



SUPPLEMENT
TO THE DIGEST "GREEN BELARUS"

ENVIRONMENTAL INFORMATION CENTER
"ECO-INFO"
CENTRAL SCIENTIFIC LIBRARY NAS BELARUS

№ 2 (53),
February, 2018
MINSK, BELARUS



BELARUS' ENVIRONMENT MINISTRY SUGGESTS INCREASING PRIBUZHSKOYE POLESIE AREA

Belarus' Ministry of Natural Resources and Environment plans to submit the draft resolution "On the transformation of the Pribuzhskoye Biosphere Reserve" to the government in February, BELTA learned from the website of the ministry.

The draft resolution provides for an increase of the area of the reserve from 8,000 hectares to 17,200 hectares, including through the addition of sections of the Ramsar site Polesie Bug Valley. A significant part of this area is also a nature protection zone.

World Wetlands Day is celebrated on 2 February. The Convention on Wetlands of International Importance (Ramsar Convention) was signed in Ramsar, Iran on 2 February 1971. Belarus signed it in 1999, declaring the Sporovsky reserve its first Ramsar territory. There are now 169 Contracting Parties to the Convention, who have designated more than 2290 wetland sites (the total of over 225 million hectares) throughout the world to the Ramsar List of Wetlands of International Importance. This list includes 26 wetlands of Belarus with a total area of 778,900 hectares.

All in all, 16 wetlands in the world have the status of transboundary. Of them 4 wetlands in Belarus have been recognized by the Ramsar Convention Secretariat as parts of the transboundary wetlands of international im-

portance: Prostyr-Pripyat-Stokhod (Belarus-Ukraine), Kotra-Cepkeliai (Belarus-Lithuania), Vileity-Adutiskis (Belarus-Lithuania), Olmany - Perebrody mires (Belarus-Ukraine).



In Belarus the mechanisms of preservation of the Ramsar wetlands have been legislated. Most of them have been declared nature conservation areas or are subject to special protection (water protection areas, etc.). An important event of 2017 was the establishment of the water-marsh sanctuary Slavgorodsky (14,700 hectares) in Slavgorod District, Mogilev Oblast.

The importance and value of the Belarusian wetlands for the European region have been supported by a number of international projects funded from various international organizations. The project "Peatlands 1" saw the rehabilitation of 28,000 hectares of wetlands that degraded as a result of peat extraction and forest melioration. Another 14,600 hectares were restored under the project "Peatlands 2". Plans have been made to continue this work as part of the UNDP/GEF project "Sustainable management of forest and wetlands ecosystems to achieve multipurpose benefits". This time the project will focus on inefficiently drained forest peatlands.

BELTA,
2.02.2018

THIS ISSUE:

Belarus' Environment Ministry suggests increasing Pribuzhskoye Polesie area.....	1
Belarus to launch UNDP/GEF project to implement Nagoya Protocol Society.....	1
Minsk to play host to seminar on Nagoya Protocol on 7 February Societ.....	2
Belarus, Latvia to develop cooperation in environmental activities Society.....	2
Belarus, Ukraine discuss joint inland waterway project.....	2
Convincing profit calculation.....	2
Endangered species of birds in focus of UNDP-GEF conservation project in Belarus.....	3
Vital not to lose time tree.....	3
Belarus, UNDP to develop cooperation in green economy, waste management.....	4
Belarus, FAO to consider project on early detection of pine forest dieback and decline.....	4
World scale sustainability.....	4
What do genes hide?.....	5

BELARUS TO LAUNCH UNDP/GEF PROJECT TO IMPLEMENT NAGOYA PROTOCOL SOCIETY

The international technical assistance project "Strengthening human resources, legal frameworks and institutional capacities to implement the Nagoya Protocol" will be implemented in Belarus, Alexander Korbut, the Deputy Minister of Natural Resources and Environmental Protection of Belarus during the introductory seminar on the project, BELTA has learned.

"Belarus participates actively in the Convention on Biological Diversity and seeks to achieve its three objectives, namely the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the utilization of genetic resources. Belarus has been working on the first two objectives for a long time. With regards to the third one, the most complex one, Belarus needs an additional legal mechanism. The Nagoya Protocol contributes to the third objective of the Convention on Biological Diversity as it creates greater legal certainty and transparency for both providers and users of genetic resources. We will execute the project to implement the provisions of the Nagoya Protocol in Belarus, and I hope that today's seminar will help us in achieving our goals," Alexander Korbut noted.

