Programme for Development of the Polog Planning Region 2015-2019

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Introduction

Development characteristics of the Polog Planning Region

The Polog region covers the northwest part of the Republic of Macedonia, i.e. the Polog Valley and the Radika river basin. The region covers 9.7% of the total area of the country and 15.4% of the total population (2013) lives in this region, and it is one of the most densely populated regions with 131.6 inhabitants per km².

Demographic development

Population size

The Nomenclature of Territorial Units for Statistics (NTUS) in Macedonia has been adopted in 2001. According to it, the entire territory of Macedonia is one unit at NTUS levels 1 and 2, with eight statistical regions at NTUS level 3: Pelagonija region, Vardar region, Northeast region, Southwest region, Skopje region, Southeast region, Polog region and East region.

The Polog region has 9 municipalities and a total of 184 settlements. The surface area by municipality, number of inhabitants and population density by municipality (number of inhabitants per km²), from the last regular census and population estimates in 2013, is provided in Table 1.

Municipality	Surface area km2	Settlements	Population Census 2002	Population density Inhabitants/km2 Census 2002	Inhabitants estimated 2013	Population density Inhabitants/km2 Estimate 2013
Tetovo	261.89	20	86580	331	90948	347
Tearce	136.54	13	22454	164	22836	167
Brvenica	164.3	10	15855	97	16519	101
Bogovino	141.65	14	28997	205	30579	216
Zhelino	201.04	18	24390	121	27441	137
Jegunovce	176.93	17	10790	61	10723	61
Gostivar	513.39	35	81042	158	83239	162
Vrapchishte	157.98	15	25399	161	27266	173

Table 1

Mavrovo and Rostushe	663.19	42	8618	13.0	8907	13
Polog Total	2416.91	184	304125	126	318458	132
Republic of Macedonia	25713	1767	2022547	79	2065769	80

Source: State Statistical Office

The table shows that the Mavrovo and Rostushe municipality has the largest area whereas Tetovo has the most inhabitants and greatest population density in the Polog region.

Population trends by region for 1994 and 2002 (regular censuses) and the population estimate on 31 December 2013 is provided in Table 2.

	Total population (Censuses)		Change of population size		Population size estimate	Chang populati 2002/2	ge of on size 2013
	1994	2002	1994/2002	In %	31.12.2013	Total	In %
Macedonia	1945932	2022547	76615	3.79	2064032	41485	2.01
Pelagonija	242614	238136	-4478	-1.88	232367	-5769	2.48
Vardar	152479	154535	2056	1.33	153487	-1048	0.68
Northeast	163841	172787	8946	5.18	175711	2924	1.66
Southwest	212856	221546	8690	3.92	220325	-1221	0.55
Skopje	545228	578144	32916	5.69	612514	34370	5.61
Southeast	168481	171416	2935	1.71	173383	1967	1.13
East	180081	181858	1777	0.98	178270	-3588	2.01
Polog	281982	304125	22143	7.28	317975	13850	4.36

Source: State Statistical Office

Population dynamics

The number of inhabitants of the Polog region in 2013 (31.12.2013), according to the data from the State Statistical Office, was 318458, of which 160258 men and 158200 women. In the period 2010-2013 the number of inhabitants has a slight growth of approximately 0.32 % on average in the last 3 years.

Table 3 - Total number of inhabitants by year

	2010	2011	2012	2013
Number of inhabitants	315 413	316 517	317 490	318458
Change	-	0,35	0,31	0,30

Sources: State Statistical Office, Population estimates on 30.06.2013 and 31.12.2013 according to gender and age, by municipality and statistical regions (NTUS 3 - 2007) 2013

Table 4 – Population of the Polog region on 31.12.2013 (according to the territorial organization from 2004)

Municipality	Total	Men	In %	Women	In %
Bogovinje	30 579	15 575	50.93	15 004	49.07
Brvenica	16 519	8 246	49.92	8 273	50.08
Zhelino	27 441	13 826	50.38	13 615	49.62
Jegunovce	10 723	5 517	51.45	5 206	48.55
Tearce	22 836	11 722	51.33	11 114	48.67
Tetovo	90 948	45 698	50.25	45 250	49.75
Tetovo region	199 046	100 584	50.53	98 462	49.47
Gostivar	83 239	41 677	50.07	41 562	49.93
Vrapchishte	27 266	13 563	49.74	13 703	50.26
Mavrovo and Rostusha	8 907	4 434	49.78	4 473	50.22
Gostivar region	119 412	59 674	49.97	59 738	50.03
Polog region	318 458	160 258	50.32	158 200	49.68

Table 5 – Population in the Polog region on 31.12.2013, according to gender and five year age groups, according to statistical regions (NTUS 3 - 2007)

Age	Total	Men	Women
Total	318 458	160 258	158 200
0	3 611	1 878	1 733
1 - 4	14 192	7 435	6 757
5 - 9	17 531	9 191	8 340

10 - 14	20 414	10 758	9 656
10 - 14	26 037	13 600	12 437
20 - 24	29 942	15 443	14 499
25 - 29	29 091	14 768	14 323
30 - 34	26 247	13 608	12 639
35 - 39	24 294	12 283	12 011
40 - 44	23 854	11 761	12 093
45 - 49	23 622	11 607	12 015
50 - 54	21 504	10 693	10 811
55 -59	17 102	8 415	8 687
60 - 64	13 145	6 240	6 905
65 - 69	9 967	4 564	5 403
70 - 74	7 871	3 595	4 276
75 - 79	5 699	2 600	3 099
80 - 84	3 068	1 350	1 718
85 and above	1 150	457	693
Unknown age	117	12	105

Polog region population according to ethnic structure – Census 2002

	Ethnicity								
Municipality	Macedonia ns	Albanians	Turks	Roma	Vlachs	Serbs	Bosnians	Other	Total
Tetovo	20.053	60.886	1.882	2.357	15	604	156	627	86.580
Tearce	2.739	18.950	516	67	-	14	1	167	22.454
Brvenica	5.949	9.770	2	-	-	78	1	55	15.855
Bogovino	37	27.614	1.183	5	-	1	9	148	28.997

Zhelino	71	24.195	2	-	-	1	5	116	24.390
Jegunovce	5.963	4.642	4	41	-	109	1	30	10.790
Gostivar	15.877	54.038	7.991	2.237	15	160	39	685	81.042
Vrapchishte	1.041	21.101	3.134	-	-	4	8	111	25.399
Mavrovo and Rostushe	4.349	1.483	2.680	10	-	6	31	59	8.618
Polog region:	56.079	222.679	17.394	4.717	30	977	251	1.998	304.125
In % Polog region	18.4	73.2	5.7	1.6	0.01	0.32	0.08	0.66	100 %
R. Macedonia in %	64,2	25,2	3,9	2,7	0,5	1,8	0,9	1,1	2,022,54 7

Spatial planning (urban, rural population)

The Polog region covers the Polog valley, Mavrovo highland, mountain range Bistra and the Radika river basin. The total surface area of the region is 2416 km² or 9.7 % of the territory of the Republic of Macedonia. The region has 9 municipalities and 184 settlements, 182 of which are rural settlements. The population density is very high - 126 inhabitants/km² and is significantly above the country's average. The region also has enormous variations, from 348 inhabitants/km² (Tetovo) to 13 inhabitants/km² (Mavrovo and Rostusha). More than half (54.7 %) of the total population is concentrated in the municipalities Tetovo and Gostivar, and the region has dominant rural population (71%). Thus, seven out of the nine municipalities are rural.



	Population	In %
Polog region	318458	100
Urban environment	92353	29.0
Rural environment	226105	71.0

Economic characteristics Gross domestic product / Growth rate

Macedonian economy has experienced a significant growth of gross domestic product and increased economic activity in the last decade. However, as a consequence of the world economic and financial crisis, there was a negative growth of -0.9% in 2009. The real GDP growth rate in 2010 was 2.8%, whereas the estimates for 2011 show a GDP growth of 2.8 %, and the estimate for 2012 is a 1.5% growth.¹

The participation of the Polog planning region, which includes the Gostivar municipality, participates in the total GDP of R. Macedonia with a constant value of 7.2% for the period 2008-2010, and a slight increase to 7.3% in 2011. However, this is not a big increase in comparison to other regions (In 2011: Skopje 42.4%, Pelagonija 11.6%, Southeast 9.7%, East 8.1%, Southwest 7.8%, Vardar 7.6%, **Polog 7.3%** and Northeast 5.5%).

There are two noticeable trends: the participation of the GDP of the Polog region in the GDP of the Republic of Macedonia is constantly stable, whereas the participation of investments in fixed assets in GDP is slightly higher than the average in the Republic of Macedonia.

Table 7 – GDP in the Polog region 2008-2011

Year	Territory	GDP, in millions denars	GDP structure, RM = 100%	GDP per capita, in denars	GDP per capita, Macedonia
2011	Polog region	31 406.00	7.3	96 728.00	47.3

¹Prior and estimated data for 2011 and 2012 according to the State Statistical Office, taken from the National Bank of the Republic of Macedonia (<u>www.nbrm.mk</u>)

2010	Polog region	31 118.00	7.2	96 848.00	46.8
2009	Polog region	29 473.00	7.2	93 966.00	46.9
2008	Polog region	29 784.00	7.2	95 277.00	47.4
2011	R. Macedonia	459 789.00	100%	223 357.00	100%

Source: State Statistical Office - MAKSTAT database

Table 8 - Participation of investments in GDP for 2011

Description		Polog region			R. Macedonia		
GDP	31 406	100%		459 789	100%		
Gross VAT	29 236	93.09%	100	402 392	87.51%	100	
Investments in fixed assets	7 244	23.07%	24.78%	94 698	20.60%	:3,53%	

Source: State statistical Office - MAKSTAT database

Table 9 – Polog region – Investments in fixed assets for 2011, by sector of economic activity, NKD Rev.2 (National classification of activities) in millions of denars

Year	Sectors by activity	Agriculture, hunting and forestry; fishing	Mining and mining stone; processing industry; Supply of electrical energy, gas, steam and air-conditioning	Construction	Wholesale and retail trade; Fixing of motor vehicles and motorbikes; Transport and warehousing; Accommodation facilities and catering activities	Information and communication	Financial activities and insurance activities	Real estate related activities	Vocational, scientific and technical activities; Administrative and support services activities	Public administration and defense; mandatory social insurance; education; Health and social protection activities	Art, entertainment and leisure, Other service activities	Total
2014	In denars	468	686	5034	693	0	0	0	0	411	6	7244
2011	In %	6.46	9.47	69.49	9.57	0	0	0	0	5.67	0.08	100%
2010	In denars	264	1051	4078	720	15	78	0	13	262	36	6517
2010	In %	4.05	16.13	62.57	11.05	0.23	1.20	0.00	0.20	4.02	0.55	100%

Table 10 – Share of investments in added value by activity in 2011, NKD Rev.2 in millions of denars

Year	Agriculture, hunting and forestry; fishing	Mining and mining stone; processing industry; Supply of electrical energy, gas, steam and air-conditioning	Construction	Wholesale and retail trade; Fixing of motor vehicles and motorbikes; Transport and warehousing; Accommodation facilities and catering activities	Information and communication	Financial activities and insurance activities	Real estate related activities	Vocational, scientific and technical activities; Administrative and support services activities	Public administration and defense; mandatory social insurance; education; Health and social protection activities	Art, entertainment and leisure, Other service activities	Total
2010	4597	3733	1078	5266	111	133	3741	1741	6283	638	27321
% IFA in AV in 2010	16.83	13.66	3.95	19.27	0.41	0.49	13.69	6.37	23.00	2.34	100 %
2011	4 946	4 555	2 122	5 774	124	163	3 956	782	6 534	278	29 236
% IFA in AV in 2011	16.93	15,58	7.26	19.75	0.42	0.56	13.53	2.67	22.35	0.95	100 %

Economic growth dynamics

Based on Article 30 paragraph 4 of the Law on Balanced Regional Development ("Official Gazette of the Republic of Macedonia" no. 63/07), the Government of the Republic of Macedonia adopted a decision for classification of planning regions according to their development for the period 2013 to 2017 as following:

Table 11 – Classification of planning regions according to their level of development 2013-2017

Planning region	Development index in comparison to the RM average	Economic social index	Demographic index	Participation in state aid for balanced regional development (in %)
Skopje	151.0	147.7	153.5	7.2
Southeast	97.1	129.5	72.4	11.1
East	96.1	136.4	65.5	11.3
Pelagonija	91.2	109.1	79.6	11.9
Polog	82.4	50.0	106.9	13.2
Southwest	81.4	97.7	69.0	13.3
Vardar	73.5	70.5	75.9	14.7

Northeast	62.7	27.3	89.7	17.3

The classification of planning regions in Article 2 of this decision has been made according to the development index. The economic social index and demographic index are used to determine the priorities of planning regions that are eligible to receive funds for stimulating balanced regional development according to the development index.

The participation of the Polog planning region in the allocation of funds for financing development projects for the planning regions in the period 2013 to 2017, in accordance with the classification, is 13.2 % of the earmarked funds in the annual programme for balanced regional development, implemented through the bureau for balanced regional development of the Republic of Macedonia.

Local economy in the Polog region is in a post-privatization cycle and follows the national economy trends. This has led to lack of profitability and liquidation of large former state-owned enterprises or their privatization and a strong increase in newly established privately owned SMEs, which are becoming the driver of local economy.

Business entities by municipality			Year		
and region	2009	2010	2011	2012	2013
Republic of Macedonia	70710	75497	73118	74424	71290
Polog region	6532	7280	7098	7285	7236
Bogovinje	363	375	377	360	338
Brvenica	259	290	291	298	288
Zhelino	262	293	294	301	282
Jegunovce	154	160	157	165	155
Tearce	249	276	285	284	290
Tetovo	2738	3011	2921	3017	3007
Vrapchishte	332	356	350	347	352
Gostivar	2038	2354	2265	2350	2369
Mavrovo and Rostusha	137	165	158	163	155
Total Tetovo region	4025	4405	4325	4425	4360

Table 11 - Overview of business entities in the Polog region by municipality

Total Gostivar region	2507	2875	2773	2860	2876
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Source: State Statistical Office

As evident in the table above, the largest number of enterprises in the Polog region is concentrated in the two major municipalities, Tetovo (3007) and Gostivar (2369), and the total number of business entities in the Polog region in 2013 is 7236, which is 10.15 % of the total number of business entities in the Republic of Macedonia.

Table 12 – Active business entities by activity sector according to NKD Rev.2, by municipality and year, as of 31 December

	20	010	20	011	20	12	2013	
Sector	Entity	In %						
Agriculture, forestry and fishing	149	2.05	140	1.97	159	2.18	149	2.06
Mining and stone mining	19	0.26	20	0.28	23	0.32	17	0.23
Processing industry	867	11.91	849	11.96	890	12.22	911	12.59
Supply of electrical energy, gas, steam and air-conditioning	1	0.01	5	0.07	6	0.08	6	0.08
Water supply; waste water management, waste management; environment	28	0.38	31	0.44	33	0.45	37	0.51
Construction	637	8.75	664	9.35	681	9.35	650	8.98
Retail and wholesale trade; Fixing motor vehicles and motorcycles	3064	42.09	3004	42.32	3010	41.32	2933	40.53
Transport and warehousing	514	7.06	500	7.04	503	6.90	507	7.01
Accommodation objects and catering activities	621	8.53	579	8.16	583	8.00	600	8.29
Information and communication	67	0.92	67	0.94	78	1.07	81	1.12
Financial activities and insurance activities	22	0.30	23	0.32	29	0.40	28	0.39
Real estate related activities	15	0.21	13	0.18	16	0.22	13	0.18
Vocational, scientific and technical activities	299	4.11	299	4.21	342	4.69	382	5.28
Administrative and support service activities	124	1.70	90	1.27	95	1.30	100	1.38
Public administration and defense; mandatory social insurance	19	0.26	12	0.17	18	0.25	19	0.26

Education	89	1.22	89	1.25	94	1.29	93	1.29
Health and social protection activities	347	4.77	364	5.13	361	4.96	371	5.13
Art, entertainment and recreation	76	1.04	70	0.99	78	1.07	75	1.04
Other service activities	322	4.42	279	3.93	286	3.93	264	3.65
Activities of households as employers	0	0.00	0	0.00	0	0.00	0	0.00
Activities of extra territorial organizations and bodies	0	0.00	0	0.00	0	0.00	0	0.00
Total:	7280	100.0%	7098	100.0%	7285	100.0%	7236	100.0%

Micro and small business are dominant on the country level and in the Polog region, and from the total number of active entities at the end of 2013 in the Polog region 99.30 % are micro and small enterprises (78.37 % micro and 20.92 % small).

