

# STATE OF THE ART OF CLIMATE CHANGE ADAPTATION AND MITIGATION in MINSK (BELARUS)





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# Introduction

This report is one of the first outcomes of Project TeRRIFICA that helps identify the state of the art of climate change adaptation and mitigation in Minsk (Belarus) as one of six pilot regions. It contributes to achieving the following objectives:

- to create a comprehensive overview on the state of the art of climate change adaptation research and innovation strategies, tangible climate change adaptation examples and communication strategies and methods at different levels of complexity,
- to create an overview and corresponding information and exchange structures between science, civil society and local government,
- to highlight areas that TeRRIFICA can address and improve,
- to identify useful content for TeRRIFICA from recent and current projects about climate action and climate change,
- to reflect on climate change adaptation ideas and strengths and weaknesses (cocreation),
- to define and adapt supporting innovative outreach and dialogue actions and formats for general public, education, policy makers and the virtual platform, ready for implementation in partner institutions and collaborating organisations,
- to develop common methodologies and recommendations of implementation for Pilots with special focus on social innovation corresponding to SDGs.

Recognition of the current state in the field of climate change adaptation and mitigation activities undertaken by academia and education, local government, civil society and business in each pilot region is helpful to select the relevant case studies for the purpose of accomplishing next TeRRIFICA tasks aimed at enhancement of climate actions as well as strengthening stakeholders engagement and co-creation.

Abbreviations:

NGOs – non - governmental organizations

CSOs-civil society organizations

SDGs – sustainable development goals

CSR- corporate social responsibility

RRI – responsible research and innovation

SMEs – small and medium enterprises



# **Glossary – key definitions**

**Climate change** refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity (IPCC).

**Climate change adaptation** means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause, or taking advantage of opportunities that may arise. Examples of adaptation measures include: using scarce water resources more efficiently; considering fresh air corridors in urban planning to improve the air quality in cities; and setting aside land corridors to help species migrate. Adaptation strategies are needed at all levels of administration: at the local, regional, national, EU and also the international level. Due to the varying severity and nature of climate impacts between regions in Europe, most adaptation initiatives will be taken at the regional or local levels. The ability to cope and adapt also differs across populations, economic sectors and regions within Europe (Description of Actions).

**Climate change mitigation** refers to a wide scope of efforts to reduce or even prevent the emission of greenhouse gases. These efforts range from changing consumer behaviour to boosting the efficiency of out-dated equipment to the use of newest technologies and renewable energies. Planning a new city can be a means of mitigation as well as the replacement of an old furnace. This means that mitigation often involves fundamental changes in the way individuals and societies as a whole produce and use energy (Description of Actions).

#### **Responsible Research & Innovation (RRI) - building blocks:**

- public engagement in Responsible Research and Innovation is about co-creating the future with citizens and civil society organisations, and also bringing on board the widest possible diversity of actors that would not normally interact with each other, on matters of science and technology.
- open access the global shift towards making research findings available free of charge for readers, so-called 'Open access', has been a core strategy in the European Commission to improve knowledge circulation and thus innovation. It is illustrated in particular by the general principle for open access to scientific publications in Horizon 2020 and the pilot for research data.
- **gender equality** in Horizon 2020 Gender is a cross-cutting issue and is mainstreamed in each of the different parts of the Work Programme, ensuring a more integrated approach to research and innovation.
- **ethics** For all activities funded by the European Union, ethics is an integral part of research from beginning to end, and ethical compliance is seen as pivotal to achieve real research excellence.
- science education Building capacities and developing innovative ways of connecting science to society is a priority under Horizon 2020. This will help to make science more attractive to young people, increase society's appetite for innovation, and open up further research and innovation activities (European Commission).



**Co-creation**: Collaborative development of new value (concepts, solutions, products and services) together with experts and/or stakeholders (such as customers, suppliers etc.). Co-creation is a form of collaborative innovation: ideas are shared and improved together, rather than kept to oneself. It is closely connected to – and mentioned alongside – two other buzz-words: "opensource" and "mass-customisation" (<u>http://fronteer.amsterdam/what-is-co-creation/</u>).

A case study is understood as an example of current actions allowing for identification both good and bad practice in climate change adaptation and mitigation. It is related mainly to a pilot region. A case study is focused on a co-creation process.



# Identification of the state of the art of climate change adaptation and mitigation

# I. GENERAL CHARACTERISTICS OF THE PILOT REGION

#### 1. Name of the region, its location and a short description

Minsk is the capital of Belarus, it is an independent administrative-territorial unit. The largest political, economic, cultural and scientific center of the country. It is the core of the Minsk agglomeration. The tenth most populated city (excluding the suburbs) in Europe. The city is located close to the geographical center of the country and stands on the Svisloch River. The area is 348.84 km<sup>2</sup>, the population is 1,992,685 people (at the beginning of 2019), excluding the suburbs.

Minsk is located on the southeastern slope of the Minsk Highland, which has a moraine origin. The average height above sea level is 220 m.

The climate is temperate continental, with significant influence of the Atlantic sea air. The average daily temperature in July is + 18.5 ° C, in January is -4.5 ° C. Winters are mild, with frequent thaws.

Minsk is the largest economic and industrial city of Belarus. The total amount of tax revenues is about half of the total amount in the country. The city produces 18.8% of industrial products throughout the country. There are the largest assembly enterprises, enterprises of food and light industry, enterprises of cosmetics, etc.

Minsk is a modern, dynamically developing city that forms more than ¼ of the GDP of Belarus.

The industry of Minsk takes an indisputable leadership in the republic in the production of refrigerators (100.0% in the republican output), internal combustion engines for cars (98.7%), woolen fabrics (100.0%), trucks (97.6%), tractors (81.2%), buses (98.8%), trolley buses (100%) etc.

Minsk is the largest transport hub of Belarus. It is located at the intersection of transport corridors linking Russia with Poland and Ukraine with the Baltic states. The city accounts for about 30% of rail passenger traffic in the country, 20% of road freight transport for import and 40% for export.

**2.** Strategies/agendas/reports developed by the local government (please provide max. 3 cases using the criteria below for each example)

#### Case study 1

#### Title:

National Strategy for Sustainable Socio-Economic Development of the Republic of Belarus until 2030



#### Time frame:

2015-2030

# Main challenges and goals regarding climate change identified:

To prevent the onset (mitigate the effects) of environmental threats to sustainable socio-economic development due to climate change, loss of biological diversity, degradation of agricultural land.

# Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions.

- to ensure by 2030 a reduction in greenhouse gas emissions by at least 28 percent from the 1990 level without taking into account emissions and sinks of greenhouse gases in the land use, land use change and forestry sector and without any additional conditions;

- the cost of environmental protection - 2.0-3.0% of the gross domestic product in 2030;
- The index of emissions of pollutants into the air from stationary and mobile sources, to the level of 2020 - 96.4% in 2030;

- the level of reduction of greenhouse gas emissions to the level of 1990 of at least 15% in 2030.

# Main actions aimed at climate change adaptation:

- organization of a scientific center for climatology and polar research, carrying out work on the study and analysis of global, regional and local climate changes, the assessment of their impact on the socio-economic system, the development of multivariant adaptation measures in climate-dependent economical fields

- leveling the age structure of the forest (increasing the proportion of mature stands and young stands) by regulating forest use and organizing sanitary logging and reforestation, etc.

# Main actions aimed at climate change mitigation:

- creating an economically feasible adaptive farming system in agriculture, characterized by the use of a reasonable alternation of crops and a rational structure of crop rotations, genetically resistant varieties, mixed crops, compliance with the optimal timing of agrotechnical measures and phytocenotic measures to combat weeds;

Are the guidelines for operationalization of activities related to the climate change provided? If yes, please describe them.