The project calls for the analysis of the current legislation in the field of genetic resources conservation. It also provides for the development of mechanisms to ensure access to genetic resources, and also legal distribution of benefits derived from their use on the principles of justice and equality. "Belarus views this project as an opportunity to give impetus to the development of the country's market of genetic resources and to intensify the exchange of experience in this field," the deputy minister noted.

Belarus joined the Convention on Biological Diversity

in 1993. In 2014 the country made part of the Nagoya Protocol. "The Nagoya Protocol reaffirms the sovereign rights of states to their natural resources, and recognizes the importance of genetic resources for food security, health, biodiversity conservation and mitigation of climate change consequences. Belarusian scientists make a significant contribution to the study of biodiversity, pay great attention to the study and conservation of genetic resources. The National Bank of Plant Genetic Resources has been established in Belarus. It includes more than 64,000 collection samples. These are representatives of 1,680 species. Belarusian scientists attach great importance to the issues of DNA-certification of agricultural plants, preservation of the forest gene pool," said Valentina Lemesh, director of the Institute of Genetics and Cytology of the National Academy of Sciences of Belarus.

The Institute of Genetics and Cytology has developed the national DNA bank of human, animals, plants and microorganisms. "The bank includes 12,000 samples. These are valuable genetic resources. Collections are updated every year," added Valentina Lemesh.

The project "Strengthening human resources, legal frameworks and institutional capacities to implement the Nagoya Protocol in Belarus" is part of the global project for 24 countries and funded by the Global Environment Facility (GEF). The executive agency of the project is the UNDP. The implementing organization is the NAS Institute of Genetics.

The Nagoya Protocol to the Convention on Biological Diversity was adopted on 29 October 2010 and entered into force on 12 October 2014. It is a complementary protocol to the UN Convention on Biological Diversity.

BELTA,
7.02.2018



Minsk will play host to an introductory seminar under the international technical assistance project "Strengthening human resources, legal frameworks and institutional capacities to implement the Nagoya Protocol" on 7 February, BELTA learned from the press service of the National Academy of Sciences of Belarus.

This project is part of the global project for 24 countries and is funded by the Global Environment Facility (GEF).

The seminar will be attended by representatives of the UNDP Office in Belarus, the Institute of Genetics and Cytology at the NASB (the executor of the project), the Ministry of Natural Resources and Environmental Protection, the scientific organizations sharing resources with other countries,

MINSK TO PLAY HOST TO SEMINAR ON NAGOYA PROTOCOL ON 7 FEBRUARY SOCIET

representatives of Kazakhstan and Tajikistan who are implementing this project. The opening remarks will be delivered by Claudio Chiarolla, Regional Project Specialist for Eastern Europe and other Countries of the UNDP-GEF Global Project on ABS, and Alexander Korbut, the Deputy Minister of Natural Resources and Environmental Protection of Belarus.

"The aim of the Nagoya Protocol is to ensure fair and equitable sharing of benefits arising out of the utilization of genetic resources which includes any material of plant, animal, microbial or other origin containing functional units of heredity and of actual or potential value, and hence the entire biological diversity of Belarus. These are plants, animals, strains of microorganisms, and collections of varieties and seeds, agricultural crops. In fact, the compliance by a country with the provisions of the Nagoya Protocol means the guaranteed receipt of benefits arising from the utilization of genetic resources of own country and willingness to accordingly provide benefits to countries-suppliers of genetic resources," the NASB said.

The Nagoya Protocol to the Convention on Biological Diversity was adopted on 29 October 2010 and entered into force on 12 October 2014. It is a complementary protocol to the UN Convention on Biological Diversity. .

BELTA,
5.02.2018

BELARUS, LATVIA TO DEVELOP COOPERATION IN ENVIRONMENTAL ACTIVITIES SOCIETY

Belarus and Latvia will develop cooperation in environmental activities. This was agreed at a meeting between Belarus' Minister of Natural Resources and Environment Andrei Khudyk and Minister of Environmental Protection and Regional Development of Latvia Kaspars Gerhards, BELTA learned from the website of the Belarusian Ministry of Natural Resources and Environment.

