

**Federation of Bosnia and Herzegovina / FBiH  
Ministry of Physical Planning and Environment**

**The Republic of Srpska / RS  
Ministry of Physical Planning, Civil Engineering and Ecology**

**Federation of Bosnia and Herzegovina / FBiH  
Ministry of Trade**

**The Republic of Srpska / RS  
Ministry of Trade And Tourism**

**Japan International  
Cooperation Agency (JICA)**

**The Study on Sustainable Development  
through Eco-Tourism  
In Bosnia and Herzegovina  
Final Report**



**VOL.4**

**Plans for Velez**

**March 2005**

**PADECO Co., Ltd  
in association with  
Pacific Consultants International**

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(Federation of Bosnia and Herzegovina / FBiH)  
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**The Study on Sustainable Development through Eco-tourism  
in  
Bosnia and Herzegovina**

**Final Report**

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### **Abbreviations and Acronyms**

AE	Average Elevation
ALS	Average Length of Stay
ARTCHEOSITES	Spatial Integrated Enhancement of Archaeological Sites
AVNOJ	National Antifascist Liberation Council of Yugoslavia
B&B	Bed & Breakfast
BETA	Bosnian Environmental Technologies Association
BHMAC	Bosnia and Herzegovina Mine Action Center
BiH	Bosnia and Herzegovina
CAP	Common Agriculture Policy
CARDS	Community Assistance for Reconstruction, Development and Stabilization
CATV	Cable Television
CBBH	Central Bank of Bosnia and Herzegovina
CBO	Community Based Organization
CEFA	European Committee for Training and Agriculture
CIS	Commonwealth of Independent States
CL	Country Lodging
CMS	Contents Management system
COA	Conservation Orientated Area
CORINE	Coordinate Information on the Environment
CPNM	Commission to Preserve National Monuments
CTF	EU/ Bosnia and Herzegovina Consultative Task Force
CZ	Conservation Zone
CoM	Council of Ministers
DTM	Digital Terrain Model
DXF	Drawing Interchange Format
EC	European Commission
EEA	European Environmental Agency
EFC	Extent for Forest Cover
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Eco Pliva Association
ETRP	Transport Reconstruction Program
EU	European Union or EURO
EUFOR	European Union Force

EU RED	European Union Regional Economic Development
EUPM	European Union Police Mission in Bosnia and Herzegovina
FAO	Food and Agriculture Organization of the United Nations
FBiH	Federation of Bosnia and Herzegovina
FVO	EC Food and Veterinary Office
GDP	Gross Domestic Product
GFAP	General Framework Agreement on Peace
GIS	Geographical Information System
GNI	Gross National Income
GOBiH	Government of Bosnia and Herzegovina
GOJ	Government of Japan
GPA	Green Pliva Association
GPS	Global Positioning System
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
HNK	Herzegovina-Neretva Kanton
<i>HPT</i>	<i>Hrvatske Posta i Telekomunikacije d.o.o Mostar</i> (Hrvatske Post and Telecommunication Company in Mostar)
ICMPD/RIC	International Center for Migration Policy Development/ Repatriation Information Center
ICT	Information and Communication Technology
IDA	International Development Association
IEE	Initial Environmental Examination
IF	Interpretation Facilities
IFAD	International Fund for Agricultural Development
IFOAM	International Federation of Organic Agriculture Movements
IMF	International Monetary Fund
ITF	The International Trust Fund
IUCN	International Union for Conservation of Nature and Natural Resources
JICA	The Japan International Cooperation Agency
JKP	Javno Komulano Preduzece (State enterprise for utility services)
KM	Konvertibilna Mark
KfW	German Development Bank
LAC	Limits of Acceptable Change
LE	Local Entrepreneur
LIFE	The Financial Instrument for the Environment
MIP	Mission Implementation Plan

MPCE	RS Ministry of Physical Planning, Civil Engineering and Ecology
MPPCEE RS	Ministry of Physical Planning, Civil Engineering and Ecology of the Republic of Srpska
MSW	Municipal Solid Waste
MTT RS	Ministry of Trade and Tourism of the Republic of Srpska
MoA	Ministry of Agriculture
MoE FBiH	Ministry of Physical Planning and Environment of Federation of Bosnia and Herzegovina
MoFTER	Ministry of Foreign Trade and Economic Relations
NATO	North Atlantic Treaty Organization
NCC	National Council of Churches
NCP	Natural Conservation Grade Point
NEAP	National Environmental Action Plan – Bosnia and Herzegovina
NGO	Non Governmental Organization
NYI	Nevesinje Youth Initiative
OECD	Organization for Economic Co-operation and Development
OHR	Office of the High Representative
OIC	Organization of Islamic Conference
OSCE	Organization for Security and Co-operation in Europe
PCLA	Pliva Country Lodging Associations
PDM	Project Design Matrix
PE	Private Enterprise
PET	Polyethylene terephthalate
PHARE	Preparation of the Legal Regulations for the Environment Protection in Bosnia and Herzegovina
PIC	Peace Implementation Council
POA	Preservation Orientated Area
PP	Pilot Project
PPP	Purchasing Power Parity
PRA	Participatory Rural Appraisal
PRSP	Poverty Reduction Strategy Paper
PSA	Pliva Sport Association
PZ	Preservation Zone
PfD	Partners for Development
PfP	Partnership for Peace
QOL	Quality of Life
RD	Road Density

RDA	Regional Development Agency
RS	the Republic of Srpska
S-M	Serbia-Montenegro
S/W	Scope of Work
SAP	Stabilization and Association Process
<i>SARENICA</i>	Telegraphic Agency of New Yugoslavia
SEA	Strategic Environmental Assessment
SEGIR	Support for Economic Growth and Institutional Reform
SFOR	Stabilization Force in Bosnia and Herzegovina
SG	Slope Gradient
SIPPO	Swiss Import Promotion Program
SL	Secondary Legislation
SME	Small and Medium-sized Enterprises
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TC	Tourist Community
TEM	Trans-European North-South Motorway
TEN-T	Trans-European Transport Network
TM	Thematic Mapper
TNCP	Total Natural Conservation Point
UEMP	Urban Environmental Management Forum
UHT	Ultra High Temperature
UMCOR	United Methodist Church on Relief
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
USAID	US Agency for International Development
USDA	United States Department of Agriculture
UXO	Unexploded Ordnance
VA	Velez Adventuring
VAT	Value-Added Tax
VFR	Visit Friend and Relatives
VTA	Velez Tourism Activities
WBA	Water Body Area
WHO	World Health Organization
WTO	World Trade Organization or World Tourism Organization
ZAVNOBiH	Earthly National Antifascist Liberation Council of Bosnia and Herzegovina





## **VOL.4 - PART E**

### **AREA REVIEW AND PILOT PROJECTS**





## Chapter E 1. Study Area Setting of Velez

### 1.1 Socio-Economic Situation

#### 1.1.1 General Conditions

The South Study Area is composed of two municipalities of two entities, Southeast Mostar Municipality in the Federation of BiH, and the Nevesinje Municipality in Republic of Srpska, respectively. After the war, the entity border as defined by the Dayton Agreement modified municipal boundaries between the both municipalities.

The Study Area with its total area of 1,174km<sup>2</sup> is divided into two municipalities as follows:

Blagaj and Podvelez districts of Mostar Municipality:

211km<sup>2</sup>, 18% of the Study Area, which is a part of Neretva canton

Nevesinje Municipality:

963km<sup>2</sup>, 82% of the Study Area

- **Urban areas** have limited developments in each municipality, making up 3.4km<sup>2</sup> of the Study Area and less than 1% of each municipal area, respectively.
- **Agriculture areas** in each municipality are mostly identified as pastures or other mixed agricultural use land as follows:
 

Southeast Mostar Municipality:	32km <sup>2</sup> , 15.1% of municipal area
Nevesinje Municipality:	335km <sup>2</sup> , 34.8% of municipal area
- **Forest and semi natural areas** in each municipality are characterized as follows:

Southeast Mostar Municipality:

Broad-leaved forests are limited to 6.7%, while coniferous forests are non-existent. Also, transitional woodland-shrub (29.3%), moors/heathland (28.4%) and natural grassland (14.5%) are dominant in the Municipality.

Nevesinje Municipality:

Broad-leaved forests and transitional woodland-shrubs are dominant categories at 39.7% and 16.9%, respectively. Coniferous and mixed forest categories are limited at 1% and 0.2%, respectively, in the Municipality.

**Table E 1.1 Area List by Category of Ground Cover and Municipality**

Category of Ground Cover		South Area: Velez Area		
		Blagaj & Podvelez	Nevesinje	Total
Urban/Artificial Area		175	169	344
Agricultural areas	Arable land	35	933	968
	Permanent crops	299	181	480
	Pastures	155	18,458	18,613
	Others	2,693	13,942	16,635
	Total	3,182	33,514	36,696
Forest and semi natural areas	Broad-leaved forest	1,405	38,269	39,673
	Coniferous forest	0	475	475
	Mixed forest	46	3,022	3,067
	Natural grasslands	3,051	1,643	4,693
	Moors and heathland	5,997	464	6,460
	Sclerophyllous vegetation	4	0	4
	Transitional woodland-shrub	6,182	16,274	22,456
	Bare rocks	215	259	474
	Sparsely vegetated areas	824	2,158	2,982
Total	17,723	62,563	80,286	
Water Surface		0	48	48
Total		21,079	96,294	117,373
Urban/Artificial Area		0.8%	0.2%	0.3%
Agricultural areas	Arable land	0.2%	1.0%	0.8%
	Permanent crops	1.4%	0.2%	0.4%
	Pastures	0.7%	19.2%	15.9%
	Others	12.8%	14.5%	14.2%
	Total	15.1%	34.8%	31.3%
Forest and semi natural areas	Broad-leaved forest	6.7%	39.7%	33.8%
	Coniferous forest	0.0%	0.5%	0.4%
	Mixed forest	0.2%	3.1%	2.6%
	Natural grasslands	14.5%	1.7%	4.0%
	Moors and heathland	28.4%	0.5%	5.5%
	Sclerophyllous vegetation	0.0%	0.0%	0.0%
	Transitional woodland-shrub	29.3%	16.9%	19.1%
	Bare rocks	1.0%	0.3%	0.4%
	Sparsely vegetated areas	3.9%	2.2%	2.5%
Total	84.1%	65.0%	68.4%	
Water Surface		0.0%	0.0%	0.0%

Source: Ground Cover Data: CORINE, EEA, 2000

Municipality Boundary: Draft Digitization based on the information from Municipalities, 2003

### 1.1.2 Population Change

Population in the Study Area has dramatically changed due to the war, especially the ethnic composition in each municipality. Available data for returnees from ethnic minority groups in each municipality are still incomplete. Some resettled returnees eventually returned to the country to which they fled to or to other areas altogether, because of the economic reasons as well as difficulties to resettle in the Study Area or BiH at large. Official statistical data of population and households in BiH are not available after the war. The population and household data that are presented here were obtained from each municipal government and web sites of international agencies.

#### (1) Blagaj

Prior to the conflict, Blagaj was a multi-ethnic community with representative populations of Bosniaks, Serbs, and Croats. During the war, a large proportion of the population fled, with many houses being destroyed during the three years of fighting.

#### (2) Podverez

Podverez was home to one of the last remaining semi-nomadic lifestyles in BiH. Due to severe water shortages in the summer months, many shepherds leave the home with their families and go north to Bjelasnica Mountain. Podverez was completely destroyed during the war and only 30% of its pre-war population have returned. Economic conditions are perhaps the worst of all the Study Areas with little economic stimulation since the end of the war. A part of the returnees have gone out of the area to find alternative livelihoods. Originally with 10,900 residents before the war, the population amounted to 85% of the pre-war population (or 9,300) as of 1999, and 38% of the pre-war population (or 4,100) as of 2004.

#### (3) Nevesinje

Nevesinje has always had a majority Serb population with a strong Bosniak minority. No Croats lived in this area. Prior to the war, Nevesinje was politically and economically tied to Mostar, but the war has largely severed these ties. Nevesinje was not damaged during the war. From a pre-war population of 14,400 people, the population as of 1999 grew to 131% of the pre-war figure (19,000). However, most of the minority Bosniak group in the area have not returned.

**Table E 1.2 Population by Ethnicity and Municipality**

Ethnicity		Bosniaks	Serbs	Croats	Others	Total	Increase	Ratio (%)	Household (size)
Blagaj & Podvelez	Pre-war	8,692	884	1,308	27	10,911	-1,610	-15%	NA
	Jun. 1999	9,254	39	8	0	9,301			NA
	Jan. 2004	NA	NA	NA	NA	4,093	-6,818	-62%	1,499 (2.7)
Nevesinje	Pre-war	3,313	10,711	210	214	14,448	4,535	31%	NA
	Aug. 1999	135	18,838	10	0	18,983			NA
	Jan. 2004	NA	NA	NA	NA	18,500	4,052	28%	5,206 (3.5)
South Study Area	Pre-war	12,005	11,595	1,518	241	25,359	2,925	12%	NA
	1999	9,389	18,877	18	0	28,284			NA
	Jan. 2004	NA	NA	NA	NA	22,593	-2,766	-11%	6,705(3.4)

Source: Pre-war and 1999 data: Webpage of ICMPD/RIC

(International Center for Migration Policy Development / Repatriation Information Center)

Jan. 2004 data: Each Municipal Government (Through JICA Socio-economic survey, January 2004)

### 1.1.3 Socio-Economic Conditions

The overall socio-economic conditions of people in the Study Area are reviewed from the results of a socio-economic survey, consisting of 300 sample home interviews, conducted by the sub-contracted local consultants. Local residents live in very poor conditions and many, if not most of the people, are unemployed. Most people appeared to be enthusiastic about the eco-tourism development and possible project implementation.

#### (1) Educational Attainment and Language

Those with higher educational degrees accounted for 38% of respondents in Nevesinje, 12.5% in Blagai, 3% in Podvrez, and 19.5% in the Area, respectively. Those with secondary education accounted for 60% of all respondents in Blagai, 48% Nevesinje, 37% in Podvrez and 50% in the Area. Respondents with foreign language skills accounted for 44% in Blagai, 43% in Nevesinje, 27% in Podvrez, and 38% in the Area.

#### (2) Employment Conditions

Those that are employed comprised 52% of all respondents in Nevesinje, 45% in Blagai, 30% in Podvrez, and 44% in the Area. Of those employed, 65% were in the tertiary sector (services), 29% in the primary sector (agriculture), and 6% in the secondary sector (manufacturing). Activities within the primary sector were concerned with livestock (49%) and farming (33%).

### (3) Problems in Agricultural Performance

Around 80% of employed respondents reported problems in productivity due to the lack of technical skills (81%) and financing (4%), etc.

### (4) Employed Family Members

The majority of family members are unemployed in the South Study Area. For instance, 67% of respondents in Podvrez, 36% in Nevesinje, 25% in Blagai and 39% in the Area, noted that some family members were not employed. The total number of employed family members of respondents in each municipality only comprises 15% of total family members in Podvrez, 22% in Blagai, 24% in Nevesinje, and 21% in the Area, respectively.

### (5) Family Income and Expenditure

Respondents indicating a monthly family income of less than 300KM were 70% of all responding families in Podvrez, 43% in Nevesinje, 38% in Blagai, and 46% in the Area. The estimated average monthly family income is around 470KM in Blagai, 400KM in Nevesinje, 310KM in Podvrez, and 410KM in the area, respectively. Respondents, whose monthly expenditure is more than monthly family income, made up 83% of respondents in Blagai, 80% in Podvrez, 71% in Nevesinje, and 76% in the Area. The majority of respondents indicated a required monthly family income over 500KM (57% of respondents in Podvrez, 65% in Blagai, 45% in Nevesinje, and 54% in the Area). The average required monthly income was estimated at around 610KM in Podvrez (twice the existing average income), 610KM in Nevesinje (1.5 times the present income), 680KM in Blagai (1.5 times), and 630KM in the Area (1.6 times).

### (6) Living Conditions

The majority of respondents stated that their living conditions are either Very Bad (20% in Podvrez, 18% in Blagai, 7% in Nevesinje, and 11% in the Area) or Bad (43% in Podvrez, 28% in Blagai, 29% in Nevesinje, and 34% in the Area). Those that did not live on their own property, made up 26% of respondents in Nevesinje, 7% in Podvrez, 5% in Blagai, and 13% in the Area.

### (7) Inter-entity Relationship

Respondents who had relationship with someone in other entities made up 78% of respondents in Nevesinje, 30% in Blagai, 27% in Podvrez, and 47% in the Area. Types of



the relationship were in the order of proportion, personal relationship (26% in the Area), trade (14%), and professional (7%).

#### (8) Economic Situation

Most respondents indicated Very Bad or Bad, which accounted for 70% of respondents in Podvrez, 65% in Blagai, 45% in Nevesinje, and 56% in the Area. Those responding Good were quite limited in number, accounted for 0% of respondents in Podvrez, 15% in Blagai, 10% in Nevesinje, and 7% in the Area.

#### (9) Expectation to Eco-tourism

Also, the majority of respondents stated that eco-tourism development in the Area would improve their economic and living conditions. However the results were slightly lower than those in the North Study Area. Respondents, who expected benefit from eco-tourism development, accounted for 70% of respondents in Podvrez, 65% in Blagai, 45% in Nevesinje, and 56% in the Area.

#### (10) Belief in Future Economic Improvement

A majority of respondents indicated Yes in each municipality, 97% of respondents in Podvrez, 95% in Blagai, 81% in Nevesinje, and 91% in the Area.

### 1.1.4 Issues in the Velez Study Area

Of the people surveyed in the three municipalities, respondents who reported that they *did not* believe in future economic improvement said this was due to:

- Politics, including the opinion that the country is governed as a protectorate;
- Infrastructure (roads and transport systems, water, telephone and electricity supply systems, rehabilitation of damaged factories etc.);
- Health and social system;
- Overall disappointment;
- Unemployment and particularly lack of job opportunities for young people;
- Bad economy;
- Agricultural development (including inputs such as seeds and technical resources, the creation of markets, and development of the livestock industry and agricultural associations);

- Financial support (including, credit opportunities, donations, investment in the agriculture sector);
- Nothing has changed in the ten years since the war; and
- Emigration of young people.

The South Study Area suffers from high unemployment, poverty, and a shortage of resources. Young people are leaving to find work elsewhere (within BiH, or abroad if they are able to), while those that stay are deprived of even basic social outlets, such as youth clubs or cinemas. Consequently, many respondents spoke of a growing drug problem and rise in crime in their communities.

Podvez, as reported, has the highest rate of unemployment and the largest number of respondents who assessed their living conditions as “bad”. In spite of this, the people interviewed were quick to offer suggestions on how to possibly improve the socio-economic conditions and were generally optimistic about the future.

Many respondents felt that agriculture and investment in its development should be a priority. Respondents in Nevesinje also pointed to the need for a focus on and investment in the agriculture sector. This region possesses good conditions for wine and honey production and for herb production. Furthermore, many people work in these areas, yet currently lack technical resources and financial means to develop. Respondents also noted that the creation of a market for agricultural products was much needed.

There are little inter-entity relations among the three areas. However, it is interesting to note that in Nevesinje, which is known to have poor ethnic relations and where the return of ethnic minorities has been slow, respondents reported the highest level of inter-entity relations, with most being personal, including some trade relationships.

The large majority of respondents from all areas stated that they believed in economic improvement in the future, while an even greater number stated that they felt that the development of eco-tourism in their region would improve economic and living conditions.

This region is ripe for eco-tourism development, and despite the chronic unemployment and poverty here, people still seem optimistic toward the future and are quick to offer suggestions for future development. It seems what the people lack is not natural resources or creativity, but technical and financial support, with which to implement eco-tourism focused projects.

There is an abundance of natural and man-made tourist attractions in the area and people are proud of their cultural heritage as is evidenced by the cultural events that take place here, the general knowledge of the residents of their region, as well as the numerous tourist attractions.

### 1.1.5 Eco-Tourism Development Potentials in Local Community

#### (1) Potential of South Local Community for Eco-Tourism Development

Respondents in the area listed the following as possible **regional attractions** for tourists.

##### 1) Historical Tourism Resources:

- Old Town, Tekija, Fort of Herceg-Stjepan, Velagiceva House, Kolakovica House, stecci (tombstones), Austro-Hungarian forts, mosques, Turkish baths, the oldest Orthodox church (destroyed), and 'Greek waters' (800 - 1,000 year old settlement in Vranjevici) in Blagai;
- Austro-Hungarian forts/castles (Madden Glava, Svetigora, Guberaca) in Podverez; and
- House of Bega-Basagica, Sahat Tower from Turkish times, stecci, mosques, churches, and Jin Mahala in Nevesinje.

##### 2) Cultural and traditional attractions:

- Susreti Prijateljstva', Blagaj Cultural Events every August, folklore shows, and Dervish Night in Blagai;
- Handicrafts, folk costumes, and folk music in Podverez; and
- Olympics (all types of sport) which are held every August, horse-riding, little cup football, and poetry nights in Nevesinje.

##### 3) Natural resources:

- Ada River, Buna River Source; Podverez Mountain, forests, and green cave in Blagai;
- Velez Mountain, caves, woods, and hunting in Podverez; and
- Velez and Crvnaj Mountains, Novakusa Caves, Grebak campgrounds, Rabina Village, Alagovac Lakes, and Udbina Water Source in Nevesinje.

## **1.2 Development Strategy Discussed in Focus Group Meetings**

Visions of Velez community and approaches to achieve the visions have been discussed in the three focus group meetings held in June. These focus group meetings were conducted as a part of survey for Community Based Organizations. The very basic desire of the participants was income generation through eco-tourism and agriculture. They were well aware of the importance of the sustainability and promotional aspects for these two industries.

### **1.2.1 Social Development of Velez Area**

Discussions were concentrated in the following two topics.

