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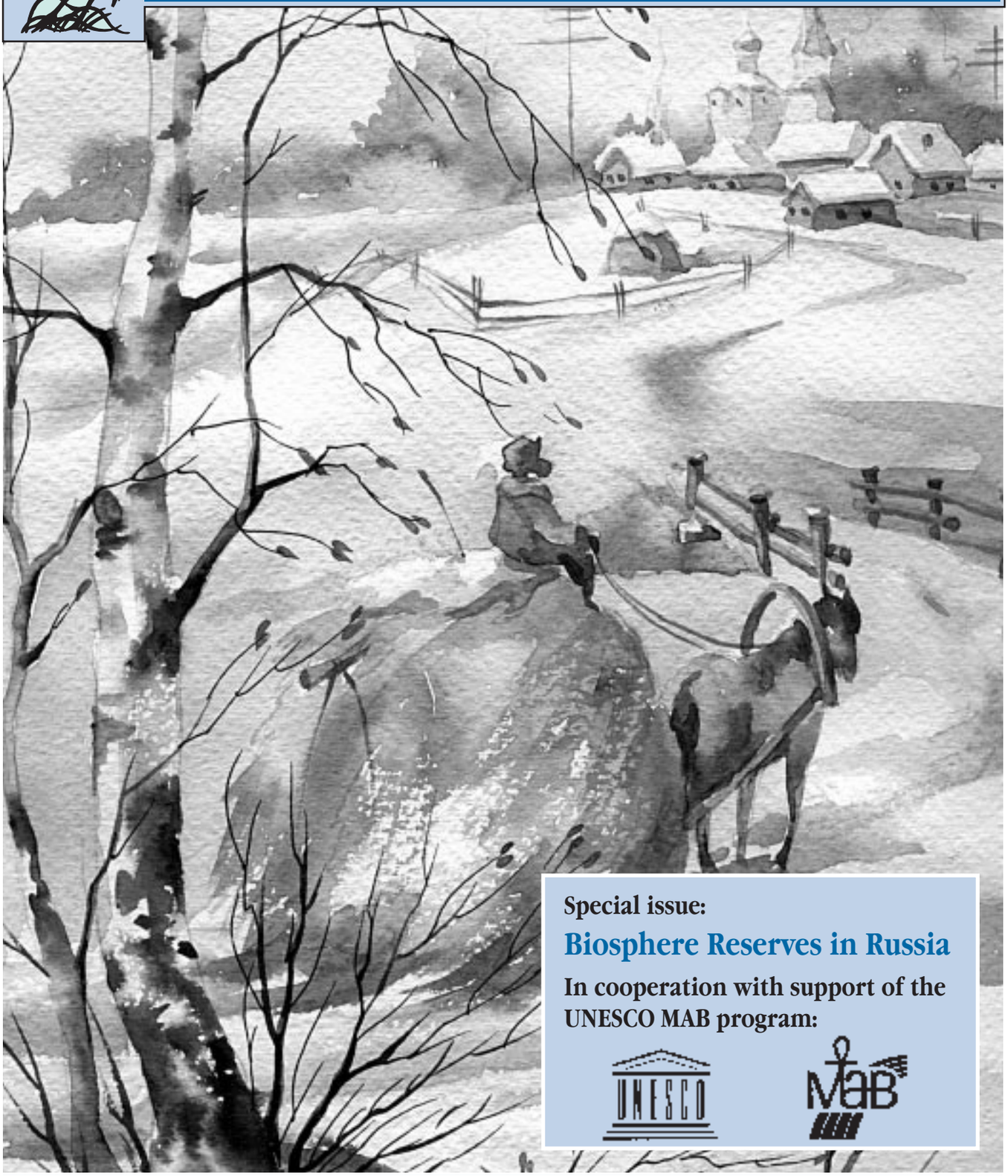
Russian Conservation News



Special issue:

Biosphere Reserves in Russia

In cooperation with support of the UNESCO MAB program:

PROMOTING BIODIVERSITY CONSERVATION IN RUSSIA AND THROUGHOUT NORTHERN EURASIA

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The mission of the Pocono Environmental Education Center is to advance environmental awareness, knowledge, and skills through education in order that those who inherit the planet may better understand the complexity of natural and human-designed environments.

The mission of the Center for Russian Nature Conservation (CRNC) is to promote the conservation of nature in Russia and throughout the former Soviet Union, and to assist conservation groups in that region through information exchange, coordination of professional and education exchanges, and provision of technical assistance to protected areas. CRNC is a project of the Tides Center.

Center for Russian Nature Conservation

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ON THE COVER

«Rural Landscape»
Cover drawing by Vladimir Voronin. Biosphere reserves emphasize the interaction of people and their environment.

Voice from the Wild (A letter from the Editor)

In this special issue of Russian Conservation News, we examine a unique element of biodiversity conservation and sustainable development in northern Eurasia: biosphere reserves. Guided by the Man and Biosphere Program of the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the world network of biosphere reserves stretches across the entire globe, conserving a diversity of ecosystems from the Amazon rainforests to the Arctic tundra to the deserts of North Africa. Biosphere reserves are intended to demonstrate sustainable interaction between people and nature. The understanding of what this interaction should be has evolved greatly over the thirty-year history of biosphere reserves, and has been applied in ways as varied as the landscapes which they cover.

In Russia the changing understanding of biosphere reserves and their purpose has created a number of misunderstandings and challenges. When biosphere reserves were first conceived in the 1970s, they were intended as areas to be protected from human influence, devoted to conservation and study. Theoretically all Russian zapovedniks fulfilled this principle, so those zapovedniks deemed most worthy of international distinction were chosen to become biosphere zapovedniks. But as time passed, the biosphere reserve concept evolved. Now more than ever it emphasizes the sustainable development of communities in and around the reserve in addition to conservation and monitoring.

Implementing these changes has proven challenging in Russian reserves. Language and other communication barriers excluded most of the Russian protected areas' staff from contributing to or even learning of changes in the biosphere reserve concept. To this day, key documents explaining the current idea of biosphere reserves have not been translated into Russian, and the majority of biosphere zapovednik staff lack a complete understanding of the multiple principles of UNESCO biosphere reserves. Even when aware of the need to change reserve management, Russian zapovedniks purposefully located far away from human settlements had difficulty trying to support the development of non-existent communities. Moreover, the financial destitution of zapovedniks – including biosphere zapovedniks – in the past decade has hindered all aspects of the reserves' work, especially the creation of new programs to support local development. Suspicion arose in the international community that Russian biosphere reserves had fallen behind international standards. For this reason, Russian biosphere reserve staff met with international specialists at a training seminar held in Krasnoyarsky Krai in June 2001 to discuss the current status of Russian biosphere reserves.

This issue of RCN is devoted to exploring this subject in depth. In the upcoming pages, we offer a description of UNESCO biosphere reserves, as well as a thorough history of the development of the biosphere reserve concept. Then moving closer to Russia, we compare various aspects of reserve management in Russia and the West. In the second half of the journal, we invite you to visit nine biosphere reserves in Russia and Belarus through a series of case studies, each addressing a specific aspect of implementing the current biosphere reserve concept in individual nature reserves. Finally, we take s look at the future of biosphere reserves in Russia, describing the founding of new reserves and publishing in full the resolution passed at the training seminar last June. Given the historical misunderstanding of specific terminology, we invite you to begin your study by looking at the glossary on page 2.

The RCN Editorial Board would also like to express its gratitude to UNESCO, which provided financial, organizational, and editorial support to this issue of Russian Conservation News.

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An Introduction of Biosphere Reserves

Biosphere Reserves in the Former Soviet Union

Russian Federation
1. Laplandsky Kavkazsky
2. Vodlozersky
3. Tsentralno-Lesnoi
4. Prioksko-Terrasny
5. Oksky
6. Nerusso-Desnianskoe-Polesie
7. Tsentralno-Chernozemny
8. Voronezhsky
9. Chernye Zemly
10. Kavkazsky
11. Teberdinsky
12. Astrakhansky
13. Pechoro-Ilychsky
14. Visimsky
15. Katunsky
16. Tsentralno-Sibirsky
17. Baikalsky
18. Barguzinsky
19. Daursky
20. Kronotsky
21. Sayano-Shushensky
22. Sikhote-Alinsky
23. Sokhondinsky
24. Taimyrsky
25. Ubsunurskaya Kotlovina

Belarus
26. Berezinsky
27. Belovezhskaya Pushcha

Ukraine
28. East Carpathians
29. Carpathian
30. Danube Delta
31. Chernomorsky
32. Askania-Nova

Estonia
33. West Estonian Archipelago

Latvia
34. North Vidzeme

Kyrgyzstan
35. Sary-Chelek
36. Issyk-Kul

Turkmenistan
37. Repetek

Uzbekistan
38. Mount Chatkal

Map by M. Dubinin

Glossary of Key Terms

Biosphere reserve. An area of terrestrial and/or coastal-marine ecosystems that has received international recognition from the UNESCO "Man and Biosphere Program," and which includes three elements – a core area, a buffer zone, and a transition area – and fulfills three integrated functions: conservation, development, and logistic support.