The ministers discussed promising areas for the development of bilateral cooperation in environmental activities, including a set of measures to implement the cooperation program between the Ministry of Natural Resources and Environment of Belarus and the Ministry of Environmental Protection and Regional Development of Latvia for 2018-2022. The program was signed on 7 February. It provides for the conservation and sustainable use of biological and landscape diversity, water resources, hydro-

meteorological activities, environmental monitoring, and also research, personnel training and many more.

Andrei Khudyk and Kaspars Gerhards expressed their intention to continue working together to prepare for the signing of an agreement between the Government of Belarus and the Government of Latvia on cooperation in the protection and rational use of transboundary waters, improving their quality, preserving and, if necessary, restoring ecosystems. They also discussed the prospects for cooperation in the area of waste management. Both the sides expressed confidence that fruitful cooperation between the two ministries will continue developing.

BELTA,
8.02.2018

CONVINCING PROFIT CALCULATION

Belarus joins EU initiative on climate and energy, implementing promising projects

A round eight thousand cities, with a combined population of over 240 million people, have voluntarily pledged to reduce harmful emissions into the atmosphere. Belarus has joined one of the largest global initiatives in the field of climate and energy, with Polotsk already seeing carbon dioxide emissions falling by 12 percent. Brest, Mogilev and fifteen other cities are also working towards similar goals and, not so long ago, twenty other towns joined the list: Bobruisk, Bykhov, Verkhnedvinsk, Vitebsk, Volkovysk, Gorodok, Dokshitsy, Ivatsevichi, Kalinkovichi, Krasnopolie, Korma, Mosty, Mstislavl, Nesvizh, Novopolotsk, Pruzhany, Svetlogorsk, Slavgorod, Slutsk and Smorgon.

The Covenant of Mayors for Climate & Energy is a European Union initiative signed by over 300 countries, each promising to improve the quality of life for their citizens. The idea has received support from the Eastern Partnership region and 225 million Euros have been allocated for related projects.

Ivan Shchedrenok, a national expert of the Covenant of Mayors for Climate & Energy in Belarus, tells us, "Belarusian cities have been demonstrating interest in this initiative: in 2017 alone, the number of participants almost doubled and, in early 2018, there were forty signatories. You might wonder why the initiative is so popular. Cities primarily gain the opportunity to draw upon global expertise in the field of climate change, learning from international experience. Secondly, donors and credit institutions pay attention to signatories, rendering financial assistance. It's important for investors that cities develop a specific business plan to reduce CO2 emissions, as this is a bright indicator for co-operation."

Polotsk was the first Belarusian city to join the EU initiative, cutting carbon dioxide emissions by 12 percent and aiming to double that figure by 2020. The Gorsvet (City Light) project is being successfully implemented, envisaging major modernisation of street lighting, at a cost of 1.3 million Euros. The initiative is much welcomed by city residents, with people replacing usual incandescent bulbs with LED bulbs, and taking steps to save water, heat and electricity.

The town of Chausy is a great example too, with its Saving Water Belarus joins EU initiative on climate and energy, implementing promising projects project gaining momentum. Costing 959,000 Euros, the smart system calculates volumes of energy and water consumed, enabling savings of 250,000 Euros annually. In addition, interactive online calculators enable residents to calculate how best to save on their utility bills.

The EU initiative is also supported by Novogrudok, which is seriously developing green energy. Not so long ago, it launched the country's most



powerful windmill, and has extensive plans, with 600,000 Euros allocated to develop renewable energy sources.

Meanwhile, the regional centre of Brest is promoting green urban planning and has launched a wasterecycling plant: an excellent example of integrating national financing and European monetary assistance. Its water treatment facilities may soon be modernised.

Speaking of achievements, Mr. Shchedrenok notes that the Energy Saving programme (being realised until 2020) is helping achieve greater energy efficiency, allowing Belarus to approach the level of most developed countries. However, some activities are yet to become part of the state programme. Participation in the Covenant of Mayors for Climate & Energy will help implement these, and find external sources of funding.

Many Belarusian cities are keen on eco-initiative: Gorsvet project is being successfully realised in Polotsk, with major modernisation of street lighting costing 1 300 000 Euros.

"Progressive cities are joining the initiative, wishing to do more than the state programme envisages. For example, they're aiming to half energy consumption and generate the remainder from renewable sources by 2050. Many desire full climatic neutrality by then, producing no detrimental effect on the climate," explains Mr. Shchedrenok.