#### **(1) Donor Programs**

Participants articulated that income generation is the most important issue among all. Even though donor programs are one of the scarce resources to develop income generation, they claimed that many of donor support were not effective since donors did not consider them in integrated way. If all the information of donor programs were available in one place, and if donors supported the community with much longer term and with much wider scope, their support would have work more effectively.

#### **(2) Water Issue**

Two rivers originating in Blagaj, Buna and Bunica, may have connection to Nevesinje through underground channels. There is a project named "Upper Horizon" scheduled as a joint effort of Republic of Srpska and UK Government. This project will use significant volume of water in Nevesinje and might reduce the water flow of the two rivers in Blagaj. Participants need political initiative (FBiH) to clarify the environmental impacts of this project.

### **1.2.2 Agricultural Development of Velez Area**

Among many issues in agriculture, participants agreed to discuss two issues, marketing and production.

#### **(1) Marketing**

Many farmers are making products for their own consumption. As is also mentioned in the focus group meeting at Pliva Study Area, developing commercial agriculture is the biggest

issue. Collection of market information and connection between farmers and available markets is very important. Farmers should identify markets first and then change the products flexibly to fit the market requirements.

## (2) Value Added Production

Participating farmers are not satisfied with the current prices of their farming products and want to increase their value through product quality improvement, packing and labeling, enhancing uniqueness of the local products.

### 1.2.3 Eco-tourism Development of Velez Area

Each individual organization expressed its own goals and project ideas.

- Tourist access to local information should be secured, and tourists would stay longer in this region;
- Fish and wild animals should be conserved through education and resource management for a sustainable hunting and fishing;
- Involvement of local community and education will change the people's behavior for the clean future; and
- Building a hunters lodge in Blagaj will increase the value of hunting activities.

Participants agreed that the following issues must be seriously considered for the eco-tourism development of the Velez Study Area:

- Financial sustainability;
- Urban environmental conservation (garbage issue);
- Animal (hunting games and fish) conservation;
- Education and training;
- Tourism promotion; and
- Cooperation among recreational associations.

## 1.3 Natural Conditions and Environment

### 1.3.1 Natural Conditions

#### (1) Regional Climate

The Velez Study Area basically belongs to Sub-Mediterranean zone that is featured by long and warm summer season with high temperatures during day. However, the temperatures in

Nevesinje and Blagaj area are quite different. Table E 1.3 shows recent thirty years temperature records in the Velez Study Area. The coldest monthly average temperature in Nevesinje is -2°C, and the warmest monthly average temperature is 18°C. On the other hand, the coldest monthly average temperature in Blagaj is 4.8°C, and the warmest monthly average temperature is 24.7°C.

**Table E 1.3 Monthly Average Temperature in the Velez Study Area**

												Unit: °C
Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Nevesinje <sup>1)</sup>	-2	0	2	8	12	14	18	18	14	8	4	0
Blagaj <sup>2)</sup>	4.8	6.6	9.6	13.3	17.9	21.5	24.7	24.2	20.4	15.3	10.1	6.2

Source: 1) Institute for Urbanism, BiH

2) State Hydro Meteorological Institute, Mostar

Table E 1.4 shows precipitations in the Velez Study Areas. Each annual average precipitation in Nevesinje and Blagaj is more than 1,500mm, which exceeds the annual average precipitation of whole BiH country. The Area has dry season basically from June to August.

**Table E 1.4 Monthly Average Precipitation in the Velez Study Area**

												Unit: mm
Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Nevesinje <sup>1)</sup>	200	200	150	125	100	80	60	50	150	200	200	200
Blagaj <sup>2)</sup>	165	148	150	127	102	78	43	76	96	151	200	179

Source: 1) Institute for Urbanism, BiH

2) State Hydro Meteorological Institute, Mostar

The other climate characteristic, particular to Potvelez is strong wind. It is reported that average number of with wind of 11-25 m/s per month is 6 days. The winds cause drying soil and the other geological formation in the area.

The Velez Study Area has snow usually from October to May.

Table E 1.5 shows the average number of days with snow cover more than 1cm in the Area according to fifteen-year period records.

**Table E 1.5 Average Number of Days with Snow Cover Exceeding 1cm in Podvelez**

Unit: days												
Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Podvelez	3.9	2.6	8.0	1.1	-0.1	-	-	-	-	0.4	1.1	2.5

Average elevations of the main towns and the surrounding zones are as follows:

- Blagaj and the surrounding zone: 256m
- Podvelez and the surrounding zone: 817m
- Nevesinje and the surrounding zone: 896m

## (2) Geological and Soil Conditions

The main types of the substratum in the Velez Study Area are carbonate stones mostly limestone and dolomite. In terms of soil, the Study Area as a whole is mainly covered by a combination of the following soil types. The characteristics of each soil type are summarized in Table E 1.6.

**Table E 1.6 Main soil types in the Velez Study Area**

Type of soils	Remarks
Lithosols (rocky ground)	These are undeveloped soils, which have formed on solid limestone and dolomite. The soil is mainly in Podvelez as well as Velez mountainous region in the Velez Study Area. The possibility of rooting for the plants is very limited.
Calcomelanosol	This soil is a humus accumulative soil, which is more often combined with rock and brown soils. The soil is the most widespread mainly on steep inclined mountainous terrains in the whole Study Area. This soil is not suitable for intensive plant production.
Distric cambisol	This soil is formed on acid silicon substrata. This is spread in central part of Nevesinje Municipality. The soil is primarily good forest habitats. But it is not well suitable for agriculture production due to erosion risks.
Calcocambisol	The soil is mainly associated with black soils, rendzinas, and luvisols. The soil is widespread in the slopes of Velez mountains, Podvelez in the Velez Study Area. The soil is rarely used for agriculture production due to low depth, surface stoniness, and other reasons.
Luvisol	The soil is mainly related to the humid regions and more flat terrains. The soil is diffusely distributed across entire territory of Nevesinje Municipality. The soil is not well suitable for agriculture production due to limited natural fertility.

Source: Sarajevo University, Faculty of Agriculture  
JICA Study Team

### (3) Hydrology and Watershed

In Nevesinje Municipality area, the characteristics of the hydrology are temporal watercourses with the features of sinking rivers, spring holes and others. Also, the surface water arrives mostly in the municipality over torrents gathered in mountainside. The largest and most significant watercourse is Zalomka River, whose source is located at border between Nevesinje and Gacko municipalities.

In Blagaj area, there are important water resources such as Buna River and Bunica River. It is reported that the well of Buna is one of the largest wells in Europe. Buna River Source and Bunica River Source are also one of the important tourism resources in the area. On the other hand, there are no permanent surface watercourses or lakes in Podvelez area.

### (4) Vegetation, Forest and Land Cover

Velez Study Area is highly karstic, where so-called naked karst is dominant. There are undeveloped forests and brushwoods of hornbeam, thorn-bushes, and blackberry. In small valleys, there are pastures, and rarely arable land. In other areas, there are degraded forests of oak, hornbeam, ash-tree, and maple. The eastern slopes of Velez mountain border on the Nevesinje area, vegetation of crest fields is made of flood fields associations, swampy communities of sedges and remainders of the original forests. Unlike other karsts fields, in particular, Nevesinje area, also sustains mesophile forests of oak and hornbeam. In terms of agricultural plants, they are seldom to be found and where it is possible corn is planted.

Table E 1.7 shows present land cover by each municipality of the Velez Study Area.



**Table E 1.7 Present Land Cover of the Velez Study Area**

Unit: ha

Land Cover			Municipality		Total
			Velez Study Area		
Level 1	Level 2	Level 3	South east Mostar	Nevesinje	
<b>Artificial surfaces</b>	Urban fabric	Discontinuous urban fabric	127	169	298
	Industrial, and commercial, and transport unit	Industrial, or commercial units	47	0	47
	Mining, dump and construction sites	Mineral extraction sites	0	0	0
<b>Agricultural areas</b>	Arable land	Non-irrigated arable land	35	933	968
	Permanent crops	Vineyards	139	0	139
		Fruit trees and berry plantation	160	181	341
	Pastures	Pastures	155	18,458	18,613
	Heterogeneous agricultural areas	Complex cultivation patterns	1,252	8,152	9,404
Land principally occupied by agriculture, with significant areas of natural vegetation		1,441	5,790	7,231	
<b>Forest and semi natural areas</b>	Forests	Broad-leaved forest	1,405	38,269	39,674
		Coniferous forest	0	475	475
		Mixed forest	46	3,022	3,068
	Scrub and/or herbaceous vegetation associations	Natural grasslands	3,051	1,643	4,694
		Moors	5,997	464	6,461
		Transitional woodland-shrub	6,186	16,274	22,460
	Open spaces with little or no vegetation	Bare rocks	215	259	474
Sparsely vegetated areas		824	2,158	2,982	
<b>Water bodies</b>	Inland waters	Water courses	0	48	48
<b>Total</b>			21,079	96,294	117,373

Source: CORINE Land Cover Data, European Environmental Agency (EEA), 2000

#### (5) Natural Disasters

In the Velez Study Area, no significant earthquakes or floods occurred, according to the one hundred years record by Hydro-meteorological Institutes in Banja Luka.

### 1.3.2 Natural Environment

#### (1) Biodiversity

The Study Area as a whole is relatively of high diversity. However, if it is compared with Pliva Study Area and Velez Study Area in terms of wider context of biodiversities, Velez Study Area is more diverse than Pliva Study Area.

In Velez Study Area, complex geo-morphological situations generated highly diverse ecological niche and high level of diversity in biological and ecological system, although strongly influenced by Mediterranean climate. The Area has a substantial diversity of plants, which count approximately 1,200 species and subspecies of vascular plants in Velez Area (Nevesinje and Podvelez area). Velez is called “Herzegovina Endemic Development Center”.

#### (2) Flora and Fauna

There are some economically valuable medicinal herbs and edible mushrooms confirmed in the Velez Study Area. Concerning the fauna, there are bear, wild boar, wolf, and wildcat, which are valued for hunting. Also, chamois are found especially in Velez and Podvelez areas. According to National Museum in Sarajevo, there are two endangered species, 11 vulnerable species, and 31 rare species, which are registered “the IUCN Red List” in terms of the flora in the Velez Study Area. However the habitats or distribution areas for the above-mentioned valuable species, it is very difficult to identify the areas due to the lack of proper scientific researches of the Subject Area.

#### (3) Protected Areas

In the Velez Study Area, a natural hunting area of Velez of 19,636ha surface is managed by “Lumber Camp Velez”, according to Institute for Urbanism Banja Luka. “Physical Planning 1981 - 2000 in BiH” also designates the Area as one of the “Second Regime of Protection Area” (see ). The Area has protected and non-protected hunting game areas. According to the Lumber Camp Velez, there are protected species of roe deer, chamois, bear, wolf, wild boar, squirrel, and owl. Of unprotected game animals in hunting area, there are wildcat, marten, and others. The area is also one of the popular sites for hunting of game birds.

Also, the municipalities proposed a total of 19 protected areas, which are mainly naturally rare and beautiful places such as caves, and river springs in the both Study Area to date, although the selection criteria and the boundary of each protected area are not clear.

#### (4) Environmental Problems

It is found that garbage is scattered along the access roads and river basins to the tourism sites. Also, some bacteria problems in the water bodies near the residential areas will occur due to insufficient wastewater treatment. In terms of impacts on flora and fauna as well as biodiversity, it is very difficult to identify the problems due to the fact that few relevant scientific researches of the Subject Area have been made.

Other environmental conditions including potential problems in Velez Study Area are as follows:

- Scattering garbage along the access roads to Blagaj, Podvelez, and Nevesinje;
- Water contamination risks due to discharges from residents without treatment; and
- Illegal logging and forest fire in the forest areas at Nevesinje.

In Nevesinje, Blagaj, and Podvelez area, it is not reported that significant pollution problem occurs in the Areas so far.

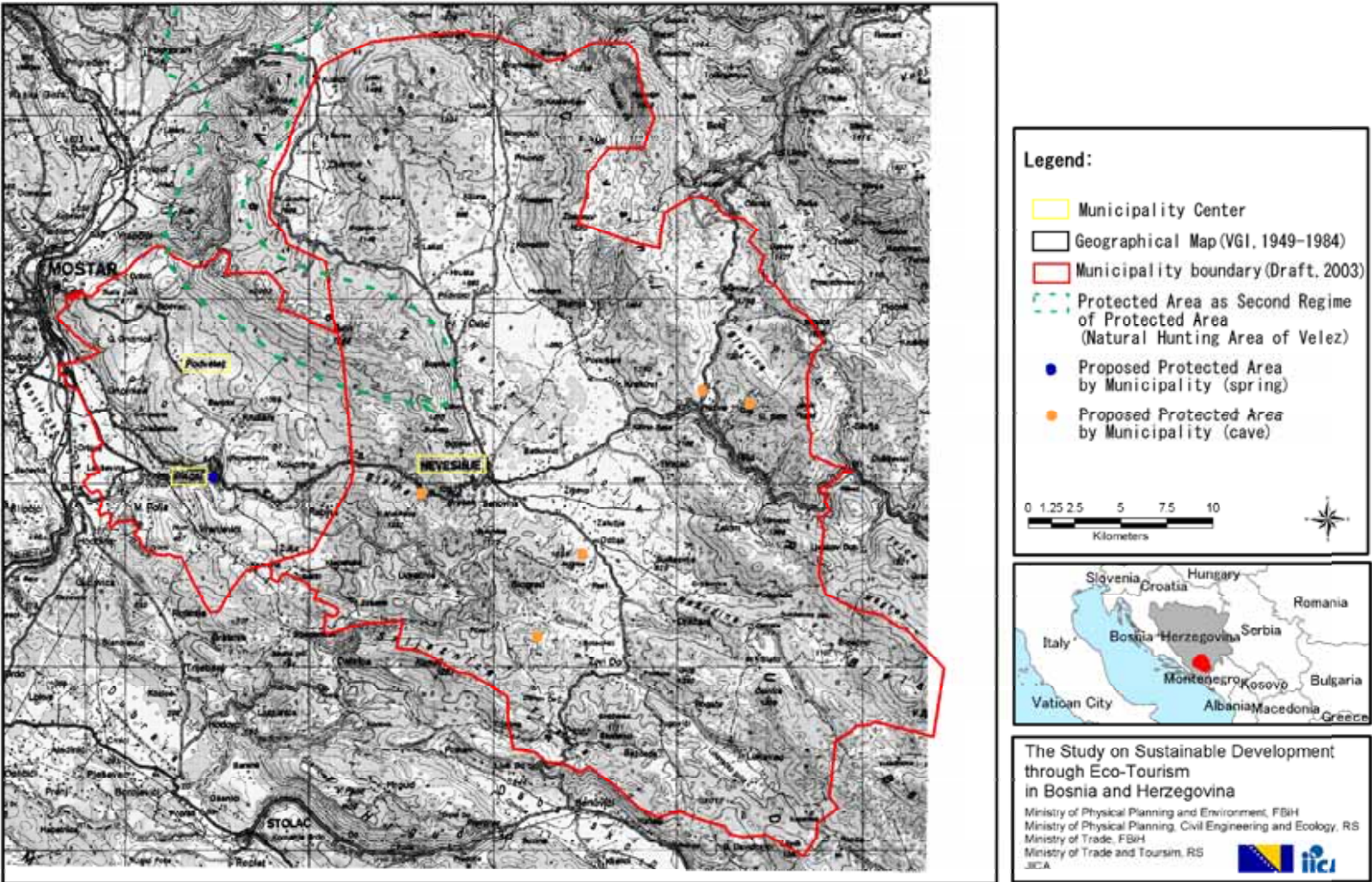


Figure E.1.1 Present Protected Area in Velez

## 1.4 Urban Environment

Urbanized portion of the three municipalities in Velez Study Area amounts to 0.8% of Southeast Mostar and 0.2% of Nevesinje municipal area. However the urbanized area is embraced by a large land of cultivated area and pasture and citizens can enjoy an abundance of untouched natural environment.

Here, an overview of the three aspects of urban environment - air, water, and solid wastes - is given, based on site visual observations, though scientifically measured ambient state-of-the-environment are not available. Except for sanitary inspection purposes, these are not sampled and analyzed by municipal authorities.

With respect to ambient air quality in Velez Study Area, incidences of air pollution are not reported. Urban traffic, both through traffic and intra-town traffic, is so light that pollutant emission impact is minimal, in the limited urban space of those municipalities. In the absence of any major industrial stationary sources, ambient air is least polluted. In sum, these municipalities offer a high quality of ambient air quality.

Nevesinje seems to be the only one, in the Velez Region, where urban drainage system is provided. Nevesinje's drainage system covers the built-up area, however effluent treatment is minimal and its overflow is channelled to a pit at Zdrejlo, 5km North of the Nevesinje Towncenter, where effluents are subjected to land treatment. The Zdrejlo point is located at the lowland of Alagovac, around 1km north from the embankment of the Lake Nevesinje - an artificial reservoir for drinking water.

Built-up areas of the Southeast Mostar - Blagai and Podvelez - are not provided with urban drainage. The latter depends on individual septic tanks. At present, it is not confirmed as to which river systems the drained effluents stream into, nor septic residues are disposed.

It is speculated that none of those effluents from domestic sources find their way directly to the Buna River, judging from geographical separation of watersheds. It is known that Herzegovina - Neretva canton regularly monitor water quality at the Buna River Source.

With respect to pollution by municipal solid wastes (MSW) in the Velez Study Area, an abundance of small-scale disposal sites are observed, unattended by municipal services, at any site off-the-main road and roadsides. More often such sites are seen in the rural part of the Municipality. Such incidences of illegal dumping degrade the quality of townscape and

healthy living environment. Collection services are not regular and less frequent in the built-up areas Podvelez and Blagai. In view of the garbage collection, Mostar Southeast Area - Blagai and Podvelez - is serviced by the Mostar Municipality.

Mostar maintains a landfill compliant with sanitary standards. Sipovo Municipality maintain official dumping sites, however it is not equipped with appropriate shields to prevent leachate seepage to the groundwater nor with a leachate treatment facility.

It is noted voluntary citizens with their own initiatives have taken actions of cleaning scattered garbages along the roadside of high visibility.



## Chapter E 2. Analysis of Current Tourism Situation in Velez

### 2.1 Inbound Tourists to Velez (Roadside Interview Survey)

#### (1) Survey Conducted

16 working days in 4 weeks (2 weekdays and 2 weekend days each) from August 5 through 29 at the two pre-determined survey locations (one on the main road to Blagaj (Blagaj road junction from Road 6-1 to Nevesinje) and the other at Podvelez junction from Road 6-1 to Nevesinje).

Some technical note:

Podvelez survey was not conducted on the first week of August due to the delayed coordination with local authorities (police, road, etc.). Podvelez results therefore reflect only those surveyed for the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> weeks of August.

#### (2) Traffic Counts

##### 1) Blagaj

- Total Vehicle Number: 3,248 (100%), of which Passenger car 2,859 (88%), Pick-up 1,369 (5%), Motorcycle 113 (3.5%), Bus 102 (3%), Truck 20 (0.6%).
- Total of Passenger car, Pick-up and Motorcycle: 3,126, of which Domestic 1,698 (54%) and Foreign 1,428 (46%).
- Total Weekday Vehicle Number: 1,572
- Total Weekend Vehicle Number: 1,676 (7% more than weekday)

##### 2) Interpretation

- Substantive contrast in traffic volume observed between the North (Jajce/Sipovo-Jezero in the order of 14,000 to 20,000) and the South (Blagaj/Podvelez in the order of 1,600 to 3,200), reflecting the importance of main artery road M-5 in Jajce.
- Passenger cars strongly dominant at 88%, with all other categories less than 10%. Interesting contrast observed here as well between the North (relative high 8% of trucks against low 1% of buses) and the South (relative high 3% of buses against relative low 0.6% of trucks). This duly reflects the characters of the two destinations;



Jajce as a local industrial center (more trucks than buses) and Blagaj as a tourist center (more buses than trucks).

- Domestic passenger cars hold a slight majority of 54% with Foreign amounting to 46%, another interesting contrast to the data for the North (Jajce/Sipovo-Jezero, where Foreign holds only 27%). This no doubt reflects very strong tourist appeal of Blagaj among Foreign markets. (This also reflects the fact that traffic counts stations in the North were placed in major trunk road network connecting major cities in BiH and beyond, whereas the road network subject to the surveys in the South is much local in nature, not leading to major towns.)
- Weekend Number slightly higher by 7% than Weekdays. The trend is almost similar to that of the North.

### 3) Podvelez

- Total Vehicle Number: 1,606 (100%), of which Passenger car 1,214 (76%), Pick-up 164 (10%), Motorcycle 37 (2%), Bus 75 (5%), Truck 116 (7%).
- Total of Passenger car, Pick-up and Motorcycle: 1,415, of which Domestic 907 (64%) and Foreign 508 (36%).
- Total Weekday Vehicle Number: 795
- Total Weekend Vehicle Number: 811 (2% higher than weekday)

### 4) Interpretation

- Passenger cars hold a majority of 76%, but not as dominant as in Blagaj or in the North (Jajce/Jezero-Sipovo) all at over 80% level. Pick-up reaches 10% level and truck keeps relatively high 7%, reflecting village economy structure of Podvelez.
- In some contrast to Blagaj where Foreign visitation is substantive (46%), Domestic occupies majority of 64% with a weaker Foreign visitation of 36%.
- Almost no difference (only 0.5%) between Weekday and Weekend Numbers, showing the similar trend as in Blagaj.

### (3) Passenger Interviews

- Number of Vehicles Interviewed:  
473, of which 4 passengers per vehicle (p/v) ranks the first at 29%, followed by 2 p/v at 27%, 3 p/v at 23%, and the rest remaining below 10% (5 p/v at 9.5%). This means that 2-4 passenger per vehicle occupies the strong majority of 79%, showing the similar trend as in the North. Small difference in the South from the North is that p/v number 4 - 2 - 3 is the order in the South while 2 - 3 - 4 is the order in the North.