	20	09	20	10	20	011	2	012	2013		2013-RM	
Size	Entity	In %	Entity	In %								
micro	3855	59.02	4283	58.83	4910	69.17	5710	78.38	5671	78.37	49935	70.04
small	2639	40.40	2955	40.59	2148	30.26	1529	20.99	1514	20.92	20629	28.94
medium	35	0.54	37	0.51	38	0.54	36	0.49	38	0.53	683	0.96
large	3	0.00	5	0.00	2	0.00	10	0.00	13	0.00	43	0.00
Polog region	6532	100%	7280	100%	7098	100%	7285	100%	7236	100%	71290	100%

Table 13 – Active entities according to size in the Polog region 2009-2013

Source: State Statistical Office (Makstat)

Table 14 – Impact of factors influencing the realization of goals by business entities

	2010-2012					
	Large	Medium	Small	Not relevant		
High price competition	1 791	1 428	565	1 034		
High competition regarding the brand, reputation or quality of product	884	1 083	1 294	1 557		
Low demand	1 117	1 605	1 053	1 043		

Innovations by competitors	266	811	1 664	2 077
Dominant market share of competitors	652	1 302	1 287	1 578
Lack of qualified personnel	608	1 335	1 355	1 520
Lack of finances	1 242	1 440	933	1 202
High access costs to new markets	1 101	1 150	1 023	1 544
High costs for complying with governmental regulations and legal conditions	1 178	1 106	1 131	1 403

New jobs

In Employment centers in Tetovo and Gostivar in 2013 a total of 8538 applications for establishing working relationships were registered (5974-TE and 2546-GV), 5837 of which for an indeterminate period of time and 2701 for a determined period of time. It is also noticeable that the number of submitted applications is always higher for persons not registered in the unemployed persons' records (6104 persons, 71.5 %), in relation to persons registered in the unemployed persons' records in the Agency for Employment of the Republic of Macedonia AERM (2434 persons, 28.5 %).

Table 15 – Submitted applications for establishing a working relationship in Employment centers in Tetovo, Gostivar and the Polog region in 2013

	Tetovo		Gostivar		Polog	
Category	2013	%	2013	%	2013	%
Applications for working relationships	5974	100%	2564	100%	8538	100%
indeterminate time	3912	65.5	1925	75.1	5837	68.4
determinate time and seasonal work	2062	34.5	639	24.9	2701	31.6
From the unemployed persons' records of AERM	1791	100%	643	100%	2434	100%
indeterminate time	838	46.8	455	70.8	1293	53.1
determinate time and seasonal work	953	53.2	188	29.2	1141	46.9
Not in the unemployed persons' records of AERM	4183	100%	1921	100%	6104	100%
indeterminate time	3074	73.5	1470	76.5	4544	74.4
determinate time and seasonal work	1109	26.5	451	23.5	1560	25.6

Source: AERM

Labour market

Population activity

The rate of economic activity is the participation of the labour force in the labour capable population aged 15 and above. The economic activity in the Republic of Macedonia is 56.5% in 2012, whereas in the Polog region it is 44.5 %, which means it is below the state annual average.

Table 16 – Rate of economic activity of population aged 15 and above in the Polog region 2009-2012

	Rate of activity			F	Rate of employment			Rate of unemployment				
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Republic of Macedonia	56.7	56.9	56.8	56.5	38.4	38.7	38.9	39.0	32.2	32	31.4	31.0
Polog region	46.1	46.7	43.9	44.5	33.5	32.3	30,0	29.3	27.3	30.8	31.8	34.2

According to the calculations derived from the data of the State Statistical Office, the number of employed persons in the Polog region in 2012 is lower than the state level, and the employment rate in the Republic of Macedonia is 39.0% in 2012, and 29.3% in the Polog region for the same year. According to this, we presume that the number of employed persons in the Polog region in 2012 is approximately 74,828.

Table 17 – Labour	capable population	according to economic	activity in 2012.
			···· · · · · · · · · · · · · · · · · ·

	Active	Employed	Unemployed	Inactive population	Total
R. Macedonia	943 055	650 554	292 502	726 910	1 669 965
Polog region	113 872	74 828	38 944	142 219	255 891

Source: State Statistical Office

Unemployment

Unemployment is one of Macedonia's major issues². The labour market in Macedonia is characterized by a high unemployment rate, which reached 37.3% in 2005. Since then there has been a decrease over time and in 2010 it is 32.0 %, in 2011 it is 31.4 %, and

²Unemployment data is taken from the web-site of the Agency for Employment of the Republic of Macedonia (www.avrm.gov.mk)

at the end of 2012 it is 31.0 %. A large part of the unemployed are young people and workers with low qualifications.

The unemployment rate in the Polog region in 2012 is 34.2% and is slightly higher than the country rate, which is 31.0% in 2012. According to the data and calculations derived from the SSO data, the number of unemployed persons in the Polog region was approximately 31,630 in 2012. The number of economically inactive population in the Polog region, according to the estimated derived from SSO data, would be approximately 142,219 persons aged 15 and above.

Table 18

	Total in %	2011 (December)			Total in %		2012 (Decemb	er)			
R. Macedonia	281144	Total	Town	In %	Village	In %	243403	Total	Town	In %	Village	In %
Tetovo	8.7	24381	11364	46.6	13017	53.39	8.7	21247	9825	46.2	11422	53.8
Gostivar	4.5	12781	7730	60.5	5051	39.52	4.3	10383	6707	64.6	3676	35.4
Polog region	6.6	37162	19094	53.5	18068	46.5	13.0	31630	16532	55.4	15098	44.6

Table 19 – Unemployed persons by municipality and the Polog region according to gender in December 2012

	Gostivar	In %	Tetovo	In %	Polog	In %
Total	10383		21247		31630	
men	7052	67.9	14294	67.3	21346	67.5
women	3331	32.1	6953	32.7	10284	32.5

Source: AERM

Unemployment according to ethnicity in the Polog region is as follows:

Table 20 – Number of unemployed persons by municipality and in the Polog region according to ethnicity

Employment centre	TOTAL	Macedonian	Albanian	Turkish	Roma	Serbian	Bosnian	Other
Tetovo	21247	4571	16029	132	367	38	3	107

In % Tetovo		21.5	75.4	0.6	1.7	0.2	0.01	0.5
Gostivar	10383	3092	5292	787	537	15	1	659
In % Gostivar		29.8	51.0	7.6	5.2	0.1	0.01	6.3
POLOG REGION	31630	7663	21321	919	904	53	4	766
In % Polog region		24.2	67.4	2.9	2.9	0.2	0.01	2.4

Source: AERM

The problem of unemployment is highest in the 25-29 years age group (4575 persons) and the 20-24 years age group (4212 persons). Most of the unemployed persons are unqualified (55.4 %), then with high school vocational education (24.4 %), qualified 8.2 % and higher education 6.5 %.

Table 21 – Unemployed persons in the Polog region according to age, December 2012

Age	TOTAL	Women	In %
15-19	518	230	1.6
20-24	4212	1863	13.3
25-29	4575	1956	14.5
30-34	3844	1376	12.2
35-39	3501	1157	11.1
40-44	3684	1119	11.6
45-49	3706	987	11.7
50-54	3336	789	10.5
55-59	2711	600	8.6
60 +	1543	207	4.9
Total:	31630	10284	100.0

Source: AERM

Table 22 – Unemployed persons in the Polog region according to education, December 2012

Level of education	TOTAL	Women	IN %
Unqualified	17523	5396	55.4

Semi-qualified and Lower vocational high school education	1465	257	4.6
Qualified	2594	412	8.2
Highly-qualified	1	0	0.0
Vocational high school education	7724	2867	24.4
Higher vocational education	218	79	0.7
Graduate vocational education	2062	1246	6.5
Master's degree	41	27	0.1
Doctoral degree	2	0	0.0
TOTAL:	10383	3331	100.00

Source: AERM

It is concerning that from the total number of unemployed persons 18988 or 60 % are unqualified, semi-qualified and with lower high school education.

The number of first job seekers registered in 30 employment centres in 2013 is 877 persons. Most of them have high school education (380) and higher education (347). It is noticeable that the number of women graduating from high school and higher education is higher than that of men, which is especially prominent in persons with master's degrees. This is due to the legally mandatory high school education and dispersion of faculties in most cities in Macedonia. In the Gostivar region this is due to the proximity of the two universities in the Tetovo region.

Table 23 – Persons applying for the first time in the unemployment records of the Employment centers in 2012 and 2013.

Year	Total	Unqualified	Semi- qualified and Lower vocational high school	Qualified	Highly- qualified	High school education	Higher vocational education	Graduate vocational education	Master's degree	Doctoral degree
2013	877	92	36	/	/	380 (155 women)	11	347 (209 women)	11 (9 women)	0
2012	1.112	161	16	62	0	471	4	385 (227 women)	14 (11 women)	0

Source: AERM

Education

According to the Law on Local Self-government from 2005 organization of education in primary and secondary schools and preschool care for children is a part of the competences of the local self-government.

The Tetovo municipality has a highly developed education network. There are 12 central primary schools, 9 regional primary schools, 1 state primary music school, 5 high schools and 2 universities in the municipality Tetovo.

The high schools have various profiles: grammar school, medicine, economy, agriculture, textile and music.

There are two universities in Tetovo: State University of Tetovo and South East European University.

The State University of Tetovo is one of the three state universities in the Republic of Macedonia. At the moment there are several faculties in the university³: Faculty of natural and mathematical sciences; Faculty of medical sciences; Faculty of applied sciences; Faculty of economy; Faculty of law; Faculty of philology; Faculty of physical education; Faculty of philosophy; Faculty of art; Faculty of business administration (in Kumanovo); Faculty of food technology and nutrition (in Gostivar)

494 students have graduated from the State University in Tetovo in 2011, most at the Faculty of law (177 students), then economy (155) and philology (86).

The South East European University was established in 2002 and comprises five faculties⁴: Faculty of modern sciences and technologies; Faculty of legal sciences; Faculty of business and economy; Faculty of languages, cultures and communication and Faculty of public administration and political sciences.

815 students graduated from the South East European University in 2011 as following: 171 students at the Faculty of business and economy, 242 students at the Faculty of public administration and political sciences, 145 students at the Faculty of language, culture and communication, 158 students at the Faculty of law and 99 students at the Faculty of modern sciences and technologies.

Table 24 – High school students by gender and school year by municipality and in the Polog region

³Web page of the State University of Tetovo (http://www.unite.edu.mk/)

⁴Web page of the university (http://www.seeu.edu.mk/)

		2011/2012					
	total	female students	male students	total	female students	male students	Comparison 2013/2012 in %
Republic of Macedonia	93064	44884	48180	89884	42975	46909	-3.42
Polog region	15977	7771	8206	15084	6961	8123	-5.59
Vrapchishte	276	176	100	280	138	142	1.45
Gostivar	5292	2620	2672	4844	2215	2629	-8.47
Mavrovo and Rostusha	175	89	86	165	81	84	-5.71
Tetovo	10234	4886	5348	9795	4527	5268	-4.29

Source: State Statistical Office (Makstat)

Table 25 – Primary school students by gender and school year by municipality and in the Polog region

		2011/2012			Comparison		
	total	female students	male students	total	female students	male students	2013/2012 in %
Republic of Macedonia	198856	96433	102423	195311	94695	100616	-1.78
Polog region	32517	15566	16951	31427	15034	16393	-3.35
Bogovinje	3405	1610	1795	3261	1587	1674	-4.23
Brvenica	1728	836	892	1677	799	878	-2.95
Vrapchishte	2903	1381	1522	2822	1323	1499	-2.79
Gostivar	7437	3566	3871	7083	3356	3727	-4.76
Zhelino	3258	1558	1700	3149	1496	1653	-3.35
Jegunovce	959	489	470	954	478	476	-0.52
Mavrovo and Rostusha	636	299	337	637	290	347	0.16
Tearce	1795	856	939	1730	819	911	-3.62
Tetovo	10396	4971	5425	10114	4886	522	-2.71

Source: State Statistical Office (Makstat)

The municipality of Gostivar has a well developed education network. There are 10 central primary schools, 20 regional primary schools, 3 high schools and 1 private college (JAHYA KEMAL) in the municipality of Gostivar.

The high schools have various profiles: grammar school, medicine, economy, vocational education (mechanical engineering, electrical engineering, chemical-technology and personal services).

Regarding higher education in Gostivar, there is a Faculty of food industry and nutrition at the Tetovo State University⁵ (99 positions for registration of students according to the competition for 2013/2014: 21 student in food technology, 48 students in nutrition and 30 students in quality management and food safety) and the private universities FON and International University of Struga – Gostivar branch (faculties: economy, law, political sciences and IT technology⁶).

Studies at FON Gostivar⁷ are conducted in Macedonian, Albanian and English. Currently the following faculties and their respective departments are present: Legal sciences, Economic sciences, Detectives and security, Political sciences and Information-communication technologies. Education is conducted in a modern campus linked to the university in Skopje. In addition to the digital concept and the permanent staff on campus in Gostivar every day education is also performed by professors and assistants from Skopje.

		2009			2010			
	Total	Men	Women	Total	Men	Women		
Republic of Macedonia	56717	26724	29993	61645	28698	32947		
Vardar	4614	2058	2556	4971	2265	2706		
East	5834	2608	3226	6058	2710	3348		
Southwest	5062	2479	2583	5468	2680	2788		
Southeast	4380	1864	2516	4814	2078	2736		

Table 26 – Students enrolled in undergraduate studies according to place of residence, gender, region, and year

⁵Web page of the Tetovo State University (http://www.unite.edu.mk/)

⁶www.eust.edu.mk

⁷www.fon.edu.mk

Pelagonija	7710	3553	4157	8091	3770	4321
Polog	4935	2845	2090	7210	3723	3487
Northeast	3956	1742	2214	4231	1802	2429
Skopje	19872	9289	10583	20802	9670	11132
Unknown	354	286	68			

Source: State Statistical Office (Makstat)

Table 27 – Graduated students at undergraduate studies according to place of residence, gender, region, and year

	2010					
	Total	Men	Women	Total	Men	Women
Republic of Macedonia	9 807	4 253	5 554	9 707	4 200	5 507
Vardar	675	268	407	791	330	461
East	953	359	594	821	327	494
Southwest	1029	451	578	950	395	555
Southeast	638	269	369	653	262	391
Pelagonija	1300	582	718	1459	598	861
Polog	1061	527	534	1042	518	524
Northeast	618	259	359	652	286	366
Skopje	3533	1538	1995	3339	1484	1855

Source: State Statistical Office (Makstat)

Table 28 – Employees in the science-development activity for indeterminate and determinate time, according to region for, 2007-2009

	2007	2008	2009
Republic of Macedonia	2 394	2 211	2 051
Vardar	-	-	-
East	55	57	99
Southwest	58	62	100

Southeast	9	9	-
Pelagonija	158	178	191
Polog	35	-	-
Northeast	-	-	-
Skopje	2 079	1 905	1 661

Source: State Statistical Office (Makstat)

Social policy

Table 29 - Residences, households, social aid users – Data from regular censuses 1994 and 2002

	Total residences		Percentage of residences with water supply, sewage and electricity	Number of households		Social aid users as a percentage of number of total households
Region/Census	1994	2002	2002	1994	2002	%
R. Macedonia	580342	697529	81.00 %	64160	82670	14.70 %
Pelagonija	84712	93857	84.60 %	9497	12639	17.40 %
Vardar	44247	53101	90.70 %	4781	5499	13.50 %
Northeast	47504	59430	84.00 %	6212	9461	20.40 %
Southwest	67253	84044	90.50 %	7363	8455	14.80 %
Skopje	161010	188196	61.80 %	15198	19222	11.70 %
Southeast	48128	59436	90.70 %	4178	5747	11.60 %
Polog	59099	79075	90.90 %	10023	14477	20.90 %
East	68389	80390	90.70 %	6908	7170	11.10 %

Source: State Statistical Office (Makstat)

In the Polog region <u>there are no public or private institutions – Home for old</u> <u>persons</u>, this is why the inhabitants of this region who want to use these services go to the closest institutions, e.g. Skopje.

		2012			2013		
	Total	Female	Male	Total	Female	Male	
R. Macedonia	26 885	13 081	13 804	29 113	14 345	14 768	
Polog region	1 243	559	684	1 150	534	61	
Bogovinje	-	-	-	-	-	-	
Brvenica	-	-	-	-	-	-	
Vrapchishte	-	-	-	-	-	-	
Gostivar	410	217	193	454	210	244	
Zhelino	-	-	-	-	-	-	
Jegunovce	17	4	13	20	12	8	
Mavrovo and Rostusha	-	-	-	-	-	-	
Tearce	-	-	-	-	-	-	
Tetovo	816	338	478	676	312	364	

Table 30 – Children in institutions for care and upbringing of children - kindergartens, according to gender, by region for 2012 and 2013.

Source: State Statistical Office (Makstat)

Table 31 – Users of monetary social aid, by gender, by region and by year 2010-2012

		Total										
	20	10	20	11	2012							
	Head of household (number of households)	Members of the household (together with the head)	Head of household (number of households)	Members of the household (together with the head)	Head of household (number of households)	Members of the household (together with the head)						
R. Macedonia	44 940	176 431	36 991	153 385	33 717	133 539						
Vardar	3 087	9 183	2 654	7 706	2 397	6 817						
East	2 825	11 322	2 558	10 599	2 284	9 599						
Southwest	3 939	16 233	3 454	14 702	3 139	12 213						
Southeast	2 073	8 058	1 702	5 938	1 702	6 169						
Pelagonija	4 883	14 649	3 904	11 683	3 884	12 111						
Polog	11 302	41 391	8 952	32 470	7 679	26 906						

Northeast	5 517	20 053	4 688	20 695	4 191	18 195
Skopje	11 314	55 542	9 079	49 592	8 441	41 529

Source: State Statistical Office (Makstat)

Agriculture

The Polog region has 168 701 ha of agriculture land, 24.87% or 41 963 hectares are arable land and 75.12% or 126 737 hectares are pastures.

