

GREEN NEWS

information - environmental newsletter

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ours rubrics



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Main trends of the environmental policy of the Republic of Belarus

The main trends of the policy of the Republic of Belarus in the field of using natural resources and environmental protection can be found in the National Strategy of the Sustainable Development of the Republic of Belarus. This document of a long-term action plan was approved by the Council of Ministers of the Republic of Belarus on March 25, 1997. The National Strategy includes recommendations and principles of the documents of the UN Conference on the Environment and Development (UNCED), which was held in 1992 in Rio-de-Janeiro (Brazil).

The main objective of the environmental policy of the Republic of Belarus is provision of the environmentally safe living conditions for human beings, the rational use and protection of natural resources, elaboration of legal and economical conditions to protect the environment, which is the interests of the present and future generations. To achieve this aim, firstly, a structural reconstruction in the production sphere is to be carried out, and then the technical policy is to be fulfilled on the basis of resource savings and the use of processes with low level of wastes.

The main trends of the work aimed at implementing the state's environmental policy include:

- improvement of the environmental legislation;
- introduction of effective economical methods of management and control of the use of natural resources and protection of the environment;
- establishment of a system of financing of the nature conservation measures;
- improvement of the system of controlling bodies and of the environmental control;
- implementation of a program of staff training and enhancement of the environmental understanding by the population; and

- Development of internationally cooperation and more active use of the foreign experience in solving environmental problems.

A whole system of measures of the environmental protection was created in the Republic of Belarus. Hence, two documents, “National Program of Rational Use of Natural Resources and Environment Protection for Years 1996-2000”, and the “National Strategy and Plan of Actions for Conservation and Sustainable Development of the Biological Diversity of the Republic of Belarus”, are fundamental in this respect.

Programs and complex projects were planned and implemented to solve the problems in the field of environmental protection. These programs include:

- development of a network of special protected natural territories,
- protection of the population from the consequences of the accident at the Chernobyl nuclear power plant,
- health,
- resource saving, etc.

*The article has been prepared by
Andrei Okhremenko*



Nature saving legislation

The following documents constitute the basis of the legislation of the Republic of Belarus in the field of environment protection and use of natural resources:

- The Constitution of the Republic of Belarus (article 34,46,55) dated March 15, 1994 with additions and amendments, dated November 24, 1996.

- The Conception of the state policy of the Republic of Belarus in the field of environment protection approved by the Supreme Council of the Republic of Belarus on September 6, 1995.

- The laws of the Republic of Belarus:

- “On environment protection”, dated November 26, 1992;

- “On the state ecological expertise”, dated June 18, 1993;

- “On the especially protected natural territories and objects”, dated October 20, 1994;

- “On the tax for using the natural resources (the ecological tax), dated December 23, 1991;

- “On production and consumption wastes”, dated November 25, 1993;

- “On protection and use of the animal world”, dated September 19, 1996;

- “On protection of the atmospheric air”, dated April 15, 1997;

- The Code of the Republic of Belarus on the land (January 04, 1999);

- The water Code of the Republic of Belarus (July 15, 1998);

- The Code of the Republic of Belarus on the underground resources (December 15, 1997);

- The forest Code of the Republic of Belarus (June 21, 1979).

Source: *Ministry of Natural Resources and Environment Protection of Republic of Belarus*

Consultation with ECO-NGOs

On April 18 of the current year (2001), the recently appointed Minister of Natural Resources and Environment Protection of Belarus, Leonty Khoruzhik, started a series of consultations with public ecological organizations of the country. The first meeting was dedicated to the problems of the ecological education. However, wider issues were considered too, like distribution of the ecological information and access to it; specific ecological problems and participation of the public organizations in discussions about them, and decisions related to them.