South's (particularly Blagaj) tourist appeal may be one strong reason for more passengers per vehicle (4 comes the first).

- Country of Residence per vehicle:

Out of 460 who answered, of which major countries are BiH 50%, Germany 16%, France 7%, Italy 5%, Croatia 4%, Slovenia, Austria and Serbia-Montenegro 2% respectively. In contrast to the North where EU hold 60% majority, BiH has majority share in the South with EU accounting only for around 30%. This may be due to the fact that Jajce location in the North faces the main artery M-5 while Blagaj/Podvez locations in the South are both of local road junctions.

- Purpose of Trip:

Tourism strong dominance at 60%, followed by Visit Friends and Relatives (VFR) at 26%, with the remaining others (14%) choosing combination of purposes such as Tourism/VFR or Business or Personal. This is quite contrasting to the North where VFR is dominant at 40% with Tourism only at 25%. Here again, Blagaj's strong tourist appeal may be the reason for dominance of Tourism. (The local nature of the subject road network is also a significant factor.)

- Will you buy local products at Eco-House?:

High 65% answered Yes, 18% say Maybe, 12% say Depend on Price, and 5% say No (either no purchase or no interest). Yes and Maybe combined at 83% gives a very healthy prospect for Eco-House project, if ever such idea be floated.

- What Kind of Tourism?:

Out of 473 vehicles, 398 or 84% stated their visits are in some way related tourism. Among 398 vehicles, 44% answered Culture tourism, 25% say Eco-tourism, 11% Sport tourism (rafting, canoeing, etc.), 3% respectively for Spa and Winter tourism. Culture tourism dominance in the South is a significant contrast to Eco-tourism dominance in the North.

- How long will you stay in BiH?:

48% answered less than 7 days, followed by 20% for 2 - 3 weeks, 19% for 1 - 2 weeks, and 10% for 1 - 2 months. Almost half of the total answered relatively short stay of less than 7 days in the South, in contrast to 55% for 1 - 3 weeks in the North. Among those 48% who answered less than 7 days, 1 day holds 27%, 7 days 22%, 2 days 15%, 3 days 13% and 4 days 9%. This is reasonably interpreted to reflect the majority tourist characteristics of South visitors drawn particularly to Blagaj (polarization between 1 to 3-day visit of 55% and 7 days of 22%).

## 2.2 Tourism Resources

### 2.2.1 Outline of Tourism Resources

#### Nature

- Mount Velez located between Nevesinye and Podvelez is blessed with spectacular views and rich forests, and has high possibility of eco-tourism.
- In Blagaj, there are the revered Tekkiye and restaurants adjacent to the Buna River Spring. Blagaj has become the most prominent tourist site in this Study Area.
- Although many limestone caves exist in this area, exploitation of these resources has not been actualized. The caves may be tailored into potential products of eco-tourism or soft/hard adventure in the future.



Mount Velez and the Buna River spring

#### Culture and History

- The highlight of the historical resource in the Study Area is Stjepan Castle. The ruin of the castle remains and the entry path for tourists is in a little dangerous condition. There is no doubt in the historical importance of this resource, and examination of its utilization as a cultural tourism resource is called for.
- The revered Tekija is also an important resource in the area.



Stjepan Castle and Tekija

### Recreation and Sport Activities

- In Mount Velez, hunting is performed actively. It is visited by enthusiast hunters from countries in geographical proximity, such as Italy, and special guides are also organized.
- Although mountain climbing and hiking/trekking are also performed, visitors are still few in number.

### Others

- In Podvelez, homemade foods, such as cheese and yogurt, are produced daily and may be utilized as a part of program of village tourism.

### 2.2.2 Evaluation of Tourism Resources

- (a) Blagaj is rich in attractions, making it the most well-known tourist site/resource in this Study Area. For this reason, a tourist route connecting Blagaj with Mostar and Medugorje is already developed and marketed in both domestic and foreign markets (e.g, holiday tourists in the Dalmatian Coast),
- (b) Although the landscape and nature of Mount Velez are splendid, there are also many similar or more spectacular resources in other parts of BiH. In order for the Velez resources to attract more visitors, it is crucially important to develop attractive activity programs that harness the existing resources and potentials, such as nature hike, bird-watching, cave exploration, mountain climbing, and camping,
- (c) There already exists rudimentary form of village tourism where visitors can observe/experience process of home-made produces or taste traditional local dishes. With some expert guidance and sophistication, these attractions can be tailored into saleable highlights of future village tourism.

**Table E 2.1 Tourism Resources of Velez Study Area**

Resources	Description
<b>&lt;Nature&gt;</b>	
- Underground river Zalomka (Nevesinye)	- Biggest underground river in BiH. It is possible to connect it to the underground river Zovodolike.
- Caves Novakuse (Nevesinye)	- Very rich with cave ornaments and some 20 non-explored speleological objects (caves and pits).
- Scenic beauty (Nevesinye)	- Views of mountain peaks (Botin on Velez), saddle (Grebak), forest valleys (Zijemlje), and spacious plateaus (Morine). - Seasonal views of wild flowers, autumn leaves.
- Buna River Source and River (Blagaj)	- Buna River Source located under vertical cliffs, treasure of nature and tourist site from the old days. Traceable from the spring 385m into the caves, and 68m below the cave floors. First cave, rich with 90m-long decoration. - Endemic trout species found only in Buna River. Maintenance of the fish pond by Fish society in Blagaj. - Quality of oxygen-rich spring rivers maintained by the presence of plants and animal indicators. Middle/upper streams of Buna valley are covered by forest species <i>Alnetalia glutinosae</i> and <i>Populentalia albas</i> . There are <i>Phragmitetia</i> from order <i>Phragmitetalia</i> .
<b>&lt;Culture/History&gt;</b>	
- Historical heritage (Nevesinye)	- Old Roman: Roman road, road signs, stone piles, and waterworks. - Middle Ages: Biggest necropolis found in Mijatovci village. Of total 452 tombstones, 305 boards, 144 boxes, and 3 monuments. - Turkish and Austrian period: <ol style="list-style-type: none"> <li>1. Sat tower in the town;</li> <li>2. Sinan-kadi efendije (Cuckova) mosque in Nevesinje;</li> <li>3. Dzaferovica (Surkovica) mosque in Donja Bijenja;</li> <li>4. mosques in Kljunima and Krusevljanima;</li> <li>5. Ljubovica mosque in Odzak;</li> <li>6. Dzinova tower in Zovi Do-Dzinova settlement, 20km from Nevesinje;</li> <li>7. Bridge Ovciji Brod;</li> <li>8. Basagica tower in Nevesinje;</li> <li>9. Building of First Serb school in Nevesinje;</li> <li>10. Orthodox church of Svetog Vaznesenaj in Nevesinje;</li> <li>11. Orthodox church of Svete Trojice on Drenovik;</li> <li>12. Orthodox church in Zalom village, which rehabilitation is donated by the King Aleksandar Karadjordjevic;</li> <li>13. Orthodox church in Luka;</li> <li>14. Orthodox church in Biograd, where it was made the decision about the rebellion 'Nevesinje gun' in 1875;</li> <li>15. Old orthodox graveyard in town;</li> <li>16. Monument of Brace Tomic on Grepka, died in 1876;</li> <li>17. House of Aleksa santic in Bojistima;</li> <li>18. Monument to Peru Tunguzu, haiduk and leader of rebellion 'Nevesinje gun' on Morinama; and</li> </ol>

Resources	Description
	<p>19. Site in the village Krekovi, where rebellion started in 1875 year.</p> <p>List of National BiH monuments in Nevesinje:</p> <ol style="list-style-type: none"> <li>1. Catholic Church;</li> <li>2. Ambient complex from Austrian period;</li> <li>3. Municipality;</li> <li>4. Sat tower;</li> <li>5. Orthodox church Vaznesenje Hristovog;</li> <li>6. Orthodox church of Uspenje Bogoradice;</li> <li>7. Halilusa, Poljane-Necropola of the tombstones;</li> <li>8. Postoljani-Prehistoric tumulus;</li> <li>9. Humcani-Necropola of the tombstones and prehistorically Radojev stone;</li> <li>10. Humcani-Necropola of the tombstones and prehistorically tumulus of Magareca glavica 1 and 2;</li> <li>11. Kifino village-Roman settlement and Midle Ages necropola of Drenovik;</li> <li>12. Kifino village-Church of Saint Nicola;</li> <li>13. Krekovi-necropola of tombstones Krekovi-Mijatovci; and</li> <li>14. Mijatovci-necropola of tombstones of Rajkov stone.</li> </ol>
- Green Cave (Blagaj)	- Signs of human existence from Neolithic period found here. Rare remains of Impress culture in Stolac and Treinje. 6500 BC ceramic products found here. Those made between 3000 and 2800 BC are now in National Museum in Sarajevo.
- Remains of fortresses from Roman period (Blagaj)	- Illyrian tribe Daors built a fortified colony on a Hum hill in 3 <sup>rd</sup> and 2 <sup>nd</sup> centuries BC. Romans turned it into a fortress in 2 <sup>nd</sup> /1 <sup>st</sup> centuries BC. Blagaj's cestrum was originally not in a Buna valley, but high on a mountain. Also, ground plan did not fit into standards of the time, very incorrect, made on Aurelian way. It held strategic importance for many centuries.
- Old town of Herceg Stjepan (Blagaj)	- Medieval Bosnian state. In 15 <sup>th</sup> century Kosacas rearranged and enlarged damaged town's walls and turned it into mediaeval castle. In Ottoman period, two big towers, five fortresses and a small mosque were added. It was repaired/rebuilt in 1699, 1728 and 1827. Heavily damaged by earthquakes, the castle lost its strategic importance and was abandoned in 1835.
- Mediaeval Bosnian tombstones[steci] (Blagaj)	- Sehits in Blagaj town valley, near sport-recreation centre Bunica, near mosque in Vrba in Gnojnice.
- Tekija, Dervish Lodge (Blagaj)	- Best preserved Tekija in BiH, right next to the Buna River Source, Believed to exist from 14 <sup>th</sup> century. In mid-19 <sup>th</sup> century, Omer-pasa Latas rebuilt it and gave it to Kaderij order. Now it belongs to Naksibendij order.
- Sultan Sulejman's mosque [1520-1521] (Blagaj)	- Belongs to Empire-style cupola mosque. In 1892 cupola, having been destroyed by wars, was replaced by octagonal sheet metal roof.

Resources	Description
- Karadozbeg's bridge on Buna River [before 1570] (Blagaj)	- 5-arch stone bridge was probably built to replace a bridge of medieval times, and Mehmed-beg Karadoz donated it to the town. Rebuilt in 1849.
- Karađozbeg's hammam (Blagaj)	- Belongs to the same period and financier is the same as in previous monument.
- Leho's bridge on Buna River [middle of XVII century] (Blagaj)	- Tradition says its donor is Haseci Ali-aga Kolakovi. It has three arches, but suffers many damages since and repaired.
- Kolakovic's House [1736] (Blagaj)	- Pearl of local architecture with its sofa (divanhan) decorated with wood-carvings and octagonal wooden cupola. Totally destroyed during the last war. There is a plan for reconstruction.
- An apartment house Velagicevina [around 1766] (Blagaj)	- Built in a stony ambience with stone treatment of walls, roofs, structures on floors, and spacious courtyard. Two musafirhanas (guest houses) served for reception of various unexpected guests.
- Orthodox Church in Blagaj [1892–1893]	- Suffered great damage in last war.
- Catholic Church [1906–1908] (Blagaj)	- Its bell tower was built in 1933.
- Mediaeval tombstones [steccij] (Podvelez)	- Found in several localities. The most significant are those in Jagodno, Ograda and Podvelez.
- Fortresses (Podvelez)	- During Austro-Hungarian regime, Podvelez was strategically important location in the military manouever. Numerous fortresses are built here. Fortress of tourist interests: in Svetigora, Merdzan head and Guberaca.
<b>&lt;Recreation/Sport&gt;</b>	
- Hunting (Nevesinye)	- Natural hunting area of Velez of 19,636 ha. surface is managed by Lumber camp Velez - Two hunting associations ('Srndac' and 'Sumsko gazdinstvo') take care of game, the necessary gears/equipment and security in the hunting.
- Hunting (Blagaj)	- Hilly partridge favored game of domestic and also Italian hunters. Organised hunting important source of income in this area. Hunting society "Golub" Blagaj takes care of the hunting place and feeding of the animals.
- Hunting (Podvelez)	- Hunting area of Velez, which goes to Podvelez and Blagaj. Primary game Greek partridge.
- Wild edible plant (Nevesinye)	- Rich in wild herbs and mushrooms.

Resources	Description
- Nevesinje Olympics.	<p>- Nevesinje Olympics: a cultural-sport event with tradition of 122 years. Held in Bratacki Lug, in the latter week of August, for three days. 10,000 participants/visitors from many areas of BiH, Croatia and Serbia and Montenegro. Central highlight are horse races: thorough-breds, mountain-breds, etc. Other traditional diciplines of games include:</p> <ol style="list-style-type: none"> <li>1. Pulling of the rope;</li> <li>2. Jumping on the bellows;</li> <li>3. Climbing on the greased pillar;</li> <li>4. Running in the sack;</li> <li>5. Running with egg in the basket;</li> <li>6. Throwing the stone from the shoulder;</li> <li>7. Throwing of spears;</li> <li>8. Pulling the pistons;</li> <li>9. Pedestrian races on 100,200,400,800 and 1,500m;</li> <li>10. Semi-marathon;</li> <li>11. Jump at distance;</li> <li>12. Football;</li> <li>13. Chess;</li> <li>14. Table tennis; and</li> <li>15. Competition of young player of gusle.</li> </ol>
- Fishing (Nevesinye)	- Lake Alagovac and Zalomka River in Nevesinye
- Fishing (Blagaj)	- Buna and Bunica River
<p><b>Others</b></p> <p>- Local products (Nevesinye)</p> <p>- Handcraft (Nevesinye)</p>	<p>- Traditional production of wheat processed in the water mills;</p> <p>- Fruit and vegetable production using natural manure;</p> <p>- Milk/cheese/cream made of the most qualitative milk;</p> <p>- Production of brandy (plums, apple, pear);</p> <p>- Meat processing for their own consumption (smoked meat); and</p> <p>- Local traditional dishes (cicvara...).</p> <p>- Knitting of wool clothes</p>

Source: JICA Study Team



**Table E 2.2 Annual Calendar of Potential Tourism Resources for Velez Study Area**

	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
<b>Climate</b>	Snow ● →		Rain ● →		Rain & sun ● →	Sun			Sun & rain	Rain	Rain & snow	Snow
<b>Annual Local Events</b>	Closing of hunting season	Hunting on pests	Hunting festival		Dervish manifestation  Opening of fishing  River Island picnic day  Mohammed Birthday celebration in Blagaj		Memorial Football	Folklore festival in Blagaj  Nevesinje Olympics (Cultural sport event)	Hunting of birds	Closing of fishing	Opening of hunting season	Ramadan (2003)  Knitting of hand wool clothes (in winter)
<b>Agricultural and Pastoral</b>			Onion Spinach Leek		Apple Potato Pea Strawberry Cherry	Peach Apricot Plum Pepper Honey	Apple Pair Plum Honey	Grapes Honey	Grapes Honey	Tobacco Kiwi	Dry meat (winter)	
<b>Local Plants, and Flowers</b>			Dogwood	Zanovet	Medicinal herbs (May, June, & July)  Wild Flowers	Wild cherry		Mushrooms collection (summer-autumn)	Wild pear & apple Blackberry Medicinal herbs (Sep-Oct)	Rosehip Cornel Hazelnut Bilberry		
<b>Wild Animals and Birds</b>					Summer migration birds							

Source: JICA Study Team

## **2.3 Infrastructure and Tourism Facilities**

### **2.3.1 Existing Conditions of Infrastructure for Velez Study Area**

#### **(1) Accessibility and Communication**

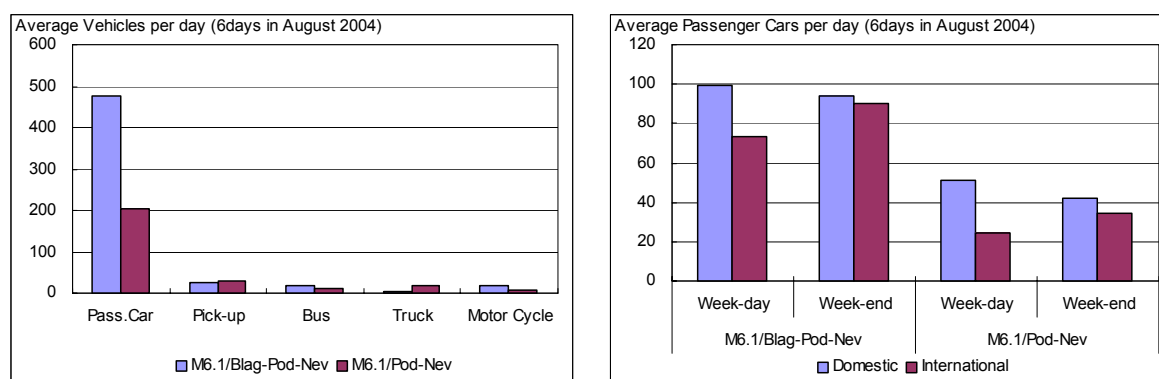
##### **1) Transport in Velez Study Area**

The national road of M6.1 is the most important trunk road in this area passing Blagaj to Podvelez and Nevesinje where domestic and international traffic flows including passenger cars, buses, and others were observed by the traffic count survey. The regional road R435 in combination with M6.1 is serving Nevesinje connecting with other towns (Gacko, Storac, Trebinje) in Srpska Entity and towns (Mostar, Konjic) in Federation Entity.

The tourist interview survey indicates that both major roads in Velez Study Area serve international car traffic (38% out of all traffic) from neighboring and EU countries, of which Bosniaks living in other countries and driving to BiH are dominant. Little traffic (average 540 vehicles per day in summer) of all vehicles on the national road of M6.1 connecting with three municipalities implies that there are few economic activities in the area in comparison with traffic on M5 (2,700 vehicles per day) and R415 (1,800 vehicles per day) in Pliva Study Area. Traffic to and from Podvelez and Nevesinje is half of the total traffic on M6.1 covering three destinations of Blagaj, Podvelez and Nevesinje.

This small amount of traffic there was also recognized by a previous survey in the JICA Transportation Master Plan. Number of vehicle traffic on the major regional roads in the southern part of the Republic Srpska including Trebinje, Gacko, Stolac towns were under 1,000 vehicles per day while the national road of M17 (E73) connecting between the coastal area and Sarajevo-Croatia served 4,000 to 5,000 vehicles per day in 2000.

Weekend traffic of international passenger cars was more than weekday traffic.



Source: JICA Study Team

Note: Traffic Count Survey by 6 days (week-day 3d, week-end 3d) in August 2004

**Figure E 2.1 Average Day Traffic by Vehicles and Nationality of License Plate in August 2004**

## 2) Accessibility to tourist attractions

### Access roads

Accessibility to existing major tourism attractions is generally in good condition by asphalt paved roads and they are within a reasonable distance from the main roads (national or regional road) or each tourist town centers within 30 - 40 minutes by car except Nevesinje town (50 minutes). It is observed that some parts of the regional R435 deteriorated partially and local access roads from vehicle roads to some attractions are difficult to approach by vehicle as they have not been paved.

**Table E 2.3 Access Roads Conditions to Tourist Attraction in Velez Area**

Destination	Major attractions	Major Road	Km	Condition	Local Road*	Km	Condition
Blagaj	Tekija, Buna River Source from M17	M6.1	2.3	●	La	6	●
	Stjepan Castle from town center (TC)	-	-	-	Lb	1	○ / --
	Bunica Park, Buna River from TC	-	-	-	Lc	3.5	□ / ○
Podvelez	Village center from M17	M6.1	12	●	Ld	7	□
	Givnine (Velez) Mt. from Corridor VC	-	-	-	Le	14	○ / --
	Castles (Mali grad, etc) from VC	-	-	-	Lf	8	□ / ○
Nevesinje	Nevesinje town from M17	M6.1	36	●	-	-	-
	Nevesinje lake from TC	R435	6	□	Lg	1	○

Legend ● = Good condition (asphalt paved), □ = Fair (paved with holes), ○ = Bad (gravel), --- = Very bad (dirt road), Local road codes\* are temporal reference numbers by the JICA Study Team.

Access control in the vicinity of tourist attractions

Although tourist volumes at major tourist attractions in Velez Study Area are generally not high at present, some areas such as Blagaj is experiencing traffic congestion and parking problem particularly on festival days. And major attractions in Velez Study Area are difficult for first time visitors to find due to the lack of adequate signage.

Local bus services

Several private bus companies serve local communities by inter-entity and intra-entity bus routes with few bus stops in Velez Study Area. Main service route is between Mostar and Nevesije route tracking the national road of M6.1 to other destinations in the Republic Srpska. As towns of Blagaj and Podvelez are dead-end destinations, local bus network for them is only intra-entity bus service. Frequency of bus services is from one to six times per day. It was observed in the JICA Study Team's interviews that local people have not faced critical problem in terms of bus services except remote areas because of their own vehicles or ride-sharing including student commuting to schools at present.

**Table E 2.4 Local Bus Services in Velez Area**

Destination	Inter-Entity Service	Intra-Entity Service
Blagaj	--	Mostar (5 times a day)
Podvelez	--	Mostar (6 times a day)
Nevesijne	Mostar, Bugojno, Jablanica, Prozor, Medjugorije	Gacko, Trebinje, Storac, Srbinje Bileca, Visegrad (from 1 to 5 times)

Source: JICA Study Team based on data from the Governments

## 3) Telecommunication in Velez Study Area

Almost all of Velez Area is covered by fixed line and mobile telephone network systems in general. However, Nevesinje has some underserved areas of mobile network, where users cannot connect with inter-entity communication, and one cannot use mobile in some rural and mountain areas.