Predominant arable land in this region are fields and gardens with 30 702 ha, orchards have 1 068 ha, only 44 ha of vineyards and 10 000 ha of meadows. The percentage share of agricultural areas is shown on the next graph.



Source: State statistical institute

The total agriculture production in the Polog region is reducing in the last years. The following picture shows annual agricultural production by tonnes and the agriculture production trend.



Polog region, total agriculture

Source: State Statistical Office

The total agricultural production in the Polog region (divided by separate crops) is reduced by 14.37% in the period 2008 to 2012 (from 166 715 t in 2008 to 142 759 t in 2012).

A total of 20 agriculture companies manage 1,519 ha, whereas 21,472 individual farmers manage 28,226 hectares. Thus, the average size of farmed land of agriculture companies is 76 hectares. Individual farmers manage an average of 1.35 ha, which indicates a small size, under the country average (1.84 ha). This average farm size does not possess strong potential for development of agriculture based on farming crops in this region.

This all means that area fragmentation in this region is highest in the country. The agriculture sector can employ many people; however, this does not have a major effect in this densely populated region with 304 205 inhabitants and increasing population numbers. Such agriculture can create many jobs, and work needs to be done on developing small family farms aimed at using the sector's potentials, especially in the mountainous part of the region. On the other hand, agriculture holdings should increase in size in the fields in order to use the possibilities provided by modern intensive agriculture.

Production of certain field and vegetable crops

			201	1				
	Wheat	Corn	Tobacco	Potato	Onion	Tomato	Paprika	Cucumber
Republic of Macedonia	256103	126096	26537	192675	44540	165642	153842	49879
Polog region	20244	40693	2	41380	7744	13746	13813	1226
% of R. Macedonia	7.90%	32.27%	0.007%	21.47%	17.38%	8.29%	8.97%	2.45%
			201	2				
	Wheat	Corn	Tobacco	Potato	Onion	Tomato	Paprika	Cucumber
Republic of Macedonia	214963	115928	27333	168859	43732	145818	166247	50093
Polog region	18152	39326	1	38 204	7 261	13 276	13 161	1 070
% of R. Macedonia	8.44%	33.92%	0.003%	22.62%	16.60%	9.10%	7.91%	2.13%
			201	3				
	Wheat	Corn	Tobacco	Potato	Onion	Tomato	Paprika	Cucumber
Republic of Macedonia	258960	131043	27859	189590	50787	130960	152153	36834
Polog region	20 346	37 899	1	40 847	7 342	13 401	13 503	1 105
% of R. Macedonia	7.85%	28.92%	0.003%	21.54%	14.45%	10.23%	10.31%	2.99%

Source: State Statistical Office

The production of certain grain cultures in the Polog region is stable in the last three years, with minor variations in regards to the overall production in Macedonia. Work intensive vegetable crops, like tomatoes and paprika, which were not traditionally planted in this region, show a slight increase. This is due to the need to use the area of the extremely small plots to the maximum, for better financial effect.

Production of fruit and grapes

				2011					
	Cherry	Sour cherry	Apricot	Apple	Pear	Plum	Peach	Walnut	Grape
Republic of Macedonia	6019	6514	3747	124552	7460	35448	9039	5480	235104
Polog region	687	524	65	8 371	950	1 647	87	831	540
% of R. Macedonia	11.41%	8.04%	1.73%	6.72%	12.7%	4.64%	0.96%	15.16%	0.22%
				2012					
	Cherry	Sour	Apricot	Apple	Pear	Plum	Peach	Walnut	Grape

		cherry							
Republic of Macedonia	5539	8127	4503	127171	6937	35444	8987	4952	240461
Polog region	623	958	71	7 211	777	1 405	89	648	526
% of R. Macedonia	11.24%	11.78%	1.57%	5.67%	11.2%	2.94%	0.99%	13.08%	0.22%
				2013					
	Cherry	Sour cherry	Apricot	Apple	Pear	Plum	Peach	Walnut	Grape
Republic of Macedonia	Cherry 6037	Sour cherry 8867	Apricot 3968	Apple 112929	Pear 7265	Plum 38902	Peach	Walnut 5467	Grape 292075
Republic of Macedonia Polog region	Cherry 6037 545	Sour cherry 8867 1 010	Apricot 3968 51	Apple 112929 6 550	Pear 7265 645	Plum 38902 1 229	Peach 11034 80	Walnut 5467 693	Grape 292075 619

Source: State Statistical Office

With the exception of sour cherries, which mark a production increase of approximately 100% from 2011 to 2013, and from 8.04% as part of the overall state production in 2011 to 11.39% in 2013, all other fruits and grape mark a small but continuous decrease in production in the past three years.

Surfaces under fields and gardens										
hectares/ha	Fields and gardens	Grains	Industrial crops	Forage crops	Legume crops	Vegetabl es, total	Potato	Flowers and decorative plants	Seed and seedli ngs	Fallow land
Republic of Macedonia	236 291	158 314	24 717	23 561	2 283	12 722	5 053	34	26	9 581
Polog region	19 971	12 958	50	5 310	242	732	644	1	-	34
% of R. Macedonia	8,45%	8,18%	0,20%	22,53%	10,60%	5,75%	12,74%	2,94%	%	0,35%

Source: State Statistical Office

By analysing the crops in the Polog region we can conclude that there are favourable conditions for production of forage and legume crops and that animal husbandry as one of the primary economically significant fields of agriculture. This is further supported by the fact that corn from this region represents approximately 29% of the total production in the country.

Total number of cattle, poultry and beehives 2013											
number	Horses	Cattle	Pigs	Sheep	Goats	Poultry	Beehives				
Republic of Macedonia	20 682	238 333	167 492	731 828	75 028	2 201 550	68 294				
Polog region	1 658	34 033	25 372	51 713	10 158	404 345	21 650				
% of Republic of Macedonia	8,01%	14,27%	15,14%	7,06%	13,53%	18,36%	31,7%				

Source: State Statistical Office

Animal husbandry is mainly represented by cattle (mostly milk cows), sheep and poultry. Milk cows and sheep are especially important for this region and its developed tradition for dairy products. Sheep breeding is a tradition in this region, with the renowned Shara breed and Shara cheese. Poultry and bee breeding are also on the rise and have a prominent share with 18.36% and 31.7% of the total production in the Republic of Macedonia.

Infrastructure

Transport infrastructure

Road infrastructure

The road infrastructure in the Polog region comprises a local, regional and A road network. European Corridor VIII passes through the region.



Picture 1 - Road infrastructure in the Polog planning region

The existing road infrastructure in the Eastern planning region comprises 1483 km local roads, 65 km A state roads and 255 km regional roads.



Road structure

The main roads connecting this region with the others are state road A2 (Skopje - Tetovo - Gostivar - Kichevo) and regional road R 1202 (connection to A2 – Mavrovi Anovi - Debar).

The road network in this region is well developed. The road network density in the Polog planning region is 0.55 and it is the same as the road network density on the level of the Republic of Macedonia (0.55).

The current condition of road A2 meets the necessary quality for this type of road. There are damages to the road surface in certain locations.

Certain sections of the regional road network R 1202 (connection to A2 – Mavrovi Anovi - Debar), R 1203 (Tetovo - Dobroshte - Jazhince – Kosovo border), R 1206 (Tetovo - Bogovinje - Vrapchishte – connection to A2) and P 1209 (Tetovo – Popova Shapka), as well as certain sections of the second category regional roads R 2231 (Gostivar - Srbinovo), R 2233 (Tetovo - Brvenica - Chegrane), R 2234 (connection to R 1203 - Jegunovce – Dolno Orashje - Radusha), R 2235 (connection to R 1202 – Leunovo – Mavrovo – connection to R 1202), R 2238 (connection to R 2235 – Galichnik – Selce – Lazaropole - Gari) and R 2242 (connection to A2 - Shemshovo - Jegunovce) are also in relatively poor condition.

The following regional roads in the region have dirt tracks or have not been constructed:

- R 2231 Srbinovo Papradishte Tuin (Oslomej, Kichevo)
- R 2234 Jegunovce Dolno Orashje Radusha
- R 2238 Galichnik Selce Lazaropole Gari

The condition of certain regional roads is not in compliance with both the requirements for economic development and safe traffic standards as well.

The local road network in the Polog region is in poor condition.

It is necessary to point out that even the funds which are available are not used for maintaining local roads, but are used for construction of new roads and maintenance predominantly of streets in urban centres.

In the last several years a part of the local roads have been reconstructed and upgraded (4.5%) using own funds and funds from the Ministry of Transport and Communications.

Condition of local roads by municipality

Bogovinje	Brvenica	Vrapchishte	Gostivar	Zhelino	Jegunovce	Mavrovo and Rostushe	Tearce	Tetovo

Asphalt	75	47	60	252	79	35	60	32	141
Cobblestone	33	20	7	9	4	3	1	30	22
Gravel	15	26	40	3	9	28	19	5	2
Dirt	36	16	18	9	7	13	56	29	6
Not constructed	23	-	3	-	15	1	50	42	-
Total	182	109	128	273	114	80	186	138	171



Road infrastructure in the Polog planning region compared to the road infrastructure in the Republic of Macedonia.

	Republic of Macedonia	Northeast region	%
A road network	1153	65	5.64%
Regional roads	3771	255	6.76%
Local roads	9258	1483	16.02%
Total	14182	1803	12.71%

There is one border crossing point in the Polog planning region with the Republic of Kosovo (Jazhince).

The average annual daily traffic on the "A" and regional road network in the Polog region in 2013 is shown on the following Table.

Road	Counting	Dead castion		Α	verage a	nnual da	aily traff	ic	
number	location	Road Section	K1	К2	К3	К4	К5	К6	Total
A2	22	Skopje - Glumovo	8512	914	135	35	57	176	9829
A2	24	Glumovo - Tetovo	9014	979	132	37	57	188	10407
A2	26	Tetovo - Gostivar	10839	2092	162	124	67	171	13455
A2	43	Gostivar - Novo Selo	4002	656	62	92	45	76	4933
A2	28	Novo Selo - Kichevo	3827	619	58	85	39	66	4694
P 1206	131	Saraj - Zhelino (old road)	1750	290	12	57	55	36	2200
P 1206	132	Zhelino - Tetovo (old road)	1972	314	13	70	61	37	2467
P 1203	601	Tetovo - Vratnica	6003	1604	208	450	506	455	9226
P 1209	602	Tetovo - Popova Shapka	1901	270	46	124	76	63	2480
P 1202	603	Novo Selo - Mavrovi Anovi	1550	284	53	132	140	105	2264
P 1202	605	Mavrovi Anovi - Debar	1272	202	38	102	149	108	1871

Railroad infrastructure:

The Vardar region has one railroad line, Skopje - Kichevo, which is part of Corridor VIII and it has a length of 83 km.

Railroad density in the region is 25.15 km' per 1000км2 (27 km' average in Macedonia), and the length of railroad tracks on one hundred thousand inhabitants is 27.13 km' (33.9 km' average in Macedonia).

The railroad network in the Polog region has much lower density in comparison to the average density in Macedonia. Railroad transport services have low quality. The problems with this type of transport are old rolling stock, low transport speed and inappropriate infrastructure maintenance.



Railroad network in the Polog planning region

From the viewpoint of municipalities covered with this type of transport services it can be said that almost all municipalities in this region are well services with the railroad services offered by Macedonian Railways - transport.

Number of transported passengers

year	Gostivar	Kichevo	Tetovo	Total	Republic of Macedonia	%
2010	38.154	71.452	16.419	126.025	1.489.000	8.46%
2011	35.263	65.127	16.236	116.626	1.408.000	8.28%
2012	20.422	46.036	10.258	76.716	1.000.000	7.67%

Transport of goods (tonnes)

year	Gostivar	Kichevo	Tetovo	Total	Republic of Macedonia	%
2010	239	2.733	16.654	19.626	2198206	0.89%
2011	639	1.954	47.726	50.319	1902581	2.64%
2012	192	1.794	90.526	92.512	1875974	4.93%

The number of transported passengers has decreased significantly in the period 2010 - 2012. The decrease of the number of transported passengers is 39.13% (32.84% at the
level of the Republic of Macedonia), whereas the transport of goods shows an enormous increase of 371.20% (2012 - 14.65% decrease on the level of the Republic of Macedonia).

The basic problem for efficient railroad transport is the poor condition of the railroad infrastructure and the low quality of services offered.

Air traffic

The Airport "Alexander the Great" is located 65 km away from Tetovo and 87 km from Gostivar. The vicinity of this airport enables it to service most of the municipalities in the Polog region.

Energy infrastructure

HES (hydro-energy system) Mavrovo is located in the Polog planning region, situated between the Mavrovo and Gorna Radika rivers. It comprises the accumulation lake Mavrovo and three HPPs of the following types: run of the river HPP (hydro power plant) Vrben utilizing the waters going into the accumulation Mavrovo, derivative HPP Vrutok, utilizing the waters coming out of the Mavrovo accumulation lake and run of the river HPP Raven utilizing the waters coming from HPP Vrutok. It is planned to build in the future an accumulation lake, Lukovo Pole, which will become a part of HES Mavrovo. The primary goal of the Mavrovo accumulation of arable land in the Polog region and regulation of waters in the upper flow of the river Vardar.

HPP	Watershed	No. of aggre.	Q- _{inst} /agr.	H _{gross}	Vol	P _{inst}	W _{year}	Put in EES
			(m³/s)	(m)	(10 ⁶ m³)	(MW)	GWh	(year)
Vrben	Mavrovo	2	4.6	793	0	12.8	45	1957/1973
Vrutok	Mavrovo	4	9	574	277	172.0	390	1959/1973
Raven	Mavrovo	3	10.6	66	0	21.6	53	1959

Characteristics of HES Mavrovo



Energy infrastructure in the Polog planning region

Translation of captions above						
Spring	Sewage	e system	Refinery			
Water supply system	Thermal po	ower plants	Oil supply line			
Regional water supply system	Hydro pw	oer plants	Industrial heating plants			
Accumulation lakes	Long distance power lines	Transformer stations	Coal mine			
Natural lakes	110 kV	110 kV	Briquette factory			
Irrigated areas	220 kV	220 KV	Gas supply line			
	400 kV	400 kV	Regulation stations			

Installed energy production capacity in the Polog planning region

MW	Republic of Macedonia	Polog region	%
2011	1849	190	10.28%
2012	1913	190	9.93%
2013	1938	201	10.37%

More than 5 small hydro power plants are located in the region in addition to HES Mavrovo.

HPP "Popova Shapka" is a small hydro power plant on Shara Mountain and has 4 turbines with power of 4.78 MW.

In the South East Europe University in Tetovo a small 100 KW solar power plant for production of electricity has been installed.

The construction of the first biogas power plant in Macedonia is ongoing, which will have a capacity of 1 MW.

According to the data for 2010-2012, the total average annual consumption of electricity by the industry in the Polog planning region is 389 GWh, or approximately 16.1% of the total average industrial consumption in the Republic of Macedonia.

GWh	Republic of Macedonia	Polog region	%
2010	2194	289	13.17%
2011	2693	490	18.20%
2012	2369	389	16.42%

An important hydro power project planned for construction is the accumulation Lukovo Pole together with the downriver HPP Crn Kamen, which will increase the production of the overall hydro power system of Mavrovo hydro power plants for an additional 163 GWh.

Another important energy facility is HPP Boshkov Most, which should be constructed on Mala Reka, in the vicinity of the city of Debar and the regional road Mavrovi Anovi – Debar - Ohrid. This power plant will have a capacity of 68.2 MW.

Environment

Solid waste

Local municipal public utility enterprises manage solid waste in the Polog planning region. Waste management includes its collection, transport and landfilling, and there is selection of only a small part of the municipal waste.

	Quantities of generated waste (tonnes)			Quantitie	ties of collected waste (tonnes)		% of waste collected		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Republic of Macedonia	735,250	786,909	793,000	543,954	550,760	555,250	73.98%	69.99%	70.02%
Polog region	91,281	104,366	106,412	62,436	59,411	60,278	68.40%	56.93%	56.65%
%	12.41%	13.26%	13.42%	11.48%	10.79%	10.86%	-5.58%	-13.06%	-13.37%

Quantities of collected and generated waste

Landfilling of solid municipal waste in this region is done on local, so-called municipal landfills, which do not meet the basic sanitation technical standards for safe landfilling of waste. The city of Tetovo does not have any landfill and is faced with problems when landfilling waste. Landfill Rusino, located in the vicinity of Gostivar has been designated as a regional landfill. This landfill does not meet even the minimal standards for depositing waste. Although a call for concessions was published for this landfill it was canceled.

There are many illegal landfills on the territory of the Polog planning region, especially in the rural areas, which are not covered with services for collecting and landfilling waste.

In accordance with the National waste management strategy the challenges of solid waste management may be overcome by introducing regional integrated solid waste management, in accordance with EU directives. It is planned for the Polog region to establish integrated municipal waste management by issuing a concession for municipal solid waste management.

Water

The Polog water supply area is located in the northeast part of the Republic of Macedonia. It covers the Polog valley, Shard Planina mountain range, karst areas Bukovikj and Krasta, the mountain range Suva Gora etc.

The territory of the Polog region covers the watersheds of the rivers Vardar and Radika. The majority belongs to the Vardar watershed, with a small portion belonging to the Crn Drim river watershed.