The Braslav District, in the Vitebsk Region, has already voiced this wish, striving to become the first climate neutral area in the country. To ensure this, the EU will allocate considerable financial support.

By Vladimir Mikhailov

Belarus, № 1(1012), 2018

ENDANGERED SPECIES OF BIRDS IN FOCUS OF UNDP-GEF CONSERVATION PROJECT IN BELARUS

A big environmental project aimed at restoring the habitats of globally threatened species (Aquatic warbler, greater spotted eagle, great snipe, black-tailed godwits) and the conservation-oriented management of forest and wetland ecosystems is underway in Belarus, BelTA has learned.

The five-year UNDP-GEF project "Conservation-oriented management of forests and wetlands to achieve multiple benefits" (Wetlands) started in November last year. All this time the stakeholders were engaged in preparatory work. On 27 February Minsk played host to the initial workshop that brought together the partners and stakeholders. The Ministry of Natural Resources and Environmental Protection is the national executing agency. The donors are the Global Environment Facility, the United Nations Development Programme. The total budget of the project is \$4.3 million.

The main objective is to introduce conservation-centered and financially self-sufficient approaches to management of forests and wetlands that will yield conservation effect for the globally significant biodiversity, climate and land use, said Nikolai Svidinsky, the head of the department of biological and landscape diversity at the Ministry of Natural Resources and Environmental Protection. Sustainable use of resources is very important for the balance of environmental and economic interests, he noted.

"Forest and wetland ecosystems of Belarus are of global importance for unique biodiversity. The conservation of these ecosystems is important for reducing the rate of biodiversity loss at the global, regional and national levels. The five-year Wetlands program includes a number of interesting projects that do not repeat the previous ones but are based on their results and problematic aspects," Nikolai Svidinsky said.

Some activities will be implemented in synergy with similar initiatives in Europe Project Manager Aleksei Artyushevsky explained that the project provides for some changes to the environmental legislation (including the long-awaited law on protection and use of wetlands), conservation of valuable tracts of forests, implementation of sustainable methods to the use and processing of peatland biomass, the improvement of forage lands for the free-roaming micro-population of the European bison, restoring the habitats for wetland birds, wetlands and grasslands, ecotourism development and so on. The project will cover more than a dozen of protected natural areas: Turov Lug and Pogost, Nalibokskaya Pushcha, Zvanets and Sporovsky, Zhada, Servech and others.

BELTA,
27.02.2018

VITAL NOT TO LOSE TIME

We might call July 22nd, 2017 the birthday of domestic electric car building

2017 was a landmark for the Belarusian scientific sphere, headlined by the Year of Science welcoming several significant events. Among them was the launch of a domestically assembled prototype electric vehicle. Although industrial production is some way off, engineers are already planning a version that can drive unmanned, as Oleg Yelovoy, the Deputy Director General for Research and Innovative Activity at the United Institute of Mechanical Engineering of the National Academy of Sciences, tells us.

From site to quarry

Mr. Yelovoy, unmanned taxis are now more common, such as in Japan, the USA and the United Arab Emirates. May we soon see unmanned vehicles in Belarus?

Vital not to lose time We might call July 22nd, 2017 the birthday of domestic electric car building We've begun developing unmanned vehicles with cargo cars. It's a topical issue and, historically, our country has specialised in production of large-size equipment, with great success. It might sound strange, but cargo transport is simpler to control unmanned: quarry dump trucks, which have strict routes and need to perform specific tasks. These vehicles need drivers least of all. Of course, unmanned vehicles are expensive but costs are well-founded since they preclude human error, and save on wages for drivers. It's sufficient to employ a single specialist to supervise the operation of several vehicles, from the office. The leading global companies — like Komatsu — are moving in this direction. We hope our co-operation with BelAZ will result in a robotic quarry dump truck; we've begun along this path already.

Probably, there will be more than dump trucks without drivers...

The buggies servicing plant territories are another promising avenue for unmanned vehicles, transporting spare parts and equipment; they'll be like little warehouse cars, which we already use (though these are larger). Of course, we also view passenger cars as a possibility; not long ago, our country became a state of light car industry.

How much time will it take to develop our own unmanned car? What's hindering the process?