Core area. One or more areas within a biosphere reserve ensured long-term protection and used for conservation of biological diversity and study of intact ecosystems. Core areas are granted strict protection, and human activities within them are highly restricted.

Buffer zone. An area or areas usually surrounding or bordering a biosphere reserve's core area used for ecologically safe activities that may include environmental education, recreation, tourism, and scientific research. Some low-impact economic activity may be pemitted.

Transition area. An area of a biosphere reserve that includes human settlements and involves several forms of agricultural activity or which is used for other purposes. Local stakeholders work together to manage the region's resources in a sustainable way.

Biosphere zapovednik. A Russian strictly protected area (zapovednik) that is a certified part of the World Network of Biosphere Reserves. As an administrative structure, the biosphere zapovednik generally represents the biosphere reserve as a whole; geographically, the strictly protected area of a biosphere zapovednik usually functions as its core area.

Biosphere polygon. A Russian term that describes n area legally and/or functionally attached to a biosphere zapovednik that can act as a part of the corresponding biosphere reserve's buffer or transition zone. The purpose of the biosphere polygon is to implement scientific research, ecological monitoring, and also test methods of sustainable/low impact nature use. Particular regulations for biosphere polygons vary according to the legislation that founded them and the administration of the biosphere zapovednik to which it is attached.

Cooperation zone. Similar to and in some cases synonymous with a biosphere zapovednik's transition area, the cooperation zone is a region specially designed for collaboration between the zapovednik and local stakeholders.

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The Anatomy of a Biosphere Reserve

*By **Jane Robertson Vernbes***

Biosphere reserves are a creation of UNESCO's Man and the Biosphere or MAB programme, which itself began as a result of the 1968 "Biosphere" Conference of UNESCO. The MAB programme was set up in 1970 as an interdisciplinary research programme, combining the natural and the social sciences, designed to improve the relationships of people with their environment.

The MAB programme helps governments to support the planning and implementation of research and training programmes. Each participating country sets up a MAB National Committee, consisting of a mix of scientists, representatives of government agencies, and individual private persons. As of mid 2001, there were 144 MAB National Committees established in the 188 Member States of UNESCO, as well as one in the United States of America.

The governing body of MAB is the International Coordinating Council (ICC), consisting of 34 Member States elected by UNESCO's General Conference. The ICC meets every two years and elects a Bureau (1 Chairperson and 5 Vice-Chairpersons) representing UNESCO's six geopolitical regions. The Secretariat is responsible for facilitating the day-to-day implementation of the MAB Programme and is provided by UNESCO's Division of Ecological Sciences. Although MAB activities are mainly funded by the countries themselves, UNESCO provides "seed money" for national and regional activities.

The basic idea of biosphere reserves was to obtain a network of sites that

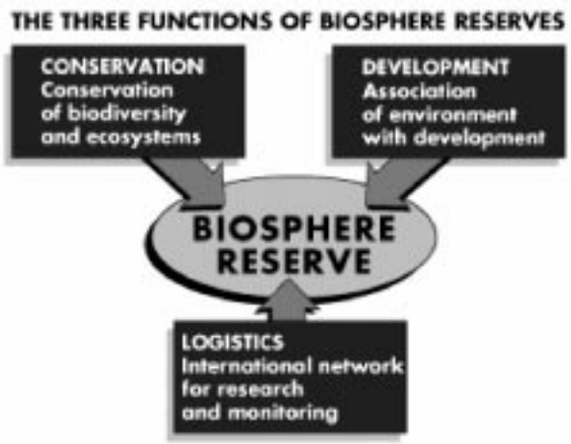

Photo by A. Fyodorova, courtesy of Raritet Publishing Company, Kyrgyzstan.

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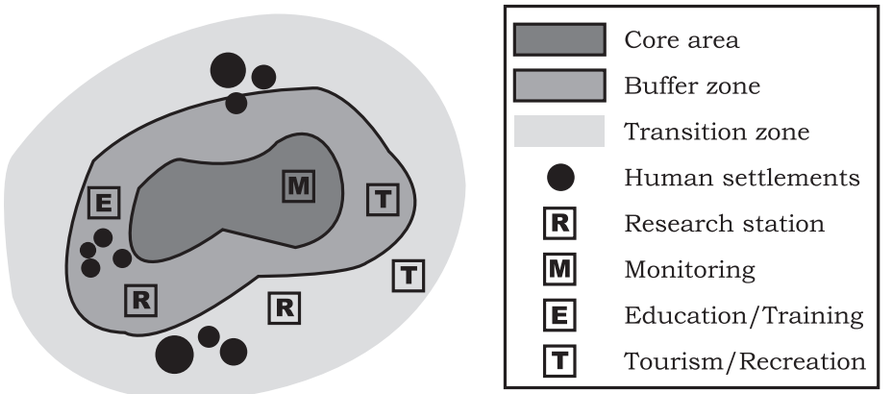

More than a Protected Area

The International Conference on Biosphere Reserves held in Seville, Spain, in March 1995 reviewed biosphere reserves in the light of the results of the 1992 United Nations Conference on Environment and Development. The Seville Conference gave rise to the Seville Strategy for Biosphere Reserves and the Statutory Framework for the World Network, which were adopted by the UNESCO General Conference in 1995.

The Seville Strategy sets out goals and objectives for biosphere reserves at the site level, the national level, and the regional and international levels. It thus sets the course for action for the next ten or so years. In particular, it gives a «vision» for biosphere reserves in the 21st century. This «vision» breaks new ground in stating that a biosphere reserve is «more than a protected area» but rather a «pact» between the local community and society as a whole. Management should be open, evolving and adaptive. This approach is intended to ensure that biosphere reserves – and their inhabitants – are better placed to respond to external political, economic and social pressures.

The Statutory Framework sets out the rules for governing the functioning of the World Network, giving a formal definition, a set of functions and criteria, and a designation procedure. In particular, it sets out a periodic review of biosphere reserves designated over ten years ago to bring them up to the revised standards and criteria.

Photo by V. Filipenko, courtesy of Raritet Publishing Company, Kyrgyzstan.

would offer a representative coverage of the major ecosystems of the world, thus providing an international logistic base for the intergovernmental MAB Programme. Today, biosphere reserves are defined as «areas of terrestrial and coastal-marine ecosystems which are internationally recognised for promoting and demonstrating a balanced relationship between people and nature."

The functions and the zonation system of biosphere reserves have been refined with time. A biosphere reserve has three functions. The conservation function contributes to the conservation of landscapes, ecosystems, species and genetic variation. The development function forests economic development which ecologically and culturally sustainable. The logistic support function facilitates research, monitoring, training, and education related to local, regional, and global conservation and development issues. It is the synergetic combination of these three functions which characterises the biosphere reserve.

Biosphere reserves are organized into three interrelated zones which enable them to carry out the different activities involved. The core area is legally established to ensure long-term protection and which should be large enough to meet defined conservation objectives. Human activity in this area is limited. The buffer zone is located around or next to the core. It can be an area for experimental research to use the natural resources sustainably and in an economically viable way. It is the area for ecosystem restoration, and can accommodate education, training as well as carefully designed tourism and recreation facilities. The outer transition area or area of co-operation has unfixed limits. It is here that the local communities,

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Moving Forward: Seville +5

At the request of the MAB ICC, a "Seville +5" international meeting of experts was organised in October 2000 in Pamplona, Spain. Aimed at taking stock of the first five years of implementation of the Seville Strategy, the meeting highlighted the following points:

Use biosphere reserves to implement the Convention on Biological Diversity
The biosphere reserve concept encapsulates the three major concerns of the Convention on Biological Diversity (conservation of biological diversity, sustainable use and sharing of benefits at the local, national and international levels). Moreover, this Convention has now adopted the "Ecosystem Approach," which is close to the principles of biosphere reserves.

Develop biosphere reserves in a wide variety of environmental, economic, and cultural situations
Since 1995, an increasing number of biosphere reserves worldwide founded in coastal marine areas. Biosphere reserves have been established in previously un-represented regions noted for their exceptional biodiversity, and are also increasingly being established near or around important urban centers.

Explore and demonstrate approaches to sustainable development on a regional scale
Since 1995, the new biosphere reserve nominations demonstrate a clear rise in the size and complexity of decision-making in biosphere reserves. In some cases, these recent biosphere reserves correspond to entire "bioregions," spanning several administrative areas. As a result, interest in creating transboundary biosphere reserves has grown. The Seville +5 meeting produced specific recommendations for transboundary biosphere reserves.

Bring together all interested groups in a partnership approach
In this process of creating larger sites, the biosphere reserve often consists of multiple units, with several core areas and buffer zones within a large transition area. The coordination mechanisms of such sites are often innovative, consisting of a consortium or a committee on which all stakeholders are represented, usually with a rotating chair. New funding mechanisms are also being tried.