Watersheds in the Polog region

Over a hundred rivers of various sizes come from the Shar Mountain towards Polog. The springs of larger rivers come from a great height – over 2.400 m. Most have a dispersed spring, made up of a network of smaller rivers. They descend through several main arms, which create the river. One of the most developed springs is the one on Vratnichka River. Its two arms that flow into the Ljuboten River are made of 48 symmetrically branching rivers. Almost all rivers on Shar Mountain belong to the watershed of the river Vardar, and the larger ones flow into it. Some of the more important ones are: Vrutochka River, Jelovska River, Golema River, Topushnica, Mazdracha, Bogovinska River, Kamenjanska River, Uliverichka River, Rachichka River, Pena, Porojska River, Neproshtenska River, Leshochka River, Tearechka Bistrica, Dobroshka River, Gabrovnica, Belovishka River, Rakita and others. Some rivers from the south part of Shar Mountain (Adzina River, Kjaf Kadis, Crn Kamen and some other smaller streams) belong to the watershed of river Radika, i.e. the Adriatic flow. River Pena is the largest tributary to Vardar and is created on Shar Mountain. It has the longest mountain flow with 29.7 km from the spring to Tetovo. Its altitude difference is 1,914 m, and the average drop is 6.44‰. Important tributaries to river Pena are the rivers: Krivoshiska, Leshnichka, Chepenovska, Skakalska, Karanikolska, Brodechka and others.

River Radika is made of two smaller rivers: Shtirovica and Crn Kamen. Shtirovica collects the waters from the northern slope of Korab, while Crn Kamen has a larger watershed towards which gravitate several permanent and seasonal, mainly of torrential nature, water flows and which drain the waters from the highest areas of Korab and Vraca. Radika and its tributaries have a mountainous character, and their lateral profiles

are characterized with white water and waterfalls and with a great drop. The river regime of certain rivers is unstable because a part of the waters flow through limestone terrain and they get lost in them.

The Mavrovo hydro energy system includes 13 rivers that flow into Mavrovo Lake. These include rivers: Shtirovica (right arm of river Radika), Bela Reka (tributary of Shtirovica), Crn Kamen, Adzina Reka (left arm of Radika), Brodechka, Krakornica, Bogdevska and Vrbenska River, Belichica, Mavrovska, Nikiforovska and Leunovska River. The water of Radika, from its spring to the delta of the Mavrovo River, flows into the lake. This section turns the left tributaries of Radika and is practically waterless for a distance of 10 km. There are only some smaller tributaries (brooks and streams) in this section, which are not damned and provide less water for Radika. There are 17 permanent lakes in the Radika watershed located on the following mountains: Stogovo - 3, Deshat - 5, Korab - 8, Shar Mountain - 1. Glacial lakes are most numerous in the Radika watershed. They are not present only on the mountains Bistra and Krchin. Wider known lakes in the park are: Korab Lake, Mal Korab, Bachilski Kamen, Lokuv, Turen Kamen, Sveta Nedela, Marusha Lake and many others.

Most common underground waters in the Polog region are dense type of springs with a free level in the alluvial layers of Vardar and Shara rivers, with alluvial thickness up to 20m. This type includes fluvial-glacial and proluvial sediments at the base of mountain Shara, quarternary-pliocene sediments in the Polog valley and dense springs with a pressure level appearing locally in Pliocene sediments in D. Polog. Drainage of these springs is done through numerous water capture objects (wells). The water is mainly used for local water supply, industrial needs and additional water supply for Tetovo. The flow of these objects is mainly higher than 10l/sec., and in certain locations it is up to 40l/sec. The total flow of all wells constructed in the Polog valley is estimated at 600-800l/sec.

There are karst springs in the carbon masses of Shar Mountain, karst ranges Bukovikj, Krasta and Suva Gora, which are separate underground water reservoirs. They are drained through numerous springs, the most important of which are springs at the contact between the karst of Suva Gora and neogene sediments (villages Chegrane, Forino, Volkovija) with Q=0,1-1,0m3/sec., spring Vrutok from the karst range Krasta with Q=0.5-5m3/sec. etc. There is no data on the total average flow of all springs in this water

supply area, but it is estimated at approximately 3.0m3/sec. Fault springs appear in limestone surfaces with greater crystalline shale content on Shar Mountain.

In its hydrographic structure the region has different types of water sources and one artificial accumulation lake (Mavrovo Lake). The water potential is due to relatively high altitude of the region, as well as the geological composition of the land. The region has numerous rivers and small watersheds belonging to the rivers Vardar and Radika.

It is believed that the part of Shar Mountain belonging to the territory of the Republic of Macedonia has approximately 30 lakes, 21 of which are permanent.

Dolno Dobroshko Lake was created by atmospheric precipitation, but several smaller streams flow into it, which is why the lake exists for longer periods.

Gorno Dobroshko Lake is smaller but deeper than Dolno Dobroshko Lake. It receives water from a spring immediately above the lake, with a small peat bog above it.

Karanikolichko Lake is one of the more scenic lakes on Shara, located in the Kara Nikole area at an altitude of 2180 m. Karanikolichko Lake or Golem Gjol does not have surface tributaries, but receives its water from numerous underground springs.

Krivoshijsko Lake is maintained with flow from several springs and it flows out from an underground river. One of the most attractive waterfalls is locates about 300m below – Gorno Ckalo on Krivoshijska River.

Belo Lake has a constant water line regardless of atmospheric precipitation. There are several springs around the shores of this lake – both permanent and temporary. The lake also flows out into the Bogovinska River.

Bogovinsko Lake is situated between Borislavec and Mala Smreka and is the largest lake on Shar Mountain. The lake is 4-5 m deep. Bogovinska River flows into and then flows out of this lake. There are several waterfalls in its vicinity. Its lifespan is expiring quickly due to the constant sedimentation of organic matter from the sheep pen in its vicinity. One of the largest high mountain mud ecosystems in Macedonia is located in the first part of the lake.

Crno Lake is deeper than Bogovinsko Lake. It is one of the most beautiful lakes on Shar Mountain. As a result of former many years of existence of a sheep pen on its northern side that part is overgrown with mud vegetation.

Dedelbeshko Lake together with the Lersko Lake is the last lake on the southern part of the Shar Mountain crest. They are the last succession stage for transformation of glacial lakes to a mud ecosystem. They are overgrown with high grasses – a whole meter above the water.

In addition to glacial lakes, Shar Mountain also has numerous ponds most famous of which are the two Chelepenski ponds (2,315 m.a.s.l.), Rudochki ponds (2,170 m.a.s.l.), Fudanski ponds (2,100-2,150 m.a.s.l.) and Vrachanski ponds (1,975 m.a.s.l.).



Water infrastructure (Spatial plan of the Republic of Macedonia)

Translation of captions above				
Water supply areas	Regional water supply systems	Accumulations		
Springs	RVS Treska	Accumulations – 2020		
Water supply system – current	RVS Treska – after 2020	Accumulations – after 2020		
Water supply system – 2020	VS Gjavato	Irrigated areas		
Sewage system – current		Irrigated areas – 2020		
Sewage system – 2020		Irrigated areas after 2020		

Water supply

Water supply and drainage of municipal waste waters is managed by municipal public utility companies in all municipalities.

Water from springs, underground waters, surface waters or a combination thereof is used as potable water. The cities Tetovo and Gostivar receive their water supply from springs. The water supply systems in rural areas mainly use spring and underground waters.

Tetovo is faced with potable water shortages during summer, which is most prominent in the high city zone.

Population coverage with city water supply system in urban areas is up to 95% (Gostivar and Tetovo). In rural settlements coverage is from 20% to 100% (Mavrovo). Population in rural areas not connected to the water supply system draw their water from wells and natural springs and the water quality varies with some of them. In certain municipalities there are villages where water supply has not been resolved. Population connections to central water supply systems only exist in urban centers. In rural areas the issue of water supply is resolved in each settlement individually, partially and by stages.

$(in thousands m^3)$	Repu	blic of Maced	lonia	Polog region 2010 2011 2 642563 357992 37 641656 651823 36 641938 352110 36 2 - 1	on	%			
(in thousands in)	2010	2011	2012	2010	2011	2012	2010	2011	2012
Water supply	6,368,589	5,869,979	5,006,246	642563	357992	373566	10.09%	6.10%	7.46%
Water used for technological purposes	6,251,678	4,953,364	4,923,165	641656	651823	369851	10.26%	13.16 %	7.51%
Releasing of unpurified waters	6,224,267	5,062,710	4,808,627	641938	352110	361727	10.31%	6.95%	7.52%
Releasing of purified waters	20,131	77,573	92,492	2	-	1648	0.01%	0.00%	1.78%
Releasing of waste waters in industry and mining	1,435,562	820,679	1,045,121	67471	35733	79182	4.70%	4.35%	7.58%

Supply, utilization and protection of waters from pollution in industry and mining.

Waste waters

The collection and city network is predominantly located in the urban centers of municipalities. Population sewage network coverage in urban areas is from 60% in Tetovo, to 95% in Struga, whereas in rural areas it is from 0% in certain villages (cesspits or direct drainages) to 60%.

There is one smaller waste water processing station in this region with capacity for 5000 inhabitants, which has been constructed to service the South East Europe University and is located in its vicinity. Population coverage with waste water processing stations is 1.5% (average in Macedonia is 12.5%). Four smaller waste water treatment stations have been constructed along the valley of the river Radika, but they are not operational.

Waste waters from other settlements are being released without any treatment directly to the receiving surface waters. In general, the condition of waste water release systems is poor, because the systems have leakages of a part of the waste water during transport, which increases the risk of soil and underground waters pollution. The inhabited locations and tourist settlements in the national park Mavrovo and tourist locations are not connected to a sewage system.

In order to improve the situation with water supply and sewage it is necessary to increase the investments needed for expanding sewage networks in urban environments, complete the collection systems and construct new sewage networks in major rural settlements. It is also needed to construct urban storm drain networks and construct a station for communal waste water processing in Gostivar.

Water quality

The territory of the Polog valley is located in the protected zones of the spring Rashche. The first protection zone covering the area of the range Zheden and spring Rashche with dams 1 and 2 is protected by a physical fence. The second protection zone covers the area Dolen Polog, which is directly connected to the Zheden range. The third protection zone covers the area of Goren Polog, with a part of the Mavrovo hydro system and the base of Shara Mountain.

There are no stations for monitoring of surface water quality in the region.

There is one determined location of a industrial water polluter, which is Silmak Ferro / Silica Smelting Plant (former NEK Jugohrom).

Irrigation

The current situation with almost all hydro-melioration systems in the Republic of Macedonia is characterized with poor technical condition of buildings, facilities and

equipment, high water losses, low use efficiency, insufficient capacity for canal flow redirection, lack of flow regulation of transport structures (canals and piping) etc. The condition of the Polog planning region system is similar to this. According to the Ministry of Environment and Spatial Planning this poor condition is due to insufficient canal maintenance, poor quality of the original construction, insufficient construction according to the design, inappropriate solutions and design, insufficient and poor quality of hydromechanical equipment, large number of water users, small plot size, poor financial condition of water management organizations and rural immigration.

The irrigation system in the Polog region uses water from the river Vardar, has an area of 13,350 ha and has 91,928,000 M^3 of water.



Irrigated areas

Situation with flood protection and other characteristics of canals in the Polog region:

- Settlements exposed to flooding: Gostivar, Tetovo, village Sarakjino and some of the settlements on the slopes of Shara Mountain;
- Degraded rivers due to waste in their basins;
- Riverbanks naturally overgrown with vegetation.

Soil

Disruption of soil quality in the region comes from:

- Open stone quarries and sedimentation of remains on a large area;
- Inappropriate cultivation in certain areas of agriculture and raising crops with intense use of artificial fertilizers and pesticides;

- Increased and uncontrolled use of pesticides;
- Destruction of soil layers, erosion, destruction of forests and overgrazing;
- Changes in the physical and chemical structure of soils under the influence of existing industrial facilities and increased sedimentation from the polluted air;
- Use of polluted irrigation water;
- Inappropriate waste and waste water management, etc.

Industrial pollution



Industry pollution in the Polog region

In the East region there is one identified industry contaminated area - "hot-spot":

1. Silmak Ferro / Silica Smelting Plant (former NEK Jugohrom), with a total of deposited $851,000 \text{ m}^3$ waste on an area of $80,000 \text{ m}^2$.

Sources of pollution of the river Vardar.

River system and location	Pollution	Source of pollution	Regulated categories	Monitored category
Vardar				
- Vrutok	Organic	Solid waste	I	I – II

Jegunovce	Inorganic	Chrome	II	III - IV
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Erosion

In the Polog area the total annual level of eroded sediments is 1,020,042 (M^3 /year), while the quantity of intercepted sediments is 604,885 (m^3 /year). The percentage of intercepted sediments is 59.3%.



Erosion and natural hazards - Spatial plan of R. Macedonia

I ranslation of legend above				
Active landslide				
Unstable slope				
Landslide				
Torential wash				
Forest in danger of fire				
Potential zones of	stone segmentation			
liquefaction	inverse fog zone			
falling rocks	area in flood danger			
landslide	zones with rainfall up to 700 mm			

The erosion intensity in the Polog planning region is:

Area	Area category I-III	Area category IV-V	General category
	(km2)	(km2)	and coefficient
Polog	623.74	837.46	III
	(42.69 %)	(57.31 %)	z=0.38

The annual quantity of intercepted sediments in the Mavrovo accumulation is 412,643 m³/year.

Air

Air quality in the Polog planning region is monitored with a fixed monitoring station and a large samples collecting device in Tetovo, as part of the National network for monitoring of air quality organized by the Ministry of Environment and Spatial Planning. The fixed monitoring station in Tetovo monitors the ecological and meteorological parameters: carbon monoxide CO (mg/m³), sulfur dioxide SO² (mg/m³), ozone O³(μ g/m³), suspended particles with 10 micron particle size (μ g/m³), wind speed and direction, temperature, pressure, humidity and other parameters.

Air quality in the Polog planning region is good with the exception of the city of Tetovo, where there is an increase in pollutant concentration, mostly PM particles. Air quality data are shown in the following Table:

	Threshold value	2009	2010	2011
Highest mean average daily concentration of PM10 (μg/m ³)	50 μg/ m ³ which should not be breached more than 35 days in a single calendar year	167	104	-
Average annual concentration of NO ₂ (µg/m ³)	40 µg/m ³ mean annual threshold value	26.53	21	17
26 th highest maximum eight hour mean concentration of O ₃ (μ g/m ³)	120 µg/m ³	125	119	98
4 th highest average middle day concentration of SO ₂ (μg/m ³)	125 µg/m³	37	26	14

Concentration of smoke in Tetovo exceeds allowed thresholds over 100 times during one year (35 days is the allowed maximum). The pollution in Tetovo is influenced by HEK "Jugohrom" and using fuels with high quantities of sulfur during the winter. The energy facilities in the Polog valley annually emit approximately 257,865,600^{M3} CO₂. About 2/3 of this quantity is emitted during the heating season and is due to the large consumption of heating energy sources, of which 49% is coal and 34% is wood. The share of crude oil is approximately 10%, and the companies "Jugohrom" and "Teteks" emit approximately 56% of the total emissions.

Exceeding the limit of airborne PM_{10} particles in the last year is shown on the following Table.

Station	Latest exceeding	Concentration (µg/m ₃₎	Total number	Allowed number
Tetovo	2014-08-28	92.5	195	35

The following Table provides PM10 concentrations in Tetovo in the last month.



Nature

In the area of nature protection, the legislative amendments provided an excellent opportunity for the municipalities to manage the protected areas and possibilities for self-finance. A draft spatial plan was created in 2011 for all existing protected areas and for newly proposed ones, for which valorization plans and protected area management plans need to be prepared.

The spatial plan defines:

- Representative protected areas
- Newly proposed protected areas
- Areas proposed for natural rarities
- Areas for managing species
- Important vegetative areas
- Important ornithological locations

- Important butterfly locations
- National Emerald network
- Ramsar areas (wet ecosystems with huge biodiversity)
- World heritage areas

There is almost no recent quantitative data on forest ecosystem regarding the condition and biodiversity in forest ecosystems. Current forest management methods result in creation of single species and single age forests.

Illegal cutting, irrational use of forests, forest fires as well as failure to reforest barren land has impact on the loss of certain species and appearance of erosion and landslides in certain parts of former forest ecosystems. Additionally, the low public awareness and lack of management plan leads to municipal waste pollution.

High mountain pastures, stone fields and slopes, in spite of being the least influenced eco-systems, are one of the most intensively used habitats, especially as grazing land for millions of sheep. Their surfaces have been artificially expanded for purposes of animal raising. Additional pressure on these habitats is exerted with the development of tourism, creation of new pastures and energy installations.

Lowlands and valley are going through the greatest changes due to the urbanization of rural environments, and mud areas and swamps are disappearing already, which is destroying the mud ecosystems.

Additional increase in farming, use of pesticides and expansion of single crops has direct impact on reducing the populations of many species.

A special problem is using of protective means in agriculture, which are frequently used in higher dosages as poison for domestic and wild animals, which are very frequently then used further on in the food chain.

Infrastructure and economic development and insufficient knowledge of the protected areas pose a serious threat to nature. Lack of constant monitoring, human resources and management plan also has an impact on neglecting or destroying of natural rarities, and certain rare endangered species have been lost in the last 3 decades. In Macedonia there is a comprehensive national climate policy or strategy regarding climate changes. Municipalities rarely take climate change as a priority. The municipality of Tearce is the only one that has prepared a strategy for climate change.