Representatives of four organizations were invited to the meeting – the All-Republican Ecological Center of Students, the Minsk City Society of Nature Protection of the Municipal House of Nature, the youth ecological organization “Balaja Rus” and the association “Ecological Management”. Minister L. Khoruzhik spoke in favour of establishment of the

guiding document of the ministry – the organizational procedures and provision of the access of the public to the ecological information and participation in taking the decisions. Due to this, he applied with the request to all interested organizations, including NGOs, about rendering the practical assistance in preparation of such a guiding document. The Belarussian ministry would also be grateful to other states if they could share their experience in this direction.

On the next day, the Minister met NGO representatives engaged in the issue of ecological publications – newspapers, information bulletins, and magazines. In future, such meetings will take place with those agencies, which are engaged in the issues of the ecological policy and ecological legal activities.

Source: information service “Eco-Accord”.



We know not what is good until we have lost it

The Belovezhskaya Pushcha is a well-known reserve of Belarus. Many people know about the Belaya Vezha (White Tower) (in Kamenets-town on Lesnaya-river), which was built by Duke Vladimir Volynsky in 1276. By the name of this tower, all adjacent forest masses started to be called. In the 13th century, the forest was called Belovezhsko-Kamenets Pushcha, and from 1409 – Belovezhskaya Pushcha.

But these forests had long before been known beyond Belarus. The legends had existed about the rich animal world of the Belovezhskaya Pushcha in the ancient times. In the Roman Empire aurochs – these wild bulls from the Northern forests- were in great demand. They were sent to arenas of circuses and amphitheatres for the bloody entertainment. The first mentioning on the forests of the Belovezhskaya Pushcha was made 2500 ago by Herodotus. The data on thick forests with the countless number of wild animals can be found in the Ipatyevskaya chronicle.

In the 13th century, limitations for hunting were introduced in the Pushcha. In the end of the 14th century, it was turned to the reserve forest with the right of hunting for the royal persons. Preservation of the Pushcha was helped by the fact that aurochs had been settling there from the ancient times. The wish to save the disappearing breed in Europe made dukes of the Great Lithuanian Principedom, and then Russian Tsars take care on preservation of the forest. In 1541, the reserve for protection of aurochs was created. In 1640, the order was issued on prohibition



of cutting the forest on the territory of the Belovezhskaya Pushcha. At the same time the territory of the reserve was marked – 163.9 hectares.

On the one hand, the royal decrees retained the thick forests and animals living there, but on the other hand, splendid royal hunts when numerous wild animals were killed were detrimental to the animal population. The historic chronicles mentioned the hunting by the Polish Shlyakhta and Russian Tsars. For example, on September 25, 1752, 66 aurochs were killed, on October 6 – 28 aurochs. One and the same hand held a pen by signing the order on preservation, care, feeding of aurochs and pulled the trigger by ruthlessly destroying them. Such an attitude resulted in the gradual disappearance of the animals. In the beginning of the 17th century, the enormous wild bull with great horns disappeared. In the beginning of the 18th century, the noble deer disappeared from the





the work of their acclimatization was started. A real battle was started for restoration of aurochs. By 1926, only 52 animals were left in the world and only 5 of them – on the territory of the Soviet Union. Only by 1977, the number of aurochs in the Belovezhskaya Pushcha exceeded 100 heads. In 1985, their number was equal to 200.

However, the excessive care of the animals can cause harm both to themselves and to the flora. By 1914, the number of deer in the Pushcha reached 6800 pieces. This resulted in degradation of the young plants, which were eaten by the animals. Even in the present time only 23% of the forest have enough young trees. This is not enough for substitution of the old forest. If earlier the human killed animals by using simple appliances and equipment, the achievements of the scientific and technological progress destroy the nature in larger amounts. The Pushcha felt the consequences of the age of the “great amelioration” which was started in the 60-ies. 15.48 km of main line ameliorative channels and 77.55 km of drying channels were excavated. About 4% of the total territory of the Pushcha were touched by amelioration. Beds of some rivers were straightened and deepened. 19.5 thousand people



in 108 settlements live in the protected area of the Pushcha. About 60 thousand heads of the cattle are grazing on the territory of the protected area, and 30 000 tons of mineral fertilizers and 40 tons of poisonous chemicals are applied to the fields. The density of the auto roads network on the territory of the Pushcha is equal to 2.3 km/km².