Strengthen regional networks as components of the World Network of Biosphere Reserves
Computer technology increases the ease of informal communications and access to information and has enhanced cooperation in regional groupings. Various sub-networks include ArabMAB, AfriMAB, IberoMAB (19 countries of Latin America plus Portugal and Spain), EABRN (East Asian Biosphere Reserves Network) and EuroMAB (including North America). A new MAB network for South and Central Asia was recently formed.

nature conservation agencies, scientists, cultural groups, private enterprises and other stakeholders should agree to work together to manage and develop the area's resources for the benefit of the people who live and work there.

As of the end of September 2001 the World Network of Biosphere Reserves is made up of 411 biosphere reserves in 94 countries. The periodic review of the Statutory Framework for Biosphere Reserves is stimulating a complete revision of existing biosphere reserves in several countries and also the withdrawal of sites that cannot meet the Seville criteria.

Biosphere reserves today offer a number of additional values. They provide United Nations recognition of local and national efforts at reconciling conservation and development needs, backed by science. They also facilitate the sharing of experience and building capacity through a structured World Network as well as provide a concrete means to implement Agenda 21 and the Convention on Biological Diversity. Finally, biosphere reserves offer a «label of excellence" for attracting funding.

Recreation in Parc National des Luberon, France. *Photo courtesy of Parc National des Luberon.*

Additional information is available on: www.unesco.org/mab

Jane Robertson Vernbes *is a Senior Programme Specialist of the UNESCO Division of Ecological Sciences.*

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The History of the Biosphere Reserve Concept

*By **Ignacio Ballarin Iribarren***

As with the birth of a human child, the birth of the UNESCO Man and Biosphere (MAB) program came after extensive prenatal development. Environmental theories of the late 1960s emphasized the need for using sound scientific knowledge as a guide for using and preserving the world's biological diversity. In particular, discussions that followed the 1968 biosphere conference conceived the idea of a worldwide network of national parks, nature reserves, and other protected areas. International exchange and cooperation began to develop and soon became a key feature of what was to become the MAB program. In essence, the program originated as an international scientific research program.

In 1970, delegates at the UNESCO General Conference gave their support to the creation of a long-term, intergovernmental, and interdisciplinary program on Man and the Biosphere. The goal of this program was to ensure the harmonious coexistence of rural populations with the environment in which they live. An International Coordinating Council and national committees would become the main tools for governing the program.

The first meeting of this International Coordinating Council in November 1971 marked the official birthday of the MAB program. At this point the "man" in Man and Biosphere was viewed largely as an aggressive element whose activities had an undesirable impacts on the environment. Preservation of valuable ecosystems was the dominant theme guiding the program. The council established research programs to evaluate human impact on a variety of major natural systems, including tropical and temperate forest, steppe, desert, coastal, and mountain systems. These programs were aimed at investigating serious results of human activity, including pesticide and fertilizer use, engineering works, industrialization and urbanization. Council members realized the need for special places to conduct research and monitoring. Though these field laboratories were not called biosphere reserves at this time, the idea marked the first appearance in the program of areas devoted to both conservation of biodiversity as well as research, long-term monitoring of ecological processes, and evaluation of human impact.

In the years following, the precise form and scientific mission of biosphere reserves began to take shape. Panels created by the United Nations and other organizations first introduced the concept of zoning that became foundational to the formation of biosphere reserves. In 1974, American scientists founded

The biosphere reserve concept focuses on the interaction between people and their environment. *Photo by I. Shpilenok.*

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the first biosphere reserves, which at this point were focused solely on long-term scientific research. At a UNESCO meeting in 1976, 59 biosphere reserves in eight countries were officially established. Within five years – the ten-year anniversary of the Man and Biosphere Program – a total of 200 biosphere reserves existed in 55 countries across the world. For the most part, these "first generation" reserves were based in protected areas that had already existed (such as national parks and nature reserves), in which scientists now conducted ecological research under the MAB label. Only a limited number of biosphere reserves also fulfilled their development function and cooperated with local populations. Few biosphere reserves actually included buffer or transition zones.

The next major step in the development of biosphere reserves came in 1983 at the First International Biosphere Reserve Congress, held in Minsk, USSR. Delegates at the congress developed an Action Plan for Biosphere Reserves. The plan confirmed the multiple functions of the biosphere reserves and developed proposals for research, monitoring, training, education and local participation. It also set up a detailed timeline for work between 1985 and 1989. But when the expected financial support from UNEP and IUCN did not materialize, the action plan was left a plan without action.

Landmarks in the History of the Man and Biosphere Programme

1970: UNESCO General Conference. Delegates support the formation of the Man and Biosphere program, intended to ensure harmonious coexistence between rural populations and the environment from which they derive their subsistence.

1971: First meeting of the MAB International Coordinating Committee. The official birthday of the MAB program sees the establishment of 13 (later 14) research programs aimed at evaluating human impact on various natural systems.

1972: UN Conference on Human Environment, Stockholm. Recommendations are made for establishing a global network of protected areas to conserve representative examples of ecosystems around the world.

1976: UNESCO meeting on the designation of Biosphere Reserves. A total of 59 biosphere reserves are established in eight countries.

1983: First International Biosphere Reserve Conference, Minsk. Delegates develop a detailed action plan for biosphere reserves, including proposals for research, monitoring, training, education, and local participation.

1992: Earth Summit, Rio de Janeiro. The Convention on Biological Diversity (CBD) introduced the "ecosystem approach," promoting holistic analysis of environmental as well as social and economic problems. The Agenda 21 Action Plan advocates conserving local environments and involving the local population in conservation and development.

1995: UNESCO Seville Conference. The "Seville Strategy" is adopted, emphasizing the importance of sustainable development in biosphere reserve creation and management. The Statuary Framework is drawn up regarding the nomination, approval, networking, periodic revision, and withdrawal of biosphere reserves by UNESCO.

2000: Seville +5 Meeting, Pamplona. Delegates review the implementation of the Seville Strategy over the past five years on the international level.

Nonetheless, biosphere reserves and the theory behind them continued to develop. In 1985, the MAB Council established a small ad-hoc Scientific Advisory Panel to reassess the entire project. This panel first clearly defined a biosphere reserve as "a high quality multifunctional area where conservation and development are to be combined in and around protected areas with the support of research and training." This definition corresponded to a new paradigm in nature conservation: sustainable development and non-conventional protected areas.

The Man and Biosphere Program underwent further evolution following the Earth Summit in Rio de Janeiro in 1992, which deeply influenced nearly all international environmental programs. For example, the Convention on Biological Diversity, which introduced the "ecosystem approach" to biodiversity conservation, emphasized the need to analyze environmental problems in a holistic way, focusing both on individual pieces of the system and the dynamic processes that link them. In spite of its name, the ecosystem approach can be

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applied not only to natural systems but also to social and economical ones. Moreover, the Agenda 21 Action Plan pointed out the importance of improving both the state of environment and public participation on the local level.

The concept of sustainable development in biosphere reserves progressed further at a major international conference in Seville in 1995. A strategy for further action dubbed the "Seville Strategy" called for changes in the biosphere reserve concept and became a crucial doctrine for the Man and Biosphere Program. The concept of a biosphere reserve and its function, which were once so vague, became increasingly clear as delegates defined ten key areas of biosphere reserve management, made many detailed recommendations, and created a list of indicators for assessing how these objectives were being met. The strategy also put forth a new understanding of biosphere reserves, conceiving them as the result of pacts between local population and society as a whole to reach the goals of sustainability. Moreover, the Statutory Framework drawn up at the conference was later ratified by UNESCO member countries, becoming a soft law governing the MAB program, strengthening its legitimacy, visibility, and credibility.

Historic sites in Parc National des Luberon, France. *Photo courtesy of Parc National des Luberon.*

Six years following the Seville Conference, work continues to implement the Seville Strategy. Transboundary biosphere reserves, which cross national borders, have become a target of special interest. Particular progress has been made in informational exchange through regular meetings in regional MAB networks in Europe, Africa, the Middle East, and other regions. Meanwhile, the biosphere reserve concept has won wide approval, even being named "the best illustration of the ecosystem approach" at the IUCN Congress in Amman last year. Having grown out of a vague notion of the need for protecting and studying intact regions of nature, biosphere reserves today represent a tool for resolving land management conflicts in all types of ecosystems, simultaneously protecting biological and cultural diversity. In the future, by studying the interface of economics, social sciences, and ecology in a world increasingly affected by human impact, biosphere reserves may become model regions for reconciling people and nature.

Photo courtesy of Parc National des Luberon.

References:

Batisse, M., 2001. "Biosphere Reserves: a personal perspective." *Seville+5 International Meeting of experts on the implementation of the Seville Strategy of the World Network of Biosphere Reserves 1995–2000.* MaB Report Series No 69. UNESCO. Paris.