If we gain a customer, our scientists will need 18 months to two years to develop a prototype. However, there's a more important issue, as voiced by the President during the 2nd Congress of Scientists: the susceptibility of the industry. Plants need to be ready and adaptable. Innovation requires not only courage but, often, the updating of production equipment, technical processes, technologies and the line. No facility is ready for this. I'm convinced that, if an enterprise produces less than a third of new equipment in its total range, it will sooner or later lose its market position. German automakers, for example, update their range by 40 percent every two years. Japanese do the same. We're encouraging our car-making industry to follow the same example. However, there are some problems. Primarily, we lack highly professional engineers and are seriously technologically backward. Sadly, we often have to replace the important 'designer-technologist-researcher' scheme, while adjusting production.

Of course, among unmanned vehicles, we also view passenger cars as a possibility; not long ago, our country became a state of light car industry

Show me your face

We might call July 22nd, 2017 the birthday of domestic electric car building. Last August, we saw a pilot sample with our own eyes. Some even managed to drive it. However, it's been many times said: our electric car will be different. Can you explain?

We're considering two variants of an electric vehicle — as discussed at the August meeting with the President. One is low-budget: i.e. a buggy for gardens and parks. Over time, an inexpensive city car can be developed on its basis — for example, for mail, delivery and taxi services. It might even become a service car for organisations. The first prototypes are planned for use in the National Academy of Sciences' Botanical Garden, which we neighbour. We'll work out technical solutions relating to operational needs, including bat-



tery charging. We'll be able to realise two ideas at the same time: an unmanned electric car moving through the park along a given route, completely Belarusian-made, assembled at our Institute; and a prototype. We have the premises and necessary tools. Moreover, in line with our action plan in the field of electric car building (approved by the Government), we've created the Intellectual Electric Transport cluster, uniting nineteen participants: scientific institutions, enterprises (including private), universities (like the Belarusian National Technical University and the Belarusian State University of Informatics and Radioelectronics) and their technological parks. According to our forecasts, production should launch by 2019 and we'll be able to present our prototypes.

Is there a second proposal to make e-cars at BelGee Plant — as mentioned earlier?

The enterprise is our partner and is meeting us halfway. We'll receive a crossover prototype or, even, a model from the Geely electric car range. Jointly with the Industry Ministry, we're preparing a road map for the project, based on suggestions by the company's management, BelGee, the National Academy of Sciences and the Industry Ministry. Electric car building offers a great opportunity, particularly at European level. According to EAEU requirements, we're ready for 30 percent localisation of production of electric car components. Greater figures are only a matter of time. We aren't afraid of revamping petrol-fuelled cars, and already have experience. Our experimental electric vehicle has been registered with the traffic police and we sometimes use it on city routes. As regards recharging, we use Vitvetsk's Vitvay Plant. Everything is ready for us to develop electric car infrastructure. Upon the President's demand, a programme of electric transport development is being prepared. A draft law is ready, envisaging measures to stimulate demand for electric cars, to help promote the electric car industry.

Tell us more about the batteries for electric cars. How heavy are they, and how quickly do they charge?

We're developing electric accumulators (the most expensive component of an electric car) so there's no need for lithium-ion technologies, which are very dirty and quite expensive, as they require cobalt. There aren't many deposits globally and those countries which possess cobalt are already planning to raise prices. We've chosen another path. A sample of graphene-like material will soon be ready and we're making a cell to rival lithium-ion in its characteristics. Its production is simpler, cleaner and cheaper, being lighter, and it's more reliable, in all weathers and temperatures. It's not explosive either. We can produce batteries of the required capacity and power, evenly distributing graphene sheets in cells along the body of an electric car. We're now making a prototype at one of the academic organisations of the Scientific-Practical Materials Research Centre. Although the first series of our electric cars will probably use traditional lithium drives and super-condensers, in time, we'll be testing and mastering graphene.

Time is of the essence for all our projects, and rely on the support of industry. We need to ensure high added value in high-tech products.

By Vera Arteaga

Reference:

Vladimir Gusakov, Chairman of the Presidium of the National Academy of Sciences of Belarus: The Year of Science was rich in innovations. Among the most significant, as mentioned at the 2nd Congress of Scientists, was the development of a portable supercomputer, that performs up to 20 trillion operations per second. In addition, we now have a national system for identification, labelling and tracking goods and vehicles, that avoids the falsification of goods. We've created a series of highly effective medicines, new varieties of agricultural plants, machines for the agro-industrial complex, and much more. One of the most significant moments for mechanical engineering was the development of an electric vehicle for personal use, in addition to work on our own batteries. We're constantly working on improving our electric vehicle and I think that, in the near future, we'll be able to position it within our integrated development.

