





# The Small Grants Program of the Global Environment Facility in the Republic of Belarus The Institution "The Centre for Environmental Solutions"

# REPORT

on the assessment of the basic state of the seven districts of the South-Eastern part of the Mogilev region before the launch on this territory of the Sixth operational period of the Small Grants Program of the Global Environment Facility in the Republic of Belarus

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### Introduction

The Small Grants Program of the Global Environment Facility in the Republic of Belarus (hereinafter GEF SGP) since the end of the year 2015 has started the preparations for implementation of the new Sixth operational period by its traditional priorities. First of all, it is the support of local projects in the sphere of combating climate change as the most pressing challenge today, as well as projects on combating land degradation, protection of international watercourses and of biodiversity, and reducing of environmental pollution threats by persistent organic pollutants. The recency of the Sixth period of the GEF SGP activities is the usage of a landscape approach, it is when local problems of the territory are considered in a comprehensive and integrated manner (ecology, social sphere and economy), taking into account the external global challenges, all these provide the best resistance to the results of the measures taken.

In consultation with the Government of the Republic of Belarus a priority territory for the GEF SGP activities for the Sixth operating period, the South-Eeast of Mogilev region was defined. The region includes the Krichev, Klimovichi, Kostyukovichi, Krasnopolie, Slavgorod, Khotimsk and Cherikov districts (Figure 1.).



Figure 1. South-Eastern districts of the Mogilev region according to the Decree of the President of the Republic of Belarus No. 235 from June 8, 2015







South-East region as a coherent area is formalized by the Decree of the President of the Republic of Belarus N 235 from June 8, 2015 "On the social and economic development of the South-Eastern region of Mogilev region", and taking into account the particularities of the region, the Mogilev Region Council of Deputies has adopted by its decision No.12-1 The Program of social and economic development of the South-Eastern region of Mogilev region for the period up to the year 2020. This Program defines the goals, objectives, indicators, and priority areas of social and economic development of the region's districts, which are economically underdeveloped, affected by the accident at the Chernobyl NPP, occupying the peripheral location in the East of the Republic of Belarus and bordering with the Smolensk and Bryansk regions of the Russian Federation. The Program effect is aimed at achieving sustained economic growth and effective social development of the South-Eastern region, taking into account the most rational use of labor potential, local natural resources and raw materials, and competitive advantages available.

It is important to note that even over a decade ago the South-East region stood out as the Krichev social and ecological and economic district of the Mogilev region, as the most problematic region in the social and economic, demographic and environmental aspects.

Thus, the South-East region is uniquely difficult area for a long time already, both in terms of the economy, demography and quality of human resources, as well as the environment and use of natural resources.

Thanks to the support of the GEF SGP, its experience and resources, the pointwise development capacity building of the region is possible . To understand how to effectively use the resources of GEF SGP, the assessment of the basic state of environment and socio-economic potential of the South-East of the Mogilev region was undertaken. In addition, the assessment was aimed at identification the needs in establishing new mechanisms or potential building of the existing structures to improve the sustainability of the South-Eastern Region of Mogilev region. In this regard, during the assessment of the basic state of the seven districts of the South-Eastern part of the Mogilev region, special attention was given to:

- description of the basic situation of the South-East Region development with the description of indicators that allow to monitor the efficiency of the follow-up actions of the GEF SGP;
- description of the needs and initiatives of the South-Eastern Region and their consistency with the priorities of the country and the GEF SGP;
- identification of the globally important endangered ecosystems of the South-Eastern region;
- identification of the need to establish or improve the institutional and financial mechanisms for increasing the effectiveness of the GEF SGP projects to achieve changes at the local level as well as at the national and global levels;
- opportunities to increase the potential of local communities as a key factor of environmental sustainability of the planned actions.

The assessment of the basic state was carried out by Belarusian experts of the International Foundation for Rural Development and the Institution "The Centre for Environmental Solutions" in cooperation with districts' authorities, representatives of the Committees of the Economy and Natural Resources of the Mogilev Regional Executive Committee and districts' executive committees, as well as with involvement of the initiative people from various organizations and companies of the districts of the South-Eastern Region. To assess the basic state of the Region, the experts visited the districts and summarized the documents of the Planned development of common areas.







# 1. On social and economic development of the South-Eastern Region of the Mogilev region.

#### 1.1. Population.

The south-eastern region (hereinafter the SER) occupies 28.3 % of the territory of Mogilev region with the population of about 130 thousand people, or 12.2 % of the region's population. At the beginning of the year 2015 the urban population of SER amounted to 87.1 thousand people (66.5%), rural – to 43.9 thousand people (33.5%). The population of the region decreased by 16.8%, or 26.4 thousand people, during the period between the years 2005 and 2015. The greatest demographic potential reduction is registered in Khotimsk and Krasnopolye districts where the population was reduced by 23.1 and 20.6% respectively during the period between the years 2005 and 2014. Krasnopolye district ranked 117th by population among the 118 districts of Belarus at the beginning of 2015.

The main reason for the depopulation of the region is migration outflow, which amounted to 57.7% in the years 2005-2014, while the contribution of the negative natural population growth totalled 42.3%. The highest natural population decrease was noted in Khotimsk district (minus 5.5 per mil).

The SER labour market reveals a steady tendency to reduce the number of the employed due to the reduction of the working-age population and migration outflows. Only in the years 2010-2014 the average annual number of the SER population employed in the economy fell by 5.9%, with the largest decline observed in Khotimsk (12.4%), Krasnopolye (11.9%), Cherikov (9.7%) and Slavgorod (9.6%) districts. At the beginning of 2015 the share of the working-age population amounted to 55.4% (58.2% for Mogilev region as a whole). Rapid aging and loss of labour capacity have been registered in rural areas: the share of the population above the working age reached 31.2%, whereas the share of the working-age population decreased to 51.3%.

Most SER districts suffer from the shortage of qualified personnel, especially in agriculture and medicine, and the situation is getting worse and worse. Having completed the compulsory appointment period, young professionals hardly ever stay in the region.

The main reasons for the labour force outflow are as follows: low income and limited access to the modern social services, as well as the radiation safety factor.

#### 1.2. Economy. Industry.

The SER provides 8.3% of the revenue by selling its products, goods, work and services, covering 9.7% of the region's industrial output, which indicates low efficiency of available resource management.

The SER industry is accumulated in Klimovichi, Krichev and Kostyukovichi districts, which account for 97.1% of industrial production, 98.2% of goods and services exports, and 65.3% of average annual employment in the south-eastern region.

The main economic activity in the SER is non-metallic mineral production: cement, concrete products and structures, paving slabs, asphalt and concrete paving. The "Belarusian Cement Plant plc", "Krichevcementnoshifer plc" and "Krichev concrete products plant plc" are located here.

Another important economic activity in the SER is food production (meat and meat foods, dairy products, bread and bakery, alcoholic beverages and soft drinks). The leading enterprises in this area are "Klimovichi Distillery plc", "Klimovichi Bakery plc", branches of "*Domochay* Bakery and Confectionery company plc" with an extensive regional network.







Rubber and plastic products are produced by "Belshina plc", a structural division of the "Manufacture of rubber products, the city of Krichev" company.