Indicate the SDGs relevant for the region:



Goal 13: Climate Action

Goal 15: Life On Land

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

# Is there a need for cooperation between different groups of stakeholders articulated/described?

If YES, mark the appropriate stakeholder groups and describe them

Governmental bodies, regional and local authorities, civil society, scientific and pedagogical community, business, church, etc.

Iocal government civil society academia & education business

Short description of stakeholders:

Describe the forms of cooperation between stakeholder groups or the ways of their involvement in climate actions (e.g. public meetings, local workshops, focus groups) (maximum 3000 characters including spaces):

- 1st National Forum on Sustainable Development (Jan 2019);

- Analytical report on implementation in 2016-2017 of the National Strategy for Sustainable Socio-Economic Development of the Republic of Belarus up to 2030;

- Appointment of National Coordinator for the Sustainable Development Goals;

- Council on Sustainable Development (38 executive bodies, local authorities, legislative bodies );

- Sustainable Development Partnership Group (civil society, the private sector (including participants in the UN Global Compact), international organizations, etc. with working groups focused on ecology, social welfare, economy and regional affairs

# Web link to the document:

https://www.economy.gov.by/uploads/files/NSUR2030/Natsionalnaja-strategijaustojchivogo-sotsialno-ekonomicheskogo-razvitija-Respubliki-Belarus-na-period-do-2030-goda.pdf

Case study 2

Title:

Governmental Program on Mitigation Measures for Climate Change 2013-2020: Resolution of the Council of Ministers of the Rep. Belarus, June 21, 2013 № 510 // Nat. Register of legal acts Rep. Belarus. –27.06.2013, No. 5/37447.

Timeframe:

2013-2020

Main challenges and goals regarding climate change identified:



Sustainable socio-economic development of the country predetermines the adaptation of various sectors of the economy to the climate change.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions.

The implementation of the objectives of the Governmental Program provides for the fulfillment of the target for reducing greenhouse gas emissions in 2020 by 28 % compared to 1990 in accordance with the Decree of the President of the Republic of Belarus of May 7, 2012 No. 224.

# Main actions aimed at climate change adaptation:

Climate change adaptation activities will include:

- assessment of the vulnerability of regions to climate change;

- development of sectoral strategies for adaptation to climate change by republican government bodies, their implementation;

- stimulation of activities related to the implementation of agricultural measures for adaptation to climate change;

- minimization of the consequences of dangerous hydrometeorological phenomena caused by climate change;

- minimization of the risk of reducing the production of agricultural products;

- introduction into the production of heat-loving species and varieties of agricultural crops with the expansion of their acreage;

- assessment of the impact of climate change and potential threats to the biodiversity of natural ecosystems, etc.

Main actions aimed at climate change mitigation:

Climate change mitigation measures will be implemented through state, sectoral and regional programs, such as the Strategy for the Development of the Energy Potential of the Republic of Belarus, the Program for the Development of the Industrial Complex of the Republic of Belarus for the Period to 2020, etc.

Are the guidelines for operationalization of activities related to the climate change provided? If yes, please describe them.

Indicate the SDGs relevant for the region: Goal 13: Climate Action;



#### Goal 15: Life On Land;

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

Is there a need for cooperation between different groups of stakeholders articulated/described?

#### 

#### If YES, mark the appropriate stakeholder groups and describe them

Governmental bodies, regional and local authorities, civil society, scientific and pedagogical community, business, church, etc.

Iocal government civil society academia & education business

# Short description of stakeholders:

Describe the forms of cooperation between stakeholder groups or the ways of their involvement in climate actions (e.g. public meetings, local workshops, focus groups) (maximum 3000 characters including spaces):

international and national conferences and seminars;
 implementation of international technical assistance projects;
 Public Environmental Coordination Council under the Ministry of Natural Resources and Environmental Protection;

# Web link to the document:

http://pravo.by/ofitsialnoe-opublikovanie/novyepostupleniya/?p0=27.06.2013&p1=27.06.2013

# Case study 3

Title:

State program "Environmental Protection and Sustainable Use of Natural Resources" for 2016-2020

#### Timeframe:

2016-2020

# Main challenges and goals regarding climate change identified:

The main objective of the State Program is to ensure environmental protection, rational nature management, the country's environmental safety and the transition to a "green" economy, as well as the fulfillment of international obligations of the Republic of Belarus in the field of environmental protection.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food



production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions.
reduction of greenhouse gas emissions by 28% to the level of 1990;
reduction of pollutant emissions into the air from stationary and mobile sources by 2.7 percent compared to 2015.

#### Main actions aimed at climate change adaptation:

- reduction of greenhouse gas emissions in order to reduce the rate of climate change, to achieve a higher quality of atmospheric air, providing environmentally safe living conditions for the population, protecting and restoring disturbed water bodies to a state that provides environmentally friendly living conditions for the population and the functioning of aquatic ecological systems.

Main actions aimed at climate change mitigation:

- Climate change mitigation to ensure the sustainable development of the country's economy.

Are the guidelines for operationalization of activities related to the climate change provided? If yes, please describe them.

**Indicate the SDGs relevant for the region:** Goal 13: Climate Action;

Goal 15: Life On Land.

Is there a need for cooperation between different groups of stakeholders articulated/described?

# ■ YES□NO

If YES, mark the appropriate stakeholder groups and describe them Governmental bodies, regional and local authorities, civil society, scientific and pedagogical community, business, church, etc.

Iocal government civil society academia & education business

Short description of stakeholders:

Describe the forms of cooperation between stakeholder groups or the ways of their involvement in climate actions (e.g. public meetings, local workshops, focus groups) (maximum 3000 characters including spaces):

holding international and national conferences and seminars;
implementation of international technical assistance projects;
The activities of the Public Environmental Coordination Council under the Ministry of Natural Resources and Environmental Protection;

Web link to the document:



http://pravo.by/document/?guid=3871&p0=C21600205

#### 3. Main stakeholders in the region (quadruple helix model)

**Local government** (indicate local/regional institutions and their main tasks referring to environmental protection and climate change adaptation & mitigation)

1. Minsk City Executive Committee;

2. Minsk City Committee of Natural Resources and Environmental Protection (Participation in the implementation of a unified state policy in the field of environmental protection and rational use of natural resources, use and protection of the subsoil; Implementation of public administration, innovation, rational use of natural resources and environmental protection within competences);

3. The Public Coordination Ecological Council at the Minsk City Committee for Natural Resources and Environmental Protection (coordination of interaction between the committee and organizations carrying out activities in the field of environmental protection);

4. The Office of Municipal Economy and Energy of the Minsk City Executive Committee;5. Minsk City Administration of the Ministry of Emergency Situations.

**Civil society** (population; voter turnout in the last elections related to the pilot region; number of NGOs and CSOs; indicate NGOs/CSOs acting for the environment and/or climate change adaptation and mitigation)

Minsk city in 2018 had 1982,4 thousand inhabitants, 1080 thousand women and 902 thousand men. Minsk currently experiences a positive population growth, rate of about 0,7-1% in a year (which means about 15000 people). As of 2018 16.5% of the population of Minsk was younger than the working age, 61.1% were of working age, 22.4% were older than the working age. Due to the specialties of calculating of the unemployment rate in the country, the number of officially registered unemployed does not substantially coincide with real unemployment. In the agencies for labor, employment and social protection as unemployed registered 0.2% of the population in working age (2287 people). According to a sample survey of the National Statistical Committee of the Republic of Belarus, the unemployment rate in Minsk was 3.8% in 2017.

average life expectancy in 2017 was 76.8 years (72 years for men, 80.7 for women) In Minsk, the number of registered NGOs in 2018 amounted to 1500 organizations. About 230 organizations from the total number work in the field of social defense, about 215 in the field of sports recreation and tourism. In Minsk are about 60 NGO's which work with environmental protection (including 7 organizations which work with wildlife and nature). 9 NGO's are active in the field of climate change adaptation and mitigation.