Belarus, № 1(1012), 2018

BELARUS, UNDP TO DEVELOP COOPERATION IN GREEN ECONOMY, WASTE MANAGEMENT

Green economy, green energy, integrated waste management, and disposal of persistent organic pollutants have been identified as the main areas of further long-term cooperation between Belarus and the UNDP in environmental protection. The agreement was reached in a meeting between Belarus' Natural Resources and Environmental Protection Minister Andrei Khudyk and Deputy Director of the UNDP in Europe and the CIS Rastislav Vrbensky, BelTA learned from the website of the ministry.

During the meeting the parties discussed the ways of expanding cooperation between Belarus Ministry of Natural Resources and the UNDP. Priority will be given to the activities included in the national action plan for the development of green economy in Belarus up to 2020.

Andrey Khudyk and Rastislav Vrbensky also discussed the need to use the mechanism of small grants with the aim of developing environmental initiatives and promoting community involvement, including the younger generation, in the environmental movement.

BELTA
23.02.2018

BELARUS, FAO TO CONSIDER PROJECT ON EARLY DETECTION OF PINE FOREST DIEBACK AND DECLINE

Belarus invites the Food and Agriculture Organization (FAO) to implement a joint project on the early detection of pine forest dieback and decline, Belarus' Deputy Forestry Minister Alexander Kulik said during a meeting with FAO Assistant Director General, Regional Representative for Europe and Central Asia Vladimir Rakhmanin, BelTA learned from the press service of the Forestry Ministry.

"We propose to implement joint projects with FAO in a number of areas. We suggest developing integrated measures to rehabilitate the damaged pine plantations in the southern regions of the country, implementing a pilot project on early detection, monitoring and restoration of damaged plantations, evaluating the national methods to take stock of the forests under the technical cooperation program," Alexander Kulik said.

He also noted that for the third year the forests in Belarus have been suffering the consequences of the climate change. In 2015 the country had to deal with very dry weather. In 2016 it was storms. 2017 brought an onslaught of bark beetles. All this has caused significant damage to forests. The Forestry Ministry called on the partner countries to join efforts and on the international organizations to provide support. The ministry places great emphasis on cooperation with FAO.

Alexander Kulik recalled that there are plans to hold an international seminar on protection of pine plantations against insects and diseases with the participation of FAO experts at the Gomel-based forestry in April this year.

Vladimir Rakhmanin, for his part, said that FAO will help the Forestry Ministry to fight off the drying out of pine plantations. According to him, European countries are aware of the importance of the problem. It has primarily affected Belarus and Ukraine, but forests know no borders and it is therefore important to fight off the spread of insects.

BELTA
23.02.2018

WORLD SCALE SUSTAINABILITY



UN member states adopted Sustainable Development Goals until 2030: a list of seventeen goals aimed at eliminating global poverty, combating inequality and injustice, and solving problems relating to climate change. The project unites 193 states, including Belarus. In late 2017, an open parliamentary session was organised, entitled Partnership of Branches of Power as a Prerequisite for Successful Implementation of Sustainable Development Goals. The Deputy Chair of the National Assembly's Council of the Republic, the National Co-ordinator for Achieving the Sustainable Development Goals, Marianna Shchetkina, comments upon the project.

What do we need to focus on, to realise the SDGs?

Approaches to achieving the SDGs are reflected in two major strategic documents: the National Strategy for Sustainable Social and Economic Development until 2030 (a key programme document outlining major avenues in the field of development and echoing the Agenda-2030) and the Programme of Social and Economic Development for 2016-2020. Several other documents for industries and regions are also relevant but our analysis demonstrates that they aren't covering all indicators. Our task is to develop national parameters and implement them into Republican, branch and regional programmes, at various levels.

All seventeen goals are interrelated, aiming to enhance the quality of life of our people. Ensuring public welfare economically and socially should be the basis for long-term development. No social progress is possible without economic development, and vice versa: no economic progress can be achieved without human potential development.