Carenzo, S. and Daniele, C., 2000. *La participacion local y la relacion Conservacion-Desarrollo en un contexto particular: las Reservas de la Biosfera (Programa MaB/UNESCO). PROMAB.* Instituto de Geografia. Facultad de Filosofia y Letras. Universidad de Buenos Aires.

Additional resources include UNESCO documents.

Ignacio Ballarin Iribarren *is the Spanish Man and Biosphere Program National Coordinator*

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The UNESCO Biosphere Reserve Training Seminar in Krasnoyarsk

From June 18th-23rd, more than 100 scientists and specialists from Russia, Belarus, Spain, Germany, France, Finland, Estonia, and Slovakia gathered in the southern tip of Krasnoyarsky Krai in Siberia for the UNESCO-MAB training seminar, "Implementing the Seville Strategy for Biosphere Reserves." The seminar was organized with the help of the Russian Ministry of Natural Resources, the Administration of Krasnoyarsky Krai, the Federal Agency of Environmental Conservation, and UNESCO's Moscow Office. Beginning in the capital city of Krasnoyarsk, the conference then continued in the village of Shushenskoye, and concluded with a field trip to Sayano-Shushensky Zapovednik, the core region of the biosphere reserve which bares the same name.

In the opening plenary session in Krasnoyarsk, a UNESCO program specialist accented that the meeting was to be more than anything else a training seminar, and that its fundamental goal was to create national and international cooperation for the future development of the global network of biosphere reserves. The specific aims of the seminar included exchanging information and experience on today's most urgent issues, such as sustainable development, biodiversity conservation, scientific research, and economic initiatives. The conference was also intended to offer instruction to Russian biosphere reserve administrators on the principles of the Seville Strategy and how to apply them in present-day conditions.

Numerous discussions were held during the seminar. *Photo courtesy of U. Gräbener.*

Over the course of the seminar, participants listened to and discussed reports from international specialists, representatives of the Russian Ministry of Natural Resources, and the staff of specific biosphere reserves. Reports began with theoretical topics, such as the nature of biosphere reserves, the recommendations of the Seville Strategy, and the functions and goals of biosphere reserves. Later reports addressed concrete challenges biosphere reserves face, such as working with local government agencies and the local population, the role of education, tourism, and creating a network of biosphere reserves. Many of these reports offered examples of successful integration of Seville Strategy concepts in Russian biosphere reserves.

Toward the close of the seminar, round table discussion were held, covering three important topics: contemporary aspects of developing the biosphere reserve concept, cooperation between biosphere reserves, regional government agencies, and local communities, and problems of integrating biosphere reserves into the local economy.

A resolution written and unanimously ratified during the seminar notes the importance of the future development of the network of biosphere reserves in Russia as a tool for implementing the convention on sustainable development. It also includes recommendations for the functioning and development of biosphere reserves and for needed changes in legislation. Specific requests were addressed to the Ministry of Natural Resources, UNESCO-MAB, and the United Nations Development Program (UNDP). Overall, participants agreed that the conference had been a success.

This article was compiled from information provided by UNESCO's Moscow Office.

Participants of the UNESCO-MAB seminar outside the pavilion in Shushenskoye. *Photo courtesy of UNESCO.*

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Do Biosphere Reserves Need Managers or Coordinators?

By ***Frederic Bioret***

Over the last ten years, the biosphere reserve concept has evolved in numerous ways, in particular giving more emphasis to local populations and human activities. Therefore management planning in biosphere reserves should take account of these new considerations. Here the term "management" is understood to include not only organizing the conservation of natural, cultural, and historic heritage, but also work on behalf of the local population and various stakeholders. In biosphere reserves, the challenge is to design a form of management that identifies interactions between people and nature that make use of natural resources. The old conflict between nature conservation and economic development should henceforth be considered obsolete, superceded by the more ambitious notion that conservation can actively promote development, and vice versa, that development can contribute to the conservation of the cultural and natural heritage. The question, then, is who will guide this interlinked conservation and development in biosphere reserves?

A biosphere reserve coordinator brings together the stabeholders in the region to discuss and manage the area's natural resources. *Photo courtesy of U. Gräbener.*

The Seville Strategy (1995) highlighted the need for each biosphere reserve to have a management plan or policy in addition to an appropriate, clearly defined management structure (Objective II.2, No. 1). Subsequent meetings of EuroMAB biosphere reserve manager-coordinators recommended that "biosphere reserves should first and foremost serve the different needs and priorities of the various stakeholders of each biosphere reserve" and affirmed that "a biosphere reserve manager is above all a coordinator." By 1998, EuroMAB no longer referred to heads of biosphere reserves as managers at all, but instead as coordinators.

The reasons for this change reflect the difference between biosphere reserves and the traditional understanding of protected areas in many parts of the world. While protected areas are in general uniform areas of relatively small size intended for nature conservation, biosphere reserves represent a mosaic of varied regions managed for differing purposes, such as conservation and development. While protected areas generally serve one all-encompassing category of interests, such as the preservation of natural or historical treasures, biosphere reserves attempt to harmonize a choir of interests that often seem discordant with one another. A single biosphere reserve may have to answer the overlapping interests of stakeholders including farmers, foresters, fisheries, tourists, scientists, and elected officials. Moreover, a biosphere reserve is so large that it encompasses a number of managers who work more or less independently of each other. The three-tiered zoning system includes a transition area that does not even have an outer limit. Strict protection of natural systems is relegated to the core area, while management agreements or contracts may exist in other regions of the reserve. And instead of the management plan that guides a standard protected area, a guide to biosphere coordination emphasizes local participation. In short, the vast complexity of a biosphere reserve mandates a leader who will coordinate efforts rather than attempting to manage all the workings of the reserve alone.

This does not mean, however, that the role of the coordinator is easy. One of the challenges in biosphere reserves today is ensuring that the control structure is visible and that the coordinator receives adequate recognition. As the person responsible for moderating the balance between environment, economy, and equity in a specific area, the coordinator must ensure that all stakeholders – resource users, professional groups, local populations, government agencies, elected officials, scientists etc. – are represented and able to communicate their needs and aspirations for the area. The coordinator must understand the interrelationships between the various interest groups, and be prepared to address conflicts through mediation.

Hence a biosphere reserve coordinator has multiple demands to meet. He or she must ensure that the main conservation and development issues and potentials (both on the level of the biosphere reserve and in a wider biogeo-

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A View from the Other Side

*By **Valery Brinikh***

Given the nature of Russian society today and its long history without democracy, the leader of biosphere reserve in Russia should be more a manager than a coordinator. To this day, in many regions of Russia – especially the Caucasus – an authoritarian style of leadership has been preserved as the norm against supposed democratic reforms. Even if decisions are made on the local level, involving members of the community, regional government officials, and other stakeholders, these decisions may never be realized because higher levels of government in the centralized bureaucracy block their implementation. Such has been the actual experience of Kavkazsky Zapovednik in past years and up to the present day.

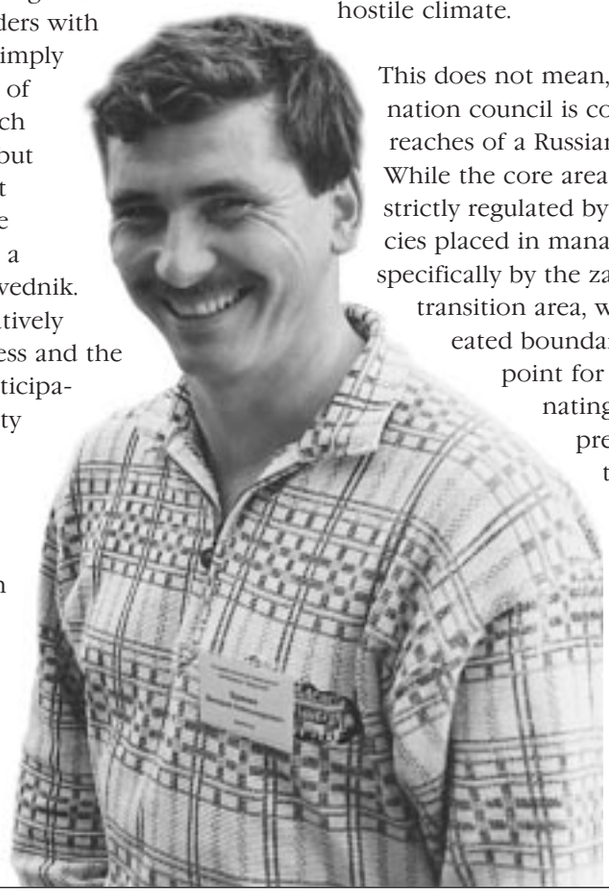
The model of biosphere reserve management based on involving varied stakeholders with a leader acting as a coordinator is simply too utopian. Like the Russian fable of the swan, crayfish, and pike, in which the three animals try to pull a cart but fail because each pulls in a different direction, a coordinating committee would not be an effective guide for a zapovednik, even a biosphere zapovednik. Moreover, considering the comparatively low level of environmental awareness and the absence of a tradition of public participation in decision-making, the majority of local community representatives on such a council would not seek mutually beneficial compromises. Indeed, if given executive power, the council would likely bring harm to natural ecosystems by ignoring the importance of the reserve's conservation function.

