How networking knowledge contributes to conservation and sustainable development of protected areas: a case of Berezinsky (Belarus), Kampinoski (Poland), and Northern Vosges (France) biosphere reserves



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# Map of three biosphere reserves located approximately in one line from west to east













1600 km to the west of Berezinsky

**Total Surface Area is 130,000 hectares,** 

**Forest cover 65%** 







600 km to the west of Berezinsky

**Total Surface Area is 76,000 hectares,** 

**Forest cover 73%** 





### Historical information on signing the contracts

- September 20, 1994 was signed an agreement on cooperation between the Berezinsky biosphere reserve (Belarus) and the Northern Vosges (France)
- August 15, 1999 was signed an agreement on cooperation between the Berezinsky biosphere reserve (Belarus) and the biosphere reserve Puszcza Kampinoska (Poland)
- February 21, 2007 was signed a trilateral agreement on cooperation between the biosphere reserves: Berezinsky (Belarus), Kampinoski (Poland), and Northern Vosges (France).



### Main directions of cooperation:

- Improvement of protection and management of the territory of reserves and its biological diversity
- Assistance in realization of scientific investigation
- Assistance in sustainable use of the territory based on ecological tourism development
- Improving of methods and means of environmental education
- Increased use of GIS for the management and monitoring of the protected areas







Principles of collaboration - sharing of knowledge within the network (i.e. networking knowledge):

Via:

- Information exchange
- Joint publications
- Training of young specialists
- Exchange of managers
- Exchange of experts
- Exchange of scientists
- Research work done by joint teams of experts comprising representatives of each reserve
- Participation in international conferences







#### In the sphere of ecotourism development:

- the international experts provided technical assistance in the development of ecotourism;
- a number of informative articles on the Berezinsky Reserve was published in the prestigious European magazines («Naturopa», etc.);
- a series of workshops on the development of ecological tourism in the protected areas was organized;
- a training of professionals of the Berezinsky reserve was conducted in France;
- an advertising package for the Berezinsky reserve was prepared and distributed among tour operators in Europe;
- more than 50 ecological tours for naturalists from France, Poland, Great Britain, etc. were conducted.
- The biosphere reserves Northern Vosges and Kampinoski act as representatives of the Berezinsky in their countries for anyone interested in visiting it.

#### In the sphere of ecological education :

Exposures with information on foreign partners have been created in the museums of nature and visitor centers of the three reserves.

An ecological game has been developed for schoolchildren with information on the three reserves.

A training seminar on the exchange of best practices in the field of environmental education has been held.

A constant exchange of methodical literature and training programs is conducted





#### In the sphere of management and protection of the territory:

- Meetings of managers and coordinators is done annually in one of the reserves in order to share experience in managing and protection of the territories, as well as exchange of the reports on past activities;
- Exchange of scientific publications, posters, photos, exhibitions, and etc., demonstrating the achievements in various aspects of protection, planning and restoration of ecosystems of the reserves;
- Technical assistance on the basis of the functioning of the working group consisted of representatives of the three reserves, during preparing the first management plan of the Berezinsky reserve for the years 2008-2014
- Introduction to Berezinsky the forest management methods on the basis of gradual cuttings in accordance with the principles of the association of Pro Silva.





#### In the sphere of scientific research:

- Five scientists from the Berezinsky reserve conducted research in the Northern Vosges in the following areas:
- Analysis of the flora of the higher vascular plants of the two reserves;
- Comparative assessment of bird populations of similar biotopes of the two reserves;
- Comparative analysis of communities of small mammals;
- Inventory of Heteroptera;
- Analysis of the structure of natural forests









#### In the sphere of scientific research:

Scientists from the Northern Vosges Biosphere Reserve, as well as several universities of Paris, Strasburg, Metz, conducted research in the Berezinsky reserve in the following areas:

- Comparative analysis of biotopes of the two territories;
- Inventory of bats;
- Dynamics and state of the capercaillie population;
- Assessment of diversity of the mire forests ecosystems





#### In the sphere of scientific research:

- For the three biosphere reserves have been implement the joint projects on:
- Comparative analysis of species diversity of birds (nocturnal predators): «Forest owls in the three biosphere reserves: Berezinsky, Puszcza Kampinoska and Northern Vosges»;
- Inventory of the certain groups of insects: Odonata, Orthoptera and Hemiptera of forest and meadow ecosystems.





#### In the sphere of scientific research:

 The current experience of GIS using in the Northern Vosges and Puszcza Kampinoska biosphere reserves was distributed for the Berezinsky Reserve



#### In the sphere of scientific research:

Publishing the joint scientific articles and books:

- as a result of joint research more than 20 scientific articles were published in the magazine "Annales scientifiques" («Scientific Notes») published by the Northern Vosges biosphere reserve, in the collection of scientific works "Special areas of nature conservation of Belarus" published by the Berezinsky reserve, and in the magazine "Puszcza Kampinoska" published in Poland;
- Aided by the French specialists, scientists from the Berezinsky reserve took part in a number of international conferences, their materials were published;
- The book about the Berezinsky reserve «Between Taiga and Berezina» was published in France;
- The book «Two protected areas linked by nature: the Berezinsky and the Northern Vosges» was published in Belarus.

## **Prospects of cooperation**

- Evaluation of dead wood stocks and determination of its role in maintaining the diversity of biota.
- Sharing best achievements on the issue of maintaining open floodplain and mire ecosystems in order to preserve their biological diversity
- Expert estimation of new ecological tours to the Berezinsky Reserve for the foreign wildlife enthusiasts.





# Thank you for your attention



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