So, in spite of the reserve status, the territory of the Belovezhskaya Pushcha is subject to the essential anthropogenic impact. If only aurochs had lived in the Pushcha, it would long ago have been the natural complex. Not for nothing, in the Middle Ages the Pope of Rome asked Mikola Gusovsky to write “The Poem of the Auroch”. But apart from the aurochs the belovezhskaya Pushcha is the place of living of 52 kinds of animals and 11 types of plants entered to the Red Book. Totally, 889 kinds of higher plants grow and 59 species of mammals, 227 species of birds, 7 species of reptiles, 11 species of Amphibious, 27 species of fishes and about 8500 species of insects live here. Impact of the human being onto the preserved territory should be reduced, introduction of poisons to the fields should be stopped, and ameliorative works should be slowed down at the territories adjacent to the Pushcha. The biodiversity and the ecological balance of the Pushcha should be preserved so that we should avoid to mark the names of the animals – aurochs, deers and others - in black as the species having disappeared from the Earth.

*By Vitaly Lipik,
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December 29 – international biodiversity day

On this day seven years ago The UN Convention for biodiversity was adopted. Presently 176 states have joined it. The main objectives of the Convention are protection of the wild nature, non-exhaustive use of nature and just and equal distribution of benefits of the usage of the biological resources of the planet.

Just one year before the adoption of this very important International document, in the end of 1992, the International Social Ecological Union founded the Biodiversity Conservation Center in Russia. With this an opportunity appeared to protect professionally the nature beyond the state structures, and all understood that the wild nature could not be saved with only declarations under the conditions of the weakening of the state structures. The representatives of the movement of groups for nature protection became the founders of the Center trying to practically implement those ideas, which were later included in the basis of the Convention.

Over its eight years of its existence, the Center did not change its priorities, but rather always tried to resolve that nature saving problems, which were most urgent during this, or that period of life of Russia. So, in the beginning of the 90'ies under the conditions of the rapidly developing economical and political crisis, the employees of the Center concentrated their efforts on maintenance of the existing achievements in the nature conservation because apart from launching missiles and overfulfilment of plans for cast iron and steel in the USSR a system of special protected territories was set up which has no analogues in the world. In 1995-1996 the Center shifted from the simple study of the Russian nature conservation legislation to participation in development of legislation. It also changed from the study of the financing sources for protection of the wild nature to studies of the impact of the policy of donors.

Since 1997, the Center has been working out a strategy of management and model management plans for the national parks and preserves of Russia, which could previously exist, with the money of the state budget. Employees of the Center successfully designed the networks of the protected territories (the ecological network) of the Northern Eurasia and the regions. Employees of the Center consider that

the natural heritage is not only ecological but also the moral notion. No traditions will remain without the wild nature, and therefore the Center stands for the careful attitude to traditions of the intercourse with nature.

“Crane Motherland” is one of the most well known programs, projects and actions of the Center. It exists on the basis of the nature preserve in the North-Eastern parts of the Moscow province, which was established in 1979 on the initiative of the group for nature conservation of the biological faculty of the Moscow State University. Cranes are nesting in this preserve and annually one of the biggest gatherings of these remarkable birds in Europe meets here before flying away for the winter.

“The March of Parks” action has been very popular in the CIS states, and its objectives are to attract attention to special protected natural territories on the post-Soviet territory and to search for the voluntary assistants of preserves and parks. Many people in the preserves and the national parks of the former USSR, even in the most remote places, know about this action and participate actively in it. The essential support of undertakers and authorities becomes possible for the protected territories with the assistance of the “March”. Irina Chebakova, the action's initiator recently obtained the prestigious award of Rollex. The Center has got branches in various parts of the former USSR. One is the Kolsky branch which supported the beginning of the design of the national parks “Khibiny” and “Kutsa” and the suspension of destruction of numerous valuable forests of the Russian North. The Belarusian Center of wild nature protection (in Vitebsk) is working in Belarus by analyzing and spreading the information on the state of the living nature, supporting the researches of biodiversity, and assisting preserves and parks of Belarus.