Academia & Education (number of students; indicate the most important research institutions/universities & basic directions of their research referring to climate change adaptation and mitigation; number of pupils from primary and secondary schools; indicate institutions promoting science or being involved in science communication)



At the beginning of the 2017/2018 school year, 154.6 thousand students studied in 28 higher educational institutions of Minsk. Per 10 thousand people of the population of the capital accounted for 783 students of institutions of higher education.

At the expense of budget funds study 42.9% of all students , including 61% at state universities on a full-time basis.

In 2017, 35.3 thousand people became students, of which 43.5% were enrolled at the expense of budget funds.

Economic and legal professions were chosen by 37.5% of freshmen, technical and construction - 24.9%, pedagogical - 6.7%, humanitarian - 6.1%, agricultural - 5.2%, social orientation - 4.3%.

In 2017, 43.2 thousand students became specialists with higher education, which is 406 specialists with a higher education per 10 thousand people employed in the economy.

Of the total number of graduates, 18.6 thousand people, or 43.1%, are graduates who have received specialties in economics.

The main scientific institutions dealing with the problem of climate change are: 1. "Institute for Nature Management of the National Academy of Sciences of Belarus"; 2. "Forest Institute of the National Academy of Sciences of Belarus"; 3. "Institute of Experimental Botany named after V.F. Kuprevich of the National of Belarus"; Academy of Sciences 4. "Republican Center for Polar Research"; 5. "The Institute of System Studies in the Agro-Industrial Complex of the National Academy of Sciences Belarus"; of 6. Central Research Institute for the Integrated Use of Water Resources;

The main **production institutions** dealing with climate change are: 1. "Bel SIC" Ecology 2. "Republican Center for Hydrometeorology, Control of Radioactive Pollution and Environmental Monitoring"; 3. "The Republican Center for Analytical Control in the Field of Environmental Protection"; 4. The main information and analytical center of the National Environmental Monitoring System of the Republic of Belarus, etc. The main **educational institutions** dealing with climate change are: 1 Belarusian State University:

т.	Delarasian		ii State			oniversity,
2.	UO	"International State	Ecological	Institute named	after A.	Sakharov" BSU;
3.		Belarusian	State	Technolo	ogical	University;
4.		Vitebsk	(	State		University;



Brest State University named after A.S. Pushkin;
 Belarusian State Pedagogical University named after M.Tank.

The education system of Minsk. The network of preschool education institutions in Minsk is represented by 451 state institutions, including 26 sanatorium preschool education institutions, 14 pre-school child development centers, 13 special pre-school institutions.

In the system of general secondary education function:

252 institutions of general secondary education of state ownership. Among them: 50 gymnasiums, 1 gymnasium-college, 2 lyceums, 177 secondary schools, 1 cadet school, 1 boarding school, 5 elementary schools, 5 kindergarten schools. 190,845 students study in schools and gymnasiums of the capital in the 2017/2018 school year.

In the educational system of Minsk function 22 institutions of technical and vocational and secondary specialized education, of which 12 are vocational technical colleges, 7 vocational lyceums, 3 colleges of secondary special education. 14,036 students are enrolled in full-time, evening and correspondence courses in technical and vocational and technical training institutions.

Students of vocational education institutions are trained in 45 specialties, which include 111 workers' qualifications; at the level of secondary specialized educational institutions - 27 qualifications in 26 specialties. In 2017, 4,415 people received vocational education and 2,355 people completed specialized secondary education.

22 institutions, among them the Minsk State Palace of Children and Youth, the Minsk City Tourist and Ecological Center for Children and Youth, represent the network of institutions of supplementary education for children and youth in Minsk. In the administrative districts, there are 11 diversified institutions of supplementary education for children and young people and 9 physical education and sports centers for children and young people.

**Business** (SMEs and large enterprises (number, employment in SMEs and large enterprises, (%) of total employment in a given region); Regional Smart Specializations (RIS3); general overview of the different industrial sectors which can be found in the region; indicate enterprises actively involved in climate change adaptation and mitigation actions and define the field of their activity)

To support small and medium-sized businesses, 28 small business support centers have been established in Minsk. A set of measures was approved to ensure the implementation in Minsk of the State Program "Small and Medium Entrepreneurship in the Republic of Belarus for 2016–2020". In 2016 – 1629,3 thousand rubles were spent on the implementation of the Program's activities from the budget of Minsk city, 52 business entities benefited from financial support, in 2017 - 668.0 thousand rubles and 23 business entities.

Investor assistance services are currently provided by the Minsk City Center for Engineering Services Municipal Unitary Enterprise, business incubators, business support centers, Minsk City Technopark LLC. A public (expert) council for the development of entrepreneurship under the Minsk City Executive Committee has been established.



In recent years, an increase in the proportion of high-tech services sections has been observed in Minsk. Thus, in 2017, the share of information and communication sections in the city's GRP was 12.7%, financial and insurance activities 8.1%, and professional, scientific and technical activities 6.2%. For 2016–2017 The city has implemented a number of innovative projects to create new innovative industries that use resource-and energy-saving technologies that provide high-value-added products and are export-oriented.

In 2011–2017, the export of computer services increased by more than 3.5 times, their share in the total export of services of the city increased from 10% in 2011 to 22.9% in 2017. At the same time, from 2013 to 2016, the volume of exports of high-tech products in Minsk decreased by 26%.

**Short summary of a pilot region** (most important climate challenges indicated by the local/regional strategy or scientific regional agendas, culture of innovation, institutional framework of the regional innovation system; existing exchange structures between stakeholders; any other relevant information and additional comments)

The most polluted areas of the city of Minsk are primarily the Zavodskoy and Partizansky districts, the Shabany microdistrict, as well as certain sections of the Oktyabrsky district and the city center. More than 35% of the territory of Minsk is in the "unfavorable" zone.

It covers the center, south and south-east of the city, extending southwards to the capital's suburbs. The quality of atmospheric air in cities and areas of their influence depends primarily on the quantity and quality of pollutants emitted by various sources, their relative location and meteorological conditions of the area.

The high industrial potential of Minsk (more than 200 enterprises polluting the atmosphere) and a highly developed transport network with a high population density creates environmental tensions in the city. Minsk is among the cities with a high density of emissions of harmful substances per unit area. Extremely dangerous enterprises include CHP-4, Minsk Automobile Plant and Minsk Tractor Plant, the emissions of which can reach 10,000 tons per year. CHP-4 runs on fuel oil and natural gas. Sulfur dioxide (52.3%), nitrogen oxides (37.3%) and carbon monoxide (9.7%) predominate in its emissions. Solid dust particles - 0.7%. The CHP-4 is located west of the city behind the ring road. Given the prevalence of western air in the Minsk district (southwestern, westerly and northwesterly winds make up 50% of the annual wind structure), the location of the most dangerous source of air pollution to the west of the city must be considered extremely unfortunate. The structure of MAZ emissions is dominated by carbon monoxide (62.8%), particulate matter (10.7%), xylene (9.4%), toluene (5%). The main sources of emissions at the enterprise are foundry, forging, thermal, galvanic, welding and painting production. The structure of emissions of MTZ is similar to the structure of emissions of MAZ: carbon monoxide - 61%, solid dust particles - 17.3%, solvenit - 11.7%.

The share of these three enterprises in the air pollution of the city is more than 20%. The following enterprises pose a serious danger: CHP 3, Minsk Heating Equipment Plant, boiler plants of the Minsk Heat Supply Network, Minskstroymaterialy, a refrigerator plant, a motor plant and CHP-2.