**Table E 2.5 Mobile Telephone Coverage Area by Three Telephone Companies**

Town	Telephone Land Lines	Post Telecommunication Main Office	Telephone Company		
			BH Telekom	HTP Mostar/	Telekom Sprske
Blagaj	NA	LIVNO/ TOMISLAVGRAD	●	●	●
Podvelez	306 lines (87%)		●	●	●
Nevesinje	NA		□ (town)	---	□ (70%*)

Note: ● = fully covered, □ = partially covered, ○ = limited area only covered, --- = not covered  
Figure of percentage of coverage area is based on the rough estimation of coverage maps.

## (2) Utility Conditions

### 1) Water use and water supply

The water supply in upland of Velez Study Area is not adequate because of geographical condition of Karst with few water sources. However, Blagaj, where Buna River runs through the town, has no problem in water supply. Every urban area in Velez Study Area is served by municipal potable water supply system except Podvelez, where villages face severe shortage of water supply in summer.

**Table E 2.6 Water Supply Conditions in Velez Area**

Velez Area Municipality	Type of Source	Existing Water Supply System		Underserved Area
		Capacity (l/sec)	Coverage Household*	
Blagaj	Buna River	n.a	n.a	n.a
Podvelez	23 wells	8/hr	350	Almost in dry s
Nevesinje	Reservoir	55	2,700	n.a

Source: JICA Study Team based on data from each municipality and JKP

Note: Coverage household is within urban area.

### 2) Inadequate sewerage treatment and solid waste disposal

In Velez Area, every municipality faces the same issue of how to manage wastewater and solid waste. Some inhabitants have used septic tank system although it is not always adequate, and visitors often encounter illegal dumping of garbage on major (M6.1) and local roads or along Buna River or in mountains. These illegal dumping is affecting not only environmental qualities but also much negative impacts on eco-tourism.

This is caused by the lack of sufficient finance for disposal management, insufficient capacity of dumping sites, and poor awareness of local communities in every municipality in spite of

many efforts of environmental awareness programs by municipalities in cooperation with JKP and NGO involving school students.

**Table E 2.7 Sewerage System Conditions in Velez Area**

Velez Area Municipality	Urban Zone Collective System	Rural Communities	Reference
Blagaj	Yes (no treatment)	Direct discharge into surface water or underground	-
Podvelez	No		-
Nevesinje	Yes (no treatment)		-

Source: JICA Study Team based on data from each municipality and JKP

**Table E 2.8 Solid Waste System Conditions in Velez Area**

Velez Area Municipality	Existing Disposal System		Official Dumping Site
	No. of Collection Vehicle	Collection Points	
Blagaj	Mostar Jurisdiction	na	Mostar Side
Podvelez	Mostar Jurisdiction	na	Mostar Side
Nevesinje	2	50	2 (Bishna, other)

Source: JICA Study Team based on data from each municipality and JKP

### 2.3.2 Existing Conditions of Tourism Facilities for Velez Area

#### (1) Velez Area Accommodation

Accommodation facilities are few in Velez Area. Blagaj and Podvelez have only one motel in each area, and one hotel with 36 rooms that is old and with poor facilities is found in Nevesinje. It is observed by the JICA Study Team that tourists who stayed at Motel Sunce located in hillside of Velez Mountain were mostly week-enders from other towns in BiH, and that 40% of visitors are expatriates or tourists from Europe countries. Some Italian hunters come to Nevesinje, who stay at private farmers' houses during hunting season.

Facilities and equipment of those accommodations satisfy basic requirements in general except Hotel Nevesinje. Floor areas of rooms of accommodation in Velez Area are comparatively small and room rates are no less than other countries' rates.

**Table E 2.9 Number of Registered Accommodation in Velez Area in 2004**

Category	Blagaj		Podvelez		Nevesinje		Total	
	Facility	Room	Facility	Room	Facility	Room	Facility	Room
Hotel	0	0	0	0	1	36	1	36
Motel	1	20	1	8	0	0	2	28
Pension	0	0	0	0	0	0	0	0
Lodge	0	0	0	0	(3)	(5)	(3)	(5)
Guesthouse	0	0	0	0	(20)	(20)	(20)	(20)
Others	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>20</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>36</b>	<b>3</b>	<b>64</b>

Source: Tourists Community of Herzegovina-Neretva Canton, Nevesinje Municipality

(2) Velez Area Recreational Facilities and others

Velez Study Area does not have enough attractive recreational facilities for international tourists to take advantage of abundant natural attractions. One of distinct tourist facilities is the restaurant of NorFish in Blagaj, where international and Bosniak tourists enjoy meals after visiting Tekija as religious holly place and Buna River Source as tourist attraction.

There are a few mountain lodges in Velez Study Area, in which local and some international tourists stay as a base for hunting and trekking.

**Table E 2.10 Number of Recreational Facilities in Velez Study Area**

Category	Category	Velez Area			
		BL	PD	NV	Total
Food & Beverage	Restaurant	5	2	7	13
	Coffee Shop	na	-	na	na
	Bar/Pub/Discotheque	-	-	-	-
Recreational Facilities	Public Park	1	1	1	3
	Sports Gymnasium	-	1s	1s	2
	Barbeque site with facilities	1	-	-	1
	Athletic ground / track field	-	-	1s	1
Water Sport Facilities	Jetty or pier for boat	-	-	-	-
	Boat house	-	-	-	-
	Recreational boats	-	-	-	-
Mountain / Nature Recreational	Mountain lodge (hunting lodge)	-	1	3	4
	Ski field only	-	-	-	-
	Ski field with lift	-	-	-	-
	Camping site / Auto-camping	1	-	-	1
	Nature trail	-	1	-	1
	Spa / Hot spring bathing facilities	-	-	-	-

Category	Category	Velez Area			
		BL	PD	NV	Total
Cultural Facilities	Museum (anthropology, history, etc)	-	-	-	-
	Theater, Cultural Hall	-	-	-	-
	Other facilities	-	-	-	-

Source: Tourists Community of FBiH, JICA Study Team

Note: BL= Blagaj, PD=Podvelez, NV=Nevesinje,

### 2.3.3 Issues of Infrastructure and Tourism Facilities in Velez Area

The following issues concerning infrastructure and tourism facilities in Velez Areas should be addressed in order to introduce eco-tourism products into the area.

#### Access improvement and adequate control in eco-tourism attraction areas

- A few local roads need to be improved by adequate pavement from trunk roads to attraction areas (e.g. Stephan Castle and Bunica park, historical relics places in Nevesinje).
- Parking area provision at suitable locations avoiding deterioration of natural and historical environment such as Blagaj historical town or Velez Mountain nature areas.
- Traffic sign system is required to guide visitors efficiently to attractions in Velez Study Area on M6.1 and R435 as the trunk roads and some local roads.
- Consideration should be given to alternative transportation means from parking area to connect with attractions such as walkway, shuttle service, horse carriage, bicycle and other system taking into account conservation of environment and historical heritages in Blagaj town.

#### Improving utility systems for sustainable eco-tourism in river environment

- Improve existing sewer system (direct discharge to rivers) by adequate measures in urban areas in Velez Study Area.
- Improve individual sewer system of farmers and tourist facilities including country lodging in rural areas by adequate measures (e.g. septic tank, composting toilet system, etc).
- Improve and enforce existing solid waste disposal system (direct dumping sites into mountains and rivers, lack of collection vehicles and insufficient collection points, etc) by adequate method and facilities.
- Enhance local communities' awareness on environmental cleaning for river basin.



### Encourage accommodation business by local communities

- Encourage resident entrepreneurs for development of country lodging and other small-scale accommodation (pension, guesthouse, etc) in two municipalities of Podvelez and Nevesinje.
- Expand accommodation capacity in order to meet future tourist increase such as motels and pensions in Blagaj town area taking into account harmonious design for historical urban townscape.
- Encourage skills and knowledge of hospitality business for local communities.
- Improve and encourage adequate facilities standards enabling for local business to apply toward EU standards (e.g. eco-label).

### Improving tourist facilities to meet international and domestic tourists for eco-tourism

- Formulate nature and culture trail systems in order to access natural and historical heritages areas utilizing existing walkways, trails or pass networks focusing on Velez Mountain and surroundings and Blagaj historical town.
- Develop or upgrade river and mountain sports facilities to meet international facilities standards with operational capacity building (guide, security, interpretation), taking into account facilities standards to avoid environmental deterioration in nature areas (river, lake and mountain forest).
- Introduce sufficient interpretation facilities and guide systems for cultural historical heritage (visitor center, site museum, sign and information, tour guide, etc) and nature attractions such as nature trails and gardens.
- Introduce adequate maintenance systems for sustainable facilities operation including material choice, design, and funding.

## **2.4 SWOT Analysis for Velez Study Area**

The strengths, weaknesses, opportunities and threats for Velez Study Area are reviewed in this section. They are presented with respect to cultural and nature-based tourism, the two types of tourism that are most promising. Table E 2.11 presents a table summarizing the key points made in this section. In this analysis it is the town of Blagaj that forms the area's anchor for cultural tourism and similarly it is the Podvelez and Nevesinje areas that contain the natural assets drawing the nature-based types of tourism. The strengths, weaknesses, opportunities and threats already discussed in the general SWOT presented as Chapter A6 are fully relevant for the Mount Velez area, but are not repeated in this section.

### (1) Velez Area Cultural Tourism

The area offers heritage assets in the Blagaj vicinity including the famous Stjepan Castle on a hilltop immediately above the town, which is now a national symbol. The town of Blagaj contains other heritage buildings as well as the panorama of the hill rising up behind the Dervish House. Further assets of note are the Ottoman lookout forts scattered along the eastern edge of the Neretva canyon along the Podvelez highlands. This is a varied group of heritage assets that together constitute strengths enabling the area to attract cultural tourism. Other strengths are complementary ones, namely the presence of restaurants in Blagaj, and the easy driving time from Mostar to Blagaj, 10-15 minutes, and to Podvelez, some 20 minutes maximum. Weaknesses include the lack of interpretive information at these different locations to enrich the visitor experience. In addition, there are few events posted on the cultural calendar of the area to liven it up. Consequently, promotional initiatives to beautify the area, to keep it tidy and expand tourism into the area are few.

The primary opportunity is Blagaj's role as the open-air showcase for Herzegovina's history for cultural tour groups, school groups, for weekenders from Mostar or Sarajevo, for vacationers on the Dalmatian coastline and for visitors to Medugorje. Blagaj and the Podvelez highlands have the opportunity to host these different groups. An additional group in the summer is the wave of motoring tourists to and from the coast making rest stops in interesting places near the main highway. The threats relate to the insufficient provision of meaningful information to visitors to the town and heritage sites, and also to the lack of new spending opportunities on activities like boat rides on the river or bicycle rentals for touring the town. Cultural tourism is experiential in nature and a further threat is the enduring lack of awareness of the local population of the need to provide these vital hosting and information services. Related to this is the possibility that the arts community will bypass Blagaj as a venue for production and sale of crafts and curios in favour of more promising towns like Mostar and Pocitelj.

### (2) Velez Area Nature-based Tourism

Key strengths focus on the attributes of Mt. Velez, in particular the excellent rock climbing it offers on its north rock face, said to be suitable for training future Himalayan climbers. In addition to climbing, this mountain offers a range of sports activities in both the winter as well as summer seasons. What's more, because of the barren nature of the upper elevations it offers fine panoramas of surrounding scenery. The area offers abundant wildlife with broad ranges of species for good hunting, fishing, wildlife viewing and photography, and good fauna

for herb and mushroom collection. Additional strengths include the pool of specialist knowledge offered by members of the local sports and nature-based associations, the excellent vehicular access to upper elevations of the mountain, and the short driving distance from Mostar to the western and central parts of Mt. Velez, within 20 - 35 minutes.

The area's weaknesses resemble the weaknesses for Pliva Study Area. There is a minefield problem on a portion of the mountain. Similarly there is a serious unfamiliarity of the sports and nature associations with international safety and quality standards for sports services. In addition there is the unfamiliarity with running nature-based activities as profit-making businesses, reflecting the same problem in the broader society as one in transition to capitalism. There is therefore a total lack of tour packages to this area in the marketplace.

The opportunities relate to the good sporting conditions on the mountain and in the Nevesinje plain to the east. The mountain can offer a variety of sports in both winter and in summer including an east-west set of trails over or around the top crest taking one or more days. Sophisticated climbing teams can train on Prenj's challenging north rockface. Members of organizations like the Prenj Mountain Union can provide the specialized knowledge to organize activities along professional guidelines. The area can even attract some of the vacationers based on the Dalmatian coast wishing to have a mountaineering experience to vary their vacation.

The threats are organizational in nature, as they focus on the failure of relevant organizations to reform and adopt international management standards to manage the set of sports activities with professionalism, providing top quality orientation and service and ensuring an acceptable standard of user safety. Similarly, there is the threat that the Velez sports clubs will fail to partner with tour operators willing to sell packages to this area, or to set up some of the activities themselves along business lines. This will require a major change of business cultures for which there will definitely be resistance and adherence to old, known ways.

#### **2.4.1 Emerging Issues**

The Master Plan will endeavor to craft proposals that will focus on strengths and opportunities and address the key weaknesses and threats blocking growth. Some key issues emerging from this analysis are listed below. The proposals making up the master plan must each in some way directly relate to one or more of these issues.

(1) Cultural awareness: Poor local understanding & delivery of interpretive information

Cultural tourism is based on gaining knowledge and experience that enriches the visitor. The local community must be trained to grasp the local cultural and natural heritage, in order to provide educational information to visitors that is satisfactory. Similarly, nature-based tourism also relies heavily on accurate information describing the sports opportunities, especially those that are somewhat extreme or unique. Part of the problem is the lack of understanding of the local heritage and of the sports activities, by local community members at the fringe of tourism activity. They don't understand the job opportunities that a range of such "eco-tourism activities" promise.

(2) Velez Area Environment: Poor environmental conditions

Local communities need to take charge of the quality of the environment and adopt a culture that values environmental excellence. They will need to formulate solutions for air quality offenders and for poor solid waste management. They will need to realize that community members are the first to benefit from the proper environmental management of their very own municipalities.

(3) Velez Area Nature: Needed modernization of sports and nature organizations

The use of the Pliva River Basin, of the Mt. Velez area and Nevesinje highlands for sports and recreational purposes by international tourists will require creation of specialized systems and services that do not yet exist for responsible management of a growing offer of activities. This will require a culture change that will be difficult to achieve quickly.

(4) Velez Area Entrepreneurship: Partnership building with tourism businesses

Tourism is driven primarily by for-profit businesses working in the competitive international marketplace and the local sports and nature-oriented associations will need to learn to collaborate with tour operators to handle different types of visitors safely. This also will require a major culture change for these organizations.

(5) Velez Area Community in transition

Because of the unfamiliarity of community members with nature-based tourism, there is a resistance or inertia to change by members of different generations who have not lived in the more advanced EU countries or have no family members residing abroad who can inform

them on conditions and the successful marriage between nature and the business world abroad in a capitalistic framework.

In a further step to this logical framework, broad goals can be formulated to address each of these basic issues. A tentative set of goals follows:

**Culture change:** One goal is to reform the community's understanding of the role of culture and information in tourism, and of the need for community based initiatives that will improve their own understanding of culture, of nature and of eco-tourism. The community must grasp the interdependency that links these factors and the business opportunities found in them.

**Environmental excellence:** The environment permeates all realms and its proper management is essential for lasting eco-tourism development. Steps to improve environmental awareness and its close linkage to heritage management will be needed.

**Nature & recreation:** These fields can be very compatible and mutually reinforcing if managed through principles of sustainability. The study areas can adapt management structures in wide use abroad to their specific needs to manage a growing volume of nature-based tourism and recreational activities.

**Entrepreneurial capacity:** The BiH economy being in profound transition, features of the master plan will encourage an understanding of the capitalistic economy as adapted successfully for eco-tourism activities in other countries.

**Community advancement:** By means of job creation and through various re-education efforts sectors of the community such as crafts people, women, and returnees can be equipped with new skills enabling them to derive benefit from eco-tourism related activities.

Table E 2.11 SWOT Analysis of the Velez Study Area

	Cultural tourism	Nature-based tourism
Strengths	<ul style="list-style-type: none"> <li>• Fame of Blagaj &amp; of <b>Stjepan castle</b> as Herzegovina's symbolic center</li> <li>• High <b>scenic value of Blagaj</b> town on dramatic site at river source, below the famous castle with charming building like the old Velagicevina house</li> <li>• <b>Good offer of restaurants</b> in Blagaj with scenic views offering fish specialties</li> <li>• Unusual highlander lifestyle including <b>artistic sheep shearing</b> seasonal activity of Podvelez villagers</li> <li>• Podvelez' Ottoman era <b>lookout forts</b> overlooking the Neretva valley</li> <li>• <b>Close proximity</b> to Mostar making possible easy packaging with other tourist sites</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Top quality rock climbing</b> at Velez north face reputed to be excellent for training purposes</li> <li>• Excellent <b>mountain activities</b> like mountain-biking, hiking, snow hiking, cross-country skiing</li> <li>• High <b>panoramic value</b> to all mountain activities per lack of forests at elevations</li> <li>• <b>Exceptionally broad species range</b> for bird-watching, fishing, hunting</li> <li>• <b>Abundant wildlife</b> in Nevesinje's meadows for hunting, wildlife viewing, photography</li> <li>• <b>Detailed knowledge</b> of local sportsmen of all sports activities</li> <li>• <b>Excellent vehicle access</b> to high elevations of Mt. Velez</li> <li>• <b>very close proximity</b> to Mostar 35 min. drive away &amp; to popular Prenj Mt.</li> </ul>
Weaknesses	<ul style="list-style-type: none"> <li>• <b>Lack of interpretation</b> at Blagaj's heritage sites like trained guides, historical information, marked touring trails</li> <li>• <b>Limited calendar of cultural events</b> to enliven and celebrate local life</li> <li>• <b>Little local promotional initiative</b> to expand town's appeal, beautify it and keep it clean</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Unfamiliarity of sports associations</b> and of the broader community with international safety &amp; quality standards</li> <li>• <b>Unfamiliarity of same</b> with operation of nature-based activities as businesses</li> <li>• <b>lack of travel packages</b> offering these activities</li> <li>• Presence of <b>minefields</b> on northern slopes</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>• <b>Blagaj as the open air showcase</b> for Herzegovina's unique heritage for cultural tourists and school groups</li> <li>• The favored <b>weekend / short stay destination</b> for people from Mostar, Sarajevo and for visitors to Medugorje and Dalmatian coast</li> <li>• <b>Refreshing rest stop</b> for motoring tourists to Dalmatian coast in summer time</li> </ul>	<ul style="list-style-type: none"> <li>• One of <b>Europe's top training mountains</b> with east-west hiking trails over the top, fine technical rock climbing sought by serious climbing clubs</li> <li>• Willing market in <b>coast vacationers</b> seeking inland touring &amp; sports</li> <li>• Exciting jeep safaris to charming villages of <b>Herzegovina's heartland</b> including the Podvelez hamlets</li> </ul>
Threats	<ul style="list-style-type: none"> <li>• Failure to fill <b>information/interpretation void</b> for cultural visitors to the area at a standard up to international expectations</li> <li>• <b>Slow offer of new spending opportunities</b> like bicycling, shopping, Buna R. boat rides because of lagging investment</li> <li>• arts community may <b>shun Blagaj</b> in favour of Mostar, Pocitelj</li> </ul>	<ul style="list-style-type: none"> <li>• Inability of association managements to unite &amp; <b>strengthen the key sports associations</b> to manage the lead sports of climbing, hunting &amp; fishing for top quality product &amp; full user safety</li> <li>• <b>Lack of interest by strong tour operators</b> to market vigorously and sell Velez Study Area's sports packages</li> </ul>



## Chapter E 3. Agriculture Analysis of Velez Study Area

### 3.1 Introduction

Velez Study Area includes the former South East Mostar Municipality (Blagaj and Podvelez) and Nevesinje.

Use of land in hectares:

**Table E 3.1 Present Land Use of Velez Study Area**

Surface	Mostar	Nevesinje	Total	%
Arable Land	550	11,002	11,552	10
Meadows & Pastures	970	19,200	20,170	17
Permanent Crops	299	356	655	1
Others	1,362	2,956	4,318	4
Forest & Semi Natural Areas	17,723	62,563	80,286	68
Urban	175	169	344	0
Water Surface	0	48	48	0
<b>TOTAL</b>	<b>21,079</b>	<b>96,294</b>	<b>117,373</b>	<b>100</b>

Altitude: 35m (Blagaj) - 800m (Nevesinje)

Annual rainfall: 1,515mm (Blagaj) and 1,789mm (Nevesinje)

Average temperature: 14.6°C (Blagaj) and 8°C (Nevesinje)

Podvelez is an area with no permanent surface water courses or lakes, which poses the greatest concern in the area. In absence of any possible means of providing for water supply, the remains of the snow in caves and cavities have, on occasion, been melted. Apart from Sitnik and Mokri Dol, there are no classic water sources in the southeastern part of the Velez.

### 3.2 Plant Production

In South East Mostar 43 ha have been planted with cereals in 2001. In Podvelez bad climatic conditions, poor soil and traditional orientation of the population towards cattle breeding are the basic limiting factors of bigger upbringing cereal corps. Beside small plots of barley, rye and oat here and there no significant production could be found.

Nevesinje with its big planes has a much bigger potential and cereals can be found, even if



the old cooperative is not operable any longer. In the ranking of their importance the relevant cereals are maize (average yield per ha 2.5 to), wheat (1.7 to), rye (1.9 to), oats (1.0 to) and barley (1.2 to). Due to unknown reasons no figures for maize are available. Approximately 30% of farming production is offered on the local market. Average price of wheat is 0.35 KM/kg.

Vegetables: Starting with the fact that wider area of Blagaj is placed under the influence of sub Mediterranean climate there are great opportunities for reproduction of numerous of vegetables. Production of the vegetable in this area has a long tradition.