Due to lack of technical and human resources in the municipalities there is no effective coordination between administrative bodies competent for the environment. Stakeholders are insufficiently involved in the decision making process. The environmental information and monitoring system needs to be further developed. Investments in the sector remain exceptionally low in comparison to the needs.

Nature in the POLOG REGION has representative protected areas with high natural value, but also areas strongly pressured by infrastructure and energy projects. National Park Mavrovo is situated on the territory of the Polog region, as well as the Shara Mountain, which has been proposed for protection within the category national park due to its high natural values.



On the territory of the Polog region there are many natural beauties, which have been proposed for protection, but have been integrated in a larger protected area (e.g. NP Mavrovo or Shara Mountain).



Some of these natural beauties are:

- Brezno tame chestnut reservation,
- River Pena as a natural,
- Crno Lake on Shar Mountain that has high botanical, geomorphologic, zoological and hydrological importance,
- Volkovija botanical importance, (NP Mavrovo)
- Adzina Reka high biological diversity (NP Mavrovo)
- Cave Simka geomorphologic importance (NP Mavrovo)
- Dlaboka River geomorphologic and hydrological importance (NP Mavrovo)
- Strezimir botanical importance (NP Mavrovo)
- Toni Voda paleontological, zoological and botanical importance (NP Mavrovo)
- Trebishka Rupa botanical importance (NP Mavrovo)

- St. John Bigorski dendrological importance (NP Mavrovo)
- Rostushe botanical importance (NP Mavrovo)
- Tri bari –zoological importance (NP Mavrovo)
- Cave Alilica geomorphologic and zoological importance (NP Mavrovo)
- Cave Kalina dupka geomorphologic and zoological importance (NP Mavrovo)

Additionally, on the territory of the Polog region there are natural monuments that are not located on the territory of the (proposed) protected area, such as natural monument Platan – Tetovo, with high dendrological value (*Platanus orientalis*) and is in the vicinity of Arabati Baba – Tekkie in Tetovo, as well as the Rechica natural monument that also has high dendrological importance due to its lindens (*Tilia Sp.*).

A part of these protected areas are also connected to other conventions or protected zones. For example, mountain Korab, the canyon of river Radika and Shar Mountain are important bird areas, and Bukovikj-Strazha, Mavrovo, Shar Mountain and Bistra are important plant areas.

The Polog region with NP Mavrovo and the proposed protection of Shara Mountain have high natural value.

From the viewpoint of geomorphology the Polog region is characterized with rocky abysses, dominant peaks, ravines, waterfalls, cirques, morena sediments, periglacial relief, grass terraces, karst valleys, karst fields, depressions and caves.

Some of the internationally important species that can be found here are *Stenobothrus eurasius macedonicus* (vulnerable species according to the IUCN Red List), *Carabus intricatus* (almost vulnerable species according to the IUCN Red List), *Paracaloptenus caloptenoides* (grasshoppers: Habitat Directive), and the butterflies *Parnassius apollo, Euphydryas aurinia, Euphydryas maturna and Phengaris arion.* There is also a great diversity of birds, fish, plants, insects, amphibians, reptiles and invertebrates on the territory.

Tourism

Tourist development trends are very important for creation of development strategies, plans, programmes and activities. It can be said that the Polog planning region in the Republic of Macedonia is one of the less developed regions for tourism. This can be

seen in the analysis of the volume, dynamics and structure of the number of tourists and overnight stays, and the percentage relationship of these indicators and the total country level numbers. These parameters are provided in the following Tables.

Year	Number of domestic tourists	Index base 2009	Number of foreign tourists	Index base 2009	Number of tourists in the region	Index base 2009	Total number of tourists in RM	Percentage of total number of tourists in the region in the total number of tourists in RM
2009	17500	100	14096	100	31596	100	587770	5.38 %
2010	17350	99.14	14478	102.71	31828	99.27	586241	5.43 %
2011	16196	92.55	12957	91.92	29153	92.27	647568	4.50 %
2012	17098	97.70	12786	90.71	29884	94.58	663633	4.50 %
2013	15491	88.52	15332	108.77	30823	97.55	701794	4.39 %

Table – Volume, dynamics, structure and percentage of tourist visits to the Polog planning region

Source: State Statistical Office

The Table shows both an increase and a decrease in the number of tourists (domestic and foreign). However, with domestic tourists and total number of tourists in 2013 we can see a decrease in comparison to baseline 2009. Thus, the number of domestic tourists is 15,491, with an index of 88.52, which is a negative trend in this regard. Almost the same can be seen in the total number of tourists, but the index is higher regarding domestic tourists in 2013 and is lower in comparison to baseline 2009, i.e. index 97.55 or 30,823 tourists.

The number of foreign tourists in 2011 and 2012 is lower than the previous two years, but is rapidly increasing in 2013. The number is 15,332 tourists with an index of 108.77, which is a positive trend. This increase is due to the initiatives by the Government of RM for subsidizing foreign tourists and the promotional activities abroad.

On the other hand, the percentage of tourists in the region compared to the total number of tourists in the country shows an almost constant decline. An exception to this is 2010 where there is an increase in the percentage participation in relation to the first year analysed, but after that comes a decrease again. The participation of tourists is relatively low by itself with 5.38 % in 2009 and 4.39 % in 2013. This indicates that the share of this region in the number of tourists must be increased in the forthcoming period.

Table 2 – Volume, dynamics, structure and percentage share of overnight stays in th	е
Polog planning region	

Year	Overnight stays by domestic tourists	Index base 2009	Overnight stays by foreign tourists	Index base 2009	Total number of overnight stays in the region	Index base 2009	Total number of overnight stays in RM	Percentage of total number of overnight stays in the region in the total number of overnight stays in RM
2009	36155	100	24991	100	61146	100	2101606	2.91 %
2010	35156	97.24	26299	105.23	61455	100.51	2020217	3.04 %
2011	31661	87.57	23126	92.54	54787	89.60	2173034	2.52 %
2012	32008	88.53	24047	96.22	56055	91.67	2151692	2.61 %
2013	30806	85.21	30846	123.43	61652	100.83	2157175	2.86 %

Source: State Statistical Office

Table 2 shows similarities in volume, structure and percentage share in overnight stays with the same parameters for the number of tourists. Domestic tourists have less overnight stays in the past 5 years, and in 2013 they amount to 30,806, i.e. the index is 85.21 in comparison to baseline 2009. The total number of overnight stays decreases in 2011, but then increases and in 2013 the index is 100.83. More accurately, in spite of the changes (increase and decrease) in the last five years, the amount in 2013 is almost the same as in 2009, which indicates stagnation.

Overnight stays by foreign tourists show increase in the first and last two years of the analysed period. The reduction occurred in 2011 when there were 23,126 overnight stays with an index of 92.54, and in 2013 this number is 30,846 with an index of 123.43. This indicates a positive trend that should be improved in the forthcoming period.

The percentage share of overnight stays in the Polog planning region on the country level shows a decrease in 2011 and an increase in 2013. However, the share in the last

year is lower than the first year analysed and is only 2.86%. It can be concluded that this is too low and that development measures and activities need to be undertaken in order to improve this in the future.

PERCENTAGE SHARE OF NUMBER OF VISITORS AND NUMBER OF OVERNIGHT STAYS IN THE REGIONS OF RM IN 2013

Region	Number of tourists	Participation of the region
	Tourists	
TOTAL	701794	100%
Vardar region	17196	2.45%
East region	20747	2.96%
Southwest region	264826	37.74%
Southeast region	109982	15.67%
Pelagonija region	70312	10.02%
Polog region	30823	4.39%
Northeast region	5584	0.80%
Skopje region	182324	25.98%
	Domestic tourists	
TOTAL	302114	100%
Vardar region	4120	1.36%
East region	13582	4.50%
Southwest region	130020	43.04%
Southeast region	59977	19.85%
Pelagonija region	49635	16.43%
Polog region	15491	5.13%
Northeast region	1856	0.61%
Skopje region	27433	9.08%
	Foreign tourists	
TOTAL	399680	100%
Vardar region	13076	3.27%

Table 3 – Tourist arrivals by statistical regions in 2013

East region	7165	1.79%
Southwest region	134806	33.73%
Southeast region	50005	12.51%
Pelagonija region	20677	5.17%
Polog region	15332	3.84%
Northeast region	3728	0.93%
Skopje region	154891	38.75%

Source: State Statistical Office



Graph 1 – Percentage share of visitors in the region in RM in 2013

Table 3 and Graph 1 show the share of tourists in the different regions in the Republic of Macedonia. The Polog region has a low share of 4.39%. This is too low in comparison to the two most developed tourist regions, Southwest and Skopje planning regions, which have a joint share of over 60%. Trailing behind this region regarding their percentage share are East (2.96%), Vardar (2.45%) and Northeast region (0.80%). It can be concluded that it is necessary to increase this share in the future, not only in the Polog

planning region, but also in the other underdeveloped regions for tourism, i.e. regions with low tourist percentage share.

Region	Number of tourists	Participation of the region %
	Tourists	
TOTAL	2157175	100%
Vardar region	30840	14.33%
East region	42222	19.62%
Southwest region	1152651	535.68%
Southeast region	327279	152.10%
Pelagonija region	162752	75.64%
Polog region	61652	28.65%
Northeast region	8244	3.83%
Skopje region	371535	172.67%
	Domestic tourists	
TOTAL	1275800	100.00%
Vardar region	6194	0.49%
East region	24987	1.96%
Southwest region	763788	59.87%
Southeast region	231870	18.17%
Pelagonija region	112637	8.83%
Polog region	30806	2.41%
Northeast region	2553	0.20%
Skopje region	102965	8.07%
	Foreign tourists	
TOTAL	881375	100.00%
Vardar region	24646	2.80%
East region	17235	1.96%

Table 4 – Overnight stays of tourists, by statistical region in 2013

Southwest region	388863	44.12%
Southeast region	95409	10.83%
Pelagonija region	50115	5.69%
Polog region	30846	3.50%
Northeast region	5691	0.65%
Skopje region	268570	30.47%

Source: State Statistical Office



Graph 2 - Percentage share of overnight stays visitors in the regions of RM in 2013

Table 4 and graph 2 show the percentage share of overnight stays in the different regions in the Republic of Macedonia. This graphical representation also shows similarities with the percentage share of number of visitors. The Southwest region is leading with over 50% (53.43), whereas the Polog region again has a low share of 2.86%. Almost the same are the East (1.96%) and Vardar planning region (1.43%), followed by the Northeast planning region with the lowest share (0.38%). Strategic development guidelines should be aimed at increasing the share of the Polog region in this regard as well.

From the previous indicators regarding the number of visitors and overnight stays in different regions we can analyse the average number of overnight stays of tourists in the Polog planning region. This analysis is related to the latest 5 year period and the results are provided in the following Table.

Year	Average stay of domestic tourists	Average stay of foreign tourists	Average stay of the total number
2009	2.07	1.77	1.94
2010	2.03	1.82	1.93
2011	1.95	1.78	1.88
2012	1.87	1.88	1.86
2013	1.99	2.01	2.00

Table 5 – Average stay of tourists in the Polog planning region by days

Source: State Statistical Office, own calculations

Table 5 shows a decrease in the average stay of domestic tourists in the analysed period. Thus, it is 2.07 days in 2009 and reduces over the next four years and in 2013 it is 1.99.

Opposite to domestic tourists, foreign tourists have an increase in average stays in the analysed period. In spite of the fact that the average stay of foreign tourists in 2009 is 1.77 days, which is lower than domestic tourists, in 2013 it is higher with 2.01.

The average stay of the total number of tourists decreases until 2012, but in 2013 it increases over the level in the first analysed year (2.00).

From the abovementioned we can conclude that the average stay of domestic and foreign tourists is approximately two days on average, which is very low and work must be done in order to increase it.

ACCOMMODATION CAPACITIES IN THE POLOG PLANNING REGION

In addition to the dynamics of tourist visitations and stay of tourists in the Polog planning region, we can follow the development also according to the changes regarding the capacities in this activity. However, the capacities should be compared with other

regions and put into time frames. The following Table provides this overview for the different planning region for the last 5 year period.

	2009	2010	2011	2012	2013		
Number of rooms							
TOTAL	TOTAL 26390 26189 26448 26877 26887						
Vardar region	508	554	589	689	690		
East region	598	533	544	599	620		
Southwest region	16369	16013	16033	16035	16050		
Southeast region	2152	2105	2277	2298	2346		
Pelagonija region	3102	3390	3330	3497	3322		
Polog region	1080	1011	1018	1014	1072		
Northeast region	297	292	302	306	300		
Skopje region	2284	2291	2355	2439	2487		
	Number of t	oeds					
TOTAL	69561	69102	69737	70287	70297		
Vardar region	1360	1496	1701	1829	1819		
East region	1718	1591	1606	1721	1826		
Southwest region	42103	41458	41454	41458	41411		
Southeast region	5750	5724	6069	6088	6298		
Pelagonija region	8999	10229	10165	10310	10001		
Polog region	3182	3057	3058	3059	3153		
Northeast region	805	633	645	653	647		
Skopje region	5644	4914	5039	5169	5142		

Table 6 – Accommodation capacities by statistical region

Source: State Statistical Office



Graph 3 – Accommodation capacities in the Polog planning region by years

From the table and graph (Table 6, Graph 3) we can see a negative trend of reduction of number of rooms and beds in the past 5 year period in the Polog region. Thus, in 2010 we have a sharp decline in the number of rooms and beds, i.e. the number of rooms is 1,011, and the number of beds is 3,057. This is less than the previous year (rooms 1,080, beds 3,082). There is a continuous increase in the following period, but in 2013 the number of rooms and beds is less than the first year analysed (1,072 rooms, 3,153 beds).

Compared to the number of rooms and beds in the Southwest planning region (16,050 rooms, 41.411 beds in 2013), which is the most developed tourism region in the Republic of Macedonia, the Polog planning region shows relatively low tourist infrastructure.

Types of objects	Number of objects	Number of apartments	Number of beds
Total	44	70	3071
Total hotels	19	59	1322
Hotels ****	1	15	154
Hotels ****	3	9	223

Table 7 – Accommodation capacities by type in the Polog planning region for 2010

Hotels ***	7	15	336
Hotels **	5	12	265
Hotels *	3	8	344
Motels	1	/	7
Workers' vacation hotel	16	/	540
Children and youth vacation hotels	2	1	817
Uncategorized objects	6	11	385

Table 7 shows the types of accommodation capacities in the Polog planning region. This is data for 2010, which is the last relevant data from the State Statistical Office of the Republic of Macedonia. It can be seen that the greatest share of units (objects) in the total number are hotels and workers' vacation hotels (19 hotels, 16 vacation hotels), which is an indicator of the market segment they may use. There is a single 5 star hotel, and there are primarily lower category hotels, 3 stars (7 hotels) and 2 stars (5 hotels). Hotels also have the greatest number of apartments, whereas from all the other objects only the uncategorized ones have apartments.

The number of beds in the Polog region is highest in hotels and vacation hotels (for children, youth and workers) with 1,322, or 43% of the total number. Workers', children and youth vacation hotels have almost the exact same number of beds (1,357). Uncategorized objects also hold a relatively high share. In the future activities must be implemented for improving the capacity of all types of objects.

Tourist consumption

Tourist consumption is represented through the turnover of catering facilities. Such an overview is provided for the Republic of Macedonia and the Polog planning region on the following Table.

Table 8 – Tourist turnover in catering facilities in RM and the Polo planning region in thousands of denars

2011		2012		2013	
Boarding house spending	Non-boarding house spending	Boarding house spending	Non-boarding house spending	Boarding house spending	Non-boarding house spending

Tourist turnover in catering facilities in RM, in thousands of denars	7428958	387385	7782534	383730	6389528	398687
Tourist turnover in catering facilities in the Polog planning region, in thousands of denars	527542	23023	522733	24111	336547	21981
Percentage share of tourist turnover in the Polog planning region in the total turnover of RM	7.10%	5.94%	6.72%	6.28%	5.27%	5.51%

Table 8 shows the logical difference between spending in the boarding location and outside of the boarding location. Namely, boarding house spending is higher than non-boarding house spending both in the Republic of Macedonia, and in the Polog region in the last 3 year period. There is an exceptionally negative trend in reduction of both board and non-board spending in the last year. This is the same on the country level, but board spending in the Polog region is 336,547,000 denars, which is a rapid decrease in comparison to 2011 (527,542,000 denars).

Non-board spending in the region increases in 2012, but reduces in 2013 in comparison to the first year analysed. In 2011 it was 23,023,000 denars and in 2013 it is 21,981,000, which is not such a big drop as with board spending.

The percentage share of board spending of the region in the tourist spending in the Republic of Macedonia is continually dropping, and it has reduced from 7.10% in 2011 to 5.27% in 2013. The percentage share of non-board spending increased in 2012 and reduced in 2013 (5.51%) in comparison to the first year analysed (5.94%).

From the aforementioned it can be concluded that the reasons for reduction of tourist spending in the region must be eliminated, as well as the very low share in the total tourist spending in the Republic of Macedonia.

Planning the development in the Polog Planning Region

Vision

The Polog planning region is an economically competitive region with improved quality of life, recognizable natural beauties and modern tourist centres and a region that nurtures different multicultural values.