Sources of dust emissions are located mainly in the eastern, south-eastern and southwestern sectors of the city and in its central part. Naturally, it is in these areas of the



city near industrial enterprises that the greatest deposition of heavy metals on soils and vegetation can be expected. A And as in the conditions of cities, industrial enterprises are either mosaically located among residential areas, or are grouped into industrial zones, the distance between enterprises is often small. As a result, the habitat pollution increases.

The main suppliers of dust to the atmosphere of the city are MTZ, MAZ, heating equipment plant, road-bridge construction management number 5, a plant of gypsum and gypsum products, an experimental plant for recycling household waste. The most dusty air in the area of "Avtozavod" (about 2 times compared with the rest).

In areas of industrial enterprises, where more than 60 thousand people live in sanitary protection zones, despite the decline in production rates, the unfavorable ecological situation continues to exist. Meanwhile, the pace of development of territories reserved for landscaping is completely inadequate in the city, the structure and continuity of green areas are disturbed.

According to town planning norms, 40–60% of the urban area should be occupied by green spaces, which create a favorable microclimate and help reduce air pollution. However, in Minsk, urban greening is far behind the pace of modern residential and industrial construction.

Thus, according to reference data, 63.2 m2 of green space falls on one inhabitant of the republic, including 23.6 m2 of common use. In Minsk, these averages are almost 2 times lower.

On January 1, 2018, 8 small business incubators were opened in Minsk. Residents of incubators are provided with office and production premises for rent at a reduced rate, information and consulting support is provided. The total area of the premises of incubators in 2017 amounted to 16067 sq. meters (in 2016 - 14062.2 sq. meters). The number of residents of incubators at the end of 2017 amounted to 262 small businesses.

An innovative industrial cluster of high technologies in the field of complex medical equipment, security systems, non-destructive testing equipment and analytical instrumentation with the conclusion of an agreement on cooperation of cluster members has been formed. The cluster includes 7 organizations of the Republic of Belarus, the Russian Federation, the United Kingdom, the United States and China. In 2017, the state registration of the Association "Innovative Instrument Engineering" was carried out, which is based on the principles of the cluster structure. The initiators of the creation were five instrument-making organizations in Minsk.



# 1. Projects aimed at climate change adaptation and mitigation implemented by <u>civil</u> <u>society</u> (NGOs, CSOs)

Title: Green Cities Framework - Green Cities Action Plan for the City of Minsk

#### Source of funding and the budget:

European Bank for Reconstruction and Development (EBRD), funding from Swedish International Development Cooperation Agency (Sida)

#### Timeframe:

23.04.2018 - 23.06.2019

Main challenges and goals regarding climate change identified:

**The overall objective**: to provide the EBRD with an instrument to address multiple urban issues in a more systematic way in the City of Minsk with use of a specific EBRD GCAP methodology for the development of the Green City Action Plan (GCAP) for the City of Minsk. The aim is that GCAP is not simply a reference document, but a living plan which will be regularly reviewed and more importantly meaningfully implemented in the coming years. GCAP is designed to guide the City during the four main steps of developing and implementing the GCAP within one cycle:

- Establishing a Green City Baseline (Step 1);
- Preparing the GCAP (Step 2);
- Implementing the actions under the GCAP (Step 3); and

- Reporting on the progress and reviewing progress policy dialogue assistance that would further strengthen the Bank's ability to deliver its transition mandate in the City (Step 4).

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 11.b.1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030*a* 

Expected results: (1) Green City Action Plan for Minsk has been prepared as a plan for investment in line with the specific EBRD GCAP Methodology which can attract financing either from the City's own resources, from the central budget, from IFIs,



donors or funds, such as the Green Climate Fund ("GCF") or from the private sector; (2) Capacities of the Minsk City Executive Committee's staff in green city planning and multiple urban development issues have been enhanced.

#### Main actions aimed at climate change adaptation:

Capacity building (trainings, consultations) for the City of Minsk on climate change adaptation.

Evaluation of the current state of the City of Minsk in terms of climate change adaptation.

Assistance to the City of Minsk in developing climate change adaptation measures.

# Main actions aimed at climate change mitigation:

Capacity building (trainings, consultations) for the City of Minsk on climate change mitigation in such areas as transport (urban mobility), air, water, waste, biodiversity, green zones, etc.

Evaluation of the current state of the City of Minsk in terms of climate change mitigation.

Assistance to the City of Minsk in developing climate change mitigation measures.

Please indicate the institution/s responsible for the implementation and its/their main tasks:

Mott MacDonald Limited, Ricardo-AEA Limited – responsible for the overall project implementation and thematic expertise in various spheres of green urban planning.

Interakcia Foundation – responsible for the project coordination, stakeholder engagement, legal support and expertise on strategic environmental assessment in Belarus.

**Please tick the type of stakeholders involved and shortly describe them** Minsk City Executive Committee.

City structures and services responsible for various issues of green urban planning Interested stakeholders (academia, NGOs, businesses, etc.)

Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society

Cooperation between partners within the consortium is implemented in accordance with the Assignment. Forms: working meetings, online discussions, etc.

Tools for communication with the society:

- Communication with interested stakeholders and gathering their feedback and inputs through a Public Consultation Group
- Public consultations

- Promotion in mass media and social media

Indicate the SDGs relevant for the project:

Goal 11 - sustainable cities and communities

Goal 13 - climate action



#### Web link to the project:

http://eu-belarus.net/en/news/220

Case study 2

#### Title: Covenant of Mayors East II

#### Source of funding and the budget:

EU, Decentralised cooperation programme. Budget line 21-02-13

4 284 600 EUR

#### Timeframe:

01/06/2016 - 31/05/2020

# Main challenges and goals regarding climate change identified:

**The overall objective** is to continue support and encourage local and regional authorities in the EaP region to achieve and implement a more sustainable local energy policy, reducing their dependency on fossil fuels, improving security of their energy supply, and allowing them to contribute more actively to climate change mitigation and adaptation.

# Specific objectives:

- Assist the cities in the implementation of their SEAPs / SECAPs. This is done in close cooperation with investors, financial institutions and banks but also by reaching out key stakeholders that can either contribute to or facilitate the SEAP / SECAP implementation at all levels of governance, including CSOs, businesses, citizens, representatives of regions, national public authorities (e.g. ministries, national energy agencies).
- 2. Guarantee the maximum sustainability of the CoM in the region, by engaging with various stakeholders such as the Covenant National Coordinators (CNC), Covenant Territorial Coordinators (CTC), Covenant Supporters (CS), etc. Transfer the responsibility for the future strategic orientation of the Covenant initiative and eventual adaptation of the EU 2030 energy and climate objectives to the regional context on local elected representatives.
- 3. Raise awareness of and promote the signing up to the new Covenant as well as assist the most ambitious signatories with the development and implementation of Sustainable Energy and Climate Action Plans (SECAPs) while keeping certain level of flexibility in the implementation of the measures.

# Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available SDGs indicators

SDGS Indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other).

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions.



11.b.1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030*a*.

### Expected results:

- 1. Local authorities in the EaP Region have the CoM-East commitment and framework designed for them and by them.
- 2. SEAPs / SECAPs are successfully implemented and monitored.
- 3. SECAPs are well designed in the framework of the new Covenant.
- 4. CoM-East is well embedded at national level and supported by key stakeholders.

#### Main actions aimed at climate change adaptation:

- 1) Organisation of the capacity building events for signatory cities on elaboration of the adaptation component of their Sustainable Energy and Climate Action Plans.
- 2) Provision of the consultations for the cities on development of the adaptation component of their Sustainable Energy and Climate Action Plans.
- 3) Assist the cities in the implementation and monitoring of the adaptation component of their Sustainable Energy and Climate Action Plans by elaboration of the investment projects and cooperation with IFIs.