The problem of coordinating various activities lies in the fact that many leaders – zapovednik directors and government representatives – have a feudal lord mentality. Each one wants his own piece of land to govern. Moreover, corruption and embezzlement are still rampant in Russia, making economic interests a significant threat to the biosphere reserve. Taking a stand against this kind of unlawfulness involves great professional and personal risk.

In response to this environment, the director of a biosphere reserve must be a highly qualified professional who is both honest and wildly dedicated to his or her job. Most zapovednik directors in Russia today have post-graduate degrees in natural sciences, and manage to live on a monthly salary of US$70–80 in regions where the living wage is US$90-100. They must be charismatic enough to inspire optimism in staff members that in some cases literally risk their lives to protect the reserve, yet receive an even smaller salary of US$30–40. In essence, the Russian biosphere reserve director must balance on the blade of a razor, using strength of character to manage the reserve in a hostile climate.

This does not mean, however, that a coordination council is completely beyond the reaches of a Russian biosphere reserve. While the core area and buffer zone must be strictly regulated by the government agencies placed in managing positions, and specifically by the zapovednik director, the transition area, which lacks clearly delineated boundaries, can be the starting point for a western-style coordinating council. Indeed, it is precisely at this point that the zapovednik director's governing power fades away and his or her role as a coordinator begins.

***Valery Brinikh** is the Director of Kavakzsky Zapovednik.*



Valery Brinikh.
Photo by N. Malesbin.

graphical context) are identified. Certain conservation or development priorities, and even sustainable development experiments could be envisaged. The coordinator must also ensure that various interests and their relationships to each other are identified, and that any conflicts that arise are resolved through mediation.

Nonetheless, the coordinator is not responsible for solving all of these problems alone. Instead, he or she must set up working groups devoted to common concerns and organize

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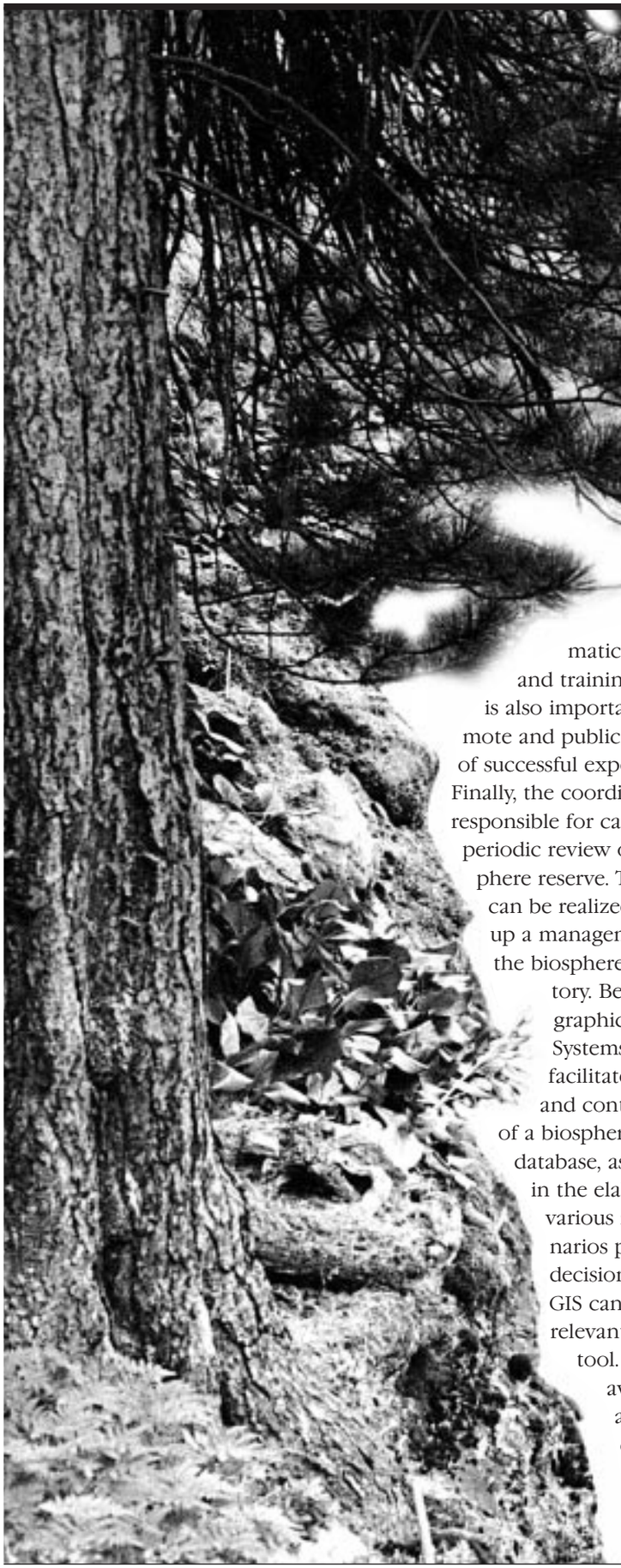

tiple stakeholders, the coordinator can most effectively guide the biosphere reserve.

thematic workshops and training sessions. It is also important to promote and publicize the results of successful experiments. Finally, the coordinator is responsible for carrying out a periodic review of the biosphere reserve. This approach can be realized by setting up a management guide for the biosphere reserve territory. Because Geographic Information Systems (GIS) can facilitate the creation and continual update of a biosphere reserve's database, as well as assist in the elaboration of various zoning scenarios pertinent to decision-making, a GIS can prove to be a relevant and efficient tool. By using all available tools and guiding a dialogue between mul-

References

Batisse M., 1986 – Developing and focusing the biosphere reserve concept. Nature and Resources, 12(3) : 1–10.

Batisse M., 1996 – Reserves de biosphere : un nouvel essor. Nature, Science et Societe 4(3) : 268–272.

IUCN, 1998 – Biosphere Reserves – Myth or reality ? Proceedings of a workshop at the 1996 IUCN World Conservation Congress, Montreal, Canada. IUCN, Gland, Switzerland and Cambridge, UK, vi + 49p.

Keystone Center Colorado, 1996 – The Keystone national policy dialogue on ecosystem management. Final report, 43p. + Appendix

Mege S., Anselme M., 1997 – Plan de gestion de la reserve naturelle du Grand Cul-de-sac marin, Guadeloupe, 1998-2002. Reserve de biosphere del'Archipel de Guadeloupe222p.

Additional resources include UNESCO and EuroMAB documents.

Frederic Bioret *is the Vice-Chair of the French MAB National Committee specializing in biosphere reserve coordination. He works mainly in the Mer d'Iroise Biosphere Reserve in Western France, advising on new alliances between tourism entrepreneurs and farming and fishing interests which promote economic development and at the same time enhance the local biodiversity.*

Photo courtesy of Katunsky Zapovednik.

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The Particulars of Russian Biosphere Reserves

By ***Vsevolod Stepanitsky***

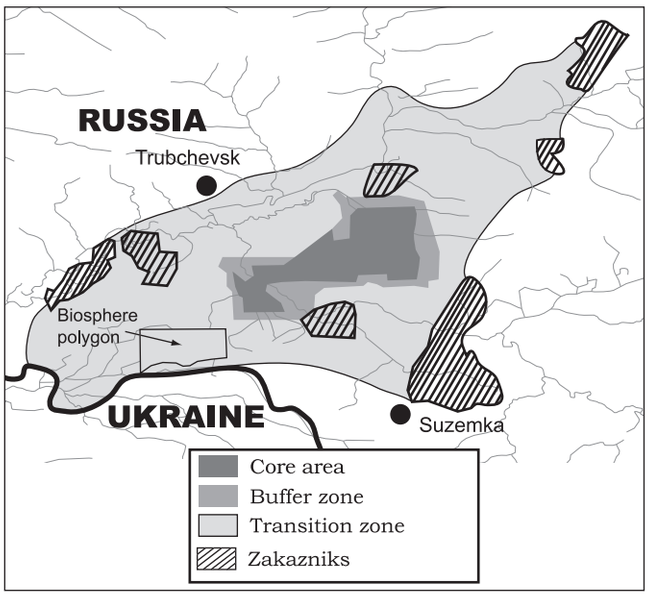
An examination of the history of the development of the network of biosphere reserves in Russia shows that careful and objective thought have not always been the guiding principles behind the founding of biosphere reserves in the nation. Why, for example, have Voronezhsky and Tsentralno-Lesnoi Zapovedniks received the status of biosphere zapovedniks while Altaisky and Darvinsky have not, even though the latter deserved this status more than the former? Why have federal zapovedniks to date been the only protected areas to receive biosphere reserve status while numerous national parks fit the necessary criteria? Why has the network of environmental monitoring stations in biosphere reserves fallen apart? Answering these questions is key to understanding the nature of biosphere reserves in contemporary Russia and developing a strategy for their future development.