Obviously, the SDGs cover more than a single state or a handful. What contribution can we make to the prosperity of peace, and partnership on the planet?

Globalisation seriously affects social policy. Previously, social issues were the sphere of responsibility of national governments but, these days, it's hardly possible to avoid international influence. Worldwide, we're seeing the most advanced practices, principles and approaches. It's vital for our national system to apply approaches which meet public interest.

IT development is an undoubted priority but we must understand that new technologies require new skills in the labour market — such as the ability to work with large arrays of information. Accordingly, appropriate qualifications are needed. With this in mind, people of the older generation should have the opportunity to train and retrain — in order not to lose out on the labour market. Informatisation of

processes and activities entails the need to move to a new type of employment, and this should be taken into account when regulating labour relations. Introducing new, modern technologies is accompanied by optimisation of figures of those involved; this is a matter of employment. Therefore, it's important to create new industries and promote development of entrepreneurship.

Achieving SDGs is an ambitious task; realisation requires more than mobilising internal resources. We support the idea of an 'integration of integrations', as proposed by the President at the UN summit in 2015, to promote multilateral initiatives to find optimal joint paths for sustainable growth, and to coordinate the battle against global challenges and threats.

Some of the tasks which UN member states plan to jointly solve by 2030 are losing their relevance for us — such as reducing child mortality, and improving maternal health. Will our priorities change?

It's true that our starting position for achieving these goals is quite high. The country has managed to achieve the major Millennium Development Goal relating to eradicating poverty and hunger ahead of schedule, and we fully meet our food needs.

The Millennium Development Goal aimed at reducing child mortality, improving maternal health, and combating HIV/AIDS, malaria and tuberculosis has been achieved. Our country is also demonstrating success in achieving gender equality and education. However, much work lies ahead. Belarus is obligated to meet all seventeen Sustainable Development Goals. This is a difficult yet necessary path; nobody should be left aside.

In February, the country will host the first regional forum gathering national co-ordinators involved in achieving the SDGs in Europe and the CIS. What do you expect from this meeting?

We have plans to host such a regional forum for leaders of regional sustainable development initiatives in Minsk, in February 2018. We plan to gather heads responsible for co-ordinating work aimed at achieving the SDGs in Europe and Central Asia, in addition to UN officials and international experts. Participants will be able to exchange experience on sustainable development, establish partner ties between national co-ordinators and solve other issues relating to social, economic and environmental sustainability.

Meanwhile, we must understand that nobody but us will act in the interests of our country. Our work towards the SDGs requires our joint effort. We need mutual support, understanding and interaction for the sake of present and future generations.

Belarus, № 1(1012), 2018



SUPPLEMENT "NEWS & EVENTS IN BELARUS" TO THE DIGEST "GREEN BELARUS".

http://ecoinfo.bas-net.by/ecology-belarus/ecology_news_in_Belarus.html

The supplement was established in 2013 as an informational and educational resource that can be freely accessed by all users interested in ecology and environmental problems.

It is a digest of the most important news and events.

Published once a month.

SUPPLEMENT "NEWS & EVENTS IN BELARUS" TO THE DIGEST "GREEN BELARUS"

ENVIRONMENTAL INFORMATION CENTER "ECO-INFO"
CENTRAL SCIENTIFIC LIBRARY NAS BELARUS
[HTTP://ECOINFO.BAS-NET.BY](http://ecoinfo.bas-net.by)

№2 (53),
FEBRUARY, 2018

REPRINT WITH REFERENCE TO GB

LEAVES IN ENGLISH

INTERNET-BULLETIN
[HTTP://ECOINFO.BAS-NET.BY/ECOLOGY-BELARUS/ECOLOGY NEWS IN BELARUS.HTML](http://ecoinfo.bas-net.by/ecology-belarus/ecology_news_in_Belarus.html)

The room contains materials prepared by the news agency correspondents :
BELTA, Belarus-Magazine , The Minsk Times.

WORKED ON THE PRODUCTION OF:
LAPITSKAYA G.I.

TARASEVICH A.A.

GORODKO Y.M.

DESIGN AND LAYOUT:

TARASEVICH A.A.

GORODKO Y.M.