Textile and clothing industry is developed by consumer service centres. Wood processing and recycling is performed by the "Cherikov Woodworking Plant" unitary public utility production subsidiary and the "Krasnopolye Forestry", "Kostyukovichi Forestry", "Cherikov Forestry" and "Klimovichi Forestry" public forestries, as well as small private sawmills.

The SER industrial system development is encumbered by the debt load on the GDP generating cement production enterprises after the massive capacity expansion in the years 2012 and 2013 due to external, including foreign, loans and the high cost of cement production caused by high energy consumption and energy prices.

The SER is also lagging far behind the other areas of Mogilev region due to the following reasons:

- the low level of economy diversification: the share of industry is about 60% (cement and alcoholic beverages), agriculture – 12.4%;
- the low labour productivity. The average SER revenue per employee for commercial organizations amounted to BYR 386.2 million in 2014, which is by 19.5% below the average regional level and by 42.3% below the national average;
- zero foreign direct investment attraction activity. There was about \$4 million attracted altogether in the period between the years 2011 and 2014, or 1.6% of the entire investment in Mogilev region;
- weak export potential: 5.8 times below the national level and 2.8 times below the regional level. Cement is by far the main merchandise exported;
- The salary, which amounts to 88.8% of the regional and 78.1% of the national level. The lowest salaries are in Khotimsk, Krasnopolye and Slavgorod districts.

#### 1.3. Transport system

The SER transport system includes two railway lines, 10 national and a network of local motorways. The total length of the motorways is 3011.1 kilometres, of which paved ones take 1755.9 km. The share of paved roads in the SER is lower than that in the region and in the country as a whole. The density of paved roads per 1.000 sq. km of the area is 213.2 km for the SER, which is below the regional and national levels in all districts, except Krichev. Krichev railway junction is the largest one in the south-eastern region. Klimovichi, Kostyukovichi and Krichev districts are crossed by the Orsha - Unecha and Mogilev - Roslavl railway lines.

The SER transport frame is formed by the Orsha – Kostyukovichi and Mogilev - Krichev railways, as well as the P-43 Roslavl - Krichev - Cherikov - Slavgorod - Bobruisk highway. The Unecha - Polotsk branch of the "Druzhba" oil pipeline passes through Klimovichi and Kostyukovichi districts.

#### 1.4. Mineral resources.

The most promising SER mining industries are located in Krichev, Klimovichi, Cherikov and Khotimsk districts. Up to 80% of raw cement balance reserves (chalk, marl, clay and loam soil) of the Republic of Belarus are accumulated here. They include "Komunarskiy" deposit of raw cement (balance reserves of more than 262 million tons), "Kamenka" deposit (163.8 million tons) and "Sozh" deposit (109 million tons). The first two are being developed by the "Belarusian Cement Plant plc" and "Krichevcementnoshifer plc". The "Sozh" deposit in Cherikov district is reserved for the future development.

There is a "Sand Mountain" deposit of writing chalk developed in Klimovichi region (6.3 mln tons). The reserve deposits are "Reut" (Klimovichi district, 10.8 million tons) and "Mouth" (Cherikov district, about 23 million tons.).







The deposits of zeolite-containing silicites (tripoli, flask) in Klimovichi, Kostyukovichi and Khotimsk districts are potentially productive. The largest "Steel" deposit with the reserves of more than 30 mln tons has favorable geotechnical conditions for open-pit mining and is prepared for industrial development.

The "Sand Mountain" mortar sand and sand-gravel materials deposit (Klimovichi district, more than 11 million m<sup>3</sup>) is being developed for silicate production. There are large deposits of construction materials (sand and sand-gravel mixture) in Kostyukovichi, Krasnopolye, Krichev, Cherikov and Khotimsk districts. The "Lobkovichskoe" phosphorite deposit (246 million tons) in Krichev district is not developed due to the high water content and depth of the phosphate layer.

New mineral water deposits have been found in Cherikov district.

#### 1.5. Agriculture.

As of January 1, 2014 the SER area totalled 823.4 thousand hectares (or 28.3% of the Mogilev region's area), which included 354.6 thousand hectares (12.2%) of agricultural land, of which arable lands are 205.5 thousand hectares (7.1%), meadows – 137.8 thousand hectares (4.7%), the improved ones amounting to 68.3 thousand hectares, under permanent crops – 2.9 hectares (0.1%).

The Chernobyl nuclear power plant disaster influenced the quality of land resources badly. 41.3 thousand hectares of land were withdrawn from agricultural use in the south-eastern region because of the radionuclide contamination.

Occupying 25.6% of the total productive land area and accumulating 19.6% of the rural population, in 2014 the SER agricultural enterprises sold only 8.9% of livestock and poultry as compared to the total volume of Mogilev region, produced 15.8% of milk, collected 20.1% of grains and legumes, 8.8% of potatoes, 9.6% of vegetables.

The agriculture development in SER is impeded by the low fertility of the agricultural land (the average soil fertility class is 26 points), low production profitability (1.8-5.0%), numerous accounts payable, the amount of which is 7-8 times higher than that of the receivables. The negative trends in agriculture aggravate the migration outflow.

Overcoming the negative trends in agriculture requires complex organizational, economic and technical measures to improve the fertility of the land and the diversification of agricultural production, as well as the need to develop non-agricultural activities (tourism, crafts, small and medium-sized production facilities).

There is no private agricultural production in SER, with, on average, 3 to 8 farmers in every district. Their production does not affect the total production of the industry. The unique activity is sheep breeding, started by the farmers of Khotimsk district, with the total number of sheep being about 2,000 heads.

#### 1.6. Forestry.

As of 01.01.2014, the SER woodland area reached 351.3 thousand hectares, with 245.3 thousand hectares, or 70% of the SER woodland area contaminated with radioactive nuclides as a result of the Chernobyl disaster and limited in its use.

The total timber reserves in the region amount to 43.9 million m<sup>3</sup>, with the ripe and overripe forest crop being 11.3 million m<sup>3</sup>. The annual volume of timber totalled 574.8 thousand m<sup>3</sup>. 252 thousand m<sup>3</sup> has been delivered on the domestic commercial timber market, with 117 thousand m<sup>3</sup> exported. The forestry activities in the SER are carried out by the "Klimovichi Forestry", "Krasnopolskiy Forestry", "Cherikov Forestry" and "Kostyukovichi Forestry" public forestries.

Wood production entails lots of waste, the use of which is difficult in the national economy due to the lack of equipment for processing waste into chips or pellets and their subsequent use. Local boilers are







not designed to use chips as a fuel. Mobile wood chip production facilities and a boiler running on wood chips can be seen in Klimovichi district only.

The main impediments to the effective forestry development are the inadequate supply of modern equipment for forest reproduction and forestation, poor road infrastructure, forest management restrictions related to the contamination of the SER territory with radioactive nuclides. We need to increase the forest productivity and improve their breed and age structure.

Given the poor economic condition of many SER areas, public forestries are often the only economically developing enterprises bearing the increased social burden. They support schools, hospitals, agricultural enterprises, forestry machinery and workers beautify the area. It diverts resources from its own development.

Hunting is performed on the SER territory by three forest hunting ranges that belong to the Ministry of Forestry of the Republic of Belarus and 6 hunting farms that belong to the "Belarusian Society of Hunters and Fishermen" national state and public association (hereinafter BSHF). Three hunting facilities and three hunting houses work to promote hunting and eco-tourism.