In the opinion of the Center employees, protection of the wild nature is not only organizing beautiful actions with symbols that are nice to look at. The work done today by the guards of the nature is not so beautiful or prestigious but it would be impossible without it to retain our habitat in a form that is acceptable for human beings and animals.

Information: “Eco-Accord”



Tomorrow's beam of hope

The accident at the Chernobyl nuclear power plant left a deep mark in the life of the mankind. Which will hardly disappear, and if it disappears then it will not happen soon. The Chernobyl catastrophe is a terrible environmental catastrophe, an enormous economic and financial loss, an impact on the life and on the health of people, but it is also a certain set of impact on the people's consciousness and attitude to life. Within some period of time, after the accident, it became evident that the people living on the contaminated territories needed rehabilitation and not only medical treatment.

The Belarusian Committee of "Children of Chernobyl" (chairman – Tamara Vassilievna Belookaya) has worked out a program of a complex rehabilitation of the children and the families living in contaminated area of the Chernobyl catastrophe. The project called "New School" is within the framework of this rehabilitation program. One of the training facilities for testing the new program was situated in the village called Sivitsa.

A radiation spot fell down here in the village, and the residents found themselves caught in the "Chernobyl trap", even though they were situated far from the place of the accident. On February 5, 1996, a new school building was commissioned. With the support of the regional administration and the committee "Children of Chernobyl" the school obtained the newest computer facilities, various office equipment, and convenient furniture. All this created a favorable condition for the project "New School" to get accustomed here. The establishment of the rehabilitation center "Health-Sivitsa" is also planned within the framework of this project in this village.

The complex rehabilitation program includes the following ways of rehabilitation: pedagogical, sociological, psychological, cultural, and ecological.

Besides, the School of Adaptation was also created by funds of Arts Joy guided by N.A. Krivosheeva and it is active within the framework of cultural rehabilitation. The pupils of this School take part in various events studying the local traditions and organize their own arrangements.

Within the framework of the ecological rehabilitation, a new method of growing vegetables and fruits is used here worked out by I.V. Chernenok. The method makes it possible to reduce the calcium and strontium contents by 8-10 times. This method of growing less polluted products is used both in the school garden and at the plots of land of the village residents. Besides, even school heating is environmentally friendly..

There is a radiation control center on the basement of the school, which can make various research and monitoring in the region. This is a branch of the Belarusian Institute of Radiation Safety headed by V.B. Nesterenko.

Various activities and celebrations are conducted at the school with participation of children and for children. For example, boys and girls together made a program called "Chernobyl is Sorrowness in the Eyes and Hope in the Heart". It was shown not only in the children's own region, but also in Minsk for the audience of students of the Pedagogical University and the University of Culture. Meanwhile, the Sivitsa School maintains also close friendly relations with the Secondary School No. 176 of Minsk.

The "New School" offers new forms of teaching. For example, it is planning to introduce such a non-traditional subject as valeology with all the required methodical materials existing for teaching. Practical works for ecological culture and health weeks are conducted at the school for pupils and for their parents, as well as, non-obligatory courses for valeology, where children study the principles of the healthy mode of life. So, after some time, the Sivitsa School can become the center of the valeological education in the region.

Due to the work done, the contents of radionuclides could be lowered in the bodies of the children and their conscious attitude to their health could be worked out. As T.V. Belookaya said, "in order to get good results, a generation of children with another outlook should be grown up". This generation is growing now in Sivitsa with the assistance of the very talented pedagogical collective.