Besides the production of vegetables in the open space, certain number of farms also practices production in closed spaces (polythene greenhouses). Great handicap of this areas, in some periods, are very strong winds that makes significant damages on the objects and agricultural surfaces. Damages are extremely visible in polythene greenhouses. If the basic technical and engineering demands weren't esteemed concerning construction of polythene greenhouse, the damage is very evident especially in period of strong wind.

**Table E 3.2 Vegetable Variety and its Yield in Blagaj**

Variety	Harvest Area (%)	Yield (Harvest ton/ha)
Tomato	53	30
Fresh pepper	26	20
Cucumber	7	25
Green lettuce	7	1

On private parcels around Blagaj, Gnojnice and Malo polje there are many polythene greenhouses for vegetable production. This market-oriented activity enables early gathering, often better prices and often easier selling. In polythene greenhouses two or three different crops could be grown over the year. - The company "Jaffa Commerce" is a dominant local wholesaler in this area. Podvez has beside small gardens no market vegetable production. In Nevesinje due to its altitude we find again potatoes as an important crop.

The FAO Seed Support Project made importation in spring 1998 to partly replace the critical stock seed situation. Well-recognized Dutch bred varieties (Desiree, Kondor, Jaeria and Kennebee) were imported, as elite seed and overall performance was excellent. Also the state farm in Nevesinje AGRO-HERZEGOVINA participated but failed soon and went bust even if the climate fits excellent for potatoes and even better seed potato production.

**Table E 3.3 Vegetable Variety and its Yield in Nevesinje**

Culture	Harvest area (ha)	Yield (t/ha)
Potato	645	9.2
Black onion	70	1.8
Cabbage & Kale	30	2.4
Beans	25	0.2
Carrot	12	1.1
Tomato	3	1.3
Pepper	1	0.5
Cucumber	1	0.2

AGRO-HERZEGOVINA, Mr. Zoran PUDAR, director, Ulica Nemanjica br 50, Nevesinje has now 900 - 1,300 ha good land of qualitative meliorated plowed fields for potato production and a potato cold storage facility is available within privatization.

Fruit production in BiH consists mainly of plums, apples, pears, cherries, melons and some peaches mainly near Blagaj. Plums dominated and still dominate the fruit production and accounted for two-thirds of all trees. Some of the existing orchards are in a poor shape.

The area of Blagaj and its surroundings have the characteristics of real sub-Mediterranean territory, where great number of south fruit can be cultivated with great success (*Ficus carica* L. - fig, *Punica granatum* L. - dog-rose...). Dog-rose ("muselez") and figs are rising very good, often without any outside influence and production of these fruit in the plantations represents significant possibility of development. Before the war Blagaj (area of Kosor) had significant plantations of peaches and nectarine. The most important peaches were Springgold, Collins, Redhvaen, Cardinal, Early redhvaen, and later new sorts emerged like Springcrest, Suncrest, Magnolia, Flavorcrest and Regina.

Beside peach, different sorts of nectarine were breeding. Maturing of peach and nectarine, in different periods, has been focused on the time of tourist season (from the middle of June till beginning of September) what greatly facilitated sales of goods. These planted trees of peach have lasted for about 17-20 years, with income of 50-70kg on each tree. There were around 600 trees planted per hectare. After the war orchards were not reconstructed, and remaining trees' incomes are not significant. Nevertheless there is a potential for various fruit varieties. Again there are no fruit trees in Podvelez due to tough climate. In Nevesinje we could find the following varieties:

**Table E 3.4 Fruit Variety and its Yield in Nevesinje**

Variety	Number of trees	Yield per tree (kg/tree)
Plums	20,000	11.5
Apples	6,700	20.0
Pear	3,100	5.1
Nuts	840	8.0
Cherry	270	3.7
Sour cherry	100	5.0

Fruit sorts and yields per tree indicate that this area can be sorted in the fruit regions of continental type, suitable for growing of plums, apples, pear, sour cherries, currant, raspberry, nuts. Surplus intended to the market are very often. Purchase of the fruit surplus is made by the Farming cooperative distributing them in other processing center in BiH. Because of the lack of processing facilities in the area, significant amount of fruit is processed in brandy of high quality made in home production, smaller part is processed in juices, jam and similar.

Wine: Grapes have been cultivated since many centuries; in 1886 the first opening of an agricultural station in Gnojnice near Blagaj represented the start of an organized production of grapes and wine. The Viennese royal court was among the first clients.

Vineyards covered a big or even the biggest part of arable land in Mostar area. The war has destroyed a lot of vineyards. The remaining ones are stocked with outdated varieties and having a high percentage of white wine. Concerning with wine Zilavka represents 70% of total and Bena, Krkosija, Smederevka and some other less frequent sorts follow. Red sorts of grape amount for just 10% of total grape. But the actual market is looking for red wine and also the Mostar climate does not allow fruity with-wines.

The wine cellars of HEPOK have been divided in HEPOK West (the Croatian wine drinking area) and HEPOK East (near Blagaj). HEPOK West has been privatized but HEPOK East is officially still waiting for an investor; as the technology is oriented towards high volume and big parts of the winery are destroyed no investor will ever purchase this company. (The fruit-presses could be sold to VEGAFRUIT but that is not linked to the wine business.)

An opportunity would be to produce table grapes that also have a good price in the market. The existing table grape varieties are Kardinal, Demir-kapija, Muskat-hamburg and Afus-alij.

**Table E 3.5 Wine Grape Growing in the Blagaj Area**

Locality	Sorts of wine grape							
	1991					2003		
	Green (ha)	Red (ha)	Total (ha)	Harvest (t)	ton/ha	Land (ha)	Harvest (t)	ton/ha
Gnojnice - Dracevice	58	7	65	850	13.0	8	36	4.5
Blagaj	61	7	68	880	13.0	10	45	4.5
Kosor	49	5	54	650	12.0	6	25	4.0
Malo polje	12	1	13	155	12.0	1	4	4.0
Total	180	20	200	2535	12.7	25	110	4.4

**Table E 3.6 Wine Grape Growing of HEPOK Winery**

Year	locality	Sorts of wine grape				
		Green	Red	Total	Income(t)	ton/ha
1991	Dracevice	-	90	90	1,170	13.0
	Kosor	20	120	140	1,680	12.0
2003	Kosor	60	-	60	270	4.5

Achieved average incomes of wine and table grapes in private vineyards and vineyards in "Hepok" company in a region of township "South-east" in 2003 are given in the table below.

**Table E 3.7 Yield of Wine Grape and Table Grape**

Property	Wine grape (ton/ha)	Table grape (ton/ha)	
		Early	Middle-early & later
Private vineyards	10	11	15
Vineyards of "Hepok"	12	11	15

Berry fruit production should be more considered as it generates high returns, has a high demand for seasonal labor, creating rural employment, and is export-oriented. Farm investment requirements are moderate and returns begin in the first year of investment. The production of berries – strawberries, raspberries, and blackberries - fits well for many parts of BiH as they can be grown on rather small plots and are labor intensive.

Processed and semi-processed berries and fruits have been an important export article in the past but due to the war the buyers in Western Europe went to Poland and other countries. Companies like Vegafruit and Vitaminka are representatives of a profitable berry fruit industry in BiH. Cold storage facilities are available over the country.

### 3.3 Livestock Production

In the study area Velez cattle farming is concentrated in Nevesinje, that has great plains and good resources for fodder production. In Blagaj beef production plays no roll at all and in Podvelez cattle are primarily used for milk production. For beef fattening adequate fodder (and sometimes water) is missing.

The total livestock production (beef) is much below pre-war standards. Table E 3.8 shows the number of livestock in Velez Study Area.

**Table E 3.8 Livestock Population in Velez Study Area**

Livestock	Blagaj	Podvelez	Nevesinje	Total
Cattle	10	1,000	12,000	13,010
Sheep	50	6,000	30,000	36,050
Goats	70	2,000	1,000	3,070
Pigs	NA	0	4,500	4,500
Horses	NA	NA	360	360
Chicken	1,000	2,000	12,000	15,000

Milk and the Dairy Sector: MOVITA, a dairy established with assistance of CARITAS, stopped its production in August 2004 and is now for sale. Obviously two Slovenian investor are competing for buying MOVITA; on one side Tuzla Milk (Ljubanska) from Tuzla and on the other side Zelena Dolina from Celje. - Daily production at the end was around 2,000 liter/day.

Beside that we could find a brand new dairy in Nevesinje named "Glokovac", partly financed by IFAD. They are facing marketing problems, due to no-name brand and Serbian background (when selling in Mostar). Daily production is only 2,000-3,000 liter/day.

In Podvelez JICA established a milk collection system; milk is be delivered each second day to P.Z.KONJIC MILK and shipped from there to Tuzla.

Sheep: PLANINSKO DOBRO in Nevesinje is a Slovenian investment that leased 3,069ha land at Zlatac from AGRO-HERZEGOVINA; meadows of 20ha, pastures of 2,900ha and unproductive land of 149 ha. Last year they started to build up a sheep flock; for the time being they have 1,500 sheep but are looking for 5,000 minimums. One of the ambitious goals is to produce an autochthonous kind of the cheese that is specific only for this region; it is called "mijeh - Fatty cheese from the skin bag".

Goats: In Vranjevici is a goat farm with 50 heads and another one in Blagaj with 20 heads. In Podvelez and Nevesinje many more goats could be found.

Pigs: Due to religious eating patterns pigs are raised in Nevesinje only; 2003 there have been between 4 and 5,000 pigs; among others Vepar doo, a pig farm.

### **3.4 Fishery**

The pre-war resource base for fish production in BiH comprised 20,000km of rivers and streams, 18,200ha of reservoirs, 400ha of natural lakes and 18km of coastline on the Dalmatian Sea. There are 160 fresh-water species, of which 10%t are harvested. The fresh-water catch of 4,620 tones, 76% of which came from state enterprises, was sufficient to meet 39% of domestic consumption of 2.6kg/capita. Today we can see more than 20 private fish farms on the Neretva River and many more in other parts of FBiH. Fish farming is profitable even if prices are low due to restricted export facilities.

At the very strong spring of Boona River we have fish production facilities from Norfish, a joint venture between BiH and Norway. Norfish also runs there a fish restaurant that is very attractive to tourists.

Beside that there are no significant other fish activities in the area.

### **3.5 Forestry**

The area of Blagaj and Podvelez does not show many forests; that forests could be planted shows the small demonstration plot of pines between Podvelez and Mostar that was established by the Austrian Empire.

Towards Nevesinje we have better soil conditions and totally forest land takes more than the half of area (645km<sup>2</sup>).

**Table E 3.9 Forest Types and Area in Velez Study Area**

Category	State (ha)	Private (ha)	Total (ha)	Ratio
<i>High forest</i>	13,477	0	13,477	20.6%
Forest with natural recovery	8,645	0	8,645	
Degraded forest	328	3	331	
Wild forest	1,504	0	1,504	
Forest cultures	3,000	0	3,000	
<i>Sprout forests</i>	16,779	7,929	24,708	37.8%
Available for management	16,779	7,929	24,708	
Not available for management	0	0	0	
<i>Shrubbery, Bare mountainous terrain &amp; non productive land</i>	27,142	109	27,251	41.6%
Total area	57,389	8,041	65,439	100.0%
Overgrown forest land	30,256	7,929	38,185	58.4%

By a growing type (type of forest), there are four types of forest:

- 1) High forest beech, fir forest, spruce, deciduous forest, other deciduous. These forests have an annual yield of 65,000m<sup>3</sup> (total mass). Planned cut mass at annual level is 43,000m<sup>3</sup>. Accomplished annual chopping is 8,300m<sup>3</sup> of different forest types. Their reproductive ability is good and it is not necessary the planting of new seedlings by artificial way.
- 2) Sprout forest beech, oak other deciduous forest. These forests have an annual yield of 39,000m<sup>3</sup> of total mass. Planned chopping mass at annual level is 11,000m<sup>3</sup>. Accomplished chopping for one year is 4,300m<sup>3</sup>. This area should be filled by the seedling of conifer, to get a mixed deciduous-conifer mass.
- 3) Forest cultures, area wooded by the seedlings of conifers (spruce, white and black pine, and others)
- 4) Area not suitable for management (shrubbery, bare mountainous terrain, non productive forest).

In terms of tree types, there are the mostly represented the forests of beech and fir forest without spruce (*Abieti-Fagetum*), secondary forest of beech (*Fagetum montanum illyricum*), while the acidophil variant of these forests mostly settled in the area of Trusine. Settlements in the gorges and canyons are rich with the thermopiles forest of beech (*Seslerio-fagetum*, *Aceriobtusati-fagetum*) and forest of eastern hornbeam (*seslerio-Ostryetum*). Land exposed to south and west contain the oak phytocineze of cerris (*Quercetum petraeae-cerris*) and cerris (*Orno-Quercetum cerris*). Subalpic belt is featured by sub-alps beech forest (*Fagetum*

subalpinum) with which alternates relict community of *Pinetum hedreichii*, and the highest belt-of forest (*Pinetum Mugi*). In the south east part of municipality belonging to the submediterranean-montgan area, there area thermopiles forest of beech (*Seslerio Fagetum*, *Aceri obtusati-Fagetum*), as well as the mezofile forest of beech (*Fagetum montanum illyricum*).

Since 1947 year, the forests are conducted by the enterprise 'Botin'.

### **3.6 Processing Industry of Agricultural Products**

Velez Study Area already has the following agro-processors.

- Wood industry, sawmills - Nevesinje (closed);
- Dairy plant - Nevesinje, Glokovac;
- Milk collection - Podvelez, P.Z.BIOPRODUKT;
- Vegetable production and marketing - Blagaj, Jaffa-Komerc;
- Herb production - Blagaj, Herbe Naturale / Caterham Herbs;
- Wine - Blagaj has vineyards but processing facilities Hepok East are in Mostar (destroyed and closed);
- Agricultural trade - Nevesinje, Z.Z.Nevesinje, Tripo Nastic, Aggregator; and
- Agricultural trade - Nevesinje, Agroherzegovina (almost closed).

Blagaj and Podvelez do not show significant agro-processing industry; Nevesinje has great potential, but is located in a remote area.





## **Chapter E 4. Pilot Project 4: Blagaj Historic Heritage Trail**

### **4.1 Background**

#### **4.1.1 Location**

This pilot project has been implemented in the old part of Blagaj town. This small town of Blagaj, which is now a part of Mostar Municipality, used to be the capital city of the whole Herzegovina in old times. The project area extends along the Buna River from its source to some 800m downstream at the stone bridge. The proposed trail/promenade connects cultural heritage sites along the river.

#### **4.1.2 Socio-Economic Background**

Blagaj is a small community with less than 200km<sup>2</sup> of land area and 582 households. It belongs to the new Mostar Municipality (since 15<sup>th</sup> March 2004). In the Blagaj town, there are one hotel, some pensions (Bed & Breakfast), three restaurants, and couple of cafes. It has few industries other than agriculture and local commercial activities. Main tourist attraction is its cool air during summer days, for which many people from Mostar city come and stay for a few hours until evening. Some international tourists make a short visit to Blagaj from Dubrovnik and Medugorje. In spite of a good potential for nature and historic tourism, Blagaj has not developed sufficiently.

#### **4.1.3 Relevance to Master Plan**

Since Blagaj is located at the gate of the South Study Area (Blagaj, Podvelez, and Nevesinje), it is important to make this area worth visiting. The enormous water spring of the Buna River (said to be the largest spring in all Europe) with Tekija as well as a fish restaurant close to the spring is receiving a significant number of visitors every year. This pilot project is an attempt to make tourists stay longer so that they may stay over night and even travel around Velez Study Area.

However, another important resource in Blagaj is the Stephan Castle. Since very limited time (May to October 2004) was allocated for the implementation of the pilot projects, no improvement of this well-known cultural asset was taken as pilot project. The master plan includes proposal on research, restoration, and tourism development of the castle.

## 4.2 Project Description

### 4.2.1 Project Objective and Outputs

The objective of the pilot project was defined as below:

“Area of old heritage of Blagaj achieves sustainable tourism development.”

In order to make this project sustainable, financial, environmental, as well as historic preservation aspects should be taken into consideration.

The outputs of this pilot project are defined as follows:

(1) Historic trail is well Organized and Clearly Indicated

Proposed trail/promenade pavement and information boards clearly leads the visitors to follow the trail.

(2) Project Gets Sustainable Revenue

Revenue from car parking, tour guiding as well as sales of the proposed information kiosk contributes to the financial sustainability of the project.

(3) Inbound Tour Operators Conducts Increasing Number of Tours to Blagaj

There are some inbound tour operators active in this area and their collaboration is essential for the successful operation of this pilot project.

### 4.2.2 Management Structure

(1) Key Organizations

“The Tourists Community of the Herzegovina and Neretva Canton” is the management body of the pilot project. Even though Blagaj is just a small part of the Canton territory, the Tourists Community understood a big tourism potential of Blagaj, and eagerly undertook this intervention. Since the Blagaj is a part of Mostar Municipality and has neither local government nor tourism community at the Blagaj district level, the Canton Tourists Community is the most appropriate organization to manage this pilot project.

## (2) Brief Job Description for the Pilot Project Director

### 1) Total Coordination

The manager monitored all the progress of necessary preparation and operation of the pilot project as the responsible person based on a contract between JICA Study Team and Canton Tourists Community. The director prepared reports on progress and achievement of this pilot project.

### 2) Management of facility construction

This included the planning, sub-contracting and supervising the construction of the following facilities.

- Promenade along the southern bank of the Buna River;
- Car parking space;
- Building for tourist information and kiosk; and
- Information boards that explain cultural heritage.

### 3) Procurement of equipment

- Relevant equipment for tourist information kiosk;
- Equipment for the two Velagicevina houses;
- Guide map of the heritage trail; and
- Boats to go into the cave of Buna water resource.

### 4) Guide Training and Cultural Seminar

- Conducted a series of training for the local tour guides
- Seminars on cultural issues such as history of Herzegovina, archeology, geology, biology, speleology, anthropology, etc, were expected but have not been implemented by the end of November 2004.

### 5) Promotion

Promotion schemes included dissemination of relevant information (by web site and printed materials), familiarization tours, business visits, and so on. The manager made collaboration with other pilot projects as well as with tour operators to implement these promotions.

## (3) Candidate of the Pilot Project Manager

The Canton Tourists Community, as an organization, undertook this management. Persons who were responsible or in charge of this project are as follows:

- Mr. Mladen Cizmic;
- Mr. Mensud Dundovic;
- Mr. Ramiz Basic (Later he was assigned as project manager); and
- Mr. Teminm Semir.

### **4.2.3 Project Participants and Beneficiaries**

Followings are the expected participants and beneficiaries.

(1) Guards of Car Parking / Kiosk Workers

They are direct employees of this pilot project. They work for the car parking and information kiosk, which are being prepared by this project.

(2) Local Tourist Guides

They are trained by this project and get revenue for guiding the tourists.

(3) Restaurant, Cafe, Shop, Hotel Owners of Blagaj

These business owners and its employees will receive more guests and increase their sales.

(4) Tour Operators

Inbound tour operators will be able to take more tourists to Blagaj and get more profit.

### **4.2.4 Financial Aspects**

The nature of this pilot project is more of public intervention rather than private enterprise. Generally speaking, road or promenade improvement and historic preservation are implemented by public sector elsewhere. However, relevant public sectors of Blagaj, including Municipality and Canton Tourists Community, have limited financial resources to fully back up this kind of tourism facility development.

The small revenue through kiosk sales, car parking, and tour guiding, may not be sufficient to finance tourism development of the area. However, tourism businesses such as hotels, pensions, restaurants, cafe, and tour operators will obtain increasing revenue as a result of the improved public facilities of the Blagaj heritage area. Therefore, the Canton Tourists

Community should enforce the currently promulgated law of levying such organizations for the activities of Canton Tourists Community and finance the pilot project upkeep.

#### **4.2.5 Implementation Schedule**

The construction and preparation work should complete before the summer 2004, when many people escape from hot Mostar to the cooler Blagaj. Otherwise this project might lose the biggest business timing. All effort must be made to complete preparation work by the end of July so that this project can go into operational stage by the beginning of August 2004.

#### **4.2.6 Threats & Proposed Mitigation**

##### **(1) Car parking and Traffic Control**

Since there are many visitors expected during summer days, car parking may not be sufficient and vehicles may disturb pedestrians on the trail. Mitigation of this potential threat is traffic management. For example, vehicle may be banned to enter the historic area during the peak hours. Bus parking can be prepared out of the historic area so that buses can be stand-by to pick tourists up from the trail area

##### **(2) Historic Preservation**

Without appropriate care-taking and protection, cultural heritage resources may get damaged through aging and tourists visits. Especially, the Velagicevina houses need emergency treatment. One of the Velagicevina houses prepared for visitors as a part of this pilot project and get revenue through bed & breakfast or cafe business. This revenue through tourism businesses can be used for the proper maintenance of this cultural heritage.

##### **(3) Garbage Disposal**

Much garbage is observed along the main road from Mostar to Blagaj and in the Buna River. Receiving more tourists may aggravate this problem if unattended. A better garbage collection system for the local population as well as tourists must be established. The JICA Study Team supported the community to conduct environmental education and organize a cleaning campaign

#### (4) Seasonality

Buna River attracts many people from Mostar where it is very hot in summer. Seasonality in tourism business in Blagaj is high. This pilot project, however, mitigates the seasonality by strengthening cultural tourism, which is season free.

### **4.3 Project Expectation with Five Aspects**

The project has been preliminary appraised from the following five aspects.

#### **4.3.1 Economic Impact**

This project itself does not generate a direct financial benefit to the public sector because majority of the project expenses is used for promenade and the visitors cannot be charged to walk on the promenade. However, economic benefit induced by increased number of tourists to the local economy could be high.