Due to its vast forests and floodplains, SER plays an important part in biodiversity conservation. 11 Red Book species of wild animals inhabit the region, with badger, black stork, roller, crane, copperhead, etc. among them. The biodiversity of the region is preserved by the local nature reserves and national and local natural monuments (Fig. 2 and Table. 1). Research is being carried out to set up a new reserve on the

territory of Slavgorod district. The reserves have a high tourism potential, but this activity is poorly developed and lacks infrastructure.

One of the main threats to SER biodiversity is the spread of invasive plant species, such as Sosnowski hogweed and Canadian maple. There were over a hundred of their habitats in the SER on 01.01.2015 and the number is increasing every year.

The urgent issue for sparsely populated rural areas of the SER is bushes overgrowing in the depopulated villages



and fallow lands, as well as wolves attacking people due to the favourable habitats created in the evacuation area.

#### 1.7. Water resources

The SER territory is rich in rivers, creeks, lakes and springs. Over 100 small rivers flowing into the region's main river Sozh that belongs to the Dnieper River basin start from here. 38 and 33 rivers and creeks flow from Klimovichi and Krasnopolye districts, with between 13 and 20 flowing from the other districts. The water regime of the rivers in the region is closely linked to their recharge peculiarities. The rivers are lowland rivers, recharged mainly from the snow and ground waters, which accounts for 4/5 of the annual runoff.







The rivers are getting shallower and shallower every year. The Sozh has not overflowed over the past three years. The floodplain and fishery biocenoses are getting impoverished. The reasons for river shallowing include global warming, lack of snow, land reclamation and artificial lowering of the groundwater by the developing mining industry in the SER. These are also the reasons referred to as factors that worsen the quality and dewater mine wells. In the years 2014-2015 there were villages in each district with no central water supply system and drinking water brought specially to the place. This problem is getting worse, in spite of the fact that more than 70% of the rural population have centralized drinking water supply systems. An urgent issue for all the districts is the poor quality of drinking water because of the high iron content.







#### The list of Specially Protected Natural Areas of South-East of the Mogilev region as of 01.10.2015.

#	Name	Туре	District	Created by, number and date of the decision, conversion	area size, ha
			onal significance - None		
			local significance		
1.	Zhuravel	Hydrological	Slavgorod	27.122006 №28-45	528
2.			Slavgorod	27.122006 №28-45	103
3.	Lobnya	Hydrological	Khotim	30.10.02г. № 10-58	200
4.	Erashovschina	Biological	Khotim	30.10.02г. № 10-58	1 560
5.	Kostel	Landscape	Krasnopolie	28.06.96г. № 9-20	4,3
6.	Cherikovskiy	Landscape	Cherikov, Krasnopolie	from November 6, 2014 № 26-16/22-26	42 845,44
	TOTAL quantity reserves of the local s	ignificance:	6	area	45 240,74
		Natural monuments	of national significance	· · ·	
1.	"Golubaya krinitza" (Blue spring)	hydrological	Slavgorod	31.07.06г. №48	0,0314
2.	"Veprinskaya dubrava" (Veprinskaya Oak grove)	botanical	Cherikov	05.05.07r. №41	15
3.	"Mezhlednikovie otlozheniya " (Black drifts)	geological	Cherikov	31.07.06r. №48	0,15
	Total quantity of natura	monuments of the national significance:	3		15,18
		Natural monument	s of local significance:		
1.	The garden "Ivanov Khutor" (Ivanov's farm)	Botanical	Krasnopolie	22.05.02г. № 5-33	8
2.	Selishche (Settlement)	Botanical	Krasnopolie	22.05.02г. № 5-15	1,6
3.	Age-old Larch	Botanical	Slavgorod	27.12.02г. № 15-39	0,02
4.	Reference pine plantation	Botanical	Khotim	29.10.2003 №10-41	15
5.	Reference pine plantation	Botanical	Khotim	29.10.2003 №10-41	17
6.	Reference pine plantation	Botanical	Khotim	29.10.2003 №10-41	24,2
7.	Reference pine plantation	Botanical	Khotim	29.10.2003 №10-41	30
8.	Reference pine plantation	Botanical	Khotim	29.10.2003 №10-41	24,4
9.	Bokhan Birch grove	Botanical	Khotim	30.10.02г. № 10-58	7,5
10.	Zaitsev Ugol	Botanical	Khotim	30.10.02г. № 10-58	93,8
11.	Bokhan Birch grove	Botanical	Khotim	30.10.02г. № 10-58	7,5
12.	Zaitsev Ugol	Botanical	Khotim	30.10.02г. № 10-58	93,8
13.	Ivanovskaya Roscha (grove)	Botanical	Khotim	12.08.2011r. № 8-7	15
14.	Freestanding oak	Botanical	Khotim	12.08.2011г. № 8-8	0,0006
15.	Freestanding larch	Botanical	Khotim	от 30.10.2002 № 10-58	0,0004
16.	Two freestanding oaks	Botanical	Khotim	от 28.09.1994 № 9-12	0,0006
17.	" The Giant Oak"	Botanical	Cherikov	09.12.03r. № 15-5	0,02
18.	The Spring in Studenetz	Hydrological	Kostyukovichi	04.12.02 г. № 12-8	0,01
19.	The Spring in Tupichino	Hydrological	Kostyukovichi	04.12.02 г. № 12-8	0,02
20.	"Krynitza" (The Spring)	Hydrological	Krasnopolie	22.05.02r. № 5-16	0,0004
21.	Svyatoe Ozero (The Holy Lake)	Hydrological	Khotim	30.10.02г. № 10-58	10







#	Name	Туре	District	Created by, number and date of the decision, conversion	area size, ha
22.	Svyataya Krinitza (The Holy Spring)	Hydrological	Khotim	30.10.02г. № 10-58	0,0004
23.	"Ezerskaya" Spring	Hydrological	Cherikov	09.12.03r. № 15-5	0,02
24.	"Berzgun" Spring	Hydrological	Cherikov	09.12.03r. № 15-5	0,02
25.	"Gorki" Spring	Hydrological	Cherikov	09.12.03r. № 15-5	0,01
		TOTAL:			
	Total quantity of natural monuments	of local significance	25		
Total quantity SP	NA, taking into account the national significan	ce	34		







There are a lot of natural and artificial reservoirs in the SER, more than a dozen of which in each district are rentable or already rented for fish farming. However, costly workflow often prevents pond fishing.

The career lakes in Klimovichi, Krichev and Kostyukovichi are of particular concern for the SER due to their unique character and steep undeveloped banks. The reservoirs are used as a recreation area by the locals despite the fact that any swimming is prohibited there.

About a dozen of fresh groundwater deposits are actively exploited on the SER territory. The highest household water consumption per capita in the republic is in Mogilev region and amounts to 134 litres a day. Over the last 5 years (2006-2011) the volume of its extraction on the field was reduced by 21.5 million m<sup>3</sup>, or by 16.8%. The use of groundwater for household needs decreased by 32.8 million m<sup>3</sup>, the use for production needs – by 1.0 million m<sup>3</sup>. A similar trend was registered in SER.