#### Main actions aimed at climate change mitigation:

- 4) Organisation of the capacity building events for signatory cities on elaboration of the mitigation component of their Sustainable Energy and Climate Action Plans.
- 5) Provision of the consultations for the cities on development of the mitigation component of their Sustainable Energy and Climate Action Plans.
- 6) Assist the cities in the implementation and monitoring of the mitigation component of their Sustainable Energy and Climate Action Plans by elaboration of the investment projects and cooperation with IFIs.

# Please indicate the institution/s responsible for the implementation and its/their main tasks:

Interakcia Foundation is responsible for the implementation of the project in Belarus.

Other consortium members: European Association of local authorities "Energy Cities", European Association of local authorities "Climate Alliance", Kommunalkredit Public Consulting, Association "Energy Efficient Cities of Ukraine", Alliance for Energy Efficiency and Renewables, Registered Union Energy Efficiency Centre Georgia, Republican Association of Communities of Armenia.

Please tick the type of stakeholders involved and shortly describe them Local authorities (administrations of the CoM signatory cities)

City structures and services responsible for various issues of climate and energy Local citizens



Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society

Each partner is responsible either for one of the six partner countries or for a particular component or assignment (e.g. capacity building).

Tools used for communication with the society: country-specific communication activities: events, publications, promo materials, promotion in social media and mass media.

#### Indicate the SDGs relevant for the project:

Goal 7 - affordable and clean energy

Goal 9 - industry, innovation and infrastructure

Goal 11 - sustainable cities and communities

Goal 13 - climate action

Web link to the project:

http://com-east.eu/ru/

Case study 3

#### Title:

STRENGTHENING THE COVENANT OF MAYORS MOVEMENT IN BELARUS

Source of funding and the budget:

Budget: 663,090 EUR

Source of funding: European Union

Timeframe:

Project period: 05.2016 - 04.2020

#### Main challenges and goals regarding climate change identified:

Main goal of the project is to improve capacities of civil society organizations (CSOs) in interaction with local authorities and other stakeholders for the Covenant of Mayors implementation (including adaptation and mitigation) and initiation of new Signatories.

The project empowers local authorities to implement successfully their current Covenant engagements in cooperation with local civil society organizations and other stakeholders.

An important component of the project is strengthening CSOs networking and policy in the dialogue with national authorities on issues connected with energy and climate change.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

Main actions aimed at climate change adaptation:

Consultation support on Covenant adhesion, development and implementation of the Sustainable Energy and Climate Action Plans (including plans for adaptation) Support for CSO participation in monitoring of the implementation of the Sustainable Energy and Climate Action Plans at the local level



- Financial support for local pilot initiatives of CSOs and LAs (6 CSOs initiatives up to 10.000 EUR and 4 LAs up to 43.000 EUR) – some activities supported within the project were activities in the field of adaptation

- Capacity building training program for CSOs and LAs on adaptation

Main actions aimed at climate change mitigation:

Consultation support on Covenant adhesion, development and implementation of the Sustainable Energy and Climate Action Plans (including plans for mitigation) Support for CSO participation in monitoring of the implementation of the Sustainable Energy and Climate Action Plans at the local level

- Financial support for local pilot initiatives of CSOs and LAs (6 CSOs initiatives up to 10.000 EUR and 4 LAs up to 43.000 EUR) – most activities supported within the project were mitigation activities

Capacity building training program for CSOs and Las on mitigation

Please indicate the institution/s responsible for the implementation and its/their main tasks:

IPO "Ecopartnership",

- Main partner, responsible for realization of the project in Belarus. Communication with local authorities and providing support for them to develop and implement of the Sustainable Energy and Climate Action Plans (including adaptation and mitigation)

Association "Energy Efficient Cities of Ukraine",

Baltic Environmental Forum Germany

Please tick the type of stakeholders involved and shortly describe them

1) Local CSOs acting in the field of sustainable development, environment, climate change, energy efficiency; local initiatives, consumer protection organisations from the CoM cities and other regions of Belarus interested in energy and climate issues; these organisations will be involved into capacity building programs and sub-granting scheme;

2) National environmental NGOs interested to build capacity to play an intermediating role and to establish channels for active advocacy and lobbing activities.

3) Local authorities of the CoM cities and related stakeholders (regional energy efficiency departments, municipal, etc).

Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society

**Form of cooperation between partners:** consortium for realization of the project Cooperation has been expressed through the division of tasks

Communication with the society :

Realization of communication and PR plans, developed in framework of the project

Indicate the SDGs relevant for the project:



Goal 7 - affordable and clean energy

Goal 9 - industry, innovation and infrastructure

Goal 11 - sustainable cities and communities

Goal 13 - climate action

Web link to the project:

climate.ecopartnerstvo.by

2. Projects aimed at climate change adaptation and mitigation implemented by <u>academia & education (research public or private scientific bodies, universities, schools, extracurricular education organisations)</u>

(please provide max. 3 cases using the template below)

#### Case study 1

"Clima-East: conservation and sustainable management of peatlands in the Republic of Belarus to reduce carbon emissions and adaptation of wetland ecosystems to climate change"

#### Source of funding and the budget:

European Union, 1 498 000 €

Timeframe:

13.01.2014 - 01.04.2017

Main challenges and goals regarding climate change identified:

The overgrowing of peatlands with shrubs, undergrowth and reeds threatens the unique biodiversity of wildlife reserves. To restore the natural landscape, it is necessary to regularly remove excess vegetation. The resulting biomass can be partially replace fossil fuel, by using biomass as fuel.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

15.2.1 Progress towards sustainable forest management

15.b.1 Official development assistance and public expenditure on conservation and sustainable use of

biodiversity and ecosystems



Reduction of greenhouse gas emissions (tons, in terms of CO2) Baseline data: 62595 thousand tons; Target: 62545 thousand tons.

#### Main research tasks or actions aimed at climate change adaptation:

Within the framework of the project, the lowland swamps are regularly cleaned from excessive vegetation. For this purpose, special equipment was purchased, plans for regular mowing of marsh flora were developed. The resulting biomass is used as fuel in local boiler houses.

In 2015, 714 hectares of wetlands were cleared, 1,800 tons of timber and 0.9 tons of cane were harvested - they partially replace traditional fossil fuels, which are the main sources of greenhouse gases.

#### Main research tasks or actions aimed at climate change mitigation:

The local population is learning how to regulate groundwater levels, which is also an effective measure to reduce greenhouse gas emissions.

The project has allocated funds for the construction and repair of water regulating facilities in the Zvanets reserve. An additional advantage of this investment was the ability to mow the most inaccessible swamp areas with the help of special equipment. The project was the first in Belarus successful example of controlled burning of dry vegetation and prevention of accidental fires in peat bogs.

**Does the project promote RRI? If yes, please shortly describe** (*maximum 100 words*) The project is aimed at effective and inclusive (with wide enagagement of civil society) environmental management, monitoring of environmental risks, and the exchange of environmental information, in particular, in the field of atmospheric air. Among the project priorities are the development of environmental monitoring, the expansion of civil society participation in the environmental decision-making process, the development of green schools. At the same time, due attention is not paid to such key aspects of RRI as gender equality, scientific education and ethics.

# Please indicate the institution/s responsible for the implementation and its/their main tasks

Ministry of Natural Resources and Environmental Protection of the Republic of Belarus (Minprirody), Drogichinsky district executive committee, Berezovsky district executive committee, Sporovsky reserve, Zvanets reserve, National Academy of Sciences of Belarus, Akhova Ptushak Batskayaushchy (APB Birdlife Belarus) NGO.