#### **4.3.2 Scope of Participation**

Number of people who directly participated in this pilot project is rather small. Nevertheless, indirect participants such as employees of hotels, pensions, restaurant and cafe can be counted. The environmental education and the cleaning campaign in the project area with local population affected a significant number of residents.

#### **4.3.3 Quick Implementation**

Facility interventions may not take months; however, there is a possibility that paper work (for renovation for municipal road and Velagicevina houses, etc.) may take time. The pilot project should be able to complete its construction and preparation work to receive tourists by the end of July.

#### **4.3.4 Use of Local Resources**

Historic area of Blagaj is one of the most important tourism resources in the south Study Area and Buna River has very unique character with its abundant water volume from the source. Materials for promenade and kiosk are also local ones. The direct employees are assigned from the local community. Therefore, this pilot project is a good example of exploiting local resources.

### 4.3.5 Sustainability

Since this project does not expect much direct income, there is a problem to be financially sustainable. The managing body, Canton Tourists Community, should financially support this project in the future as explained in Section 4.2.4.

## 4.4 Plan of Evaluation in November

### 4.4.1 Data Collection and Indicators

Potential data to judge the performance of this pilot project include:

- The increased number of organized tours over 2003 (data may be available through tour operator);
- Tourist stay nights in the hotel and pensions in Blagaj;
- Increased Sales of cafe, restaurant, hotel, pensions, and car parking;
- Sales of ticket for Tekja and for fishing
- Increased Number of visitors to Tekija and Velagicevina house; and
- Number of participants to the guided walk tours.

The project should examine the availability of these data by the end of the summer 2004.

### 4.4.2 Expected Results

There are few tourism statistics available. This means the performance (visitors and sales) of the pilot project cannot be compared with the achievement of the previous years. However, the management of this pilot project should organize data collecting activities to monitor the project performance. Followings are suggestion of data collection and expected performance.

**Table E 4.1 Expected Project Performance**

		August	September	October
1	Number of organized tours (buses)	30	25	10
2	Tourist stay nights in Blagaj (person)	600	450	300
3	Visitors to Velagicevina houses (person)	1,000	400	200



**Table E 4.2 Project Design Matrix for Blagaj Historic Heritage Trail**

Project Name: Blagaj Historic Heritage Trail      Project Area: Heritage area, Blagaj  
 Project Management: Mostar Canton Tourists Community      Target Beneficiaries: Tourism businesses in the area  
 Project Commencement: May 2004      Project Evaluation: Nov. 2004

<b>Project Narrative Summary</b>	<b>Indicator</b>	<b>Data collection</b>	<b>Assumption</b>
<b>Overall Goal</b> More tourists come and stay longer in the Blagaj, Podvezje, Nevesinje.	20% of tourists visited Blagaj historic area among the guests stays in the Area.	1. Base line survey in 2004 2. Follow-up survey in 2006	- The BiH keeps being a stable country.
<b>Project Purpose</b> Heritage area of Blagaj achieves sustainable tourism development.	Number of visitors increase by 50%. Project is financially sustainable.	1. Vehicle and guest count 2. Project revenue record	- Tourism of BiH in developing in the same pace.
<b>Output</b> 1. Historic route is well organized and clearly indicated. 2. Project gets sustainable revenue. 3. Inbound tour operators conduct increasing number of tours to Blagaj.	1. Guests number of local restaurants & cafe exceeds 1000/week in high season. 2. Project earns 500KM/week to maintain facilities and employment. 3. Number of tour participants to Blagaj increase by 30% from 2003 summer season.	1. Guest count by restaurant and cafe 2. Project account record 3. Record of inbound tour operators	- Tour operators keep motivation to promote Blagaj.
<b>Activities</b> 1-1 Improve riverside walk 1-2 Put information boards, benches, etc. 1-3 Let Velagicevina (old houses) open to the public 1-4 Produce map & pamphlets 2-1 Prepare information center and car parking 2-2 Coordinate and train local guide club 3-1 Let tour operators active as part of project management body 3-2 Conduct promotion (Workshops on history tc)	<b>Cost</b> (Portion of JICA Study Team) 1 Route & facility construction 66,000KM)  2-1 Equipment (10,000KM) 2-2 Training (1,500KM) 3-1 Self-effort of the managing body (0KM)  3-2 Support by JICA Study Team (0KM)	<b>Income</b> Monthly - Car parking (3,000KM), - Profit of Kiosk (2,000KM) - Tour Guide (2,000KM)  Project commission 10% of the above 7,000KM x 10% = 700KM	- Owner(s) of Velegic houses agrees to this project. - Tour operators support this project by sending tours etc..  <b>Pre-condition</b> - Major stakeholders has no oppositions.

Source: JICA Study Team

## 4.5 Evaluation of the Pilot Project and Lesson Learned

### 4.5.1 Project Achievements

This pilot project has been implemented by the Neretva Herzegovina Tourists Community with technical and financial support from the JICA Study Team. Mr. Ramiz Basic was person in charge of this pilot project in the Tourists Community. The progress was not as expected, and pilot project could not have significant effect in the tourist season of 2004. The JICA Study Team conducted a focus group meeting for the evaluation of this pilot project on 29<sup>th</sup> November 2004 in Blagaj.

One of the main tasks of the pilot project is to pave the road along the Buna River. Indigenous stone was decided toll be used for the finishing so as to appeal the atmosphere of old capital city of Herzegovina, The trail pavement has not been completed at the time of this writing. This is due to the coordination with the Mostar Municipality. The municipality wanted to lay water supply pipe under the pavement. The tourism community expects the completion of the pavement work during winter of 2004/2005.

Construction of tourist information and car parking has been completed as expected. The Neretva and Herzegovina Canton Tourists Community will manage the tourism information. Two issues concerning this are 1) Tourists Community has financial constraint and it is not clear if there can be budget allocation for the officer who works there, 2) It is prohibited for Tourists Community to sell anything such as guide books, souvenir, and local products. This may be a constraint against the financial sustainability of the operation of the information service.



Tourist Information kiosk and car parking constructed in Blagaj

The seven information boards have been installed as planned. These panels explain history and cultural values of each cultural heritage resource in Blagaj. Local and English language were used for the convenience of the visitors. The tourism community prepared its own format of the board, however, there is another format recommend by the Commission to Preserve National Monuments of BiH. There should have been some coordination concerning with the format of the information boards.

Equipment for the tourist information kiosk has been purchased. Another set of equipment for the Velagicevina house were also prepared. Mr. Almir, a young owner of a part of Velagicevina complex, is ready to receive visitors to his old house and beautiful garden named Cafe Velagicevina. Since his house is also designated as a lodging house under the program of the Velez Tourism Activities Pilot Project, the old Valagicevina house also offers bed & breakfast service. A part of profit from this business will be used for the preservation of the cultural heritage.



Velagicevina house and its garden

Concerning the guide training, the tourism community has implemented one-week guide training for five volunteers from Blagaj. Training consisted with two parts - Blagaj history and guiding skill. In order for the trainee-guides to receive guests, intimate collaboration with tour operators is needed.

Promotional activities implemented during the pilot project period include participation to tourism fairs, promotional tours, pamphlet and web site development. Blagaj is receiving an increasing number of visitors. However, this is not because of the pilot project, but because of opening of the Stari Most (Old Bridge) in Mostar old town. Effects of the promotional activities by the pilot project will become clear in the next tourist season in 2005.

#### **4.5.2 Areas of Weak Performance**

##### **(1) Coordination with Tour Operators**

There was very limited collaboration with tour operators. Tourist buses were coming to Blagaj during the summer season in 2004. The owner of the Tekija (Islamic Dervish House) roughly estimates the number of visitors to Blagaj as 100,000 in this season. Even though this figure indicates a significant potential of the Blagaj as a tourists destination, tourist expenditure cannot grow without appropriate collaborations with inbound tour operators. Tour operators can arrange tours so that visitors spend more hours and money in Blagaj.

##### **(2) Community Development Initiative**

Even though the tourism can be a very powerful tool for the community development, limited number of residents are involved in this pilot project. These stakeholders include the manager of Tekija (Islamic Dervish House), restaurant owners, a hotel owner, two country-lodging families and guide trainees. All the tourists surely visit Tekija (Islamic Dervish House), and some of them eat at the Norfish restaurant. However, the beneficiaries and participants of the tourism industry are limited among the residents of Blagaj. Since there are many CBOs and individuals interested in tourism such as folklore group and women's association, the Tourists Community should have involved these community stakeholders into tourism development.

#### **4.5.3 Key Lessons**

##### **(1) Focus Group Meetings for the Selection of Pilot Project**

Participatory way of making decision worked with a strong initiative of the JICA Study Team. For the selection of project ideas, a donor should:

- 1) Clearly define selection criteria;
- 2) Well understand the social and economic situation of the community;
- 3) Carefully examine the proposed project sites; and
- 4) Find an appropriate project management and leader who are sufficiently motivated.

##### **(2) Business Model for Financial Sustainability**

This pilot project does not expect sufficient direct revenue for the operation and maintenance of the road pavement and tourist information kiosk. JICA Study Team expects that Mostar Municipality and Neretva Herzegovina Canton Tourists Community would take care of these

facilities. However, since these institutes are under a severe pressure of financial difficulties, there is a danger that they cannot appropriately maintain these facilities.

(3) Difficulty of Project Implementation in Short Term

The JICA Study Team expected that the pilot project would be ready by August or September 2004 and be effective even for the tourist season of the year. For the scheduling of a project, donor should have collect information of all the necessary procedure and should allocate some time allowance for unexpected events. It may take at least three seasons to evaluate the effectiveness of a tourism development project.

## **Chapter E 5. Pilot Project 5: Velez Tourism Activities**

### **5.1 Background**

#### **5.1.1 Public Participation and Support for Tourism Development**

A variety of mutually reinforcing tourism development activities were proposed for the Southern Study Area. Each of the major communities within this region, Blagaj, Podvelez and Nevesinje, were designated to establish lodging and sport activities. The sports activities will be set up in the mountain area of Velez, on the eastern side and near the Podvelez villages and in the Nevesinje countryside. The country lodging component will include homes in all three of the municipalities comprising the Study Area.

Successful economic and community development requires the support of the local people. It is important to identify and understand the goals that people have for their economies and communities. It is also important to accurately understand their expectations for realistically achieving those goals. The start of the Velez Sport Activities Project, like all other JICA Study Team projects, began with a survey of public opinion and with public participation workshops. These public participation techniques were employed to define the development needs of the communities as well as potential eco-tourism solutions for meeting those needs.

The majority of survey respondents and workshop participants stated that Eco-tourism Development in the area would improve their poor economic and living conditions. The positive results of respondents who believed that eco-tourism would improve their lives included 70% of respondents in Podvelez, the 65% of respondents in Blagaj, and 45% in Nevesinje.

#### **5.1.2 Development Goals and Objectives**

The key objectives are:

- To lay a foundation for the safe and orderly growth of sporting activities on Mount Velez and in the Nevesinje countryside that will create jobs for local persons;
- To expand the country lodging offer in the area by getting 10 more families to serve as host families earning additional income;
- To get the people of Nevesinje to organize activities in cooperation with participants from Podvelez and from Blagaj; and

- Collectively these actions will enable the local communities to achieve sustainable income through village tourism.

Development Objectives include:

- Training of 10 host families in bed & breakfast operation and creation of a reservations system;
- Training of 10 - 15 sports-minded young men and women in skills of hosting visitors, monitoring sports, providing first aid and the key responsibilities of operating a sports base and managing supplies and equipment; and
- Creation of a simple sports base on the east side of Mount Velez, and potentially a second one on the west side serving as focal staging areas for mountain sports activities.

### **5.1.3 The Velez Region's Tourism Attractions**

#### **(1) Natural Resources**

The land in the Mount Velez Region consists of large mountains and wide fertile valleys. The Velez peak, approximately 2,000m in elevation and with very little vegetation, provides beautiful panoramic views of Mount Prenj, Mostar and the Neretva River below. The variety of habitats in this region provides shelter for many types of wildlife, birds, and fishes. The contrasts produced by these very different land forms and wildlife habitats provide an especially attractive setting for a variety of sports activities.

The Mount Velez Region has abundant water resources that can be used for a diversity of sports activities. The rivers are unique because of their quality and their hydrological characteristics. Specifically, the region has both surface and sub-surface rivers. The largest and most significant watercourse is Zalomka River, whose spring is located at border between Nevesinje and Gacko municipalities. In Blagaj area, there are important water resources such as Buna River and Bunica River. It is reported that well of Buna is one of the largest wells on Europe. The springs of Buna and Bunica are also one of the important tourism resources in the area. In sharp contrast, in Podvelez area, there are no permanent surface watercourses or lakes. Examples of water resource recreation sites include:

- Ada River, Buna River Source; Podverez Mountain, forests, and green cave in Blagaj;
- Velez Mountain, caves, woods, and hunting in Podverez; and
- Velez and Crvnaj Mountains, Novakusa Caves, Grebak camp grounds, Rabina Village, Alagovac Lakes, and Udbina Water Source in Nevesinje.

The types of sports activities that will be supported by the pilot program are:

- Mountaineering & trekking;
- Rock climbing [if feasible in short time frame];
- Birding;
- Jeep safari;
- Mountain biking;
- Snow hiking, cross-country skiing;
- Fishing;
- Hunting; and
- Photo safari [wildlife photography].

## (2) Cultural and Historical Tourism Resources

In the Mount Velez Region, Blagaj that is the focal point for cultural tourism. It is also worth noting that the Roman Catholic pilgrimage town of Medugorje is less than a one hour drive to the south, and since the early 1980s has been attracting large numbers of visitors. As a result both of these locations the Mount Velez Region offers major cultural attractions in addition to natural areas for sports and recreation. A brief description of the several cultural and historical tourism attractions in this region includes:

- In Blagaj the attractions include: Old Town, Tekija, Fort of Herceg-Stjepan, Velagiceva House, Kolakovica House, stecci (tombstones), Austro-Hungarian forts, mosques, Turkish baths, the oldest Orthodox church (destroyed), and 'Greek waters' (800 – 1,000 year old settlement in Vranjevici), and Susreti Prijateljstva', Blagaj Cultural Events every August, folklore shows, and Dervish Night;
- In Podvrez the attractions include: Austro-Hungarian forts/castles (Madden Glava, Svetigora, Guberaca). Handicrafts, folk costumes, and folk music in Podvrez; and
- Nevesinje the attractions include: House of Bega-Basagica, Sahat Tower from Turkish times, stecci, mosques, churches, and Jin Mahala. Olympics (all types of sport) that are held every August, horse-riding, little cup football, and poetry nights in Nevesinje.

### 5.1.4 Economic Challenges

The Mount Velez Region suffers from high unemployment, poverty, and a lack of resources. Local residents live in very poor conditions and many, if not most of the people, are



unemployed. The unemployment rates are dramatically high and comprised 48% of all respondents in Nevesinje, 55% in Blagai, and 70% in Podvrez, respectively. Of those persons who are employed, 65% are in the tertiary sector, 29% in the primary sector, and 6% in the secondary sector, respectively. Activities within the primary sector originate from livestock (49%) and farming (33%). Consistently, however, most people are enthusiastic about the Eco-Tourism Development and possible project implementation.

Podvrez has the highest rate of unemployment and the largest number of respondents who assessed their living conditions as “bad”. In spite of this, the people interviewed were quick to offer suggestions on how to possibly improve the socio-economic conditions and were generally optimistic about the future.

Young people are leaving to find work elsewhere (within BiH, or abroad if they are able to), while those that stay lack even basic social outlets, such as youth clubs or cinemas. Consequently, many respondents spoke of a growing drug problem and rise in crime in their communities.

Respondents indicating a monthly family income of less than 300KM comprise 70% of all responding families in Podvrez, 43% in Nevesinje, 38% in Blagai and 46% in the area, respectively. The estimated average monthly family income is around 470KM in Blagai, 400KM in Nevesinje, 310KM in Podvrez and 410KM in the area, respectively. Respondents, whose monthly expenditure is more than monthly family income, make up 83% of respondents in Blagai, 80% in Podvrez, 71% in Nevesinje and 76% in the area, respectively.

#### (1) Blagaj

Prior to the conflict, Blagaj was a multi-ethnic community with representative populations of Bosniaks, Serbs, and Croats. During the war, a large proportion of the population fled, with many houses being destroyed during the three years of fighting.

#### (2) Podvrez

Podvrez was home to one of the last remaining semi-nomadic lifestyles in BiH. Due to drastic water shortages in the summer months, many shepherds left with their families and went north to Bjelasnica Mountain. Podvrez was completely destroyed during the last war and only 30% of its pre-war population has returned. The economic conditions are perhaps

the worst of all the Study Areas with little or no economic stimulation since the end of the war. A part of the returnees has gone out of the area to find alternative livelihoods. Originally with around 10,900 residents before the war, the population amounted to 85% of the pre-war population (or 9,300) as of 1999 and 38% of the pre-war population (or 4,100) as of 2004, respectively.

(3) Nevesinje

Nevesinje has always had a majority Serb population with a strong Bosniak minority. No Croats lived in this area. Prior to the war, Nevesinje was politically and economically tied to Mostar, but the war has largely severed these ties. Nevesinje was not damaged during the war. From a pre-war population of 14,400 people, the population as of 1999 grew to 131% of the pre-war figure (19,000). However, most of the minority groups in the area (Bosniaks and Croats) have not returned yet.

## 5.2 Project Description

### 5.2.1 Implementing the Velez Sport Activities Pilot Project

(1) Organization

The key organization for implementation is Nevesinje Youth Initiative having its headquarters in Nevesinje, and undertaking activities to build the capacities of the youth from that area. It is duly registered and is perceived to be a respectable organization under young, capable management. It will direct this project with backing from the highest municipal officers as well.

For technical expertise in connection with the sports activities and mountaineering, the assistance of a specialized organization are to be arranged. One such organization is the Prenj Mountaineering Union, which has a major membership pool and members from the greater Mostar area, and the strongest sport club of Nevesinje. Many of the members of these clubs have extensive knowledge about Mount Velez and the Nevesinje valley. A number of clubs related to sports activities like fishing, hunting and canoeing and kayaking have indicated their strong support for the pilot project. They will be key players in setting up needed safety systems, and in solving the current confusion in the issuance for permits for hunting and fishing, which one tour operator says is stymieing growth of sports tourism from foreign enthusiasts. These organizations represent a major resource that will be tapped for the pilot projects and master plan.

For technical know how in connection with the country lodging component of this pilot program, the same hospitality trainer secured for the Pliva Country Lodging pilot project would probably cover training for the Velez host families. In the event any foreign training expertise can be arranged for Pliva Study Area, it can also cover this one.

The HNK Tourists Community also be asked to assist in both training programs to instill hospitality or hosting skills in all of the project's participants. Fortuna trade Tours of Mostar is also a training resource that may be tapped.

## (2) Promotional Development

Several types of promotional information were expected to promote the Mount Velez Sports Activities. Each of these was designed in terms of a distinct message and amount of information to be communicated to the tourism market. The promotional information included: 1) a detailed Guide Book that describes the variety of sport activities available in the Mount Velez Region; 2) a full color brochure that provides a map of the region, descriptions of all of its sport opportunities, and contact information; 3) single page "cut sheets" that describes a distinct type of recreation sport activity; and 4) a web site that provides an array of information regarding the recreation resources and support services for the Mount Velez Region.

## (3) Human Development

Because of the high unemployment there are many candidates who are willing and able to work as sports guides and monitors. There was a strong interest expressed at the community meetings in working in both sports and lodging services to be provided to visitors to the area, either domestic or foreign. There is a strong desire for either seasonal or part-time work and their associated income-earning opportunities.

Foreign language ability, especially English language instruction provided by Cambridge House, is increasing rapidly among a large number of NYI leaders and members. The leaders of NYI were especially diligent in gaining fluency in the English language. To their credit, they accomplished this fluency during the January to December 2004 time period.

The followings are existing and potential recreational activities that can be promoted in the pilot project.

## 5.2.2 Sport Fishing (existing recreation)

Several quality sport fishing opportunities are available in the lakes and rivers throughout the Mount Velez Region. Each community in this region can provide uniquely different fishing experiences. Within these waters a diversity of large and healthy fish species may be caught by the sports angler. Passive to very active fishing techniques may be employed in the Mount Velez Region. The sports angler may pursue streamside fishing by either spin casting or fly fishing or considerably more leisurely boat fishing in the lakes.

### (1) The Rivers

There are three major rivers located in the Mount Velez Region and a variety of smaller tributaries. Each of these rivers and streams has unique water conditions and fishing characteristics. The three major rivers are named the Zalomka, the Buna, and the Bunica.

The biggest and the most important river in the Nevesinje valley is the Zalomka River. This large river traces huge curves as it flows northwards through the entire valley. In some locations it is very prominent and wide and in other locations quite narrow. The amount of water in each section of the river can vary considerably by both location and season of the year.

The season of the year will impact the flow of water significantly in the Zalomka River. During the springtime, when the snow runs off the mountains, the river can rise dramatically. The snows, when increased by the spring rains, can produce a substantial torrent of flowing water. In the summer season the Zalomka's water flow decreases significantly. A diversity of fish and crabs can be found in the Zalomka River: California trout, Brown trout, Rockery crab, puddle crab.

There are numerous small rivers located in the Nevesinje Valley. Examples of these smaller rivers include the Batusa, Radimlja, Zymlyski, Sebckje, Jamuk, Drezanjka, and the Zavadoke Rivers. Most of these rivers are intermittent streams. This means that they do not have water during the entire year. They are generally dry in the summer months.

One of the major rivers in the Mount Velez Region is the Buna River that flows through the center of the community of Blagaj. The Buna River has many unique characteristics. The Buna River Source is one of Europe's largest natural springs. Measurements of this natural spring indicates that water is flowing out of the ground at the rate of 36m<sup>3</sup>/s. From this remarkable water source, the Buna flows towards the west for a distance of approximately

6km to the Neretva River. The constant cold temperature of the Buna River makes it an ideal fish habitat for trout. An abundance of California trout may be found in this river. Its nearly ideal temperature and purity have made it an attractive site for a large trout fish hatchery.