The water consumption in the industry and agriculture decreased by implementing recycling and reconsecutive water supply, introducing individual technological water consumption and wastewater standards.

The discharge of main pollutants into water bodies decreased in Mogilev region in 2014 by 18% or 13.6 million m<sup>3</sup> as compared to the year 2010. This was due to the improved treatment of the wastewater discharged into the environment as well as the construction of new and reconstruction of the existing wastewater treatment plants. Thus, there were 26 sewage treatment plants under construction and reconstruction in Mogilev region in 2014, including Cherikov. However, the problem of treatment facilities deterioration, especially in rural areas, is quite urgent.

There are water protection measures taken annually to improve the ecology of small rivers. These measures are included into projects for protecting water areas and coastal strips, as well as the improvement of water bodies, shore protection, river bed cleaning and restoration, water cleaning from silt sediment and vegetation. However, there is still the issue of contaminated creeks and rivers, illegal dumps, especially in public recreation places, as well as livestock farm dumps.

The SER floodplains are heavily overgrown with trees and shrubs. This is especially true about the flooded parts of the floodplain, the Sozh river and its major tributaries. This decreases spawning areas and depletes fisheries, as well as reduces nesting birds' habitats because the floodplains are not mowed for fodder, which previously destroyed the overgrown shrubbery. However, the importance of the floodplain for fodder was noted in Slavgorod district, especially during the dry year of 2015, which allowed not only to provide cattle with feed, but also sell herbal feed outside the area.

#### 1.8. Energy and Heat Supply.

The electricity power plant capacity in Mogilev region amounts to 680 MW, including 18 MW of wind power, photovoltaic and biogas plants and 4.1 MW of hydropower plant. There are 50 facilities using solar collectors for water heating, including 20 dairy farms. The share of electricity generation plants in SER is about 10%.

Since SER has a low industrial capacity, there are plans to build solar parks (Slavgorod, Cherikov, Klimovichi, Kostyukovichi). The wind turbines could be in Kostyukovichi and Khotimsk districts where the average annual wind speed reaches 4.14 m / s, and the wind energy potential amounts to 217.05 W /  $m^2$ . At the same time the average annual wind speed is not subject to significant interannual fluctuations

RUE "Mogilevenergo", "Klimovichi electrical networks" branch supplies the SER with electricity. The productive supply of 0.4-10 kW electric power amounted to 430.3 million KW, or 14.9% of the productive







electricity supplied by RUE "Mogilevenergo" in 2013, while 52.4% of the electricity consumed came from Krichev district.

The SER towns of regional jurisdiction, urban and large rural settlements have centralized heating system and receive thermal energy generated in large boilers. The whole SER area is served by RUE "Mogilevenergo", "Klimovichi electrical networks" branch, which has one boiler plant with the capacity of 132 Gcal per hour, located in Kostyukovichi. Some boilers are on the balance of district utility services. Large boilers operate on gas or natural gas fuel combined with local fuels. Small boilers operate on local fuels.

The SER consumers are supplied with natural and liquefied gas by the "Mogilevoblgaz" Production Republican Unitary Enterprise. Natural gas is supplied to all district centers, towns of regional jurisdiction, urban and 39 rural settlements (5.6% of the total), including 27 agricultural settlements (54% of their SER number).

#### 1.9. Housing and social infrastructure.

Housing per capita in the SER matches the average data for Mogilev region, but lacks the necessary amenities. Housing is in demand only in the towns of regional jurisdiction and urban settlements.

At the beginning of 2015 there were 102 pre-school institutions with the total of 5.4 thousand children in the SER. The institutional coverage of children averaged 67.5%, which was 93.2% of the average regional level. This indicator ranges from 55.6% in Cherikov district to 72.2% in Krichev district. In the towns of Krichev and Kostyukovichi there is a lack of pre-school institutions.

There are 101 full-time educational institutions in the SER with the total of 15.8 thousand students. Given the economic unreasonableness of educational institutions with a small number of students, some schools close, while others are reorganized and consolidated by taking in students from nearby settlements. In general there are 2,430 teaching staff members working in secondary education institutions. The number of students per teacher ranges from 5.2 (Khotimsk district) to 7.8 people (Krichev district), with the average regional indicator of 9 people.

There are no higher education or research institutions institutes on the territory of the SER. Secondary vocational education is provided by agrarian colleges (Klimovichi and Krichev), vocational and technical education – by 5 vocational schools that train builders, mechanical engineers for agricultural machinery and equipment, tractor-drivers for the agricultural sector, milking machine operators, vegetable growers, foresters, social workers, shop-assistants etc. The shortage of vocational and technical students is increasing every year.

Many educational institutions and their hostels are located in buildings that require capital repairs and (or) maintenance, they are often equipped with high energy-consuming facilities.

The SER healthcare system includes 7 central district hospitals, 7 district centres of hygiene and epidemiology. There are community health centres, dental clinics, 5 nursing hospitals, more than 15 general practice clinics and 70 paramedic midwife stations based on CDHs. The hospital in Kostyukovichi has been enlarged, while the human and logistical capacity of hospitals in other districts is weakening.

#### 1.10. Waste.

Municipal solid waste disposal in the SER is carried out on 6 landfills and 119 mini-sites. The waste disposal sites annually receive about 65-70 thousand tons of waste products and over 67 thousand tons of MSW. MSW sorting stations are available in Kostiukovichi, Krichev and Klimovichi only, and there is a plan to build another station in Khotimsk supported by the EU project.

The major recyclers in Mogilev region are:

waste paper – the "Spartak Paper factory", Shklov;







- plastic waste "RePlas-M" foreign private unitary manufacturing and commercial enterprise, Mogilev, "Secondary Resources Processing Plant" JLLC, Mogilev, MGKU "Spetsavtopredprivatie" Mogilev;
- waste glass Belarusian-Austrian CJSC " Elizovo Glassworks", Osipovichi district;
- used tires "Danoton, LLC" Mogilev, "Krichevcementnoshifer plc" Krichev, and "Belarusian Cement Plant plc" Kostyukovichi.

#### 1.11. Air quality.

Mogilev region, including the south-eastern region, displays a tendency to reduce pollutant emissions from stationary sources into the air. If in 1990 there were almost 230.0 thousand tons of harmful substances thrown into the atmosphere, in 2009 there were already 54, and in 2014 – 50 thousand tons. By the number of pollutant emissions discharged into the atmosphere in the Republic of Belarus, Mogilev region ranks fifth in the six regions. The per capita amount of pollutants emitted into the atmosphere from stationary sources in 2014 amounted to 47 kilos (in 1990 – 180 kilos). The amount of pollutants emitted per 1 sq. km of the territory totalled 1,722 kilos, which is less than for most areas and for the whole country. The volumes of pollutant emissions in Krasnopolye, Slavgorod, Cherikov and Khotimsk areas are minimal. The industrial centres of the region – Kostyukovichi, Klimovichi and Krichev – contribute most to air pollution.

To curb the growth of emissions from stationary sources companies receive emission permits that set requirements to reduce emissions through construction, reconstruction and modernization of gas clearing units. 94.9% of pollutants from stationary sources in Mogilev region are captured and neutralized by gas clearing units (approximately 90% for the whole country). In 2014 the enterprises of the region, including "Belarusian Cement Plant plc", introduced 18 air protection measures, which led to the reduction of pollutant emissions into the atmosphere by more than 800 tons.