Please tick the type of stakeholders involved and shortly describe them

local government civil society cademia & education dusiness Short description of stakeholders:

Shortly describe the forms and tools of cooperation between partners involved in the implementation and the tools used for communication with the society (maximum 3000 characters including spaces):

The work of the Project Coordinating Board to monitor progress in implementation and support the project in order to achieve the planned results;
holding 3 regional seminars to disseminate successful project experience;
publication of materials on the sustainable use of biomass;
working visits to the project areas.



#### Indicate the SDGs relevant for the project:

Goal 13 - Climate action Goal 15: Life On Land.

#### Web link to the project

https://www.by.undp.org/content/belarus/ru/home/operations/projects/environ ment\_and\_energy/ClimaEastBelarus.html

#### Case study 2

Reclamation of quarries in the Minsk region as a method of restoring degraded land and contributing to mitigating the negative impact of climate change

Source of funding and the budget:

Global Environment Fund - Small Grants Program in Belarus. Budget - 235439 USD

#### Timeframe:

December 2011 - May 2013

#### Main challenges and goals regarding climate change identified:

Spent quarries after sand and clay production pose a real threat to the development of land degradation, an increase in the area of "spontaneous" landfills, and contamination of ground and surface waters.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

15.2.1 Progress towards sustainable forest management

15.b.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

Main research tasks or actions aimed at climate change adaptation:

The project proposes to reclaim old quarries with afforestation of territories and the creation of grass cover on degraded lands. Based on his example, a system has been developed to prevent the use of sites as landfills, and experience is spread in other regions of Belarus.

Main research tasks or actions aimed at climate change mitigation:

Reclaimed quarries contribute to the restoration of lost biodiversity, increasing the area of stabilizing land types.



# Please indicate the institution/s responsible for the implementation and its/their main tasks

Public association "Belarusian movement" Otechestvo ".

Please tick the type of stakeholders involved and shortly describe them

Ministry of Natural Resources and Environmental Protection, Minsk Regional Committee of Natural Resources and Environmental Protection, Minsk District Executive Committee, deputies of the Goransky, Lugovloslobodsky, Papernyansky, Shchomyslytsky and Yuzefovsky rural councils of the Minsk district, local community

local government civil society  $\Box$  academia & education  $\Box$  business

#### Short description of stakeholders:

#### Republican government bodies are represented by

the Ministry of Natural Resources and Environmental Protection. Regional governments are represented by the Minsk Regional Committee for Natural Resources and Environmental Protection. Local authorities are represented by the Minsk District Executive Committee of the Executive Committee, Goransky, Lugovloslobodsky, Papernyansky, Shchomyslitsky and Yuzefovsky Rural Councils

Civil society is represented by the public association "Belarusian movement" Otechestvo "..

Shortly describe the forms and tools of cooperation between partners involved in the implementation and the tools used for communication with the society (maximum 3000 characters including spaces):

The project was initiated by deputies of the Goransky, Lugovloslobodsky, Papernyansky, Shchomyslytsky and Yuzefovsky rural councils of the Minsk district, local residents and supported by the Ministry of Environment, Minsk Regional Committee of Natural Resources and Environmental Protection and the district executive committee. The project was implemented through the implementation of the Republican campaign "Forest Week 2012". More than 400 volunteers were involved in planting forest crops. " The results of the project are presented at a thematic workshop held in Molodechno within the framework of the Xth Republican Environmental Forum.

#### Indicate the SDGs relevant for the project:

Goal 15: Life On Land. Goal 13 Climate Change

#### Web link to the project:

http://www.sgp-gef.by/ru/projectslist/project89.html

#### Case study 2

Enagagement public in ecological monitoring and improving the management of environment protection on local level

Source of funding and the budget:

European Union. Budget - 3500000 Euro



#### Timeframe:

30.03.2018 - 30.03.2022

#### Main challenges and goals regarding climate change identified:

Air is one of the most important parts of our world. Harmful substances that get into the air can cause irreparable harm to our health, therefore public attention is paid to monitoring the quality of atmosphere air. However, the anthropogenic factor is increasingly influencing the state of our planet. Caring for our common home is a new level of self-awareness. The project aims to develop all types of environmental monitoring with the participation of civil society. The project is one of the components of the program "Improving Air Quality And Environmental Management in Belarus".

# Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

SDG 3 – Good Health and Well-being

3.b.2 Total net official development assistance to medical research and basic health sectors;

SDG 4 Quality inclusive education for all

4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development,

including gender equality and human rights, are mainstreamed at all levels in: (a) national education

policies, (b) curricula, (c) teacher education and (d) student assessment

SDG 11 Safe, resilient, sustainable cities

11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of

total urban solid waste generated, by cities.

SDG 12 Sustainable Consumption

12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development

(including climate change education) are mainstreamed in (a) national education policies;

(b) curricula; (c) teacher education; and (d) student assessment

SDG 13 Climate Change

13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early

warning into primary, secondary and tertiary curricula

#### Main research tasks or actions aimed at climate change adaptation:

The priorities of the project are the creation and support of monitoring clubs and public environmental coordination councils in the regions of Belarus, the development of "Green Schools" and the active involvement of civil society in conducting environmental training throughout the country, as well as participating in regular consultations with authorities responsible for environmental protection, and acting as reliable partners in environmental policy implementation.

Main research tasks or actions aimed at climate change mitigation: Dissemination activities for the project results carried out by CSOs;



Consultations organized by Aarhus Centers annually;

Meetings of the Public Environmental Coordination Council held during the project implementation period;

CSO initiatives successfully implemented within the project;

Stakeholders involved in project capacity building activities

**Does the project promote RRI? If yes, please shortly describe** (*maximum 100 words*) The project is aimed at effective and inclusive (with wide engagement of civil society) environmental management, monitoring of environmental risks, and the exchange of environmental information, in particular, in the field of atmosphere air. Among the project priorities are the development of environmental monitoring, the expansion of civil society participation in the environmental decision-making process, the development of Green schools. At the same time, due attention is not paid to such key aspects of RRI as gender equality, science education and ethics.

Please indicate the institution/s responsible for the implementation and its/their main tasks

UNDP -United Nations Development program.

Please tick the type of stakeholders involved and shortly describe them

Regional and district executive committees, Ministry of Natural Resources and Environmental Protection, Regional Committees of Natural Resources and Environmental Protection, Minsk District Executive Committee, Republican Center for Ecology and Land History, Education for Sustainable Development Association, National Children Recreation and Education Center "Zubryonok", Children Recreation Center "Nadezhda"

local government civil society academia & education 

business

# Short description of stakeholders:

Shortly describe the forms and tools of cooperation between partners involved in the implementation and the tools used for communication with the society (maximum 3000 characters including spaces):

Trainings for teachers, a call for local initiatives (civil society organizations, consultants and partners), establishment of 7 environmental monitoring clubs, support for environmental forums with civil society organizations and other partners, support for the activities of the Aarhus centers, an extensive educational campaign (creating videos on participation civil society in environmental decision-making)

Indicate the SDGs relevant for the project:

Goal 3 Good Health and Well-being

Goal 4 Quality Inclusive Education

Goal 11 Sustainable Cities

Goal 12 Sustainable Consumption

Goal 13 Climate Change

# Web link to the project:

http://pgs.greenlogic.by/



**3.** Projects aimed at climate change adaptation and mitigation implemented by <u>business (Corporate Social Responsibility, CSR strategies might be useful)</u> (please provide max. 3 cases using the template below)

#### Case study 1

#### **Enterprise Name:**

Unitary enterprise "Coca-Cola Beverages Belorussia"

#### Sector of activity:

production and sale of soft drinks, drinking water, nectars and juices

**Size and number of employees:** 800 people

**Source of funding and the budget:** private (corporate) funds

Timeframe: 2007-

**Title of the project:** SAVE ELNYA TOGETHER!

#### Main challenges and goals regarding climate change identified:

Restoration of one of the largest highland weatlends in Europe, seriously affected by the perennial fires caused by the drying of the upper peat layer, began manually due to the inability to use heavy equipment in the wetland area. The initial goal of the project was to build natural material dams to retain water in peat. The second stage is the construction of 46 cascade dams on the widest channels. The third stage is ecological education of the local population of the region.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type



15.2.1 Progress towards sustainable forest management

15.b.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

#### Main actions aimed at climate change adaptation:

During the project more than 50 dams and 46 cascade dams on the widest canals were built. As a result of such actions, the level of water in the swamp increased, and the body world characteristic of high bogs began to grow.