The school struggles not with the modern computers or the office furniture in classrooms, but rather with the fact that after classes the children can not be sent out of the school even with the broom. For many children this school is the only opportunity to express and assert themselves. The administration (with the director A.A. Khimoroda and the Deputy Director T.F. Vilnevets), and the school's collective managed to create together this very unusual microclimate. This made the school looking like a second home for the children. But what is the most important is that the children also use their knowledge outside of the school. They are trying to organize volunteer work. The only problem is that the school is an elementary school, therefore after the completion of the 9th class the senior pupils have to leave the school. But they could become volunteers. The school is planned to become a secondary school. Moreover, the school building and the collected material conditions allow doing it. The sooner it will happen, the sooner the problem of the volunteers will be resolved.

In addition to this active work with children, a work with the parents is conducted at the school.

The family club called «Home is the Place where we will be understood» is functioning here, and adults are coming here with their problems knowing that they are listened to and can get assistance.

The school is unique, and that is why, it is a pity that these type of schools are rare. Teachers, pupils, parents, the school, and the nature live here the same way of life. This is the place where the new life begins and the clear and kind future is born.

You can obtain more detailed information on the work of the Sivitsa school from the report on the performance of the preliminary stage of the program of the complex rehabilitation of children and families of Chernobyl with the title «Health – XXI Century» and the videofilm «...And the Garden Will Flourish» published by the Belarusian Committee «Children of Chernobyl».

The article was written by

Elena Gavrilova,

Special thanks to

Tatyana Frantsevna Vilnevets

for her assistance in preparation of the article.

The number of wild animals is growing in the forests of the Grodno province

The number of elks, wild boars, roes and deer's has grown by 15-30% in the hunting forests of the Grodno province over the last three years. This was informed to «Interfax» agency by the chairman of the province's society of hunters and fishermen, Mark Baransky.

According to him, increasing numbers of otters and capercaillies have also been noted. The increase of the number of animals in Grodno province forests and woods is the result of the nature conservation and biotechnical measures, - considers M. Baransky.

He informed that in the current season in the province, hunters would be allowed to shoot 800 deer's, wild boars and roes. However, M. Baransky believes, - «possibly, hunters use the licenses for shooting such a number of animals, firstly, due to

the high cost of vouchers and permits for each occasion, and secondly, due to imperfection of means and methods of hunting. Besides, in the current half-year less than a can of gunpowder and only one cartridge were sold per hunter via the trading network».

Referring to the information of hunters and forest-guards, M. Baransky said that presently about 1 650 elks, 2 310 wild boars, over 3 000 roes and over 400 deer's once brought from the Belovezhskaya Pushcha are living in the forests of the Grodno province.

Information: «Eco-inform»



Preservation of Belarussian pearl – Naroch area

The first mentioning of this area of Belarus reminds the quiet rustle of the pine wood, the spicy smell of the meadow flowers, splashes of water...

Everybody knows that the Naroch area is the Belarussian pearl. The uniqueness of this area is connected with Naroch Lake. Many people are sure that it is impossible to find a lake better than Naroch. Not only in Belarus but far beyond it, people know about our biggest lake – Naroch, which is mildly and respectfully, called the Belarussian Sea.

Fishermen from glorious dynasties have lived on the Naroch land. They transferred their romantic profession from generation to generation. They loved their lake Naroch! And they knew it as the beloved child.

Many tales and legends of the Belarussian people were related to the Naroch land. Many songs and poems were written about the beauty of the lake Naroch. Here is what the writer Vitaly Volsky wrote about a storm on Naroch:

“A recently friendly blue lake became gloomy and dark covered with high angry waves which in their endless rows threw and threw their white foamy ridges with noise and roaring. Water flows sounded and were falling from the skies as the continuous stream. The forest sounded, the lake sounded. It was an impression that pines bent and creaked...”