To reduce pollutant emissions into the air from stationary sources in the region, special attention will be paid to the efficient use of energy resources and increasing the use of local, alternative and renewable energy sources such as biomass, wind, solar and water.

The largest volumes of pollutant emissions into the air are registered in Krichev and Kostyukovichi districts ("Krichevcementnoshifer plc" and "Belarusian Cement Plant plc"). Thus, in 2013 in Krichev district this figure amounted to 6.8 thousand tons (14.1% of the total emissions in the territory of Mogilev region), in Kostyukovichi district – to 5.5 thousand tons (11.4%).



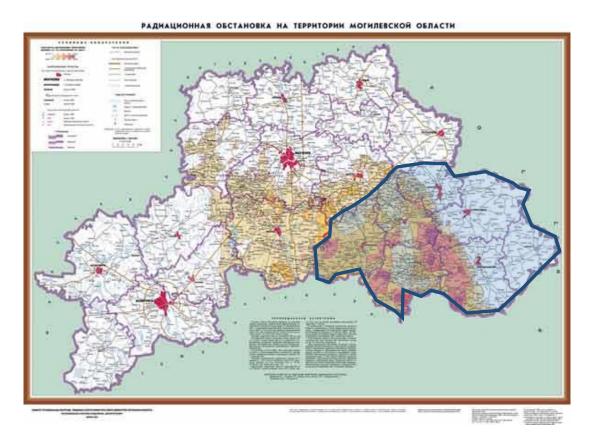




# 2. The radiation situation in the South-East of Mogilev region<sup>1</sup>

This section is picked out as a separate part, since it is fundamental and unfavourable for the sustainable development of the SER Regions of the Mogilev region.

The map of the radiation situation on the territory of the Mogilev region is presented in Figure 3.



Source: http://rad.org.by/public/Mog\_obl\_radiac.jpg

All districts of the SER were suffered from radioactive contamination except Hotimsk district (ric. 4). The most contaminated of them are districts of: Kostiukovichi, Krasnopolye, Slavgorod, Cherikov.

The post-accident characteristic of the districts (according to the BORBIC data of 01.01.2009) \*

Indicators	Krasnopolie	Cherikov	Slavgorod	Krichev	Kostyukovichi	Klimovichi	Total of the South- East Region
Number of settlements in the area of radioactive							
contamination	86	84	77	40	29	5	321
Contaminated lands, ha, from them							-
agricultural	28 959	27 360	44 545	1 070	19 668	3 146	124 748
forest lands	50 159	45 400	48 800	16 000	28 614	11 200	200 173
Withdrawn from agricultural							
usage, ha	9 931	9 670	9 622	1 821	7 722	703	39 469

<sup>&</sup>lt;sup>1</sup> The information below is based on data provided by the Division on the issues of mitigation of the consequences of the Chernobyl NPP disaster of the Mogilev Region Executive Committee and according to the BORBIC <u>http://www.rbic.by/index.php?option=com\_content&view=article&id=256</u>.







Settlements resettled	61	27	24	-	41	16	169
Persons resettled	10 086	6 130	4 602	169	9 243	1 437	31 667

\* in 2015-2016 the data were refined and for further usage the shown data needs to be verified. Here these data are shown to indicate trends.

By the Decree of the Council of Ministers of the Republic of Belarus from January 11, 2016 # 9 a new list of settlements and facilities that are in the zones of radioactive contamination was revised and adopted, the list is reviewed every 5 years.

In the zone of the subsequent resettlement - the territory with a density of soil contamination by radionuclides of cesium-137 from 555 to 1480 kBq/m2 (from 15 to 40 Cl/km2) or strontium-90 from 74 to 111 kBq/m2 (from 2 to 3 Cl/km2), where the average annual effective dose of irradiation of the population may exceed 5 mSv (above the level of the natural and technogenic background) - only 3 human settlements are recorded: Kostiukovichi - Belaya Dubrova - Samotevichi village, Krasnopolie - Mhinichi - Borovaya villange and Cherikov - Veprin - Monastyryok.

In the area entitled to resettlement is the territory with the density of soil contamination by radionuclides of cesium-137 from 185 to 555 kBq/m2 (from 5 to 15 Cl/km2) or strontium-90 from 18.5 to 74 kBq/m2 (0.5 to 2 Cl/km2), where the average annual effective dose of irradiation of the population may exceed 1 mSv (above the level of the natural and technogenic background) - more than 90 human settlements are recorded.

In the area of residence with periodic radiation monitoring is the territory with the density of soil contamination by radionuclides of cesium-137 from 37 to 185 kBq/m2 (from 1 to 5 Cl/km2) or strontium-90 from 5.55 to 18.5 kBq/m2 (from 0.15 to 0.5 Cl/km2), where the average annual effective dose of irradiation of the population may not exceed 1 mSv (above the level of the natural and technogenic background).

Population decline from 1990 to 2015 in the region is 15.5% when republican average is 7.0%. The population decline intensity in the districts affected is much higher. In Kostyukovichi district the decline was from 33.8 ths of people up to 24.2 ths of people (minus 28.4%), in Krasnopolie - from 15.8 ths of people up to 10.1 ths of people (minus 36.4%), in Slavgorod - from 19.6 ths of people up to 13.5 ths of people (minus 31.0%), in Cherikov - from 19.4 up to 13.9 ths of people (minus 28.5%).

After the Chernobyl NPP accident in connection with radioactive contamination in the region, about 40 thousands of hectares of agricultural lands were withdrawn from agricultural use. Starting from 1998 the measures on transferring the land from the category of alienation into economic use (including limited use) are taking place. So, in Klimovichi district in 1998 631.5 ha of land were returned into agricultural use, in Kostyukovichi districts in 1998, 2006, 2011, 2014 - 1 435 ha of land, in Krasnopolie district in 1998 - 413.5 ha, in Cherikov in 2006 - 67 hectares of land.

A major factor forming the internal radiation dose of human due to food, is at the moment the consumption of forest products: mushrooms, berries and bush meat.

In areas with varying density of soil contamination with caesium-137 there are 425.9 ths hectares of forests, or 35.19% of the total area of forest fund association (1200.2 ths ha), including - from 1 to 5 Cl/km2 - 278.6 ths ha (23.02%), from 5 to 15 Cl/km2 - 97.3 ths ha (8.04%), from 15 to 40 Cl/km2 - 47.6 ths ha (3.93%), - 40 and more Cl/km2 - 2.4 ths ha (0.20%). The most contaminated forest areas are in Krasnopolie, Cherikov, Klimovichi, and Kostyukovichi district forestries (Figure 4)<sup>2</sup>.

<sup>&</sup>lt;sup>2</sup> Below there is information about the radioactive contamination in a district forestry on the basis of the following source <u>http://www.plho.mogilev.by/rad.php?catid=0</u>







## 3. Analysis of development planning in the SER districts.

This section is important in assessing the basic state of the SER districts, because it shows the districts' priorities based on local documents. Hereby the main focus is made not on the plans for social and economic development of the districts, but on local plans on energy efficiency and accomplishment, since they are in greater degree concretise the districts' needs in the areas which are closest to the priorities of the GEF SGP activities.