"Eco-Info" CSL NASB
Address for correspondence:
Surganova, 15, of. 501
220072 Minsk, Belarus

e-mail: ecoinfo@kolas.basnet.by
Website: <http://ecoinfo.bas-net.by/>
Twitter: https://twitter.com/Green_Belarus
Facebook: <http://www.facebook.com/CSL.by>
Tel.: +375 (17) 284 14 96

WHAT DO GENES HIDE ?

Minsk's Akademicheskaya Street is a science hub, with almost every building housing a research institution or laboratory. Wherever you go, you come across a scientist. There's even a DNA bank: the only one in the post-Soviet space.

As valuable as gold

"The national 'gene pool store' is right under you," says Valentina Lemesh, who has a Ph.D. in biology. She works as the Director of the Institute of Genetics and Cytology at Belarus' National Academy of Sciences. Meeting on the first floor, she tells me that all genetic research relies on this database, which is being used by the 'DNA Identification' Union State programme, currently in its second year.

The programme's full title is 'Development of Innovative Geno-geographic and Genomic Technologies for Personality Identification and Individual Characteristics of a Person on the Basis of Studying Regional Gene Pools'. Each word represents painstaking work by geneticists, which begins with collection of biological material for wide-ranging analysis, determining the function and development of the human genome.

Belarusian scientists have collected an impressive number of DNA samples and biological materials in pursuit of the state programme, with each sample used repeatedly from the bank; it's efficiently and saves up to \$130 from each unit.

Over eight thousand DNA samples are stored in large freezers in a special room, at a temperature of minus 80 degrees: from people, plants, animals and micro-organisms. Among them are samples from patients with malignant and benign tumours of the lungs and bladder, and from people suffering from bronchial asthma, cardiovascular pathology and osteoporosis. In the process of research, these are compared with samples from healthy people, allowing analysis and the drawing of conclusions. In addition, the bank keeps 780 DNA samples from Belarus' indigenous people, from eighteen settlements, across six regions of the country. The biomaterial of national team athletes is also stored at the bank, which resembles a systematised library, providing scientists with great opportunities for research. Doctors from large Republican medical centres help replenish it.

"It's difficult to collect enough samples of a certain pathology in medical genetics," Ms. Lemesh stresses. "The process is strictly regulated and conducted in accordance with the principles of voluntariness and informed consent, with mandatory questionnaires. Each sample is as valuable as gold."

Margarita Smal, a research officer at the laboratory of molecular genome stability, at the

Institute of Genetics and Cytology, of the NAS of Belarus

Find and neutralize

Almost Br2 billion has been allocated for the 'DNA Identification' project, which is to run until 2021. Specialists are working at several scientific sites: in Minsk, Moscow, Novosibirsk and Tomsk. Results from specific methods and technologies will be used in the field of medical genetics, aiming at the prevention, diagnosis and prognosis of a wide range of diseases and to aid forensic science.

"If a person is predisposed to diabetes, osteoporosis, or cardiovascular, oncological or autoimmune diseases, we can predict their occurrence, enabling us to give treatment and arrest development,"

explains the Director of the Institute of Genetics and Cytology at Belarus' National Academy of Sciences. "Criminals with particular genetic diseases will have distinctive DNA, enabling their identification more easily."

This should help seriously in criminologists' gathering of evidence, with studies conducted only by laboratories with international certification. Belarus' lab is the only one in the CIS accredited to these standards.

Expensive equipment is necessary to ensure accuracy and quality of research. Belarus owns one of twenty fragmented analysers worldwide: a compact box with touch buttons which helps greatly in investigating crime. Geo-geographic research can help identify individuals who have died in disasters and in wartime. Results can be carefully submitted into the bank gene pool, remaining valid for dozens of years.

Testing suitability for stressful employment

This year will see some innovations implemented, including genetic testing for stress resistance and psychoneuro-emotional characteristics. Results will then be used in employing members of emergency services, such as for the Emergency Ministry, and

for aviation.

"A complex of genes is responsible for stressresistance," explains Irma Mosse, who heads the human genetics laboratory. "A person can be healthy and physically fit to work in these areas but, in a stressful situation, will crumble. We can determine at the initial stage whether someone is suitable for certain work."

Tests will soon be available for all residents of Belarus, to create a genetic passport, showing their innate predispositions and features. Forewarned is forearmed.

By Alena Prokina

Belarus Magazine,
01.02.2018



image/jpeg;base64,/9j/4AAQSkZIRgABAQAAAQABA