Naroch impresses with a magnitude of its water spaces, which occupy all visible area to the very horizon. We have a wonderful lake with the area of 80 square kilometers. The length of the lake is 13 km, the width – 10 km, the depth reaches 25 m. By its beauty this is not just a lake but rather a live fairytale, and on its beaches, here, one may have an excellent rest in any season.

According to its geographic position, landscape, water properties, the lake Naroch belongs to the unique lakes of Belarus, and it has the important recreational and fishing industrial meaning. Light pine woods, chains of lakes, the picturesque relief, mineral waters and medicinal mud create the conditions

necessary for development of various types and forms of treatment, rest and tourism here.

Development of Naroch with this aim was started already in 1920-30-ies. On the North-Western bank of the lake, near the village Kupa (now the resort settlement Naroch) several private villas, restaurants, yacht-clubs, a landing pier for boats were built, the narrow railroad was constructed which connected the lake Naroch with the Lithuanian family Shvenchenis. Along the Northern bank on the narrow stony sandy strip a highway passed linking Naroch with the settlement Myadel and Vilno. Yachtsmen from Warsaw, Poznan, Grodno, Vilno came to yacht clubs. In the period of complicated historical changes much was damaged and destroyed. A new stage of development of the lake was started.

Today, 13 sanatoriums, children camps, automobile camping and other facilities and structures are located around Naroch. But unfortunately, they belong to different masters; therefore, there is a great deal of irresponsibility, which brings no profit to anybody.

In the beginning of the 60-ies the Naroch-group of lakes started to feel more anthropogenic impact due to the intensive management and recreation development of the area. In the end of the 70-ies appeared a vivid worsening of the water quality in Naroch. Experts say that the sources of the pollution at the lake are the above mentioned infrastructures that has: a sewage collector built on soft soils and near water, and it often cracks; the economic activity near the water intake; construction of a cinema theatre and restaurants near the lake; crowds of people at rest.

Worsening of the water quality

In the 50ies the lake Naroch was considered one of the cleanest lakes in Europe. Then one could say for sure that it occupied the first place in Belarus by the cleanliness and transparency. Water was transparent to 6 and even 9 metres. Now it decreased by seven times...



More than a year has passed since the national park “Narochansky” was established. It comprises 24 more reservoirs, which along with the lake Naroch constitute the total area of 14595 hectares. Will this action be a real saving from ecological grieves? Unfortunately, our national natural potential has found itself under the feet of those who are unworthy of it. Without the big affection to nature the human being can’t hope for the clear prospects.

One can remind the words: “What is, say, Naroch for Belarussians!” In the ideological execution – proud, prosperity and sacred thing. This is just how it must be, how our citizens must comprehend it. And evidently, it was true by a certain period. But now this is doubtful, because this prosperity becomes more and more contaminated and trampled. We could not preserve it – could not or did not want to? The matter is also in the fact that the public factor is not sufficiently engaged for participation in rehabilitation of the environment, preservation of the national natural heritage, and expression of the will of people in the form of protests. Frankly speaking, those who come to have a rest to Naroch are not interested in imaginative definitions. They have a more simple interest: what is the state of water in the lake is the surrounding nature preserved?

It is enough to say that by the degree of study and ecological peculiarities the lake Naroch is included in the list of one hundred outstanding lakes of the world. Before the second world war, the biostation of the Warsaw University worked at the lake and carried out the first nature studies during the summer. In the middle of 1940 the Naroch biological station of the Belarussian State University was established. It became a place of continuous intensive hydrobiological, ecological and physiological studies. The Naroch biostation made an exclusively important contribution to development of hydrobiology. From the day of founding of the station, all scientific researches at the lake Naroch and water pools of the Belarussian Polesseye have been organized and headed by the most prominent hydrobiologist – professor G.G. Winberg.

The nature of the Naroch area is wonderful by itself. Certainly, the activity of the man should be thought over with great diligence and precaution by trying to save more natural territory. Life has shown that Naroch along with what is adjacent to it is something unique, and, possibly, there is no another one in Belarus. We must not passively observe development of negative tendencies in this wonderful place. Relations of the man and lakes are a part of common ties with the nature. Apart from all



the nature but also to protect and save the national wealth, to save the Motherland.