A special attention is paid to the analysis of the document "The Sustainable Development Strategy of the Mogilev Region before year 2025" as an innovative instrument for long-term development planning, including districts of South-Eastern Region of Mogilev region.

#### 3.1. On the short-term of the districts on energy efficiency and accomplishment

According to the legislation of the Republic of Belarus annually in each district the short-term plans or action programs on energy saving and accomplishment of the district are developed, approved and implemented. Activities on these plans mainly correspond to such priorities of GEF SGP as "Combating climate change" and "Land degradation".

Action plans on energy saving in each district are aimed at saving energy and fuel resources (FER), consumed by the district, at increase the share of renewable energy sources (RES) and local types of fuel (LTF) in the amount of boiler and furnace fuels (BFF), allowing to reduce the cost of oil products and gas, rising in price.

At the beginning of the year 2016 the SER districts are striving to save FER from 0.430 to 1.6 ths of ton of reference fuel, to bring the share of RES in the BFF till 50-60, mostly with the help of LTF, expanding the share of LTF in BFF district's utilities. For this purpose in the plans of the SER districts on the energy saving the following is stipulated:

- 1. Modernization of equipment with low efficiency to more energy-efficient;
- 2. Replacement of gas boilers to boilers running on LTF or mixed type;
- 3. The introduction of control systems on thermal energy and electricity consumption;
- 4. Use of solar water heating installations;
- 5. Building of solar power plants;
- 6. Automation of artesian wells operation in villages;
- 7. Replacement of heating networks;
- 8. Windows replacement , thermal modernization of building social institutions;
- 9. Replacement of mercury lamps for street lighting to energy efficient.

As a rule the financing of these measures relies on local sources, a part of the resource is allocated by the Development Bank, and the other part - from other sources (for example, international projects). In 2015 the European Union will allocate about 1 million Euro for the purposes of resource and energy saving in the Mogilev region, a part of the projects will be implemented in Slavgorod and Khotimsk districts.

During 2016 it is expected to achieve the economic benefit with a payback period of 2 to 5 years on average, the share of use of LTF and RES in FER will be from 55 to 75%.

Action plans on accomplishment in the districts related to the GEF SGP's priorities include:

1. Comprehensive accomplishment and maintenance (operating) of settlements areas:







- arrangement of sports areas and playgrounds on domestic territories;
- arrangement of lawns and landscaping the territories (planting trees, bushes);
- demolition of old buildings;
- repair of public toilets;
- repair of the street and road network.
- 2. Maintaining in proper condition the territory of agricultural sites:
- installation (repair) of fences on cattle farms and complexes;
- repair (renovation) of manure storage facilities and wastewaters manure containing;
- arrangement (fencing, installation of information signs) of sites for temporary storage of scrap metal and tires;
- demolition of unsuitable premises of agricultural organizations, recultivation and engaging into economic circulation the lands liberated after demolition of that premises;
- plowing and involving into economic circulation of idle lands (except liberated after the demolition of unsuitable and unexploited premises (their components).
- 3. Regulation of distribution and amounts of Sosnovskys cow parsnip and other invasive species.
- 4. Maintaining in proper condition of areas along highways and railways, that means waste disposal, dead fallen wood removal, as well as deadwood and trees which are in poor condition in right-of-way areas along the highways.
- 5. Maintaining in a proper condition the forest fund territories:
- disposal of wastes on the territory of the forest fund, including illegal landfills.
- maintaining in a proper condition and improvement of sites and recreation areas in the forest fund.
- 6. Arrangement (repair) of existing sites and recreation areas on the water bodies
- 7. Maintaining in proper sanitary and technical condition, recultivation of mini landfill sites and adjacent territories
- recultivation of decommissioned landfill sites (mini-landfill sites);
- arrangement and improvement of the landfill sites and mini-landfills, preparation and compaction of wastes, cleaning the surrounding areas and access roads, considering the season, and in accordance with the schedules of operation of these facilities;;
- repair of container yards and containers.
- 8. Maintaining in proper condition and arrangement of places for collection and storage of specific wastes, such as waste oils.
- 9. Involvement into the economic activities of unoccupied lands (up to 10 ha for a district).
- 10. Carrying out the informational and educational activities among the adult population (the Spring Water Center and the Energy Efficiency and Resource Saving Center, Slavgorod).
- 11. Construction of a barrier-free environment for people with disabilities, Cherikov.
- 12. Implementation of the recultivation of abandoned quarries.







The executors of these plans are the local authorities and organizations. The plans are implemented mainly by local sources, often by holding Community Cleanup Days (Subbotniki).







#### 3.2. On strategic approaches to Mogilev region development up to the year 2025.

The document that sets the focus of long-term SER development is "Sustainable Development Strategy of Mogilev region up to the year 2025" is under discussion and pending approval. This document does not separate the SER, nor does it set special conditions for the SER development as it is done by Presidential Decree No 235. Thus, the strategic planning principles and approaches to Mogilev region development determine the SER strategic development as well.

Mogilev region sustainable development strategy states that the sustainable development of the region will be based on recognizing the importance of biological diversity and natural ecosystems, conservation and restoration. Natural resources are not just a product or resource necessary for economic growth. Natural potential is a system that maintains conditions necessary for comfortable existence of people both as biologic species and social beings.

As the ecological impact of Mogilev region residents exceeds the amount acceptable to restore the original ecosystem properties, to reduce this impact the sustainable development strategy for Mogilev region provides for measures in the following areas:

- $\Rightarrow$  production industry:
- reducing energy and resource consumption of the industries;
- increasing the efficiency of resource recycling and opportunities for recycling due to deeper processing of solid domestic and industrial waste;
- transition to a "Zero waste" concept;
- closing the resource cycles;
- reducing the environmental impact of the industry

 $\Rightarrow$  energy production and consumption

- the regional energy system area must be stable, to provide sufficient energy services to consumers and ensure uninterrupted availability of energy resources.
- generation, transportation and use of energy shall cause the minimum possible damage to people's health and the environment.

Power supply is seen as a key area in the sustainable development strategy, so the focus is made on the following events:

- reducing in the proportion of energy from the burning of oil, gas, coal and peat.
- increasing the proportion of alternative renewable energy sources.
- studying the energy potential of the existing reservoirs in the region.
- exploring the potential of biogas production in the cattle-breeding facilities and the possibility of growing energy agricultural and woody crops.
- energy savings in all areas of people's life and activity.
- carrying out energy audits of production facilities and housing.
- implementing modern energy-saving technologies employing the advanced procedures, energy management and control into production and daily life.
- economic and moral stimulation of the economy, first and foremost concerning the use of alternative energy sources in households.
- teaching energy efficiency within the educational process.
- the environment and people's health shall not be damaged by energy production, distribution and consumption, as well as in the course of formation, processing and disposal of waste produced in these processes.