Mid-term goals

Mid-term goals were defined at the held workshops. The mid-term goals have been defined according to the identified strategic development areas. The results from the sector analyses were taken into account in the defining of these goals. The following mid-term goals have been defined:

- **1.** Support and development of entrepreneurship, competitiveness and innovation in MSMEs
- **2.** Support and development of modern education, human resource development and raising the level of social development
- **3.** Sustainable development of sport-recreation centres in the region by valorisation of natural and cultural values
- **4.** Protection of the environment by controlled utilization and management of natural resources

Defining of priorities

Defining mid-term goals also enables the defining of priorities. The priorities were determined in the held workshops and from the results of the sector analyses.

The mid-term goals are presented in the further text, and in the frames of each mid-term goal priorities are given and the basic measures for each priority.

Mid-term goal 1. Support and development of entrepreneurship, competitiveness and innovation of MSMEs

Local economy in the Polog region is in a post-privatization cycle and follows the trends of national economy. This has resulted in lack of profitability and liquidation of large, former public enterprises or their privatization and a strong rise of newly formed privately owned MSMEs, which have become the main driver of regional/local economy. In order to reduce unemployment it is necessary to create preconditions for motivating the demand for labour, i.e. open new hobs by improving the business climate. In the future special attention should be given to developing entrepreneurship, MSMEs, family businesses, crafts, self-employment and attracting investments. The large number of unemployed persons in the rural areas creates an undisputed need for faster development of these areas and creation of preconditions for higher employment of the available labour force. Supporting the development of main industries in the Polog region (construction and construction materials, furniture industry and foodstuffs industry) will enable the creation of new hobs and improving the living standards of residents.

There are two characteristic trends in the Polog region: the participation of GDP of the region in the total GDP of the Republic of Macedonia is constantly stable (7.2-7.3 %), whereas the participation of investments in fixed assets in GDP is slightly higher than the level in the Republic of Macedonia.

The Polog region has the lowest gross-domestic product per capita in comparison to the national average with an index of 47.3 (2011).

No.	Indicators	Indicator Baseline 2014	Indicator 2019
1	Gross domestic product per capita	47.3 (2011)	= Index MK100
2.	Participation of the region in GDP	7.3 % (2012)	> 8 %

3.	New business entities	7236 (2013)	> 15-20 %
4.	New employment	-	5 000 new jobs
5.	Unemployment reduction	33.6 %	< 25 %

Priorities in achieving this mid-term goal are:

1.1. Improving economic growth and development by supporting domestic and foreign investments

Outputs	Indicators		
Number of new investments	Number of new companies in the free economic zone		
Opening new jobs	Number of new business objects in local economic zones of the municipalities		
Opening new business entities	Foreign direct investments in the economic zone		
	Volume of foreign investments by returnees		

Realizing this priority includes the following basic measure:

1.1.1. Stimulating domestic and attracting foreign investments

Domestic and foreign investments are very important in achieving good and successful economic growth in the region, which contributes to opening new jobs and contributes to raising the living standard of people in the region. Investments from migrants from the Polog region have contributed to the region's overall economic growth. The settlements Poroj and Dzepchishte can be pointed out as a positive example, where there are currently about 40-50 production companies that are an investments of our migrants who have temporarily worked in Western European countries and have decided to invest in their birthplace. The investments themselves are a transfer of knowledge, skills and technologies from Western European countries transformed into successful enterprises in our region.

The programmes and activities for implementation of this measure are:

• Opening an office for contacts and cooperation with the Diaspora

- Preparing and development of benefits for investments of the Diaspora in the region
- Preparing an investment brochure for the region
- Preparation of a catalogue of enterprises

Indicative activities
- Drafting a study on the need for a Diaspora office in the Polog region
- Equipping the Diaspora cooperation office
- Employing staff for work in the office
- Analysing possibilities for offering benefits from the municipalities/region for Diaspora investments

1.1.2 Support and development of regional/local economic zones and the free economic zone

One of the 4 free economic zones in the Republic of Macedonia is located in the Polog region. The free economic zone in Tetovo has an area of 94 hectares. The zone is especially important for the Polog region because it enables the opening of new jobs and transfer of new technologies. In the first stage it is planned to open 25 to 30 industry facilities in it, with a predicted 7,000 new jobs. After the published international tender, Normak investment group was selected to manage the Tetovo economic zone on the principle of public private partnership. The Italian company ITEC, which produces composite materials, is the first investment in the industrial zone and it is expected to soon start constructing a new facility. Its investment is expected to be 5 million Euros and it is expected to open 150 new jobs at start.

It is also very important to conduct analyses and studies for opening local/regional economic zones by the local self-governments themselves, which they will offer to domestic and foreign investors under special conditions that will be attractive for them. The conducted analysis and studies will show which are

the locations meeting the technical standards for establishing a regional/local economic zone.

The programmes and activities for implementation of the measure are:

- Conducting a study for creation/establishing of regional/local economic zones in the Polog region
- Programme of activities for supporting domestic and foreign investments in the economic zones
- Preparation of General Urban Plan (GUP) and Detailed Urban Plan (DUP) for regional/local economic/investment zones

Indicative activities			
- Selection of consultants for drafting of the study for creation/establishing of regional/local economic zones in the Polog region			
- Promoting the results of the study for regional/local economic zones			
- Amending the GUP and DUP for the determined regional/local economic zones			
- Drafting technical documents for the determined economic zones			
- Construction of infrastructure in the determined zones			
- Promotion of the zone to domestic and foreign investors			
- Regular meetings with NorMak and potential investors in the free economic zone and the regional economic			

zones in order to provide support by the council of the Polog planning region in their practical implementation

1.2. Improving competitiveness, innovation and increasing MSMEs productivity

The sector of micro, small and medium enterprises on the national level covers over 98 % of the existing enterprises and is important for economic growth with approximately 68 % GDP share and about two thirds of the employed persons. This also applies to the Polog region where 99.3 % are MSMEs. That is why this is the basic priority of the policies of the Government of RM aimed at increasing the competitiveness and innovation of MSMEs at the national and regional levels. Currently in the Republic of Macedonia through appropriate projects and programmes supported with donor funds, measures and activities have been undertaken for support of entrepreneurship, competitiveness and innovation of MSMEs, with a special emphasis on public-private dialogue. This is with the aim of their faster growth and development, higher investments and increased exports. Currently the measures for supporting enterprises are conducted in two main programmes for support and development of MSMEs implemented by the Ministry of Economy and the Agency for Support of Entrepreneurship - APPRM.

Outputs	Indicators
Number of trainings for Beginners and MSMEs	Number of participants on the trainings
(20)	Number of users in the regional MSMEs fund
Number of organized fairs for MSMEs (2)	Number of conference participants. Number of initiatives
Implemented conferences on entrepreneurship,	arising from the conferences
competitiveness and innovation (5)	Number of contracts concluded for public private
Created regional fund for support of MSMEs	partnership
Number of created business plans and approved	Number of protected brands and products with
by financial institutions	geographic origin
Prepared and printed brochure on sources of	Investments in tourism, number of overnight stays of
financing	domestic and foreign tourists
	Volume of investments from public private partnerships

Realization of this priority includes the following basic measures

1.2.1. Developing offers for non-financial and financial support of MSMEs

The appropriate programme for development of entrepreneurship, competitiveness and innovation for small and medium enterprises is putting into operation the policy and strategy for small and medium enterprises through various forms of non-financial support, in order to create conditions for opening new jobs, reduce unemployment, increase exports and create conditions for raising the living standard.

In everyday life most managers of companies of this type put this type of support in the background and give greater importance to financial support. However,
experiences show that the solution to most challenges the companies are facing is by using non-financial support.

In the everyday operations of MSMEs financial support has primary importance and priority on the list of needed assistance for development and growth of the enterprise. Institutions offering financial support for micro, small and medium enterprises in Macedonia are: commercial banks (EBRD, Pro Credit Bank, Komercijalna Banka, Stopanska Banka, Tutunska Banka, etc.), the Macedonian bank for development promotion, specific credit lines for the SME sector and the private guarantee fund, savings banks (Mozhnosti, FULM and Horizonti), SME commercial fund financed by USAID, etc.

The Macedonian bank for development promotion was established in 1998 and is the only state owned bank, which has a mission to improve access to finances for MSMEs.

The programmes and activities for implementation of the measure are:

- Offering information/advice/services for start-up businesses and MSMEs
- Establishing a regional fund for supporting MSMEs
- Drafting a brochure for current sources of financing for start-up and established business
- Opening a business start-up centre

Indicative activities
 Creating a data base of consultants/institutions that offer information/consulting services for start-up businesses and MSMEs
- Project for subsidizing information/advice/consulting services for start-up business and MSMEs (e.g. Info desk, voucher system, etc.)
- Preparing a study on the regional fund for supporting MSMEs
- Finding the finances to establish the fund
- Selection of consultants for drafting of the brochure for sources of financing
- Printing of the brochure

- Promotion and distribution of the brochure to potential entrepreneurs and existing micro, small and medium enterprises

- Determining an allocation and launch of a start-up centre
- Equipping and staffing of the business start-up centre
- Organizing a business planning competition in SUT and SEEU

1.2.2. Improving the competitiveness and innovation of micro, small and medium enterprises

The candidate membership of the Republic of Macedonia to the European Union will create possibilities for opening new markets for companies in the Polog region. However, in order to penetrate those markets they need to have quality and competitive products and appropriate certificates, i.e. technical standards for production, quality and environment protection. The lack of international production standards is an obstacle when placing on those markets. Therefore, there is a need to develop a continuous programme for supporting the implementation of international standards (ISO, HACCP, CE, etc.), with the aim of having companies in the Polog region and wider implement them, thus becoming more competitive on the market.

The programmes and activities for implementation of the measure are:

- Study for identifying activities/sectors in which the Polog region is competitive
- Developing a programme for supporting competitive activities/sectors in the Polog region
- Promoting the competitive advantages of the region (fairs, promoters, B2B....)
- Preparing a catalogue of MSMEs in the Polog region
- Branding of specific regional products

- Supporting the implementation of international technical standards in MSMEs (ISO, HACCP, CE, HALAL...)
- Supporting and motivating MSMEs exports in the region
- Opening an incubator / cluster / innovation centre (of excellence) / technology park
- Supporting MSMEs in the process of implementing new technologies
- Supporting public private partnership to aid businesses in the region

Indicative activities Projects and activities for supporting competitive activates/sectors in the Polog region Project for development of a cluster for construction and construction materials or for the furniture industry Project for opening an incubator / innovation centre (of excellence) Organizing a regional MSME fair Organizing B2B meetings with companies and the Balkan region Project for supporting initiatives for Public Private Partnership Project for voucher system for supporting MSMEs in the Polog region Project for voucher system for supporting MSMEs in implementing technical standards, innovation, access to finance etc. Conducting a study for determining specific regional products for branding

- Project for support of technology transfer to MSMEs

1.2.3. Improving and developing human resources in accordance with the needs of the labour market

The low education structure of unemployed persons (60 % of the total number of unemployed persons have no qualifications or are low qualified, semi qualified or with lower vocational high school education), i.e. labour force, with little or no professional education indicates that it might be necessary to expand the opportunities for requalification, to finish qualifications, acquire new skills and new knowledge or, in other words, to strengthen the capacities of active job

seekers. On the other hand it is very important to harmonize education programmes with the needs of the labour force and not to create large numbers of professionals with higher education who are not needed in the business environment. In order to meet in continuity the demands and needs of business it is necessary to continuously educate the labour force, to re-qualify it and finish qualification, i.e. to create a functional formal system of informal education (lifelong learning).

In production industrial capacities in the Polog region (with the exception of the textile industry and major supermarket chains) the participation of the female labour force is inadequate, i.e. it is in a very unfavourable position. The number of women entrepreneurs or managers of sectors in production capacities is negligible. Thus, appropriate programmes and project activities need to be developed to support and stimulate female entrepreneurship. These programmes and project should be developed and implemented by the relevant institutions on the local and national levels.

Programmes and measures for implementing the measure are:

- Training of unemployed persons in specific crafts, depending on the needs of the labour market
- Training farmers to better use the funds from subsidies and IPARD
- Opening centres for education and training of adults (Tetovo and Gostivar)
- Training and education to increase the quality of competitive products on the market
- Harmonizing curricula to the needs and demands of the labour market in the Polog region
- Stimulating and supporting young talent
- Programme for support and development of female entrepreneurship

Indicative activities

- Projects for training in insufficiently present vocations on the labour market in the Polog region

- Training of farmers in business planning

- Project for supporting initiatives for opening informal education centres in urban environments (Tetovo and Gostivar)

- Project for promoting the concept of life-long learning

- Seminars for preparation of applications for using IPARD funds

- Project cycle management training

- Trainings for improving exports of MSMEs

- Project for promoting young talent

- Projects and activities to stimulate employment of women and support for self-employment

1.3. Strengthening and development of institutions / organizations for supporting start-up and established businesses

Analysis of the data for support of entrepreneurship by the Center for Development of the Polog Planning Region (CRPPR) and the local governments show that the support is insufficient and inadequate, and quite negligible in certain cases. The existing annual CRPPR and local government budgets are too small for implementing sufficient activities with appropriate capacity to have an impact on the support for entrepreneurship and MSMEs and they do not correspond to the practical needs for development programmes and policies for start-ups and MSMEs. Lacking adequate mid and long term programmes for supporting the development of start-up and established business in the Polog region they are frequently left to individually resolve the problems and needs they are facing.

Currently the responsible institution offer only partial entepreneurship and MSME support services and act as an out of tune orchestra lacking a defined system for support of start-ups and MSMEs in the Polog region. Existing institutions / organizations that offer support services for start-ups and MSMEs and which can

be involved in the creation of a system for supporting MSMEs in the Polog region are: Center for Development of the Polog Planning Region, Enterprise Support Agency ESA Tetovo, Business Development Center at the South East Europe University, Career Center at the Tetovo State University, local economic development offices in the nine municipalicities of the Polog region, regional chambers of commerce (SKSZM, SSKM and SKM) and a network of private consultants in the Polog region.

Creating and establishing cooperation in the aforementioned institutions with the aim of developing an appropriate system to support and develop enterpreneurship, competitiveness and innovation of MSMEs will enable high quality, expedient and relevant programmes for support and development of enterpreneurship and MSMEs, which will provide for continious economic and social growth in the Polog region.

Outputs	Indicators
- Organized coordination meetings for	Number of meetings organized (min 2 meetings per
harmonization of annual action plans of	year)
stakeholders	Number of mutual projects by stakeholders (2-4
- Organizing joint promotional activities for	projects)
supporting start-up and established businesses	Training conducted for stakeholder employees
- Conducted a training needs analysis for	(minimum 1 per year)
stakeholder employees	Number of organized seminars / conferences /
- Conducted capacity building trainings for	workshops (minimum 1 per year)
stakeholder employees	Number of organized meetings with institutions /
- Database of institutions/organizations and	organizations from other regions in RM (minimum 1 per
consultants offering services for start-up and	year)
established businesses	Number of meetings organized with institutions /
	organizations from the Balkan and wider (minimum 1
	per year)
	Number of newly registered consultants in the data
	base of APPRM and the Chamber of consultants of the
	Polog region (over 10 consultants)

Implementation of this priority involves the following basic measures:

1.3.1. Institutional capacity building of CRPPR, centres for supporting businesses, chambers of commerce, LED (local economic development) and improving mutual cooperation

The programmes and activities for implementing the measure are:

- Training needs analysis for the staff of CRPPR, centres for supporting businesses, chambers of commerce and LED offices
- Conducting trainings for capacity building and improving the services of CRPPR, centres for supporting businesses, chambers of commerce and LED offices
- Exchange of experiences with other regional centres in Macedonia and abroad
- Organizing regular meetings to improve stakeholder cooperation
- Harmonizing annual action plans of stakeholders with the aim of regional development
- Development of a consulting network offering services to businesses

Indicative activities
- Establishing a forum for cooperation of institutions/organizations for supporting start-ups and existing businesses
- Conducting trainings arising from the training needs analysis for employees in relevant institutions
- Preparation and conducting of joint annual events (seminars, conferences, workshops, campaigns, etc.)
- Organizing quarterly stakeholder coordination meetings
- Conducting trainings for personal business consultants

Priority 1.4 Sustainable agriculture and rural development

Outputs	Indicators
Studies created (3)	Reduced use of chemical agents

Number of campaigns and information meetings (3)	Increase in the number of irrigation projects and the number of households that irrigate
Number of promotions organized for investments in processing capacities	Reduced urbanization of arable land Investments in capacities for post-harvest
Number of promotional meetings for the new national guarantee fund	activities Utilization of the fund
Projects for facilities needed for the youngest and oldest populations	Built new facilities (kindergartens, retiree clubs)
LAGs (Local Action Groups) established in the region	Organized planning of the development in the region
Capacity building trainings for farmers (10)	Reduced production costs and increased production and placement of products
Promotion events for local products (3)	Increased number of tourist visits to rural
Projects for new and reconstruction of old infrastructure	environments
	Kilometres of constructed local roads
	Constructed old-persons homes and accommodation centres

The implementation of this priority includes the following basic measures:

1.4.1. Regional planning of agriculture activities

The Polog region has many and varied low capacity agricultural activities. These activities have major economic importance. This is not due their total value, but due to the number of rural people engaged in them and the utilization of the natural potential of the region. It was pointed out that farmers have continuous problems with lack of organization and lack of guidelines for longer term planning of their production, and with it the directing of their investments. Huge funds are spent on one-time mass production of crops that are not competitive on the market. This contributes to the constant leaving of arable land and its urbanization.