By **Bernard Pakulnitski**

The regional center of ecological study of children and teenagers "Zelenaya Dubrava"

Neman river as electric power source

The Belenergo Concern and its Western branch Grodnoenergo are developing the idea of building a cascade of hydropower stations on the Neman river. The first publications in the press about this appeared in spring 2000. Then there was a long interruption. The public did not practically discuss this topic. Only a limited circle of people, mainly, of the group of the power engineers and of the related branches, knows about construction of the cascade on Neman river. Therefore, the ecological initiative group of the Grodno public association "*the Centre of the Informational Support of public initiatives*" assumed the obligation of the broad information of the population by authorities and state organizations about this project. For the first time in Grodno, open public hearings were conducted for the problem of the impact by the human being on the nature.

Go on with the cascade.

According to the idea of the power engineering experts, a cascade of two hydropower stations should be built on Neman. The first one, called the Grodno station, must be situated approximately 10 km from the city near the settlement Beregovoi, and the second one, the Neman station, after Grodno almost on the frontier with Lithuania. It is planned to be near the village Palnitsa.. The authors of the idea call this method of obtaining the power the cheapest and ecologically pure. By the way, they say, the dam of the designed station (the Grodno Station) will be a low pressure type, i.e. it will raise the river level in the reservoir not more than 6-7 m. It will not flood large areas, and in places where submersion is expected, there are no settlements. And the hydropower station will provide countless numbers of benefits. Well, it goes without saying, the additional electricity. And also, development of the

rest area, sport bases and yacht clubs on a new water pool, a new road through the river (i.e. on the dam), etc.

What happens if...

Unfortunately, no power engineers were present at the hearings. The Director General of Grodnoenergo Sergei Bely stated that until the design and estimates are fully satisfying there will be no topic for discussions. Fortunately, the scientists of the Grodno University, the Institute of Biochemistry, employees of the state (province and municipal) nature conservation organizations and journalists are of the different opinion. The subject of discussion was our Neman and what can be expected in case of implementation of the project.

Igor Malevich, the ichthyologist of the fishing inspectorate reminded that some representatives of the Red Book live in the river, in particular, the well-known Neman barbell. By the way, the water pool will stretch upstream to Lunno and, evidently, will sharply cut the area of its living and spawning. An if we also have in mind the dam of the station, we may speak on the threat of the existence of the population of the species in the Red Book.

We should have a separate discussion of the submersion area. And although only 650 hectares will get into it as the designers say (at construction of a system of protecting dams), this is a lot if we take into account that relatively pure land in Belarus in the radiation aspect is not so large. Besides, there are many historical monuments near Neman, which will have to be studied. In addition to submersion, there is also a notion of a slight flooding. The matter is that the increased level near the basin will make



underground waters rise. This notion entails the whole range of problems of the pure water of wells and existence of pines, which does not like water, etc. This is just about the living world. But there are also problems of the river itself or its bed.

The river goes deeper.

All old residents of Grodno think that “the present Neman is quite different from what it was in the past”. It is somewhat reduced in its volume, islands and sand-banks which formerly were stripped of water only in the middle of the summer, now are not covered with water even during the spring. Well, any resident of the city by passing by a new bridge can see this. And the matter is not in the fact that rains or snowfalls have become less numerous. There is an explanation of hydrologists based not on superficial thoughts but rather on studies conducted in 1991-92. The scientists made then the following conclusion: as the result of the long extraction of the sand and gravel mixtures from the Neman bed, the so called sagging of its level happened. And although the water consumption (the volume passing per unit of time) has not changed, Neman has seemingly become smaller. While the river port extracted only sand from the river there were no big changes in the bed morphology. But in the end of the 60-ies both building enterprises and the river port started to rapidly increase their capacities. A deeper and wider fairway was required for barges, which dragged the sand and gravel mixtures. The extractors started to excavate sandbanks and spits, which had been formed for ages by the river, which had transported the bottom drifts. These very banks served the hotbeds of the natural resistance to water

streams and. Hence, supported its level. When they disappeared near Grodno the level, as the hydrologists say, sagged.