Today 24 of Russia's 100 zapovedniks are internationally recognized as pieces of the World Network of Biosphere Reserves. They range from the steppes near Kursk to the waters off Vladivostok, from the frozen tundra of the Taimyr Peninsula to the mountains of the Caucasus. But what distinguishes any of these biosphere reserves from the rest of the non-biosphere zapovedniks in Russia? The only clear answer is that a UNESCO certificate hangs on the wall of a biosphere zapovednik director's office. The differences between ordinary zapovedniks and biosphere reserves are growing each year, but by and large, to this day there are no significant differences between these types of protected areas in Russia.

There currently exists, however, one criterion that could become fundamental both for determining which zapovedniks ought to have the status of UNESCO biosphere reserves and for meeting the demands of the Biosphere Reserve Concept: special zoning in the reserve to create a biosphere polygon. This zoning could take a number of forms, but in essence involves including some kind of semi-protected region contiguous to the reserve core. Today, only five biosphere reserves in Russia include a territory recognized by Russian legislation as being a biosphere polygon: Barguzinsky, Oksky, Sayano-Shushensky, Tsentralno-Sibirsky, and Kavkazsky. These reserves allow sustainable, low-impact use of natural resources on their biosphere polygons, such as managed hunting, fishing, ecotourism, moderate timbering, plant gathering, beekeeping, and deer herding. The remaining 17 biosphere zapovedniks have no legally desgnated biosphere polygons. Nonetheless, some of these zapovedniks have functional (if not official) zoning, including Bolshoi Arktichesky, Komondorsky, Kerzhensky, and others – Visimsky and Bryansky Les – have planned expansion that will include a biosphere polygon.

The irony is that a legal contradiction exists in the formation of biosphere reserves in Russia. Following the letter of Russian Law, a biosphere polygon can be attached only to the territory of zapovednik that has already obtained the status of a biosphere zapovednik. In other words, a biosphere polygon can be attached to Visimsky Zapovednik only after the reserve receives a UNESCO certificate naming it a biosphere reserve. Meanwhile nominating Visimsky Zapovednik for the status of a biosphere reserve would be ridiculous without the presence of functional zoning. Nonetheless, Komandorsky, Kerzhensky, and Bolshoi Arktichesky Biosphere Zapovedniks, which all function as biosphere reserves even though they lack legally recognized biosphere polygons, demonstrate not only imperfection of Russian legislation, but also the eternal wisdom of the founders of the Roman Law, who claimed that life was wider than the law.

National parks present an entirely different problem. To date, only one Russian national park, Vodlozersky, has been included in the network of UNESCO biosphere reserves. The-



The zonation of the newly established Nerusa-Desnianskoye-Polesie Biosphere Reserve, whose core area includes the entirety of Bryansky Les Zapovednik. *Map by M. Dubinin based on materials provided by Bryansky Les Zapovednik.*

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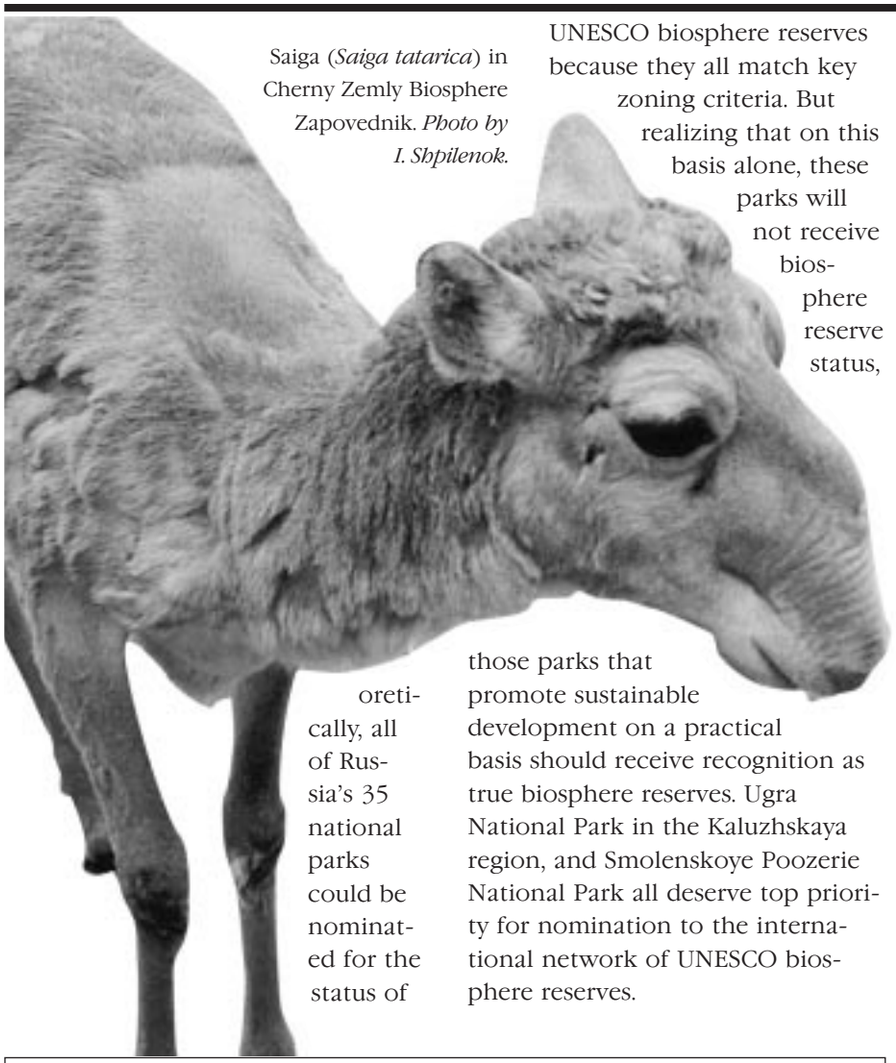

Saiga (*Saiga tatarica*) in Cherny Zemly Biosphere Zapovednik. *Photo by I. Shpilenok.*

UNESCO biosphere reserves because they all match key zoning criteria. But realizing that on this basis alone, these parks will not receive biosphere reserve status, theoretically, all of Russia's 35 national parks could be nominated for the status of those parks that promote sustainable development on a practical basis should receive recognition as true biosphere reserves. Ugra National Park in the Kaluzhskaya region, and Smolenskoye Poozerie National Park all deserve top priority for nomination to the international network of UNESCO biosphere reserves.

The Seville Strategy has created a new level of complexity in creating and maintaining biosphere reserves in Russia. Zapovedniks and national parks must become further integrated into the economic structure of the regions in which they lie. But this task may be easier said than done. For decades the Russian network of protected areas was developed without attention to the actual interests of individual regions, which in turn created innumerable conflicts throughout the history of zapovedniks. These conflicts were usually manifested in attempts to shrink the size of nature reserves or to allow undesirable economic activity in these areas. They often arose because individual local officials were ignorant of or misunderstood the importance, objectives, and specific features of zapovedniks and national parks as protected areas that were simultaneously focused on nature protection, research, and promoting environmental awareness. It would be naive to expect that all the officials throughout Russia (not to mention the general public) would be in favor of expanding national parks, zapovedniks, and other protected areas: nonetheless, this logic prevailed in protected areas management for decades.

The importance of zapovedniks and national parks, as well as the benefits a region gains by establishing a protected area, should be publicized until it is clear part of the public consciousness. This is all the more true for biosphere reserves. Zapovedniks and national parks cannot be isolated entities in Russian regions: they should be an integrated part of the region, using their conservation, recreational, scientific, and intellectual potential to benefit the region. This may be the only way to secure a future for zapovedniks and national parks in Russia.

Vsevelod Stepanitsky *is the Deputy Director of Environmental Protection in the Russian Ministry of Natural Resources.*

The Enigmatic Biosphere Polygon

The term "biosphere polygon" is a Russian term not used in the Biosphere Reserve Concept, leading many to wonder exactly what a biosphere polygon is. But even in Russia the meaning of the term has not always been clear. The terms "biosphere reserve," "biosphere zapovednik," and "biosphere polygon" have sometimes been used interchangeably in Russian, although some publications have tried to underline differences between these terms.

Time has changed the general understanding of the term, but it remains nebulous concept. Judging by the understanding of the term "biosphere polygon" in Russian legislation on protected areas, which emphasizes location, a biosphere polygon is most similar to the international concept of the buffer zone. At the same time, the fact that biosphere polygons are to be used as areas for demonstrating sustainable land use makes them functionally more similar to the transition zone that surrounds international biosphere reserves.