## (2) The Lakes

The Nevesinje region has many large and small lakes. The small lakes are natural and these are located in the upper elevations of the mountains that surround the Nevesinje Valley. By example, there is an especially attractive mountain lake located approximately 4km east of the Velez Mountain Range. Naturally occurring lakes along the floor of the valley have seasonal characteristics. In the winter and spring they are generally full, but by the middle to the end of summer they can be nearly dry.

The largest lake in Nevesinje Valley is a man made lake called Lake Alagovac. It is located at the foot of the Velez Mountains and its water surface area covers approximately 40 ha. Lake Alagovac is located approximately 4km north of the Town of Nevesinje. This lake is the source of the town's water supply. The water quality of the lake is excellent and the town carefully manages the water resources to sustain water quality.

Trophy fishing is available at Lake Alagovac. The trophy species include White Amur and Pike. The Sportfishing opportunities also include Dace, Carp, Lake Trout, and Catfish. Streamside and boat fishing are allowed in Lake Alagovac.

### **5.2.3 Mountaineering (existing recreation) and Technical Climbing (potential recreation)**

The Velez Mountain Range offers a variety of challenging climbing and mountaineering experiences. Mount Velez is the summit of this range and this mountain is 1,958m above sea level. The ascent distance from the valley floor in Blagaj to the summit is nearly 1,900m.

The most challenging technical climbs in the Velez Mountains are located along the headwalls of the eastern face of the mountain range. These walls have extremely steep pitches and require expert technical mountaineering skills. The difficulty of these climbs is evidenced by the fact that mountaineers practicing their assault for Mt. Everest have used the climbs in this region.

The north and south flanks of the Velez Mountains offer rigorous climbing experiences that require basic mountaineering skills. Access to these routes can be time consuming, but the

scenery along the routes and locations for camps will compensate the climber who chooses one of these routes.

The western side of the Velez Mountains is definitely the easiest route to the summit and requires minimal mountaineering skills and equipment. The western side of Mount Velez is a relatively gentle sloping, treeless moraine. Views of the Buna River and Neretva River valleys may be seen continuously during this mountaineering experience.

Great caution is required for all backcountry activities in the Mount Velez region because of the continued presence of minefields in certain areas. Unfortunately, the easiest route to the summit along the western face has the largest number of mines. Most importantly, Nevesinje does NOT have land mines and therefore the eastern side of the Velez Mountain Range offers considerably safer mountaineering and hiking experiences. The use of ANY of these routes should be used ONLY with the assistance of an experienced mountain guide.

The mountaineering and climbing conditions in the vicinity of Nevesinje are excellent. The visitor may select either leisurely or strenuous mountaineering experiences. The Velez Mountains may be approached from several hiking trails located on the eastern, southern, and northern sides of the mountains. Many of these routes offer leisurely hiking experiences. Access to these hiking routes is excellent. There are forest roads that provide direct access to the trailheads (starting points). In addition, there are two mountain huts that can be used for overnight stays by mountaineers and others using the backcountry. One of the huts can be visited by a car because there is direct road access from the village of Sopilja.

One of the most attractive locations for mountaineering in the Nevesinje region is in the vicinity of Mount Crvanj. This area has excellent and very scenic paths to the summit of the mountains. On the route to Mount Crvanj there is a very beautiful lake. The people A mountain hut near this lake is currently being renovated. All of these natural and man-made features provide will provide enjoyable recreation experiences for persons visiting the Crvanj mountain region. The technical climbing challenges begin when the mountaineer reaches the immense headwalls of the Velez Mountains. The rock walls, snow and ice, and weather conditions contribute to the difficulty of this climb.

#### **5.2.4 Hunting (existing recreation)**

The environmental conditions and abundance of wildlife in the Mount Velez Region have resulted in a long tradition of hunting. Each of the three communities in the region has

established hunting clubs that manage specific regions for controlled hunting. The hunting practices in this region are extremely regulated. The hunter may pursue large trophy animals such as wild boar and bear as well as birds such as grouse and pheasant.

Velez Study Area provides essential natural habitat for a diversity of wildlife. Within this region the government has identified specific protected and non-protected hunting game areas and wildlife species. For the lands managed by Lumber Camp Velez, the protected species include roe deer, chamois, bear, wolf, wild boar, squirrel, and owl. The unregulated game species in hunting area include wildcat, marten, fox, badger, and other small game such as rabbit and squirrel. Velez Study Area is an extremely popular site for hunting game birds.

A large amount of forest land in the Mount Velez Region is privately owned and its wildlife is managed in accordance with government regulations. The hunting area of Velez consists of 19,636 ha that is managed by “Lumber Camp Velez”. The natural resource management practices employed by Lumber Camp Velez are strongly supported by government regulations. According to the Institute for Urbanism Banja Luka document entitled Physical Planning 1981-2000 in BiH, the Mount Velez Region is designated as a Protected Area. Specifically, it is classified as a “Second Regime of Protection Area”. Also, the municipalities of this region have proposed the creation of 19 new protected areas. Each of these proposed areas have rare environmental characteristics and scenic beauty. The proposals demonstrate the communities’ commitment to environmental conservation.

### **5.2.5 Wildlife Viewing, Birding and Photo Safari (potential recreation)**

The environmental conditions located in the Mount Velez Mountains and the Zalomka River Valley offer excellent habitat for a remarkable diversity of wildlife. These regions are essentially enormous wilderness areas located near the center of Europe. Mount Velez Region provides vital habitat for dominant predators such as the European brown bear, wolves, lynx, wild cat, badger, marten, and wild boar. The environmental quality of the rivers has sustained the rare River Otter. The mountains have sustained the rare Chamois and the more common Roe deer. The close distance between the Balkans and northern Africa makes this region the natural migration path for birds. The characteristics of the region, specifically its remoteness, enormous size, rugged terrain, abundance of water, and few human inhabitants all contribute to the variety of rare wildlife species that have thrived in this area for centuries.

Wildlife viewing is considered to be the most rewarding personal experience associated with nature-based tourism. The diversity and abundance of wildlife species, and the opportunity for seeing rare and endangered animals and birds offers the tourist an experience that is unique in the world. The Bosnia and Herzegovina wildlife experiences are especially unique to Europe. The abundance of wildlife in BiH and the diversity of bird species are created by the occurrence of bountiful and expansive habitats that remain wild in character. This wilderness setting offers both a sanctuary for the animals and also a challenge to viewing them safely.

The environmental value and rarity of the wildlife in the Mount Velez Region has been recognized by the international community. According to National Museum in Sarajevo, there are two endangered species, 11 vulnerable species, and 31 rare species, which are registered “the IUCN Red List” in terms of the flora in the Mount Velez Region.

Birding, once considered an obscure hobby of a few nature lovers, is now one of the world’s most popular outdoor activities. Numerous organizations throughout the world, such as the International Audubon Society, have millions of members who actively pursue birding, and spend billions of dollars in the process.

BiH’s geographic location represents an enormous opportunity to provide birding experiences to tourists. The Balkan Peninsula represents one of the most significant bird migration paths between the continents of Europe and Africa. Tens of thousands of birds migrate through BiH each spring and fall. A total of 240 bird species have been positively identified in BiH. Most of these are migratory, but because of the great abundance of water and cover several resident bird species may also be found in BiH. Consequently, the Mount Velez Region is an exceptional place for photo safari – wildlife photography.

#### **5.2.6 Cave Exploration (potential recreation)**

The environmental conditions in the Mount Velez Region have combined to produce numerous caves and a remarkable underground river system. The types of rocks in this region are predominantly dolomite and limestone and their geological formations in this region are known as karsts. The region also has an abundance of both underground water and precipitation. The rock is extremely vulnerable to water erosion and the combination of these natural dynamics results in the creation of caves and underground streams. The caves and underground rivers are constantly increasing in size, as the erosion process continues.



The location of 20 large caves has been identified in the Mount Velez Region. The cave system closely follows the river system. This is most apparent when viewing a map of the region. And the river system is especially remarkable because it travels both above and below ground.

(1) The Blagaj Caves

The most prominent caves in Blagaj are located either in or near the Buna River. The Buna Source is, in fact, the entry to an enormous cave system. Research and mapping of this cave system has been conducted by a team of French cave experts. They have used underwater scuba diving techniques to explore the caves. Their research indicates that the cave extends into the mountain for a distance of 385m from the spring. The underground river found in this cave flows 68m below the ground. The cave has numerous decorations called stalactites that hang from the roof of the cave. Caves above the Buna's spring are the habitat of white-headed vulture. This is a rare species of bird that is a significant attraction for both birders and wildlife photographers.

(2) The Nevesinje Caves

The majority of known caves in the Mount Velez Region are located in the vicinity of Nevesinje. A total of 15 caves are located to the north and south of the Town of Nevesinje. The most famous and attractive cave in this area is called Cave Novakusa. This caves a multitude of stalagmites and stalactites. These stone pillars and columns provide beautiful decorations.

(3) The Podvelez Caves

The Podvelez caves provide habitat for a variety of rare birds. There are many sorts of birds that live in various caves and cavities located throughout this area. Examples of bird species that use the caves for their habitat include: rock pigeon, falcon, eagle, sparrow-hawk, owl, and little owl.

### **5.2.7 Herb and Mushroom Collection (potential recreation)**

The forests, fields, and river valleys in the Mount Velez Region contain a diversity of herbs and mushrooms that have many useful purposes. By example, the medical herbs and edible mushrooms found throughout the region and the lavender growing in the Blagaj region are not only attractive, but also have significant economic value. The people of this region use

their many natural resources for food, medicines, and fragrances. They also obtain income from the sale of herbs and mushrooms.

Given the distinct environmental characteristics found in each of the region's communities, there is a remarkable diversity of herbs and mushrooms available for collection. Nevesinje, Podvrez and Blagaj can provide the tourist with very different herb and mushroom collection experiences. Nevesinje offers the outdoor experiences of a mountain valley. Podvrez provides the natural setting for plants that are uniquely adapted to high mountain environments. Blagaj's Mediterranean climate and rich soil conditions provide the growing conditions necessary for herbs and lavender and grapes that have brought agricultural fame to this region.

The residents of the Mount Velez Region have extensive knowledge of the natural world that surrounds them and they are uniquely qualified to share this knowledge with tourists visiting the region. They know both the terrain and the plants and share this knowledge with the visitors they guide. The herb and mushroom collection tourism experience is both an enjoyable gathering activity and also a rewarding way to learn about the region's natural environment.

The natural vegetation growing on the Podvrez plateau numerous has a wide variety of herbs that have medicinal and aromatic benefits. The local population collects them subsidize their incomes by selling them to the herbal processing facilities located in the surrounding area.

The Nevesinje region has numerous species of herbs and mushrooms, but is particularly well known for its fruits and berries. The growing conditions in this area are well suited for the growing of plums, apples, pear, sour cherries, currant, raspberry, and strawberry. Nevesinje frequently enjoys a large harvest of these fruits and berries and they ship part of this product to food processing plants and also make local fruit products. Home production includes juices, jams, and a very high quality brandy.

Agriculture provides the economic base of The Mount Velez Region. The region produces honey, dairy products, wines, fruits, and a diversity of field crops. For the tourist interested in naturally grown and processed agricultural products, the region has a lot to offer. By example, honey, cheeses and dairy products are still produced in the traditional ways.

## **5.3 Project Expectation with Five Aspects**

The project has been preliminary appraised from the following five aspects.

### **5.3.1 Economic Impact**

The Nevesnije Youth Initiative carefully selected a large variety of sports activities in order to optimize economic benefits. The activities not include many people, but include the majority of the year. Thus the economic impacts will occur for majority of the year. Specific economic benefits will include jobs, income, and commercial revenue from the rental of equipment and the sale of products.

The selected 10 households as well as participating associations of various tourist activities gets significant economic benefit. These additional incomes contributes a lot to the depressed local communities, since each business unit is either local association or family and the money that tourists spend circulates in the community.

### **5.3.2 Wide Participation**

The sports activities are widely distributed throughout the entire Velezregion and include nearly all of the surrounding communities. Thus the wide participation includes many people, many communities, and most of the geographic area of the Velez Study Area.

The 10 families, which are involved by the lodging program, will be the first participants. Various associations and cooperatives such as for hunting, fishing, hiking, and farming will also participate this pilot project. Therefore, this project will get the widest participation among the six pilot projects.

### **5.3.3 Quick Implementation**

The sports activities would be very quickly identified and an operational plan is expediently completed. The Nevesnije Youth Initiative did an excellent job of collecting essential business planning information, evaluating it, and creating a sports activities program plan.

Existing tourist activities are rearranged and offered as tourist products, which may not take much time. Concerning the farmers' lodging, the project selects houses that need less renovation and improvement so that participating families can receive tourist as soon as possible, hopefully from July 2004.

### **5.3.4 Use of Local Resources**

All the project participants including the managers are local people. These village tourism activities are completely based on the beautiful nature of the Study Area. Local foods are offered to the visitors.

### **5.3.5 Sustainability**

Sustainability largely depends on the product quality. If visitors are satisfied with the village lodging and tourist activities, then, the project receives increasing number of tourists. Improvement of facilities and equipment as well as training of the project participants improves the product, however, close collaboration with inbound tour operators is inevitable for the long-term sustainability.

Concerning the sustainability of NYI, they are challenged by the need to generate income. Although they do not have dedicated source of income, they do anticipate receiving commission from the lodging, equipment rental, and recreational entities. Most importantly, the Mayor of Nevesinje claimed that NYI was fully support from the Municipality and the Municipality supports them for all of their operational expenses.

Table E 5.1 Project Design Matrix for Velez Tourism Activities

Project Name: Velez Tourism Activities Project Area: Nevesinje, Podvelez, Blagaj  
 Project Management: Nevesinje Youth Association Target Beneficiaries: 10 households and 5 associations  
 Project Commencement: May 2004 Project Evaluation: Nov. 2004

Project Narrative Summary	Indicator	Data collection	Assumption
<b>Overall Goal</b> More tourists come and stay longer in the Blagaj, Podvelez, Nevesinje	By 2006 tourist-stay-nights in the area increase by 20% from 2004	1. Base line survey in 2004 2. Follow-up survey in 2006	-The BiH keeps being a stable country
<b>Project Purpose</b> Project participants (Local households) generate sustainable income through village tourism	1. Accommodation occupancy rate +33% 2. 50% of guests join activities and pay	1. Accommodation records 2. Guest evaluation	-No significant negative incidents happen
<b>Output</b> 1. Business model and its organization are well established (officially registered) 2. Tourists are satisfied with accommodations and its service 3. Tourists are satisfied with various activities offered in the area 4. The area is widely recognized as eco-tourism destination	3. The project (not participants) gets sustainable revenue (1,400KM in Sep.) 4. 70% of the guests are satisfied with cost performance of the accommodation 5. 70% of the guests are satisfied with cost performance of the tourist activities 6. 90% of inbound tour operators recognize this area as good eco-tourism destination	1. Study team checks financial records and cash 2. Study team checks Guest evaluation 3. Study team checks Guest evaluation 4. Interview survey to inbound tour operators	-No other competitive tourist destination derives in near areas
<b>Activities</b> 1. Organize relevant institutes to handle this project 1.1 Improve the facilities 1.2 Procure equipment 1.3 Train the accommodation owners 1.4 Consult and advise on guest handling 3.1 Improve facilities for tourist activities 3.2 Train the association members 3.3 Conduct environmental campaign 1.1 Make advertising signage 1.2 Set-up web site 1.3 Conduct monitoring / Familiarization tours	<b>Cost</b> (Portion of JICA Study Team) 1. Self-effort of the managing body (0KM) 2.1 Facility improvement (54,000KM) 2.2 Equipment procurement (44,000KM) 2.3 Training (24,000KM) 2.4 Support by JICA Study Team (0KM) 3-1. Included in 2-1 above (0KM) 3-2. Included 2-3 above (0KM) 3-3. Support by JICA Study Team (0KM) 4-1. Supported by JICA Study Team (0KM) 4-2. Support by JICA Study Team (0KM) 4-3. Support by JICA Study Team (0KM)	<b>Income</b> Monthly  -Accommodation 10houses x 2rooms x 10days x 30KM = 6,000KM (200nights) -Tourist Activities 5associationsx10 guests x 10days x 15KM x = 7,500KM  (500 guests)  Project commission 2KM per night and per guest (200+500) x 2KM = 1,400KM	-People and organizations in Blagaj, Podvelez, Nevesinje make good collaboration  <b>Pre-condition</b> -Enough households (house owners) apply for this project

Source: JICA Study Team

## 5.4 Evaluation and Lessons Learned

### 5.4.1 Project Achievements

A summary of the projects economic achievements and levels of investment are provided in the Table E 5.2. All of the tasks assigned to NYI by their Term of Reference with JICA were completed. The pilot project consists of two parts 1) country lodging program and 2) recreational activities.

#### (1) Country Lodging

NYI selected nine lodging families (two from Blagaj, one from Podvelez, and six from Podvelez) and supported them in various ways. For the improvement of the lodging facilities, each family received 1,500KM loan and improved the accommodation facilities. This loan will be paid back to the NYI for the further development of the program as a revolving fund. Training tour to Istria, Croatia, was the high light of the training program. NYI conducted a bus tour to observe a good practice to lodging business in the neighboring country. Two person from each lodging family participated this study tour and learned carious aspects of the lodging business and eco-tourism in Croatia. NYI also implemented another training in Nevesinje and in Mostar.

#### (2) Recreational Activities

This program facilitated sports associations in Velez Study Area to participate tourism business. NYI supported hunting clubs, fishing clubs, and mountaineering club with training and equipment. This pilot project conducted an one-week outdoor sport training with an American outdoor sport expert dispatched by JICA Study Team. Also NYI organized a grant of 2,000KM for each recreational association for the preparation of equipment necessary to receive tourists.

#### (3) Common Support

Another support implemented for both of lodging program and recreational activities is marketing and promotion. NYI conducted two familiarization tours, participated several tourism fairs, and participated in Website development as well as brochure preparation. NYI also prepared a reservation system for lodging and recreational activities with telephone and facsimile. However, they have not received enough visitors in the first season. This is due to the delay in the progress of the pilot project.

### **5.4.2 Areas of Weak Performance**

#### **(1) Slow Progress**

Because of the project progress, NYI could not prepare the system to receive tourists in the high season of 2004. They may need trial and error period to become skillful enough in guest handling on commercial bases.

#### **(2) Limited Activities for Promotion**

Achievements in the marketing and promotional aspects were not enough. There are three tour operators that are favorable to this pilot project, i.e. Green Visions, Fortuna Tours, and Astra tour. However, any tour programs have been planned or implemented.

#### **(3) Revenue System for NYI as Management Body**

NYI, as the management body of this pilot project, has been expected to be financially sustainable by getting commission with the reservation service. However, this system has not been yet established or agreed among project stakeholders. This might endanger the survival of this pilot project. Taking care of the lodging families and sports associations cost significantly, if they have to constantly improve their product quality.

### **5.4.3 Key Lessons**

#### **(1) Time Frame**

Preparation of tourism project, agreement in participatory meeting, developing human resources, all these efforts take time. It is not realistic to prepare any tourism project in this short time frame. NYI should clear many procedures and conditions for the implementation of the pilot project. The pilot project should have reasonable time frame and rational expectation of achievement.

#### **(2) Capacity Building in Youth**

NYI is the youngest age group among the six pilot project management bodies supported by the JICA Study Team in both of Pliva and Velez Study Area. Though, their performance and capacity building has never been the worst one. NYI recovered the lack of experience with their sense of mission and quick learning. JICA Study Team understands that NYI was the best managing body of this pilot project among the organization available. This is a very positive lesson learned.

**Table E 5.2 Achievements of the Tourism Activities Pilot Project**

Planned task	Achievement	Cost	Benefit	Things to do	Who and how
Preparation of facilities and equipment	<ul style="list-style-type: none"> <li>- Financial support for 9 families (1,500KM-loans)</li> <li>- Grants for sports associations (2,000KM)</li> <li>- Camping equipment, mount-bikes, boards for houses</li> </ul>	38,000.510	Improved conditions for tourism, improved conditions in accommodation.	Second part of grant for sports associations (3,000.00) after submitting its business plan. Equipment for skiing, boats for renting, hunting lodge with recreational activities.	NYI supported by donors
Training	<ul style="list-style-type: none"> <li>- Study tour to Istria</li> <li>- Training for mounatery guides</li> <li>- Training for families on hospitality and servicing in hotel Bristol</li> <li>- Training organized by 'Sinergija' Organization and classses with Tourism professor Mr. Lekanic</li> </ul>	16,290.00	Families learned how to start with business, how to sell product, they got positive opinion about its area, how treat guest, hospitality.	First aid training and course on foreign language.	Doctors and proffesors
Lodging and recreational business	<ul style="list-style-type: none"> <li>- Booking-services, info-center, equipment for the office and promotion</li> </ul>	13,545.00	Each family had at least 5 overnights.	Creating guest-book for each family, brochures and visit cards for families, basic conversation - dictionary.	NYI
Promotion	<ul style="list-style-type: none"> <li>- Visit to tourism fairs in Teslic, Novi Sad, Banja Luka</li> <li>- Presentations in UNITIC Sarajevo, Business Center Mostar.</li> <li>- Promotional tours for Journalists</li> <li>- Web-site, flyers and brochures, promotion in Germany (youth tourism meeting)</li> </ul>	14,250.00	Results of the promotion could be expected during the next season.	Continue with the promotion, Federal Tourists Community and Ministry of Tourism RS agreed that NYI can use their stands on international tourism fairs.	





## **Chapter E 6. Pilot Project 6: Milk Collection**

### **6.1 Background**

#### **6.1.1 Location**

This pilot project contributes to the milk farmers in the community of Podvelez and a part of Nevesinje. These farmers are living in very disadvantaged land, rocky and not suitable for cultivation. This Karsts plateau does not hold water and very little water is available for farming and living here. Livestock farming is one of the very few livelihoods possible in the project area. Three villages from Nevesinje Municipality Jasena, Udreznje and Bukorici may be included in the project coverage.