Strategically Mogilev region should produce energy securing the maximum possible share of local renewable energy sources in the fuel balance taking into account the economic feasibility and minimum environmental impact

- $\Rightarrow$  Waste management involves
- introducing a waste management system, based on the following principles:
  - reducing all types of waste by increasing the efficiency of extraction of secondary material resources.
  - getting rid of waste incineration technologies, including the control over illegal incineration of municipal solid waste, crop residues, etc.
- Two-level waste separation:
  - initial waste separation by the population (containers for separate waste collection, teaching separation principles, raising awareness).
  - additional industrial waste separation to extract secondary material resources.
- obtaining biogas, compost, landfill gas from biodegradable waste.
- dumping unrecyclable waste or temporary storage and processing of other waste avoiding damage to the environment or the negative impact on human health.
- abolishing the waste amount planning system (getting rid of plan targets) and transition to the waste amount forecasting system of the amount of waste.
- raising waste reduction awareness involving the media, information meetings and training sessions.
- involving schools in promoting the idea of sustainable waste management through the organization of educational process where students can learn the basics of housekeeping with these principles.

The declared sustainable development principles for Mogilev region correspond to the GEF SGP priorities, thus facilitating their interaction, first and foremost, allocating the GEF SGP resources to energy efficiency pilot project implementation.

Summing up this section, it should be noted that planning procedures in these areas require modifying the existing approaches to enhance their development sustainability. It is important that territorial planning documents regarded environmental issues as a priority, but not something dealt with post factum, i.e., the activities should be planned so as not to overcome the negative effects of human activity but promote a more proactive approach to ecosystem protection.

In view of this, an important aspect would be to improve the planning expertise of local administration professionals based on sustainable development principles and the UN objectives in the area of sustainable development, signed by the Republic of Belarus as well.







### 4. Institutional capacity of SER to implement GEF SGP Projects.

According to the SGP rules, GEF may support the local communities employing non-profit organizations and practising self-government. The first group includes funds, non-governmental organisations, nonstate institutions and non-profit consumer cooperatives. The second group includes village councils that serve as basic administrative units for the areas.

There are between five and ten village councils in each SER district, each of which has the potential to become the GEF SGP funds administrator. However, only three village councils have foreign grant project administration or international technical assistance project administration experience. All of them are in Slavgorod district. Thus, the SER village councils' potential to manage GEF SGP funds is rather low and needs increasing.

There is only one local non-profit organisation in all SER districts with the experience in project work, namely "Vozrozhdenie-Agro" ("Revival-Agro") local rural development fund located in Slavgorod. The fund has successfully implemented over 15 small and large projects since the year 2007 financed by GEF SGP, UNDP, EU, OSCE and other international and foreign organisations. Krasnopolye district attempts to set up its own local non-profit organisation. As non-profit organisations require a complex development process to set up, we do not expect a large number of them to appear in the nearest future.

There are public interest groups in Slavgorod, Krasnopolye and Kostyukovichi districts that take active part in teaching ecology to adults and schoolchildren in the form of informal and additional classes respectively. The Centre for energy efficiency and cost-effective use of resources based in School No. 1 in Slavgorod has been conducting workshops for adults for two years already. A new approach to teaching and private enterprise support for adults is being developed by Pochepy middle school in Krasnopolye district (the "Green garden economy for rural development" centre). The grammar school in Kostyukovichi is a unique educational resource centre for sustainable development. This potential should be strengthened and multiplied.

It should be noted that project activities in SER districts used to be performed in close cooperation with regional, national and foreign non-profit organisations. About 10 organisations from Minsk and Mogilev are estimated to be involved in project activities in SER districts. Their potential could be used for GEF SGP purposes in case of the local project management organisations deficiency.

The UNDP and EU offices in the Republic of Belarus perform certain direct activities in SER together with the district executive committees or state bodies, established by the district executive committees, which are not prospective beneficiaries from the GEF SGP funds.

The project activity analysis on the SER territory before the year 2016 revealed that the ample funds of international projects were directed at improving the health of the children living in the areas that suffered from the Chernobyl power plant disaster as well as creating the environment that facilitated healthcare and education improvement in the corresponding districts.

The foreign aid structure has slightly changed in recent years, with most finance being allocated for supporting private enterprise in rural areas, informal education for adults, social and ecological issues. Thus, there has been about 800,000 Euros raised for the above purposes, including GEF SGP projects, in the last eight years in Slavgorod district due to the cooperation between Slavgorod district executive committee and "Vozrozhdenie-Agro" local fund.







While evaluating the basic state of the SER districts the experts paid special attention to the local authorities' awareness and their willingness to cooperate with the GEF SGP. In general, the administration of absolutely every region demonstrated great interest in cooperation with the GEF SGP. Slavgorod and Krasnopolye districts deserve special mention as they have been actively involved in the project activity for many years, thus allowing most beneficial communication and interaction with the expert group that studied the situation in the district.

The expert evaluation also discovered that most districts did not understand the possible ways of interaction before the start of communication. After additional introduction of GEF SGP and communication between the experts and the local professionals in the prospective project areas the locals formed better understanding of the correlation between the GEF SGP programme and the problems and challenges they faced and tried to solve. Thus, exchanging the best practices and introductory visits arranged for the representatives from the districts in the areas with the positive GEF SGP experience provide an important precondition for taking active measures.

Thus, the institutional capacity and project activity analysis in the districts of the south-eastern part of Mogilev region reveals:

- 1) low project activity in the region;
- 2) low inner potential of the region for project development and implementation;
- 3) extremely insufficient administrative resource for project management;
- 4) the likely need for support of a certain regional project required to enhance the internal SER capacity in project activities in accordance with the GEF SGP objectives and priorities. This will ensure the efficiency and sustainability of the GEF SGP performance in SER.
- 5) the need to attract regional and national non-profit organizations to regional project development and implementation in SER. These projects may be directed at preservation of water quality and floodplains of the Sozh river, forest management, support for private enterprise, improving the efficiency of for energy and resource saving activities
- 6) the need for educational activities carried out by GEF for the administrative staff and public interest group leaders to improve the SGP efficiency.







# 5. Growing points and challenges of SER districts related to GEF SGP priorities.

While evaluating the basic state of the SER districts the experts discovered a number of common problems and challenges, as well as those unique for one or several districts, namely:

- I. Common for all districts:
  - the long-term radioactive contamination of the region reveals itself as follows:
    - 1) by restricting the use of the natural area development potential (agricultural lands, forests, floodplains),
    - 2) by increasing the production cost (involves additional costs of protective measures),
    - 3) by exacerbating the already difficult demographic situation (the highest migration outflow of the population);
    - 4) by increasing the social burden on the state to ensure radiation safety living conditions for the population.
  - low cost and energy efficiency of the real economy.
    - 1) the production technology requires modernization;
    - 2) most businesses and organizations suffer from high debt load;
    - 3) poor diversification and lack of production aimed at the external market;
    - 4) lack of professional staff;
    - 5) unclaimed vacant production, educational and cultural premises in rural areas;
    - 6) lack of services, for example, no slaughter facilities.
  - low private enterprise activity in manufacturing and agriculture, which requires the support of environmentally friendly and safe organizational and developmental practices of private business (organic farming, production of import-substituting products, etc.).
  - Land degradation related to the interruption of human activities and land overgrowth.
    - 1) large-scale floodplain overgrowth by trees and shrubs, which reduces the spawning areas, production of cattle food and has a negative impact on biodiversity;
    - 2) spatial distribution of invasive plants: Sosnowski hogweed and Canadian maple;
    - 3) the increase in the number of sparsely populated rural areas and their overgrowing with trees and shrubs, which requires significant resources to maintain the landscaping;
    - 4) the need to restore the hydrological regime of small peat bog areas;
    - 5) forest and grassland fires (burns), especially on the land with limited economic activity due to the radioactive contamination.
  - shallowing rivers and declining fish resources due to the global warming and warm snowless winters, inefficient melioration systems, mining activities, floodplains and fallow lands overgrown with bushes. The shallowing of rivers caused the extinction of such species as the eel, the bream and the pike-perch.
  - poor quality of drinking water, mainly because of the high iron content, with water deferrization stations required everywhere. There are more and more communities with water leaving the wells and drinking water supply required. In addition, the quality of water in many mine shafts is unsatisfactory;
  - air pollution and pollution of surface and underground water bodies with wastewater in the districts of the south-eastern part of Mogilev region is insignificant, with the exception of three







major industrial and agricultural districts: Kostyukovichi, Klimovichi and Krichev. The air and water protection measures shall ensure the environmental safety of the territory.