Information provided by ***Gennady Yankus*** *and* ***Aleksandr Ananin****, Director and Deputy Director of Science in Barguzinsky Biosphere Zapovednik.*

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A Personal Appraisal of the Implementation of the Seville Strategy in Russia

*By **Uli Gräbener.***

One of the reasons for conducting a UNESCO-MAB training seminar for biosphere reserve managers in Russia was that the periodic review process had revealed some inherent difficulties Russian biosphere reserves faced in meeting the criteria and recommendations of the Seville Strategy and Statutory Framework for Biosphere Reserves (1995). As an observer close to the Russian biosphere reserves with a background in international biosphere reserves, I was asked to prepare a critical analysis of the implementation of the Seville Strategy in Russia. I have done this in hopes of elucidating the problems and opportunities for biosphere reserves in Russia.

Perhaps the greatest perceived problem actually stems from miscommunication and a lack of mutual understanding. The fact is that western and Russian biosphere reserves – and the local theories guiding them – developed in relative isolation. Much of the international concern regarding the implementation of the Seville Strategy in Russia (or supposed lack thereof) came directly from a misunderstanding of Russian biosphere zapovedniks. It must be kept in mind that the first biosphere reserves in Russia were designated according to biosphere reserve criteria as understood in the beginning of the MAB Programme in the 1970s: at that time, scientific research and conservation of ecosystems were priorities, with relatively little focus on what is now referred to as "the development function." As a result, many of Russia's first biosphere reserves were located in remote areas with pristine nature.

Russian and international colleagues discuss biosphere management during a cruise along the Yenisei River.
Photo courtesy of U. Gräbener.

Today the Biosphere Reserve Concept has a slightly different face, which arises from the Statutory Framework, a "soft law" adopted by the UNESCO General Conference (including Russia) in 1995. The current concept is purposefully flexible. It was specifically developed to accommodate the needs of a multitude of very different countries with very different natural histories, cultural backgrounds and legal bases. To be effective on a global level, the biosphere reserve concept must be adaptable to the environment and development issues varied ecosystems pose. It is applicable to areas highly modified by human activities, for example in peri-urban environments, as around the city of Agadir in the Arganeraie Biosphere Reserve in Morocco, or near to Paris in the Fontainebleau Biosphere Reserve in France; it is likewise relevant to large wetland areas as in Brazil, such as the 24,000,000-hectare Pantanal Biopshere Reserve, or to the vast arid lands in Niger, where 10,000,000 hectares lie in the Air et Tenere Biosphere Reserve. Nevertheless, Russian biosphere zapovedniks have difficulties fulfilling the development function, which was amplified at the Seville Conference. In most cases, these strict nature reserves simply have no human settlements to develop. But this does not necessarily mean, as several examples show, that a zapovednik cannot develop into a biosphere reserve according to the Seville Strategy.

When European and Russian reserve managers gathered in Krasnoyarsk for the training seminar last summer, the axiom certainly proved true – and I am no exception – that when confronted with a new approach to a seemingly familiar problem, people judge the new approach on the basis of their own value system. It became clear that many misunderstandings stemmed from the lack of Russian participants' knowledge and understanding of the thinking on conservation and development in other European regions, and vice versa, from the foreign experts' lack of awareness of the of the particularities and history of nature protection in Russia. Misperceptions gave rise to some lively debates, but by the end of the seminar, the Russian participants had shown just how many changes had occurred with the Russian zapovedniks in the last years, and that in fact the differences between Russian and some European reserves were not as great as had been perceived.

Nonetheless, they do exist, as the following example illustrates. During a field trip through Sayano-Shushensky Zapovednik (the core area of the biosphere reserve of the same name), participants at the seminar learned that two rangers had recently been killed by dissenting soldiers and another two rangers had been reported as missing for over two years, probably having been killed by poachers. This story was not told to perpetuate an image of a wild and unpoliced Russia, but rather to

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illustrate the problems posed by the huge distances and remoteness of many sites in Russia, in contrast to much of Europe. It became clear to all of the seminar participants that managers of Russian protected areas face problems of a different scale than their counterparts in Western Europe. Similarly, everyone realized that given these differences, a certain amount of openness and willingness to understand hitherto foreign ideas was necessary on both sides. After all, there are many different ways to implement one and the same strategy.

Two examples illustrate how the same Seville Strategy has been applied successfully in two very different countries. The first comes from my own personal experience in Germany, typical of many Western European countries. Today, less than two percent of the land area can be considered "virgin nature," as centuries of extensive and intensive human activity has created cultural landscapes which often have a higher level of biodiversity than initially supported by the natural environment (mainly beech forest in Central Europe). Following the industrial revolution, however, and in particular in the last three decades, agriculture in arable areas has been industrialized, including the unification of field systems and intensive use of artificial fertilizers and pesticides. In parallel, less fertile lands have been abandoned and now lie fallow. Both of these processes have had negative effects on biodiversity, leading to landscapes with less biological and aesthetic value. In Germany, the biosphere reserve concept has therefore been applied to prevent and reverse these negative effects by innovating with alternative agricultural systems and supporting certain traditional practices, thus recreating a variable, pleasing landscape, which is also of economic value. These biosphere reserves are highly formalized, and their functions and goals as well as operation are described in the federal law on nature conservation.

Canada shall serve as a second example, a country whose biogeographical zones match Russia's. Biosphere reserves have been created here relatively recently, with focus centered on the southern, more populated parts of Canada, where human influence has modified the condition of natural areas with high biodiversity and/or high aesthetic value. Canadian biosphere reserves usually contain a legally protected area or areas, such as a National Park or a Provincial Nature Reserve, as a core area. But there is no special law in Canada for biosphere reserves: rather it is local communities and municipalities that drive their establishment and maintenance, in consortium with the protected area managers and other stakeholders such as the forest services or private industry. The biosphere reserve "manager" is in fact a coordinator who facilitates discussion, scientific research and monitoring, and development actions of the varied actors. The transition area plays an important role in promoting the development function, but the extent to which this development is realized depends on the commitment of the people involved.

In comparison, Russia too brought its unique pre-existing characteristics to the founding and development of its network of biosphere reserves. There is no disputing the fact that the system of strict protected areas, or zapovedniks, was very well developed. Indeed, I daresay that zapovedniks had one of the strictest protection regimes around the world, as only researchers had access to these areas to conduct their work. This has allowed the preservation of some of the largest areas of pristine nature in the entire world, and it is highly desirable that this system be kept alive.

Nonetheless, this system faces certain problems. Officials at the Ministry of Natural Resources now admit that because of the abundance of ideal conservation sites in Russia, proposals for founding biosphere reserves in earlier years did not follow any specific logic, but were made more by chance or politics. Moreover, most zapovedniks no longer receive the level of financial support for their work that they did in the Soviet time. They face severe difficulties, especially in paying their research staff, and their directors are realistic in not expecting the situation to improve much in the next few years. In addition, though many zapovedniks are located far from any population centers, a number of zapovedniks are located in poverty-stricken, remote rural areas. While twenty years ago centralized planning offered limited support to these communities, today they live on subsistence farming and have little hope for development beyond resource exploitation, and even then only in those regions where this is an option.

Hence, several zapovedniks managers – including those with the biosphere reserve "label" – have realized that they must adapt in order to secure their own future, for example by cooperating with surrounding local communities, working with and improving regional enterprises, to developing sustainable business partnerships and/or attracting additional financial resources. There is no single approach or recipe to success in this: every region or site has had to find its own way. As a result, certain Russian zapovedniks have begun to truly implement the Seville Strategy, using their own approach. Some of the success stories are presented in the second part of this

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issue, but for now let me summarize some of the trends.

One trend is that the zapovedniks with the biosphere reserve label are becoming the core areas of even larger complexes, which correspond to "Seville biosphere reserves." The zapovednik concept includes the possibility of buffer zones, usually a strip of land 500 meters to several kilometers wide drawn around the protected area. The zapovednik is also sometimes complimented by a zakaznik, a special-purpose preserve with a lower level of protection sometimes allowing limited human activities. Nature parks and natural monuments may also be officially included into these larger complexes. Federal legislation has recently established the notion of "biosphere polygons" as areas adjacent to zapovedniks with a lesser protection regime, and often including certain kinds of human activity. A number of zapovedniks with biosphere reserve status have already established such polygons. Both zakazniks and the new polygons can offer opportunities of creating buffer zones according to the Seville criteria.

The question of adding a transition area is more complex, as this is in fact functional "development zone," or "cooperation zone." Laplandsky Biosphere Reserve, presented in greater depth later in this issue, is probably a good example in Russia. The Director of Laplandsky Zapovednik recognized the need to address the environmental problems of his region at much larger scale than the zapovednik itself. All the major stakeholders, local authorities and major enterprises around the zapovednik formed a group that acts as a coordinating council. The lands around the zapovednik are called the "cooperation zone" and do not have rigidly defined boundaries. This kind of territory can be considered analogous to the transition area named in the Seville Strategy.