#### **6.1.2 Socio-economic Background**

Farmers in remote areas like Podvelez and a part of Nevesinje have limited access to agricultural markets. Nevertheless they have 1 - 2 milk cows each but use the milk just for household-consumption, as nobody collects milk and brings it to factories. It is expensive for farmers and dairy companies to get involved in milk collection.

As milk collection, if available, would facilitate fast revenues for farmers JICA Study Tam intends to support technically and financially an already existing initiative in milk collecting. First steps of this initiative like the registration of the cooperative have been assisted by UMCOR, a NGO.

#### **6.1.3 Relevance to the Expected Master Plan**

Operating milk collection and thus connects farmers to the milk factory does not have any direct connections to eco-tourism. However, Podvelez and a part of Nevesinje is very disadvantaged area in terms of any living condition. The population size is much smaller than that of before the conflict. In order to sustain the livelihood of the residents and to prevent them to go out of the area, this milk project can be effective as a relief activity. There are three issues that can connect livestock farming and eco-tourism.

### (1) Dairy Products

Livestock farming produces milk, cheese, butter, sour cream and so on. These dairy products can appeal to the tourists as local specialty and souvenir. Additionally cheese-making and milking events could be marketed to the tourists.

### (2) Eco-system

Livestock farming is an important part of the local eco-system. Cows eat grass and grasses (including herbs mushrooms, and wild berries) intakes cow's excreta to grow. Therefore, farm animals are important factors to keep the existing eco-balance of this Karsts plateau.

### (3) Farm Activities as Tourism Products

Some segments of eco-tourists are interested in farming activities such as milking and processing dairy products. Actually all the milk cow farmers, who attended the focus group meetings, expressed willingness to receive tourists to their farms. This milk collection project can be also developed in this direction within a few years.

## **6.2 Project Description**

### **6.2.1 Project Objectives and Outputs**

The project purpose is that participating farmers get more profit by selling milk. This pilot project is designed to collect and market enough milk so that P.Z. BIOPRODUKT achieve break-even soon.

### **6.2.2 Management Structure**

#### (1) Key Organizations or Individuals

A farmers cooperative named P.Z. BIOPRODUKT will implement this pilot project. In 2003, eight farmers from Podvelez established this cooperative and have chosen a manager.

P.Z. BIOPRODUKT  
Mr. Esad KOLICIC, manager  
Podvelez  
gsm 387 61 175638  
tel/fax + 387 36 560318

## (2) Brief Job Description for Pilot Project Director

The director will manage the whole milk collection business alone just assisted by a truck driver for local milk collection. That means the manager will be in charge of organizing the milk collection, controlling milk quality, and managing finances and the sales relations towards P.Z.Konjic Milk and other dairies.

## (3) Identification of Likely Candidate

The cooperative founders already nominate Mr. Esad KOLICIC.

## (4) Creation of New Organization

P.Z. BIOPRODUCT was established recently and has been preparing a milk-collecting project with supports from NGOs. However, shortage of the financial resource disturbed the progress of their projects. As one of the six pilot projects, JICA Study Team will support a part of their preparation and prospective operations.

## (5) Project Participants and Beneficiaries

Milk farmers who live isolated villages in Podvezl and Nevesinje (village of Jasena, Udreznje and Bukorici) participate and gets benefit form this pilot project. As the first stage, the project sets-up one big milk station and intended to install some satellite milk stations. The project capacity (lacto freezers and milk truck) is not big enough to take care of all the milk farmers in the communities, however, later on a geographical extension is expected if the first stage is successful.

### **6.2.3 Project Activities**

#### (1) Basic Business Plan

The project sets-up a big milk station and if required up to five small satellite stations in the project area. The milk farmers should become the cooperative members and get their milk cows health checked. Farmers bring their milk daily to the central milk station or to the milk truck, passing through the villages. A milk truck prepared by the project will collect milk and the raw milk is picked up by bigger trucks from Konjic Milk cooperative.

The project receives money from milk factory and distributes it to the farmers after subtracting milk-handling fee (0.05KM per liter). The project also supports farmers with training and consulting so that they can improve hygiene and milk quality.

Some details of the business plan might be modified based on

- Who will support this project and how (Governments, donors, NGOs, milk factories, relevant organizations such as veterinarian association);
- How many farmers participate;
- How much the project charges farmers for milk handling; and
- Other factors.

## (2) Facilities and Equipment to be Prepared

10 lacto freezers are available from P.Z. KONJIC MILK, which is a local NGO supported by Norwegian Government. One room in a municipality building in Podvelez has been allocated for this project as the main milk station with the support of the FBiH Herzegovina and Neretva Canton Government. However, the power lines are not available in the room yet. This main milk station will have three to four lacto freezers.

For the foreseen five satellite milk stations that will have one lacto freezer, three locations have been agreed and the project is examining another potential sites for the remaining two satellite stations. Farmer's houses that have three-phase electricity can accommodate lacto freezers. Installation of lacto freezers has to be economically justified.

P.Z. BIOPRODUKT and JICA Study Team agreed to make one satellite milk station in Nevesinje, as soon as enough milk is available in this area, so that this operation becomes an inter-entity project.

One milk truck with capacity of 2,000 liter will be purchased for about 30,000KM to bring milk from project milk stations to the milk factories. Tools to handle milk with better hygiene will be also procured for the operation.

## (3) Recruiting Cooperative Members

P.Z. BIOPRODUKT is now concentrating their effort to recruit cooperative members. Milk farmers should join this cooperative and pay annual membership fee. Milk cows should get health check before joining the operation. This medical check costs around 30KM per cow, however, checking the first 150 cows will be financed by the Canton Ministry of Agriculture,

Forestry and Water Management. The project expects as many as 250 farmers with 400 milk cows to join so that milk-handling fee can cover the cost of the project management and operation. 400 milk cows produce 4,000 liter of milk per day easily. If the project handles less than 2,000 liter of milk per day, the project is not financially sustainable. The cooperative explains all these conditions to the milk farmers and tries to increase the cooperative members.

**Table E 6.1 Financial aspects of the Milk Collection Pilot Project**

<b>Cooperative's costs / month</b>	<b>Real(KM)</b>	<b>Low budget(KM)</b>
Administration office incl. telephone	200.00	150.00
Auditing (once a year)	15.00	15.00
Manager salary incl. insurance	1,000.00	700.00
Driver salary incl. insurance (7 days a week)	500.00	0.00
Compensation of the farmer running a single lacto freezer and doing sampling and recording - 5x 50	250.00	30.00
Consumption of water and electricity for chilling (based on 10 lacto freezers)	200.00	200.00
Milk hygiene tests	300.00	300.00
Hygiene products for the cooling tanks	200.00	200.00
Small Milk Truck		
Truck fuel / diesel, oil and tires	300.00	200.00
Truck overhauling	200.00	100.00
Truck depreciation (new truck in 5 years 60,000KM)	1,000.00	1,000.00
<b>Total/month</b>	<b>4,165.00</b>	<b>2,895.00</b>
<b>Total/day</b>	<b>138.83</b>	<b>96.50</b>
<b>Fees charged by Coop per liter</b>		
Fees charged by Coop per liter	0.03	0.03
Liters needed per day to cover expenses	<b>4,627.78</b>	3,216.67
Revenues for farmers (0.5KM/liter)	69,416.67	
<b>Or as an alternative</b>		
Fees charged by Coop per liter	0.06	0.05
Liters needed per day to cover expenses	<b>2,313.89</b>	1,930.00
Revenues for farmers (0.5KM/liter)	34,708.33	

#### (4) Training

Milk factories have their standards on milk quality concerning hygiene and ingredient. If the milk from this pilot project does not meet their requirement, they refuse to receive the milk.

In order to keep the milk quality above the acceptable level, farmers should have sufficient knowledge and skill on milking, hygiene, fodder quality and others. The collaborating NGO, P.Z. KONJIC MILK, is conducting trainings for the same contents in the other area. Therefore, inviting this training course to the pilot project area may be a good solution.

**Table E 6.2 Initial Cost requested for the Milk Collection Project**

Items	JICA Portion	Portion of other Organization	Cost (KM)
Renovation of premises in Podvelez	0	Mr. Samir Sunagic, Minister	6,000
Introducing Electricity in Milk Station in Podvelez	0	Mr. Samir Sunagic, Minister	2,000
5 Lacto freezers in various villages	0	P.Z. Konjic Milk	15,000
Installation costs incl. electricity for 5 lacto freezers	10,000		0
5 Lacto freezers in the milk collection centre of Podvelez (total 5,000 l)	0	P.Z. Konjic Milk	15,000
Small milk truck with cistern of 2,000 liters (used one)	30,000		
Big milk truck (8,500 liters)	0	P.Z. Konjic Milk	70,000
Legal and tax advice	3,000		
Training for suppliers: hygiene, fodder quality	2,000		
Health check of first 150 milk cows	0	Mr. Samir Sunagic, Minister	4,500
Health check of next 250 milk cows	7,500		
Office equipment, PC, printer, chairs etceteras	0	UMCOR	3,000
Two Veterinarians	4,000		
Total	56,500		115,500
<b>OVERALL TOTAL COST</b>			<b>172,000</b>

### Implementation Schedule

- April - May 2004
- Organizing participating milk farmers
  - Medical check of the milk cows, installation of lacto freezers, procurement of milk truck and other equipment
  - Training of cooperative members (farmers), truck operators
- June 2004
- Starting operation for milk collection
- October 2004
- Achieve break-even of the project operation, if 2,000 liter/day could be collected

## 6.2.4 Threats & Proposed Mitigation

(1) Threat 1: Milk Truck is not Available

10 Lacto freezers are readily available from P.Z. KONJIC MILK, however, P.Z.BIOPRODUKT is still looking for a used milk truck at a cheap price.

Mitigation is to make inquiries and collect as much information as possible. There is information on milk truck available at 30,000KM, the project should examine this one very soon.

(2) Threat 2: Not enough Milk is Collected

The project will fail if the amount of daily collected high quality milk will be below 2,000 liter/day.

The first mitigation measure is to persuade many milk farmers to join the cooperative and participate this milk collection project. And second measure is to maintain and improve the milk quality through training and consulting milk farmers.

## 6.3 Project Expectation with Five Aspects

The project has been preliminary appraised from the following five aspects.

### 6.3.1 Economic Impact

If the cooperative P.Z.BIOPRODUKT will deliver at least 2,500 liters of milk per day to SAPPIT or any other dairy factories, then the project will be sustainable. The target is to reach 4,000 liters daily and in that case the revenues for local farmers per month will be around 60,000KM.

### 6.3.2 Wide Participation

Indirectly 250 local farmers and more will participate. JICA Study Team examined the willingness of the milk farmers to participate this pilot project and found many of them are interested. Some farmers have purchased additional milk cows already for this project.



### **6.3.3 Quick Implementation**

The project could start relatively quickly if the above mentioned business activities are in place. Since this project is supported by many stakeholders such as JICA, Cantonal Ministry of Agriculture, P.Z. KOJIC MILK, UMCOR (a NGO), coordination among them are very critical issue for swift project implementation. To speed up the process JICA will probably need to push the cantonal Minister of Agriculture Mr. Samir Sunagic in Mostar. (See Table E 6.2)

### **6.3.4 Use of Local Resources**

As the milk farming business starts from a very extensive level, only local resources will be used in the beginning; later on specific fodder for milk cows from outside will be needed to expand and to improve the project.

### **6.3.5 Sustainability**

If the cooperative P.Z.BIOPRODUKT will deliver at least 2,500 liters of milk per day to SAPPIT or any other dairy, then the project will be sustainable with enough handling fee to maintain the project. The balance of demand and supply of milk is an important factor to make this project feasible. Extreme fluctuation of the market milk price might disturb the sustainability of this business model.

## **6.4 Plan of evaluation in November**

### **6.4.1 Data Collection**

The most important question for evaluation is if participating milk farmers have get enough additional income to maintain their livelihood in the villages. It will be very easy to analyze the project progress as we just have to look at the bank accounts; how much was transferred from the purchasing dairy to P.Z.BIOPRODUKT and how much was transferred from P.Z.BIOPRODUKT to their members. There may be some sampling survey of pilot project participants to examine the significance of the income through this pilot project to their households.

Another qualitative issues will be discussed and evaluated in a focus group meeting in November.

#### **6.4.2 Expected Results and Indicators**

If a milk cow produce 15 liters of milk, it becomes 450 liters a month. This means additional 225KM income of the farmer. This is a significant economic impact on an average household. This project will encourage farmers remain in their communities and facilitate more ex-residents to return to their home village.

Table E 6.3 Project Design Matrix for Milk Collection

Project Name:	Milk Collection in Podvelez & Nevesinje	Project Area:	Podvelez and Nevesinje
Project Management:	P.Z. BIOPRODUKT Podvelez	Target Beneficiaries:	More than 250 local farmers
Project Commencement:	April 2004	Project Evaluation:	Nov.2004

Project Narrative Summary	Indicator	Data collection	Assumption
<u>Overall Goal</u> Participating farmers get more profit by producing and selling various dairy products.	Average farmers revenue increases by 150KM/month per milk cow in Sep. 2004.	By follow-up survey in 2006 by JICA	
<u>Project Purpose</u> Participating farmers get more profit by selling milk.	Average farmers revenue increases by 150KM/month per milk cow in Sep.2004.	50 sample survey to check cost and benefit of farmers.	The cooperative keeps the momentum to be active.
<u>Output</u> - Project organization is established with concerned human abilities. - Necessary facilities and tools are prepared. - Milk collecting operation is conducted with enough quantity. - Milk quality satisfies the hygiene and notorious standard.	- Organization and members has enough ability to operate project. - Facilities are good enough for operation in quality and quantity. - 2,500 liter/day milk is collected and sold to factory to operate cooperative sustainable. - All the milk sold meets the requirement of the dairy company.	- Checking by JICA team and coordinator - Checking by JICA team and coordinator - Sales record of BIOPRODUKT is audited - Check record of factory	- Farmers will accept the same handling fees even if milk price is going down.
<u>Activities</u> 1-1 Organize milk-cow farmers for milk collection 1-2 Arrange veterinarian health check of the cows 2-1 Train farmers and operators 2-2 Prepare milk truck and equipment 2-3 Install 10 lacto freezers on remote farms 2-4 Prepare equipment for milk quality testing 3 Conduct milk collecting operation 4 Conduct consultation and hygiene supervising for farmers	<u>Cost</u> (Portion of JICA Study Team) 1-1 Self-effort by managing body KM (0KM) 1-2 Included in 2-1 below (0KM) 2-1 Training (2,000KM) 2-2 Truck and Equipment (46,000KM) 2-3 Installation (12,000KM) 2-4 Included in 2-1 above (0KM) 3 Covered by handling fee (0KM) 4 Included in 2-1 above (0KM)	<u>Benefit</u> Monthly Revenue per cow 10 liter/cow/day 500 cows 30 days 0.03KM/liter for handling charge  AxBxCxD = 4,500KM  Government's milk subsidies are going directly to farmers	- Operators and farmers are careful and honest. - Milk factories keep buying milk. <u>Pre-condition</u> - Milk factories agree to purchase milk with reasonable condition. - Minimum 500 cows participate in the project.

Source: JICA Study Team

## **6.5 Evaluation and Lesson Learned**

### **6.5.1 Project Achievements**

By the end of 2004 the milk collection project had established the milk collection center with three lacto freezers operationable and a small administration unit. The milk truck was bought (10,000KM) and a lacto freezer has been installed on it with a capacity of 1,200 liter.

No satellite milk stations with one lacto freezer each has been set-up as farmers are not willing / able to transport their milk to a satellite station that is further away than 500 m. Villages in the area have often farms far apart from the next neighbor.

More than 150 milk cows underwent the required veterinary health check and half of them are delivering daily milk for the market. The other half is not giving milk due to the up-coming calving or their milk is used for the calves or for homemade cheese production.

Milk is marketed through P.Z. Konjic Milk.

### **6.5.2 Areas of Weak Performance**

Two problems are threatening the project.

First, the small amount of milk collected daily; around 80 milk cows give 600 liter/day, sometimes 700 liter. This amount is not enough to maintain the project.

Secondly, the P.Z. Konjic Milk is in financial difficulties and is not picking up the milk from the milk collection station in Podvelez as foreseen in the plan. Therefore P.Z.BIOPRODUKT has to transport their milk (1,200-1,300 liter each other day) to Konjic town without getting compensated for this extra work; i.e. 150KM each other day.

### **6.5.3 Key Lessons**

The project faces two challenges and the following scenarios could be developed from lessons learned.

(1) First, the volume of daily collected milk must be increased:

- By increasing the milk produced and delivered per cow. From 8 liter to 16 liter a day is 100% more, but not an unrealistic figure, especially for the Simmental cows. But also local breeds must be able to produce 12 liter/day;
- By increasing the number of participating farmers. Presently 80 farmers are delivering milk, even if some of them have for certain periods no milk at all to market. Around 400 milk farmers are in the area so that there is a potential for augmentation; and
- By increasing the number of participating cows from presently maximum 150 towards 900; that is the total figure of milk cows in the area.

(2) Secondly, the transport problem has to be solved:

- By convincing P.Z.Konjic Milk to pick up the milk each other day in Podvelez;
- By getting compensated from P.Z.Konjic Milk to bring the milk over there each other day; and
- By buying another truck with a bigger cistern for long distance transport and delivering the milk directly to a dairy. It is economically better to transport the milk to Teloptik in Sarajevo and get 0.05KM per liter than to ship it just half the way to Konjic without any compensation. Best would be if local dairies are recovering their economically drought phases like MOVITA in Mostar (presently closed), Glogovac dairy in Nevesinje (struggling) and SAPPIT/TIPPAS (struggling) and start buying more milk; that would enable cheap transport costs, eventually with the same compensation as Teloptik is offering now.

Figure E 6.1 shows the locations related to the three pilot projects implemented in Velez Area.



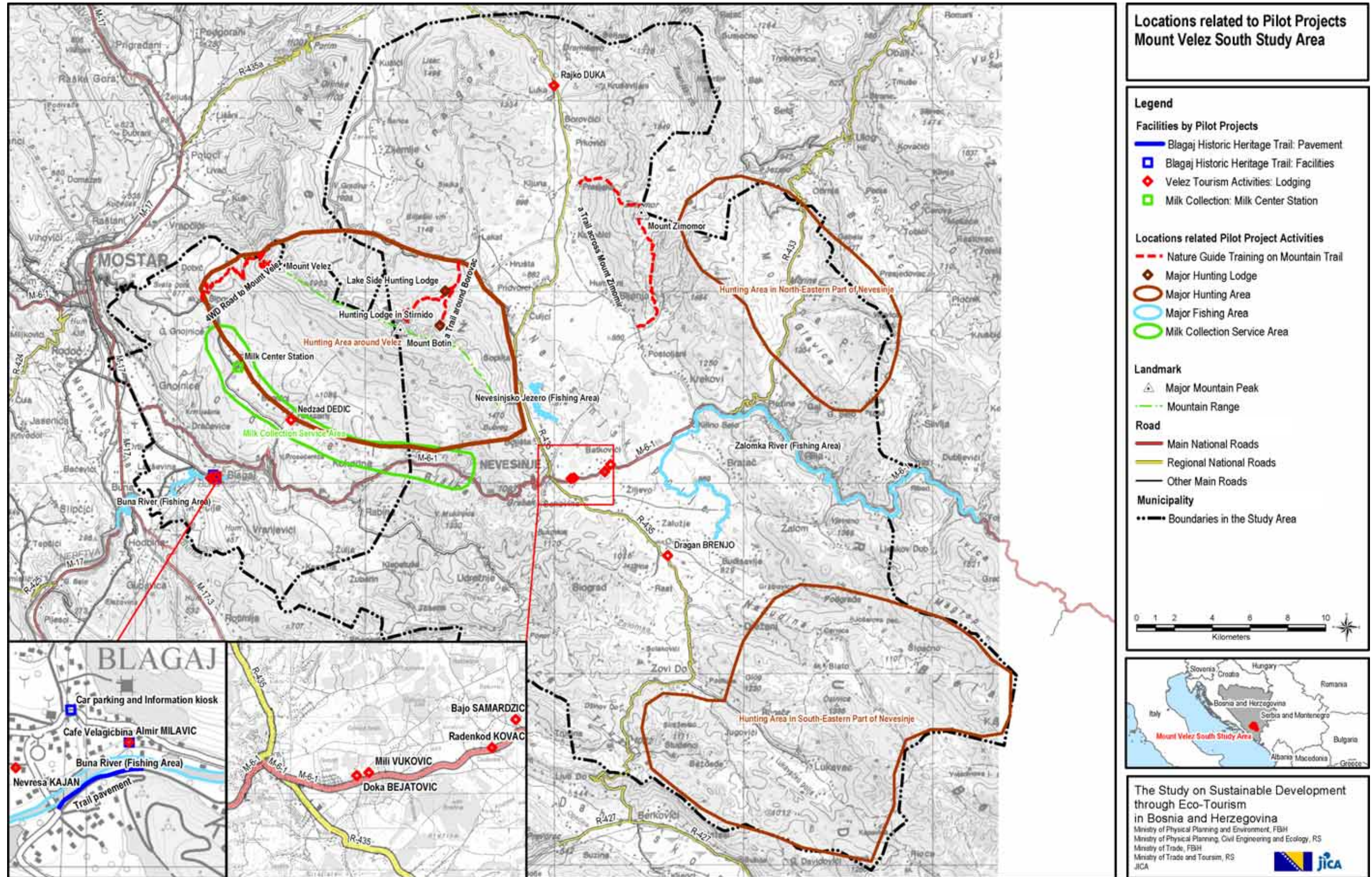


Figure E 6.1 Locations related to Pilot Projects Mount Velez South Study Area