#### Main actions aimed at climate change mitigation:

Please indicate the institution/s responsible for the implementation and its/their main tasks

Ministry of Natural Resources and Environmental Protection - implementation of the state social order

Administration of State-Established Environmental Protection Institution "Yelnya" - implementation of the state social order

Public organization "Akhova ptushak Batskaushchyny" - preserving the diversity of species and ecosystems of Yelnya weatland by introducing people to active nature conservation (goals within the project - to prevent peat fires, restore biodiversity and disrupt wetland ecosystems by optimizing the hydrological regime of Yelnya weatland)

International conservation organization Bird Life International (UK) - protection of birds and the preservation of their habitat, the creation of a circle of people interested in the results of the organization's activities, the expansion of the organization's work area to attract partners from around the world

volunteers - realization of the need to help society (construction of dams made of natural materials on melioration channels).

Media - to quickly cover socially important events, using primary information from potential stakeholders, and the availability of social content (viewers own release release), expanding the consumer base. (Media mission)

National Academy of Sciences (NAS) of Belarus - conducting a comprehensive research and studying the economic benefits of environmental services for the country's economy

local government civil society academia & education business

#### Short description of stakeholders:

Local government: Administration of State-Established Environmental Protection Institution

civil society: non-governmental organizations (NGOs)

academia and education: schools and kindergartens, NAS

business: Unitary enterprise "Coca-Cola Beverages Belorussia" employees



Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society (maximum 3000 characters including spaces):

Interaction with government allowed the company to organize joint platforms for conducting a dialogue, increase sales through a positive brand created in the Republic of Belarus and the world market, and attract foreign investments. Such support for the preservation of the ecosystems of Belarus has allowed the company to apply for state social subsidies and build staff loyalty (internal CSR).

Indicate the SDGs relevant for the project: SDGs 13,15,11

Web links to a project or to CSR strategy:

https://by.coca-colahellenic.com/ru/

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3. Projects almed at climate change adaptation and mitigation implemented by						
(please provide max, 2 cases using the template below)						
(pieuse provide mux. 3 cuses using the template below)						
Case study 2						
Enterprise Name:						
Brewery Olivaria JSC, Carlsberg Group						
Sector of activity:						
Brewery and beer production						
Size and number of employees:						
850 people						
Source of funding and the budget:						
private (corporate) funds						
Timeframe:						
2013-						
Title of the project:						
Program "Making Better Beer and Life Better"						
Main challenges and goals regarding climate change identified:						
At all stages of production, the company uses the principle of rational and efficient						
use of natural resources - from research and development in the field of raw						
materials to methods of storing and transporting products.						
Aims and objectives of the program:						
prevention of negative environmental impact						
support of initiatives aimed at increasing responsibility for the state of the						
environment						
creation and distribution of any ironmontally friendly technologies						

creation and distribution of environmentally friendly technologies



Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

15.2.1 Progress towards sustainable forest management

15.b.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

# Main actions aimed at climate change adaptation:

High environmental standards

The company's products are represented in more than 6,000 refrigerators throughout the country. Each of them is safe for the ozone layer of the atmosphere due to the use of hydrocarbons. Vehicles for product delivery, purchased by the company in 2014, comply with the EURO-4 and EURO-5 environmental standards. This allows to reduce the release of nitric oxide by 20% and emissions of nitrogen and carbon by 25% CO2 reduction.

# Main actions aimed at climate change mitigation:

In order to optimize product delivery routes and thereby reduce CO2 emissions, company introduced an automatic router. New development allows efficient use of logistic resources and the most optimal routes.

The company is improving the packaging of products - the first of the Belarusian brewing companies began to use preforms with a shortened lid. The weight of the preform was reduced by 1.3 grams, and the savings on the lid - almost 0.5 grams. One of the main advantages of this preform is the reduction of harmful emissions into the atmosphere.

The "Chystai Plyn" campaign is aimed at drawing attention to the unique natural area of the Svisloch River, giving it protection status. It takes place with the support of the Minsk City Committee for the Protection of Natural Resources. Chystaya Flood - campaign to protect the floodplain of the river Svisloch.

local government civil society 
academia & education business

# Short description of stakeholders:

Local government: Minsk City Committee for the Protection of Natural Resources civil society: non-governmental organizations (NGOs)

business: Brewery Olivaria JSC employees



Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society (maximum 3000 characters including spaces):

Information support from media: information about social initiatives is published in the Belarusian media

A progress report is available on the corporate website of the company Distribution of information in the internal channels of corporate communications

Indicate the SDGs relevant for the project: SDGs 9,13,14,11

Web links to a project or to CSR strategy: https://alivaria.by/ru/ustoichivoe-razvitie/nashi-proekty/



# 4. Projects aimed at climate change adaptation and mitigation implemented by local government

Title:

Braslav district – the first climate neutral municipality in Belarus

Source of funding and the budget:

735000 Euro, European Union, Braslav district executive committee

#### Timeframe:

11.03.2016 - 11.02.2019

#### Main challenges and goals regarding climate change identified:

Contribution to converting Braslav district into climate-neutral municipality by 2030;

Contribution to meeting the CoM target of reducing CO2 emissions by 20% by 2020

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 11.b.1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030a

#### Main actions aimed at climate change adaptation:

Development of a roadmap of transforming Braslav district into a climate-neutral municipality by 2030

Involving of local population into converting Braslav into climate-neutral municipality

Sharing Braslav experience among other municipalities and relevant stakeholders in Belarus and other countries

#### Main actions aimed at climate change mitigation:

Reduce amount of  $CO_2$  emissions generated in Braslav district per person annually due to increased share of RE in total energy production and advancing of energy efficiency (changing of boilers, installation of solar collector system, installation of LED lightning, changing of inefficient pipe etc. );



Increase quantity and quality of municipal services on sustainable energy management available to population and visitors of Braslav district (which is a wellknown tourist destination in Belarus);

Please indicate the institution/s responsible for the implementation and its/their main tasks:

### Braslav district executive committee (local authority)

- Realization of a list of practical demonstration measures on energy efficiency
- Establishing and running the energy management unit by decision of Braslav executive committee/local council
- Establishing public informational center on energy efficiency and energy saving
- Promotion of Braslau as a climate-neutral municipality.

#### Center for environmental solutions (NGO)

- Preparation of synthesis report on available experience of climate neutrality in different municipalities
- Development of a Strategy of transforming Braslav into climate-neutral municipality by 2030
- Educational campaign for local citizens of Braslav

#### Please tick the type of stakeholders involved and shortly describe them

**Braslav district executive committee (BDEC)** was in general responsible for project implementation. Being the local authority for Braslav district BDEC initiated changes in the area of energy efficiency and climate neutrality. By joining the Covenant of Mayors, Braslav local authorities demonstrated its willingness to work in the area of energy efficiency. Project activities helped to reduce energy consumption, increase the share of renewable energy in total energy balance and decreased the amount of CO2 emissions

**Center for Environmental Solutions**, being one of the largest environmental NGOs in Belarus working in the area of promotion of energy efficiency actively participated in most of project activities, bringing its experience, professional capacity and contacts in the area of energy efficiency and climate sustainability, involvement of local population, promotion of environmental concepts among different stakeholders.

Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society

**Form of cooperation between partners:** consortium for realization of the project Cooperation has been expressed through the division of tasks

#### Communication with the society :

- Realization of communication and PR plans, developed in framework of the project
- Educational and promotion campaigns for local citizens



Indicate the SDGs relevant for the project: Goal 7 - Affordable and clean energy Goal 9 - Industry, innovation and infrastructure Goal 13 - Climate action

#### Web link to the project:

#### Case study 2

Title: PubLiCity: Energy Efficient Modernization of Public Lighting in the City of Polotsk

#### Source of funding and the budget:

European Union, within the EU4Energy initiative (Covenant of Mayors – Demonstration Projects programme), overall budget 1 630 500, EU funding - 1 304 400

#### Timeframe:

01/08/2015 - 22/11/2019

#### Main challenges and goals regarding climate change identified:

Main challenge – to reduce energy saving in public lighting, thus reducing CO2 emissions by the city

PubLiCity project focuses on energy efficient upgrade of public lighting in the city of Polotsk – the first Belarusian signatory of the Covenant of Mayors for Climate and Energy. The project uses innovative European approaches to public lighting and citizen engagement and sets an example for similar changes in other cities of Belarus. The project also applies innovative methods of citizen engagement in decision-making and planning processes related to public lighting and energy saving.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

MoRRI indicators – at the moment not available

SDGs indicators

13.2.1 Availability of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

13.3.2 Strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. 11.b.1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030*a* 

1570 modern LED street lights, some of them solar-powered, and new decorative lighting will be in operation in 18 central streets and avenues of Polotsk by the end



of 2019 to result in energy savings of 1920 MWh and reduced CO2 emissions of 880 tons per year.

Main actions aimed at climate change adaptation:

- Informational campaign for the citizens of Polotsk

Main actions aimed at climate change mitigation:

- Pre- and post-installation energy audit of public lighting and public opinion survey on the quality of public lighting (2016 and 2019)
- Capacity building for city experts responsible for public lighting (2016-2017)
- Purchase and installation of the lighting equipment (2018-2019)
- Architectural forum Arch.Pro.Svet where student teams developed concepts for the city illumination (2016)
- Light Hackathon where students developed concepts for urban light installations (2018)
- Polotsk Light Festival a 3-day festival of urban light art in Belarus, inspired by the Lyon Light Festival (2018)
- Energy Days as part of the EU Sustainable Energy Week (2016, 2017, 2018) annual city-wide events to promote energy efficiency and transition to clean energy.

Please indicate the institution/s responsible for the implementation and its/their main tasks

- Polotsk District Executive Committee
- Foundation Interakcia assisting Polotsk authorities in management and implementation of the project, responsible for awareness raising and stakeholder engagement events

Please tick the type of stakeholders involved and shortly describe them

City authorities and city services responsible for public lighting and energy saving; Local activists, citizens interested in eco-friendly way of life

Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society

The project applies innovative methods of citizen engagement in decision-making and planning processes related to public lighting. In the beginning of the project, we conducted a public opinion survey to find out how Polotsk citizens assess the quality of public lighting; the results helped us to include streets and areas which citizens are most concerned about into the project design documentation for modernization of street lighting. We will repeat the survey in August 2019, after new lights appear in



the streets, in order to see to which extent Polotsk residents are satisfied with the new lighting.

Next, we decided to try new ways of engaging local activists into urban lighting planning. In 2016, we conducted architectural forum Arch.Pro.Svet where 40 students from all over Belarus, together with 19 famous designers and architects, developed concepts for creative lighting of the city's downtown area, tourist sights, city entrances, and suburban neighborhoods. Now the city authorities have concepts that they can use to develop actual public lighting projects. Later, in 2018, we held a nation-wide call for ideas and a Light Hackathon for students to collect concepts for light installations that could appear in the city's public spaces. Some of the ideas came to life as part of the project in September 2018, during the Polotsk Light Festival – a 3-day festival of urban light art with focus on energy efficiency, which was the first event of this kind in Belarus and gathered more than 30,000 guests. Polotsk Light Festival was a new format of Energy Days – annual city-wide series of creative events to promote energy efficiency and transition to clean energy, which we conduct in Polotsk every year as part of EU Sustainable Energy Week.

#### Indicate the SDGs relevant for the project:

Goal 7 - affordable and clean energy

Goal 11 - sustainable cities and communities

Goal 13 - climate action

Web link to the project:

http://eu-belarus.net/en/projects/13

#### Case study 3

#### Title:

Cross-border Water Inspectors: Towards Joint Monitoring and Development of Water Resources of the Pripyat River Basin

#### Source of funding and the budget:

European Commission, Eastern Partnership Territorial Cooperation Programme 'Belarus-Ukraine'

Overall budget: 277,800 euro

#### Timeframe:

30.11.2017 - 31.03.2019

# Main challenges and goals regarding climate change identified:

The overall objective: To contribute to joint monitoring and management of BY – UA cross-border rivers and water resources.

Specific objectives: To create joint-cross border system of public monitoring and management of small rivers and water resources of the Pripyat river basin in the Pinsk (BY) and Liubeshiv (UA) districts.

Main indicators (of product/result/impact) applied (MoRRI indicators/SDGs indicators):

1. Institutional framework and specific action-oriented mechanisms have been created for joint monitoring, exchange of information, environmental protection and



cleaning of small rivers and water resources of the Pripyat river basin (cross-border working group on public monitoring of small rivers and water resources of the Pripyat river basin; public monitoring posts and school ecological clubs)

2. Population, local authorities and non-state actors have taken part in common activities aimed at joint monitoring, exchange of information, management and improvement of environmental condition of small rivers and water resources;

3. Awareness of local population, especially youth, on the challenges related to small rivers and water resources has been raised.

Main actions aimed at climate change adaptation:

- During **50 special lessons** pupils from Pinsk and Lubeshiv districts learned why it is important to monitor the status of small rivers.
- Manual on how to examine water in rivers was created.
- **20 ecological posts** appeared in both districts, 20 adults and 200 pupils were among their participants
- These posts conducted **20 campaigns to research the condition of water in** rivers and clean the shore.
- On special website you will find up-to-date information about the condition of small rivers. Participants of ecological posts measured the level of water pollution with compact laboratories.
- Water pipe network was constructed in village Zapolye in Pinsk district as well as recreation area was created in the area of Korostynka river in the village of Derevok in Lubeshiv district
- **Cross-border water festival** took place in Pinsk district in summer 2018. Participants from **cross-border summer camp** were volunteers at this festival.
- Experts drew up Cross-border plan for management of small rivers and water resources of the Pripyat river basin.

Main actions aimed at climate change mitigation:

Please indicate the institution/s responsible for the implementation and its/their main tasks:

Pinsk District Executive Committee (Belarus), Liubeshiv District Public and Ecological Organization "World Around Us" (Ukraine), Department of Education of Liubeshiv District State Administration (Ukraine)

Foundation Interakcia – responsible for assisting the lead partner (Pinsk) in project management and implementation, as well as communication and awareness raising campaigns as part of the project

**Please tick the type of stakeholders involved and shortly describe them** Administrations of the partner districts

Local environmental inspections

Schools (teachers, pupils, parents)

Shortly describe the forms of cooperation between partners involved in the implementation and the tools used for communication with the society Tools for communication:



- social media and mass media
- local events: summer camp, festivalpublications

# Indicate the SDGs relevant for the project:

Goal 9 - industry, innovation and infrastructure

Goal 13 - climate action

Web link to the project:

http://eu-belarus.net/en/projects/18