality tourism product and increase the sector's contribution to sustainable municipal and regional development.

Joint actions for conservation and sustainable use of resources and development of policies for sustainable tourism should be supported by targeted action to develop the area as a destination for sustainable tourism. It is necessary on the basic of market research to define target groups to be addressed in the product of the destination, and the necessary tourist information and visitor infrastructure. Targeting foreign markets will enable the district to develop the product and improve and generate investment capital

Ideal Goal 2:

- Operational objective 1: Development of existing sustainable tourism products and create new tourist packages with the participation of forest sites and territories.
- Operational objective 2: Interpretation of natural and cultural heritage.
- Operational objective 3: Marketing and promotion of the destination.
- Operational objective 4: Development of specialized infrastructure in the thermal center of Velingrad, in urban areas and around urban areas

General opinion on the nature of sustainable tourism based on the understanding that the growth of Velingrad Municipality is impossible without balance of economic, environmental and socio-cultural development. Tourism is an important tool for sustainable

development not only of the thermal centre of Velingrad, but the whole Velingrad tourist area. Tourism in the municipality can be improved by offering and in the scheduling of forest sites for different kinds of tourism: winter, hunting, fishing, photo, etc.

Priority №3. Improvement of forest infrastructure – SWOT analysis

- Status of the problem - poor condition of the forest road network, the need to build new roads for greater accessibility to remote logging sites, strengthening slipping terrain along the main roads, regular cleaning and maintaining roads in winter.
- Restrictions and threats - lack of finance and investments. If the roads donot improve this results to increased transport costs, difficult access to logging sites.
- Possible solutions – improving transport communications, attracting tourists and investors. The inclusion of projects for construction, reconstruction and modernization of forest roads.

Ideal Goal 3: Within the municipality there is an optimized, restored, finally forged maintained forest roads.

- Operational objective 1. To build and maintain a database and maps for property characteristics (forest inventory data processing), the current state of the road network - roads and access routes in the forests.
- Operational objective 2. To design, build and maintain lasting (quality and high load-bearing) road network for access to forests.
- Operational objective 3. To initiate and achieve changes in the regulatory framework governing the deduction of fees for timber in the Trust Fund for the repair and maintenance of access roads in forest.
- Operational objective 4. To take measures and build facilities to strengthen the landslide areas along main roads, regular cleaning and maintaining roads in winter.

Priority №4. Management of water resources - SWOT analysis

- Status of the problem - Maintenance of existing water supply system, need to build new water intakes and pipelines, timely removal of accidents, improving drinking water quality, environmental protection.
- Restrictions and threats – Losses of water resources in the water supply network threats to the spa and wellness tourism, the poor condition of reservoirs and rivers has a negative impact on fishing tourism.
- Possible solutions - construction, expansion and reconstruction of water supply and sewerage network protection of the environment of garbage, putting up information signs, litter bins on trails for environmental protection

Ideal Goal: Quality management of water resources

- Operational objective 1. Need to build new water intakes and pipelines.
- Operational objective 2. Protection of water resources and the environment from garbage
- Operational objective 3. Improving the quality of drinking water.

Priority №5. Public relations, training, interaction between institutions – SWOT analysis

- Status of the problem - missing bilateral relationship of SFE/SHE/EEF with the public, lack of quick access of stakeholders to a database on the state of forests

and others. Lack of training and education of adolescents in the area of forest conservation and maintaining them in good condition, the difficult interaction between institutions.

- Restrictions and threats - cooperation between consumers, farmers and owners, financing, involvement in various programs and projects.
- Possible solutions - improve public relations through the media, information boardsand advertisements. More measures to links with other relevant organizations and institutions. Support for education and training of young people is one of the measures that contribute to a better understanding and support for the work of SFE/SHE/EEF. The participation of the younger generation in afforestation and cleaning of forest areas, the inclusion of disciplines and practices in school curricula related to the forest, its importance, its protection, etc.

Ideal Goal:

Through the media, information boards, advertisements, meetings with SFE/SHE/EEF и RIEW, including additional disciplines and practices associated with forest conservation and water resources to improve public relations, training of the younger generation, communication between institutions.

- Operational objective 1. Active cooperation of the media, to improve cooperation between consumers, farmers and owners.

Operational objective 2. The inclusion of programs and courses in classes of younger generation.

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