- Study on the optimal usage of the water potential
- Study on the condition of arable land in the region
- Study on the use of chemical agents in agriculture in the region
- Public campaign for protecting arable land from urbanization (importance and long-term effects)
- Workshops for promotion of competitive crops and bee products
- Initiative for investing in an independent accredited laboratory for product analysis
- Supporting projects for investing in buy-out (processing) centres
- Promotion of the national credit guarantee fund for rural development

1.4.2 Utilization of the potential of rural environments

Rural areas in the region have good potential for fishing and aquaculture, cattle breeding, forest fruits and facilities and conditions for rural tourism. This region still has sufficient population in the mountain and rural villages in need of direction and creation of better living conditions through utilization of natural potential.

Indicative activities

- Establishing LAGs
- Drafting a project for promotion and usage of local food production in rural catering objects
- Preparing a study with a map for dissemination of products growing in wilderness
- Construction of old-peoples' homes and accommodation centres
- Promotional events for fishing and aquaculture
- Creation of a database of existing rural roads and priorities for their reconstruction and the need to construct new roads
- Study on the potential for utilizing alternative energy sources

1.4.3. Support to farmer training and rural tourism activities

This measure includes the activities related to training the local population for modern production and protection of the soil and plants that yield products necessary for rural tourism.

- Preparation of joint events for rural tourism promotion with neighbouring countries
- Preparation of a project called "Milky Way" for promotion of local dairy products and rural tourism
- Project for promotion and registration of traditional production by sheep-pens
- Organizing trainings for tourist managers for the region
- Organizing youth training for agro economic measures
- Trainings for appropriate use of chemical agents
- Trainings for usage of organic waste
- Preparation of promotional materials for rural environments with an emphasis on rural development and tourism
- Construction of leisure infrastructure

Priority 1.5

Contemporary and modern infrastructure

Outputs	Indicators
Length of reconstructed "A" sections and regional roads:	Average annual daily traffic;
Length of reconstructed local roads;	Number of passengers in road traffic; Number of transported passengers in railway
Number of reconstructed railway stations; Length of reconstructed and constructed	traffic; Total goods transported in railway traffic;
local roads;	

The implementation of this priority includes the following basic measures:

Measure 1.5.1

Modernization and development of road infrastructure

The planned development of the Polog planning region will be obstructed if the current level of development and quality of road infrastructure remains. Latest data show that road transport of goods and passengers are the fundamental type of transportation used not only in the Polog region, but also in the Republic of Macedonia. Thus, it is necessary to modernize existing roads of different categories, but also to invest in further development of the road infrastructure. The following will be implemented in this measure:

- Urbanism plans for inhabited and uninhabited locations and spatial planning
- Modernization of the existing "A" road network and construction of new sections
- Modernizing the existing and construction of new regional roads
- Modernizing the existing and construction of new local roads

Increasing the activities and support in preparing technical documents for urbanism plans for inhabited and uninhabited areas and spatial planning Modernization of the existing "A" road network and construction of new sections

- "A2" Section: Tetovo-Gostivar
- "A2" Section: Gostivar-Kichevo; Gostivar- Debar

Modernizing the existing and construction of new regional roads

- R 1203 Tetovo-Jazhince
- R 1206 Tetovo-Pirok-Gostivar
- R 1209 Tetovo-Popova Shapka
- R 2233 Tetovo Brvenica-Chegrane-Gostivar
- R 2234 Prshovce-Jegunovce-Radusha
- R 2235 Mavrovi Anovi- Mavrovo
- R 2242 Zhelino-Shemshovo-Jegunovce

Modernizing the existing and construction of new local roads

Measure 1.5.2

Improving the railroad infrastructure

Although the Polog region is a one of the regions that is well serviced with railroad transport services, the quality of these services is very low. Due to many years without investments in the railroad and the poor service quality the data on number of transported passengers and goods show great reduction in the transport. Railroad transport is one of the fastest, safest and cheapest types of transport, and is also the most environment-friendly. However, the volume of this type of transport in the Polog region is relatively low.

- Reconstruction of the existing railroad infrastructure
- Increasing the safety of railroad-road crossings

Indicative activities

Preparation of technical documents for reconstruction of railroad lines Preparation of technical documents for reconstruction of railroad stations Vertical signals and crossing signals

Measure 1.5.3

Gasification

Using natural gas increases the competitiveness of industry since it is the cheapest energy source.

Developing the gas supply system, i.e. the construction of a primary and secondary distribution network is imperative for the development of the Polog region, especially for the development of industry.

Indicative activities
Preparation of a feasibility study
Preparation of technical documents
Construction of a primary and secondary network

Measure 1.5.4

Urbanism plans for inhabited and uninhabited locations and spatial planning

The spatial development of a region is based on the creation of regional spatial plan. The regional spatial plan will define the spatial allocation of various types of human activity and it will lead to harmonized spatial development and will define the basic elements for optimal spatial allocation of population in the region. In addition to this, it is necessary to create new general and detailed spatial documents. Many of the rural settlements are not covered with spatial documents, which is one of the basic obstacles for the development of these areas.

Indicative activities

Creation of a regional spatial plan;

Updating and creation of General Urbanism Plans (GUP); Updating and creation of Detailed Urbanism Plans (DUP);

Creation of planning documents for rural settlements;

Mid-term goal 2. Support and development of modern education, human resource development and raising the level of social development

The trend of population structure changes according to the education is continuously moving towards reduction of persons with low level of education and increase of persons with high and higher level of education. However, in spite of this trend, the share of persons with low level of education remains dominant in most regions and municipalities. The relatively low increase of population with high and higher education is conditioned, amongst other things, with the intense intellectual immigration.

The Polog region has a highly developed network of education institutions. There are 145 primary schools, 13 high schools and 4 universities in the region. The four universities in the region are: Tetovo State University, South East Europe University, FON and International University in Struga.

The high schools in the Polog region have various profiles: grammar school, medicine, economy, vocational education (mechanical engineering, electrical engineering, chemical-technological, textile and personal services) and music. Currently there are no high schools in the rural municipalities.

Introducing a functioning system of informal education that will in continuity provide an offer of certified trainings for deficit professions for young people and adults on the labor market in the Polog region, i.e. crafts in accordance with the labour market demands. Built formal network of authorized centres of the adult education centre in the Polog region.

Continuous and practical reforms in the education system of high schools to profile tem according to the economy demands instead of training young people for activities they will never apply. Introducing a combined system of education with 2 days theory and 3 days practice in companies. Reducing the number of classes in the grammar school and increasing the concentration in vocational high schools.

Together with the reforms in vocational high schools, preparation of promotional campaigns on the importance and role of vocational high schools in the development of a competitive labour market, economic development of the municipalities and the region and training of staff suited to the demands of the local/regional business community.

What is also very important for the development of the labour market in the region is introducing a practical system for processing educational data in the municipalities Tetovo and Gostivar for vocational high schools, which can be used to monitor the development of the formal and informal education systems in order to be able to conduct analyses and determine directions for development of staff suited to the needs of the labour market in the Polog region.

No.	Indicators	Indicators base year	Indicator 2019
1	Built high schools in rural municipalities (Bogovino and Tearce)	-	2
2.	Construction and reconstruction of primary schools	-	3-5 schools
3.	Social aid users	-	Reduced by 5 %
4.	Coverage of old persons in the centre for old persons in the region	0	100
5.	Number of kindergartens in rural municipalities	0	4
6,	Number of old persons homes (public or PPP)	0	1-2
7	Percentage of used Active employment measures (self- employment)	11.5 %	15 %

Priorities in implementing this mid-term goal are:

2.1. Continuous improvement of conditions and quality of education and human resource development

Outputs	Indicators

- Institutions/centres licensed for informal education (3-5)	- Coverage in high school education (gross/net) at the regional and municipal level
 Trainings conducted for deficit skill on the labour market (1-3 trainings each year) Adopted new departments in the vocational high schools according to the labour market needs Trained mentors/teachers for conducting high- quality practical education (100) Concluded memorandums for cooperation with the municipality, business community and vocational high schools and universities for conducting high quality practical education Opening informal education centres 	 Graduated students per 000 population Lifelong learning coverage of 000 in the region Female population share in high school education (gross/net) in the region and municipalities Unemployment according to the level of education and needs of the labour market Population that has moved away, aged 15 and above, according to level of education Amount of funds invested in education projects for connecting smaller municipalities and rural environments with larger urban environments

Implementation of this priority includes the following basic measure:

2.1.1. Improving the conditions in primary and secondary schools

In order to ensure quality education in primary and secondary schools it is necessary to continuously invest in the education infrastructure. Currently in the urban environments the situation is a little better than the rural environments, where conditions are rather poor for quality education in certain areas. Although a lot has been invested in the last years in the infrastructure of primary and secondary schools this trend must continue until a satisfactory level of equal or almost equal conditions is achieved in urban and rural environments.

The programmes and activities for realization of the measure are:

- Construction and reconstruction of primary and secondary schools in urban and rural environments
- Construction of sports halls and fields for sports-leisure activities in primary schools, secondary schools and higher education

• Equipping of primary and secondary schools with audio visual aids

Indicative activities

- Preparation of projects, technical documents, approvals and project revisions for construction and reconstruction of primary and secondary schools

- Preparation of projects, technical documents, approvals and project revisions for construction sports-leisure facilities

- Equipping classrooms with practical education equipment

2.1.2. Improving the quality of formal and informal education

Conducting regular annual research on the situations, trends and development of micro, small and medium enterprises in the Polog region, the needs of the labour market on one hand and on the other hand introducing a data processing system in the municipal education sectors in urban environments for vocational high schools, which will be used to monitor the development of profiles in the formal and informal education system in order to be able to make analyses at any time and determine directions for development of staff suited to the needs of the labour market in the Polog region.

Besides employment centre, informal education trainings are carried out in the Workers' University in Tetovo and Gostivar. There is a lack of formal training network by the Center for adult education outside of Skopje at the moment, and this gap is filled by the aforementioned institutions in accordance with their capacities and capabilities, but this is not even remotely sufficient to fulfil the demands and needs of the labour market. Opening of formal centres for informal education will contribute to developing and building skills and knowledge appropriate for the needs of the labour market.

The programmes and activities for implementation of this measure are:

• Opening high schools in rural municipalities (Tearce and Bogovino)

- Opening a regional arts high school
- Opening departments in the vocational high schools according to the needs of the labour market
- Modernization and equipping of classrooms/laboratories in primary schools and vocational high schools
- Creation of a functional/practical system for practical education of students (vocational high school, universities) in close cooperation with the municipalities, education and business community
- Establishing a scholarship fund for talented students in cooperation with the business community
- Continuous improvement of knowledge and skills of the existing teaching staff (primary, secondary, higher education)
- Coordination meetings of municipalities in the Polog region for harmonization of departments in high schools with the needs of the labour market
- Support/stimulating local/regional media for broadcasting educational programmes and content
- Programmes for education of persons without education and low qualifications
- Supporting public private partnerships in the development of adult education programmes

Indicative activities

- Creating an analysis on the possibilities for opening high schools in rural municipalities (Tearce and Bogovino)
- Opening the high schools if the analysis shows a need for that and its feasibility

- Conducting annual analysis of the labour market situation, i.e. the needs and demands of the business community for labour and opening such departments in vocational high schools and higher education

- Conducting trainings for requalification and completing qualifications of unemployed persons with no education of low qualifications

- Conducting regular trainings for building the knowledge and skill of the current teaching staff

- Project for broadcasting educational content in local/regional media

- Project for activities for development of PPPs in the creation and implementation of adult education programmes.

2.2. Raising the level of social development

Outputs	Indicators
Number of reconstructed kindergartens in urban environments (3-4) Number of newly built old persons homes (1-2)	Number of social aid users Amount of funds invested in health and social services and cultural events for improving services in the region
Concluding PPPs for kindergartens and old persons homes (1-2)	Number of PPP contracts
Improved infrastructure for persons with physical disabilities and special needs	

2.2.1. Offering better services and conditions for preschool children and old persons

There is an evident lack of service capacities for preschool children and old persons in the Polog region. Preschool children can use services in existing kindergartens, which are located only in the urban areas in Tetovo and Gostivar and there are none in the rural areas (there is an initiative to open them in Bogovino and Jegunovce).

The programmes and activities for implementation of this measure are:

- Construction/opening of kindergartens in rural areas
- Increasing the capacities of existing kindergartens
- Construction of a regional home for old persons

- Stimulating and supporting a public private partnership for opening kindergartens and old persons homes
- Opening retiree clubs in rural municipalities

Indicative activities
- Drafting technical documents for reconstruction and construction of kindergartens and old persons homes
- Projects for stimulating public private partnership in the offer of services for children and old people
- Project for organizing educational and amusement activities for preschool children
- Project for organizing sports and leisure activities for retirees

2.2.2. Offering better living conditions for persons with disabilities

The existing infrastructure in the Polog region, and the country level, for offering better living conditions for persons with disabilities is in a very poor condition, and we can say that it does not even exist regarding certain needs. Investments in any type of infrastructure for this category of our citizens will be a step forward towards their social inclusion and cohesion.

The programmes and activities for implementation of this measure are:

- Constructing appropriate infrastructure for persons with disabilities
- Stimulating the business community to employ persons with disabilities
- Creation of specialized education centres for persons with disabilities
- Establishing a foundation for providing equipment and specific tools for persons with disabilities

Indicative activities

- Programme of activities for stimulating the business community to employ persons with disabilities

- Opening specialized centres for daily stay of persons with disabilities

- Providing finances in the fund for procurements of aids

2.2.3. Improving conditions for developing sports-leisure activities

Although there are many active sports associations and clubs in different sports in the Polog region, the infrastructure is not sufficiently developed and obstructs the professional development of sports persons and does not provide opportunity for developing recreational sports for all citizens in the Polog region. Currently a swimming pool is lacking, as well as a sports hall in the Tetovo region (construction began in 1986 and has still not been completed), sports halls in primary and secondary schools, recreational parks for children and youths and other infrastructure objects for sports and leisure activities. Investing in infrastructure objects for the development of sports-leisure activities will contribute to having healthy youths and instilling a competitive spirit in all fields of life.

The programmes and activities for implementation of this measure are:

- Construction of an Olympic size swimming pool
- Construction/reconstruction of amusement-leisure parks for youths and children
- Construction of a hall for sports/club/recreational/competition activities
- Organizing regional sports and leisure events/competitions

Indicative activities
- Drafting technical documents for the construction of a swimming pool
- Project for reconstruction of the existing not-constructed sports hall in Tetovo
- Construction of trim tracks in ecologically clean environments
- Project for promotion of paragliding
- Project for organizing various sports competitions for high school and university students

- Creating a study for construction of a regional amusement park for children and youths

2.2.4. Improving the conditions and utilization of active employment measures and social welfare

The coverage of unemployed persons and social aid users in active employment measures is modest (approximately 11.5 % on the regional level for the self-employment measure), although they have influence in the support for employment. Increasing the coverage is conditioned by the capacity of institutions in their delivery, and in the allocation of more funds in the delivery of these measures, e.g. additional funds from local self-government, European funds and donor projects. Special attention in these measures should be given to the greater participation of youths and women where the unemployment is highest.

Programmes and activities for implementation of the measure are:

- Conducting information campaigns on the Active employment measures for unemployed persons
- Conducting trainings for unemployed persons (motivational, CV, interviewing, developing individual action plans etc.)
- Stimulating and increasing social responsibility in the business community and local governments

- Conducting trainings for deficit professions (e.g. welders, machinists etc.)
- Conducting trainings for persons with physical disabilities (e.g. IT, foreign languages etc.)
- Creating a regional/municipal fund for implementing active employment measures
- Project for better inclusion of youths up to 29 years and women in active employment measures
- Project for better inclusion of Roma in active employment measures
- Project for conducting trainings in basic business skills and business planning for active job seekers

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Priority	Competent institutions	Sources of financing	Total funds available
2.1. Continuous improvement of conditions and quality of education and human resource development	Ministry of Education and Science, Bureau for Development of Education, Local self- government units, Center for Development of the Polog Region, Universities, vocational high schools, public institutions, ESA Tetovo, NGO	National budget through Ministry of Education and Science and Bureau for Development of Education, EU IPA, municipal budgets, donor projects	
2.2 Raising the level of social development	Ministry of Labour and Social Policy, Center for Development of the Polog Region, Local self- government units, public institutions, NGO	National budget –MTV programme, Ministry of Labour and Social Policy, World Bank, EBRD, municipal budgets, EU IPA, Business community, donors	

Mid-term goal 3. Sustainable development of sport-recreation centres in the region by valorisation of natural and cultural values

The trends of tourism to development are very important when creating development strategies, priorities, measures and projects. It can be said that the Polog planning region is one of the underdeveloped tourism regions in the Republic of Macedonia. The realization of this mid-term goal will lead to conditions to increase the number of tourists and overnight stays. This goal can be achieved if concrete measures are undertaken for sustainable development of the sports-leisure centres, which would be related to improving the tourism and supra structures, strengthening institutional capacities for developing tourism and strengthening the work in the cluster.