This was reminded to the people assembled at the hearing by the chief expert on riverbed processes, the officer of the Hydrological Institute (St.Petersburg) Victor Katolikov invited as an independent expert. And then he retailed what may be expected at Neman after construction of the hydropower station. The dam will catch all bottom drifts, which are used by the river as the permanent construction material for its bed. According to the information of the Belarussian hydrologists about the section Mosty-Grodno, Neman annually transfers about 400 thousand m³ of water. And all this will be left in the headrace. As for the tail-waters, due to their absence the so-called erosion pits are formed which can be stretched to several kilometers. The repeated sagging of the level is practically inevitable. This phenomenon, according to Katolikov, always accompanies the similar rivers. By the way, about the Kaunas hydropower station which was commissioned in 1959. During 15 years the observations were carried out there of the changes in the riverbed. As the result the following can be stated: water level reduction in tail-waters





were almost 90 cm at the distance of 15 km from the dam. Certainly, we may fight this somehow. For example, in Germany, on the Rhine the sand is transported by trucks and damped off to water. Level sagging is not merely “river going to itself”, and the whole embankments are sagging, services, pipelines, water intakes become bare. And who doesn’t know where the water intake “Pogorany” is situated? Just there in the tail-waters of the possible dam. And one should not be doubtful that the situation would essentially be aggravated in case of the construction.

Now, about the efficiency of the hydropower station on Neman from the point of view of the power engineering. The problem remains still open. The explanations of investments prepared by the designers and submitted to Grodnoenergo before the hearings did not suit the customer. But according to the chief design engineer Valentin Barinov the approximate cost of construction can be determined by the analogous design, which was already calculated for the Polotsk hydropower station. It constitutes about 25 thousand conventional units. And what will the Grodno hydropower station bring to the power system of the province? As it becomes clear this will be equal to not more 7% to the total volume taking into account its capacity of 15-20 MW. Well, power engineers understand that this is not much at all, and therefore they say about the cascade consisting of at least two (as a minimum) hydropower stations.

Is there any alternative?

Let us start with what the Chairman of the Committee of the Power Saving Lev Dubovik said by coming out at the International Scientific Practical Conference held in the autumn 2000 in Grodno: “We have excessive electricity (in Belarus)”. It turns out that we sell it to Germany and Poland. And one of his expressions is retained in everybody’s mind: “The cheapest power source is its saving”. It is known that only at transporting the electricity to the consumers, about 20% is lost (compare with additional 7% from the hydropower station). Losses can not fully be avoided, and this is well understood by all who studied at school. But possible saving programs are so numerous. And they also require investments.

The whole world has already refused from construction of hydropower stations on big and



middle size rivers. In Germany, Denmark, other European countries a great number of wind motors operate, and experiments with the sun energy are ongoing. Biogas units are used where manure is used as the power source. However, our power engineers are not so enthusiastic about them. They say that this is not serious. But there are thousands of these units in Germany. In some rural areas they provide 70% of the whole power consumption. And what about us? As the representative of the Grodno department of the power supervision and power saving Anatoly Bulov said at the hearing, only this year, the first experimental wind unit for 250 kW and the first biogas unit of the same capacity will be installed in the province. For power saving is needed more attention to reconstruction and improvements of power stations. In one word, the potential alternatives to use Neman for power production are far from exhausted.

We must all remember that the most important here is that Neman is a unique object and any interference to its life will violate the ecological balance. And anybody would hardly be able to guarantee that this will be irrevocable.

By *Nina Polutskaya*,

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News of public ecological organizations and initiatives of Belarus



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