- the increase in the timber waste volume. Wood processing is one of the most profitable and rapidly developing economic activities. The increase in wood production volumes entails large amounts of lumber waste, hardly suitable for further use because of the lack of wood chip and pellet production equipment. Besides, the only boiler in the region working on wood chips as a fuel is the one in Klimovichi.
- low awareness of the population and many professionals of organizations and enterprises in the field of resource and energy conservation.
- high depreciation of water treatment plants and storm drainage systems in major cities of the region.
- *II.* Unique for one or several districts:
  - the mining pit safety in Kostyukovichi, Klimovichi and Krichev districts, which require upgrading and creating the safe recreation environment. There are a number of small mining pits in other districts as well that can be forested or transformed into public recreational and leisure facilities;
  - recycling large livestock facility waste, which poses a threat to the ecology of rivers and the entire region. Such facilities are in Cherikov and Klimovichi districts;
  - high anthropogenic load on the unique natural sites, for example, the "Blue Krynica" Source, a natural site of national importance. Up to 100,000 people visit this place during the high season, with between 5 and 10 thousand at a time on the Makavei holiday;
  - threats to biodiversity. There are nesting areas of the roller and the black stork as well as the bear habitats etc. in the territory of Slavgorod, Cherikov, Krasnopolye and Khotimsk districts. It requires strengthening the environmental activities and regulating the access to the territory. One of the most important activities is quality monitoring in the areas most densely populated by protected species of animals and birds;
  - threatening liquidation of unique industries based on the natural potential of the area: sheep breeding and flax growing in Khotimsk districs;
  - the risk of weediness and destruction of natural and man-made ecosystems, for example, the "Ash grove" and the "Ivan's farm" in Krasnopolye district;
  - the continuing decline in groundwater levels around mining pits, which will increase the number of the settlements with neither access to drinking water from wells nor central water supply (Krichev district);
  - the increase in the number of predator raids on settlements registered in the settlements adjacent to depopulated areas. There are cases of wolves attacking people (Krasnopolye, Cherikov, Kostyukovichi districts).

#### III. The growing points in SER could be as follows:

- Forestries and their tree and shrub nurseries, as well as "School Forest farms", set up in cooperation with the Department of Education (Kostyukovichi district), summer camps in Klimovichi district.
- Cooperation on the use of equipment to take care of the floodplains;







- Cluster approach to fundraising in tourism and region promotion, which involves of the regional development agency creation.
- Vocational schools and colleges, able to launch new courses appreciated in today's job market (e.g. alternative energy equipment maintenance, tourism etc.), which will increase the competitiveness of educational institutions and their popularity with students.
- Cooperation with religious organizations that motivate and urge the locals to develop. A striking example is the village of Vydrinka in Krasnopolye district, the villages of Lesnaya and Golubaya Krynica in Slavgorod district;
- Large water bodies, which are vital for the local population, as well as make the area attractive for people and potential investors. For example, the Paluzhskoe water reservoir in Krasnopolye district, the unique recreation facilities at the Besed river in Kostyukovichi district.
- The unique production facility development, such as trout farming in Kostyukovichi district mining pits.
- Setting up alternative energy generation parks (Kostyukovichi, Slavgorod, Khotimsk and Klimovichi districts).







## Conclusion

Assessment of the basic condition of SER of Mogilev region in order to develop activity strategy for of the GEF SGP in this territory has shown that the economic and demographic situation in SER remains difficult over many years. It is burdened with the Chernobyl NPP accident consequences. The government is making efforts to facilitate the development of SER primarily in the area of economy, social protection and radiation safety, as these factors have priority.

Due to increase in recent years the importance of environmental factor in the sustainable development of regions, this area remains open for SER, and the GEF SGP activities in this regard will complement the government efforts and improve the overall sustainability of the outcomes.

In SER regions there are number of issues and growth points for the development that are associated with the GEF SGP priorities. Mostly they are: combating climate change and adaptation to the consequences of climate change, land degradation and biodiversity conservation, international watercourses. The issues related to shrub invasion of the areas, combatting forest fires and burns, shallowing of rivers and the poor quality of drinking water are cross-cutting and unite the regions. Specific issues are the unique natural flora resources or water bodies or facilities, their impact on the human economic activities and vice versa (reserves, pits, water reservoirs, springs, sheep breeding and flax cultivation). Allocation of resources to the GEF SGP for addressing these issues or for strengthen the capacity of growth points can enhance the region's capacity for sustainable development.

Efforts undertaken will be more effective when enhancing the potential of local communities, above all for understanding the origin of reasons for the negative phenomena and possible ways of their solution. Today this potential is weak. In this connection, before the start of active actions by the GEF SGP it is important to train both leaders of the regions and initiative groups on new approaches on planning and prioritization of actions, as well as on the development and implementation of projects. In some cases, it needs to attract the focused experts, for example, in hydrology, ichthyology, and alternative energy sources. Probably it will be efficient to establish or increase the capacity of local specialized centers, for example, the Spring Water Ecology Centre in Slavgorod, the Resource Center of Education for the Sustainable Development. And, of course, it is important to ensure the proficient support for the projects implementation.

An important way to increase the development potential of local communities is to support the activities of local community-based organizations: non-profit organizations (NPOs) and local administration. But this potential in SER is also weak today. Just one NPO in SER and only 3 village councils out of more than 40 have been working on projects. In this regard, the contribution of the GEF SGP into increasing of local institutional capacity to address local problems will be very important both for the GEF SGP, and for sustainable development of SER in general in the future.

In order to enhance the SER potential for efficient use of the GEF SGP funds it will become essential to attract experienced regional and national NPOs to develop and implement inter-regional projects. The topics of these projects may be the preservation of quality of water and flood plains of the Sozh river, forest resources management, support for private enterprises, improvement of the efficiency of measures for energy and resource saving. As a rule, such projects are in need of developing regional thematic strategies, which is the main function of the regional and national NPO in cooperation with local authorities.







Thus, in the report on assessment of the basic condition of SER the key indicators and trends of SER development, problematics, growth points and development potential of the regions are outlined, as well as a number of conditions necessary for the successful implementation of the sixth operational period of the GEF SGP in the SER territory.