No.	Indicators	Indicator base year (2013)	Indicator 2019
1	Total number of tourists in the region	30823	32300
2.	Average number of overnight stays in the region	2.0	2.8
3.	Percentage share of the tourism turnover in the Polog planning region in the total turnover in RM	5.28%	7%
4.	Number of beds	3153	3300

In the future it is expected that the total number of tourists will increase by approximately 5% from the baseline year, which means that their number should be around 32300. This estimate comes from an analysis of the past five year period when from baseline 2009 (31596) there was a slight drop in the number of tourists, which persisted through to the last year. However, because there is an increase in the number of subsidized countries in the Republic of Macedonia and on the world market, tourists are aimed at unknown destination and thus an increase in the number of tourists is expected. The increase in number of tourists will come as a result of implementation of major tourism projects in this region, which is part of the mid-term goals and priorities of this strategy.

Two days stays by tourists were analysed in the given period and they show a trend of stagnation. Together with the increase of the number of tourists we also

expect increase in their average stay by 0.8 days, or approximately 1 day, with a tendency to increase further in the forthcoming period.

There is a significant decrease in the percentage share of tourist spending of the region in comparison to the overall tourist spending in RM in the past three years. However, due to the mid-term goal and priorities for the next period we expect an increase of the percentage share back to the level of the beginning of the analysed period (7%) because this region has rich tourism potential, especially regarding winter sports, natural and biodiversity tourism.

Regarding the dynamics of increase of accommodation capacities in the Polog planning region we expect similar tendencies in the future as well. This leads to the conclusion that the increase of the number of tourists in the region in the future will to an increase in the number of accommodation capacities to 3300 beds.

Priorities in implementing this mid-term goal are:

3.1. Developing infrastructure and ca	atering – accommodation capacities

Outputs	Indicators
Number of adopted spatial – architecture plans Number of parking lots	Number of parking spaces operational Length of road connections and locations connected
Number of mountain climbing trails (foot and bicycle)	National restaurants in operation
Reconstructed asphalt roads Number of national restaurants Number of accommodation capacities (by type) Reconstruction of the cable car Tetovo – Shar Mountain Reconstruction of the sports centre "Popova Shapka" Promotional activities for investing in hotel facilities	Categorized and operational accommodation capacities Amount of investment funds in renewed infrastructure Published brochure "Invest Polog"

Implementation of this priority includes the following measures:

3.1.1. Improving the tourism infrastructure and suprastructure

Several types of resources are required to implement local projects for promoting the tourism infrastructure. These resources can be financial, material and human. It is necessary to harmonize and synchronize them so that they can function efficiently, i.e. they need to be adequately allocated to be put into operation. Implementation of the measure will be aimed at:

- Marking and construction of mountain trails (foot and bicycle)
- Development of winter tourism centres in Popova Shapka and Mavrovo
- Providing utility technical conditions in tourist locations

Indicative activities
Reconstruction of the cable car Tetovo – Shar Mountain
Construction of parking lots on locations in Popova Shapka and Mavrovo
marking a system of trails, sports and recreation region
Reconstruction of the road Staro Selo – Ljuboten
Providing utility – technical conditions for tourists

3.1.2 Stimulating public private partnerships

The different stakeholders must cooperate in order to implement the projects. There are numerous models for implementation of the projects and their aims and priorities. One important model is public private partnership, joining public and private entities.

The measure will be implemented by:

- Promotion of benefits from public private partnerships
- Information and trainings for making public private partnership contracts



3.1.3 Stimulating investments in hotels, restaurants and drafting applications for foreign funds

The Polog region is a traditional immigration region. Tetovo and Gostivar are the largest urban and most important business centres in this region, with significant capacity of attracting investments from the Diaspora. Thus, the potential for investments in tourism is evident and is a significant impetus for development of the region in this regard. Additionally, R. Macedonia has access to many programmes (IPA, IPARD) that are suitable for providing investments in the private and public sectors. Using the funds from such international funds will enable the linking of this region with other European regions.

The measure will be implemented by:

- Presentation of the benefits from investing in tourism
- Promotion of the region on tourism fairs
- Promotion of benefits for attracting investments from the Diaspora

Indicative activities
Training of municipal departments for applying to projects
Stimulating investments in national restaurants
Investments in camps and vacation locations
Investments in the construction, design and equipping of private accommodation capacities
Brochure "Invest Polog"

3.1.4 Drafting spatial plans for tourism

There is a general problem with spatial plans for all objects in the Republic of Macedonia. In the last years efforts have been made to legalize illegal construction, which influences the capacities of touristic locations.

The measure will be implemented by:

- Drafting of new plans in accordance with the changes due to legalized objects
- Conducting and appropriate categorization of tourism objects

Indicative activities

Drafting of urban - architecture plans, documents Plans and programmes for legalized and illegal objects Categorization of touristic objects Preparing proposals for regulating the level of protection of natural and cultural values Drafting documents on the capacities of the space surrounding the touristic location

3.2 Institutional capacity building for development of tourism (LED, tourism offices)

Outputs	Indicators
Number of tourism trainings conducted	Allocated budget for promotion of tourism
Number of built info points and centres	Number of training participants and certificates issued
Set road signs directing to tourist attractions	Info points put into operation
Tourism workshops held	Number of road signs for tourist attractions
Created promotional materials	Number of printed brochures, flyers
Established tourism departments	Functional web-page
Web-site of the region created	
Participation on sports-tourism fairs	
Introduced statistical data on tourism	
Trainings held for electronic reservations	

Implementation of this priority includes the following measures:

3.2.1 Appointing persons responsible for tourism in municipal administration

The new tourism legislation provides that every municipality in the Republic of Macedonia which is ready for tourism development should employ one person who will work exclusively on tourism development. This measure will increase the possibilities for developing tourism in the Polog planning region.

The measure will be implemented by:

- Employing persons responsible for tourism in the municipalities
- Inter municipal cooperation between LED sectors/departments
- Training of persons responsible for developing tourism who work in municipalities



3.2.2 Allocation of funds for tourism promotion

Any location that wants to develop tourism must have adequate funds for promotion and it must adequately implement them. Each location should create its set, or combination, of media and promotion means in order to create a recognizable tourism brand and increase tourist visitations.

This measure will be realized by:

- Selection of tourism values
- Selection of best promotion means and methods for defined market segments

Indicative activities
Promotion of potentials and networking
Organizing tourism promotion days
Web-site of the region (creation and updating)
Brochure, flyers on tourism in the Polog region
Presentations at sports tourism fairs

3.2.3 Functioning of info points and centres and improving tourism signalization

Spatial movement of tourists requires the existence of clear and multilingual destination signalization. Natural and cultural tourist attractions would remain unknown if their exact location is unknown. It is desirable that the tourism locations themselves have certain general information and information for visitors

and tourists, presented on information boards. Info points can be built next to main roads or in locations with greater frequency of people. The information should relate to natural and cultural tourism potentials, their location, working hours, directions, possibilities for additional and adjoining tourist activities, and the mutual connection of different tourism entities.

This measure will be realized by:

- Plan for construction and equipping of info points and info centres
- Putting up of information boards
- Signalization plan for important tourist attractions on main roads
- Selection of attractions to be recreated in visualization software

Indicative activities
Drafting a plan and making info points and centres in the region
Equipping the system of info points
Integrating software in the info points with information on all tourist attractions in the whole region
Preparing applications (programmes) for presentation of the most significant cultural attractions in the region
Improving existing and construction of new connections and signalization
Mapping and determining priorities of tourist resource that will be signalized, as well as determining locations for setting up the information boards

3.2.4 Improving the communication with state institutions for recording tourists

The public and private sectors should harmonize their individual policies and activities if they want to improve tourism development. Mutual cooperation of stakeholders at a given location is imperative for almost all aspects of tourism development. Communication problems may cause difficulties in developing tourism.

This measure will be realized by:

- Training activities for employees in state institutions and the business sector (workshops)
- Employing persons with tourism background in state institutions

• Connecting data gathering institutions with all tourism stakeholders



3.3 Strengthening the work of the cluster and activation of tourism resources

Outputs	Indicators
Number of conducted trainings for stakeholders to join a cluster	Percentage of membership in the tourism cluster
Number of mapped tourism resources Number of specialized tourist guides Trainings conducted for municipal employees and the business sector on new tourism trends	Number of certificates issued from tourism trainings Activated tourism products
Trainings conducted for the local population on tourism benefits	

Implementation of this priority includes the following measures:

3.3.1 Motivating stakeholders to work in the cluster

The tourist region, as a separate tourist destination, should offer products and programmes, which are a combination from all service providers in the region. This can be achieved by forming a tourism cluster. The offer would become specialized and the quality of products and programmes would increase. This measure will be realized by:

• Presentation of the work of the cluster

• Selection of interested new cluster members



3.3.2 Creating joint tourism programmes (products)

Contemporary tourists need a wider selection of tourism offers. The Polog region has various tourism values, most of which have not been sufficiently developed. Consequently, tourist programmes need to be created, connecting all tourism service providers in the different municipalities in the region. This measure will be realized by:

- Organizing meeting between tourist agencies and other providers of tourism services in the whole region
- Selecting best proposals for tourism programmes and promotion
- Developing tourist arrangements that include selective types of tourism and cultural tourism



3.3.3 Creating a continuous education system

Contemporary changes in tourism dictate adaptation of all segments in the tourist offers. Thus, human resources, as the most important element of the tourist offer,

should be continuously trained and improved. This will be realized by implementing different models and systems for continuous education of newly employed and current employees. This measure will be implemented by:

- Opening informal education centres
- Using domestic and foreign experiences

Indicative activities
Education and specialization of guides
Tourism training for the local population
Trainings for municipal employees and the business community
Opening informal education centres
Implementing lifelong learning programmes

Mid-term goal 4 Protection of the environment by controlled utilization and management of natural resources

The Polog region has great natural treasures present in many representative protected areas with high natural, geomorphologic, scientific and biological value. Natural resources in the Polog region provide economic growth for the population by using natural resources, tourism development etc. Sustainable development is a priority for the Polog region, but it must aim at sustainable using of natural resources and their appropriate management, as well as the reduction of pollution that comes as a result of industry, transport and the heating season. Realization of sustainable development goals and development of any branch of economy is impossible without protection of the environment. This goal will be implemented by measures for waste management, waste water management, climate change and reseeding of polluted soil and protection of biodiversity.

No.	Indicators	Indicator base year	Indicator 2019
1	Percentage of collected municipal waste	56.6%	71 %
2.	Percentage of processed waters	0.44%	15%

	released in industry and mining		
3.	Population coverage with processing stations for municipal waste water	1%	10%
4.	Number of protected areas in the Polog planning region	-	+1

This strategic goal will be implemented through two priorities:

Priority 4.1

Regional approach to the waste management process

Outputs	Indicators
Number of trainings (5);	Functional regional public enterprise;
Number of functions performed by the regional enterprise;	Construction started of a regional landfill (1 or 2), depending on the feasibility study;
Number of staff trained (30);	
Equipment procured;	Implementation started of regional waste management;
Prepared study (1);	Percentage of waste recycled;
Prepared application (1);	Percentage of waste collected;
Prepared technical documents (1):	Quantities of organic waste that are landfilled;
Number of analyses and research:	Coverage of the population with a waste collection system;
Number of activities implemented for introducing selection and	Number of transfer stations;
recycling of waste;	Number of installed urban equipment for waste selection.
Number of projects implemented.	

Implementation of this priority includes the following basic measure:

Measure 4.1.1

Establishing regional waste management and improving existing waste management

Waste management in the Polog planning region today is the responsibility of each individual municipality. In every municipality the local public utility enterprise collects and landfills municipal solid waste. The general condition in this sector is poor due to the large number of illegal dumps and non-functioning of transfer stations, which leads to large quantities of waste piling up in urban areas. Joint landfilling of waste in the Rusino landfill was agreed in the last two years, but the problems persist.

It is a priority to introduce regional waste management in order to reduce costs for waste management, its recycling and waste minimization. The process for introducing regional solid waste management is complex and in the programme period it will be focused on:

- Construction of a regional landfill in compliance with all environmental legislation
- Construction of waste transfer stations
- Remedying of existing landfills
- Urban waste selection equipment
- Education of individual waste collectors and social protection
- Campaign for promotion and raising public awareness on waste management
- Inter-municipal enterprise for waste management

Indicative activities		
Education of human resources;		
Institutional capacity building;		
Procurement of equipment;		
Association and education of individual waste collectors;		
Setting up of containers for waste separation;		
Preparation of a feasibility study;		
Preparation of attached studies (socio-economic analysis, study on possibilities for payment, etc.);		
Preparation of technical documents on the regional landfill and landfills for inert waste;		
Tender procedures for implementation;		
Activities for reducing waste generation;		
Activities for remedying existing landfills;		
Activities for introducing waste selection and recycling;		
Expanding waste collection services in rural environments;		
Campaign for reducing waste and conscientious use of resources;		
Activities for separation of hazardous from municipal waste (batteries);		

Priority 4.2

Protection and promotion of natural resources

Protection and promotion of natural resources is a priority for every society. Managing natural resources is a complex process that demands huge finances and economical management.

Outputs	Indicators	
Number of realized projects;	Number of measuring stations by type (water, air, soil)	
Number of installed measuring stations;	Number of annual measurements	
Prepared regional plan for reducing pollution of	Analysis of data from measuring locations	
the different mediums;	Number of protected areas in the Polog planning region;	
Measures undertaken according to data analysis;	Surface area of newly declared protected zones;	
Number of implemented projects;	Number of different species of game;	
Forested areas;	Number of species of fish;	
Areas with indigenous tree species;	Surface area of forests	
Number of implemented projects;	Emissions of hazardous gases;	
Prepared regional plan on climate change – green agenda:	Number of species of fish;	
Number of prepared projects;	Number of indigenous or rare species of plants and animals	
Number of projects implemented with other sources of financing:	Population percentage covered with a water-supply system	
Number of prepared public campaigns;	Monthly measurements for soil, air and water pollution	
Number of projects implemented for reducing technical losses;	Measures implemented under the plan for watershed management;	
Length of newly constructed water-supply system;	Quality of potable water;	
Prepared water management plan;	Improved water resource monitoring system	
Trainings and workshops held;	Population coverage with processing plants;	
Number of declared protected zones;	Concentrations of BOD5 in rivers (- 20%);	
Number of measuring locations;	Monthly reports on the operational plan of industries for integrated prevention and control of pollution	
Number of processing plants;	Categories of water resources	
Length of the newly constructed waste water system;	Concentration of SOx, NOx, and PM10 particles in the air	

4.2.1. Monitoring the environmental situation in the region

Data is needed to predict any appropriate environmental protection measures that will have an impact on reducing environmental pollution. Macedonia is faced with a general lack of data on the condition of the mediums, due to the poor analytical data of the relevant services. Providing analytical data on pollution in the region will simplify the process of planning measures and activities for environmental protection.

Indicative activities	
Increasing the number of monitoring stations	
Procurement of regional mobile monitoring stations	
Preparing an analysis on pollution sources and degree of pollution	
Preparing a strategy for fighting pollution	

4.2.2. Protection of biological diversity

Modernization of society has had the greatest impact on the environment and has the greatest influence on the environmental changes that influence biodiversity and functioning of ecosystems. Data indicate the reduction in biodiversity, i.e. a constant reduction in the number and prevalence of certain species in certain locations or in general.

It is necessary to take urgent regional measures to protect biodiversity, adequately manage natural resources and reduce the impact of climate change on nature.



4.2.3. Protection of water, air and soil from pollution

Water resources are a priority for every region. In the last 20 years water resources are under constant pressure from pollution that primarily comes from
industry, illegal landfills and urban environments. At the same time, a large part of the region is faced with problems in potable water supply, especially during the summer period. The region is rich in important water resources and they should be protected from any pollution. A part of the pollution of water resources includes the pollution of soil from industrial emissions and using of large concentrations of pesticides. Urban transport, industrial capacities and households have the greatest impact on air pollution.

It is imperative for the Polog region, which is characterized by huge water resources, to conduct measures for reducing the pollution of those water resources. Continuous monitoring of all mediums (water, air and soil) is a primary activity of the region in identifying polluters and undertaking measures for pollution prevention.

Indicative activities
Creation of a regional registry of polluters
Mobile regional stations
Increasing urban greenery
Construction of urban and regional bicycle roads
Project documents for a new water-supply system
Construction of storm drains and fecal sewers
Conducting EE measures for public buildings
Gasification of industry and public buildings
Strengthening municipal capacities for protection of the environment
EE in street lighting
Preparation of project documents for waste water management
Organizing public campaigns
Projects for reducing technical losses of water
Prevention of illegal connections
Construction of filtering stations
Construction of water supply systems in rural populated areas

Measure 4.2.4 Climate change Climate change in the last few years are visible to man and are an apparent threat to everyday life, economy, health, agriculture, infrastructure, nature etc. Predictions for Macedonia include reduction of agriculture yields, disappearance of certain species and serious impact on the economy.

Erosion is a serious factor influencing the environment, and it occurs due to climate change, barren areas, illegal cutting of trees and lack of spatial planning.

Thus, it is necessary to take measures for climate change mitigation (part of which are covered in the energy priority) and measures for adaptation to climate change.

Indicative activities
Education of the population on effects of climate change;
Finding financial measures for fighting climate change;
Projects for reduction of emissions of hazardous gasses;
Organizing public campaigns and educational workshops;
Pilot projects;
Preparation of a regional plan for adapting to climate change;
Water course regulation;
Flood protection measures;
Using energy efficiency measures;
Planting new forests;
Preparing a regional strategy for managing climate change;
Protection from erosion through identification of potential landslide areas;
Implementing measures for reducing erosion effects by foresting and other measures.