Meanwhile, national parks have recently drawn attention as potential biosphere reserves in Russia. Russian national parks, which first appeared in 1983, come much closer to the current international understanding of biosphere reserves, but are still not a perfect fit. The future will show how national parks fare as biosphere reserves. The first test case, Vodlozersky National Park, received biosphere reserve status only this fall.

Thus the UNESCO MAB training seminar for biosphere reserve managers revealed that in fact several biosphere zapovedniks have started their own initiatives to implement the Seville Strategy. They have each chosen an individual approach based on their backgrounds and available opportunities. This approach may appear haphazard when viewed from outside, but it is well suited to Russia and actively supported by the Russian Ministry of Natural Resources. Other zapovedniks, regardless whether or not they have been designated as biosphere reserves, would do well to follow these examples. It is certain that some of them can never meet the Seville biosphere reserve criteria. The majority, however, can serve as core areas of a new generation of Russian biosphere reserves which start to address the acute problems that exist in the remote areas of Russian, and can greatly help in their progress towards sustainable development.

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Local fishermen near Tsentralno-Sibirsky Biosphere Zapovednik.
Photo by M. Zhukov.

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A Comparative Study of Implementing the Seville Strategy in Russia and Germany

*By **Elena Amirkhanova***

A close comparison of two specific nature reserves – one in Germany (Schorfheide-Chorin), one in Russia (Prioksko-Terrasny Zapovednik) – shows the challenges of implementing the Seville Strategy in different countries and regions. The two reserves selected for this comparison are similar in size and form, both about 100,000 hectares in area and located in forested regions near large metropolitan centers (Moscow and Berlin). Their core sizes are also nearly identical, about 5,000 hectares. Over the course of the last several centuries, both regions came under heavy anthropogenic influence. But despite their similarities, a significant contrast exists in the way each reserve functions. Recognizing the differences in reserve management in different countries may be a first step towards making biosphere reserves more effective.

Photo by L. Woodson.

Prioksko-Terrasny Zapovednik in Russia was founded simply as a zapovednik in 1948, then received the status of a biosphere zapovednik in 1978. The zapovednik's historical role was to conserve the forest ecosystems of the wilderness near Moscow. Meanwhile, Schorfheide-Chorin in Germany was founded directly as a biosphere reserve in 1990 and from the start focused on demonstrating environmentally sustainable land use. Thus while Prioksko-Terrasny Zapovednik has spent the past 23 years trying to change its management to meet the goals of biosphere reserves, the administration of Schorfheide-Chorin has been focused on them since the reserve's creation.

As a whole, the functions of biosphere reserves correspond with the traditional functions of Russian zapovedniks. The core region of Prioksko-Terrasny Zapovednik fulfilled its conservation function long before it received official biosphere status. Moreover, scientific research and monitoring efforts were always considered primary functions of Russian zapovedniks. The "Chronicle of Nature" (Letopis' prirody), an annual record of natural conditions, plants, and animals in the reserve served as a basis to implement the environmental monitoring later prescribed by the Seville Strategy.

Fulfilling other biosphere reserve functions has proven more difficult. The zoning of Prioksko-Terrasny Zapovednik has hindered the reserve from taking an active role in regional planning and demonstrating varied approaches to sustainable development. Because the zapovednik lacks a biosphere polygon, it restricts much of its activity to the core area and buffer zone. Any change in zoning to allow increased economic activity in either of these zones will bring harm to the natural systems the zapovednik protects. Meanwhile, attempts to create a functional transition zone outside the zapovednik have met with opposition from local officials. Thus the zapovednik lacks an area to support the economic activities called for in the Seville Strategy.

Some consideration has been given to the varied partners and stakeholders of Prioksko-Terrasny Biosphere Zapovednik, but only in that part of the reserve that abuts the

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core region. Cooperation agreements exist with collective farms, forestry collectives, small farms and other organizations located in the buffer zone, but in general such programs are still in development. Moreover, in order to become more involved in regional planning and support of the local population, zapovednik administrators must face the traditional attitude of local residents, who tend to view the reserve in a negative light because it restricts the use of natural resources in the region. Along the southern border of the zapovednik, essentially along the very core of the biosphere reserve, people have begun illegally building small cabins called dachas.

This and other problems are intensified by the reserve's financial difficulties. Russian Biosphere Reserves seeking to implement the Seville Strategy must do so without adequate funding from the federal government. For example, the staff of Prioksko-Terrasny Zapovednik often acts as a local environmental consulting service, but lacks the needed finances to create official local consulting centers. Similarly, the administration of the reserve has not found the resources to create regional model areas.

Meanwhile, from the outset Schorfheide-Chorin has been, more than anything else, an area for environmentally and socially sustainable land use. Since 1990 the administration of the reserve has sought out partnerships with the local community, which over the past decade have developed significantly. Funding problems have not had as severe an effect on Schorfheide-Chorin: staff began actively developing regional model areas in 1994 with the beginning of the scientific research and practice project called "Agriculture and Nature Conservation." Although the reserve's staff give attention to environmental monitoring, Schorfheide-Chorin spends more resources and efforts on harmonizing the relationship between people and nature. In essence, even though Schorfheide-Chorin had to overcome significant challenges in order to better implement the Seville Strategy, the fact that its structure and mission have always been directed towards sustainable development has made fulfilling this mission easier.

At the current time, only the core area of Prioksko-Terrasny Zapovednik meets the standards of a biosphere reserve, and the implementation of all of the principles of the Seville Strategy on the entire territory of the biosphere reserve is possible only in the long term. It is directly connected to the need for a fundamental change in Russian society, an increase in environmental awareness, increased funding for nature reserves, and a reexamination of the role of Russian biosphere reserves in the regions. Further efforts are required to adapt the recommendations of the Seville Strategy to Russia based on the successful lessons learned from other biosphere reserves, such as Schorfheide-Chorin in Germany.

Elena Amirkhanova *is a student of the Geography Department of Lomonosov Moscow State University and an intern at the UNESCO Moscow Office.*

Table 1. The Realization of the Seville Strategy in Prioksko-Terrasny Zapovednik and in Schorfheide-Chorin Biosphere Reserve. *The Seville Strategy included a long list of indicators to be used for determining the level to which the strategy had been implemented. Below is a comparison of five key indicators in the two reserves.*

Indicators	Prioksko-Terrasny Biosphere Zapovednik	Schorfheide-Chorin Biosphere Reserve
Zoning implemented	Zoning was established in 1980, 32 years after the zapovednik was founded.	Zoning was included in original plans for the reserve.
Zones are reorganized to better achieve three functions	Long-term plans include reexamination of zones. Plans already exist for creating a functional transition zone.	Long-term plans include reexamination of zoning.
Coordinated research and monitoring programs implemented	Reserve staff keep a "Chronicle of Nature," as well as additional reports, and carry out monitoring.	Research is conducted throughout the reserve, but is restricted in the core.
Sites developed to demonstrate sustainable land use	No sites yet exist. Creation of sites demands special investment and supplemental organizational efforts the zapovednik cannot support at the current time.	Sites include the Fridrichsfelde sheep-farming school, the Polssen-Schmideberg farm, and Lipe pasture cooperative.
Local community involved in planning and managing the biosphere reserve	The local community is occasionally involved, but a better form of cooperation is still needed.	Community involvement exists and is welcomed, particularly in the field of agriculture.

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A Critical View of the Changing Role of Biosphere Reserves in Russia

Adapted from an article on specialized environmental monitoring by ***Tatiana Minaeva***

Changes to the theory of biosphere reserves have brought new problems to Russian biosphere reserves, first and foremost because their own staff were uninofmed of these changes. The first time the official federal agencies responsible for managing protected areas were involved in discussion about reform in biosphere reserves came in June 2001 at the UNESCO training seminar in Krasnoyarsk. The goals and recommendations of the Seville Strategy were presented, but to this day, a great number of people hold misconceptions about the role of biosphere reserves, and significant misunderstandings exist between the staff of Russian biosphere reserves and their western counterparts. This tendency is particularly true regarding the detailed environmental monitoring Russian biosphere zapovedniks worked hard to introduce and improve over the course of thirty years. Many would be surprised to learn that in light of a renewed focus on sustainable development, environmental monitoring should no longer be the solitary and primary activity in biosphere reserves. Others have swung too far in following the push toward sustainable development, mistakenly believing that the biosphere reserve concept no longer supports environmental monitoring.

Now the danger is that in striving to fulfill the demands of the Seville Strategy, biosphere zapovedniks in Russia will neglect the meticulous monitoring which they excelled at for decades: environmental monitoring. In effect, this means throwing out the baby with the bathwater. The federal protected area management no longer demands that environmental monitoring through highly detailed wildlife and vegetative studies be carried out in biosphere reserves, leading many zapovedniks to cut these programs. Two generations of scientists and protected area managers were involved in the development of the biosphere reserve network in the Soviet Union using a standard approach. But now the benefits of this approach may disappear. Financial difficulties have decreased the quality of scientific work.

Without question, the focus on sustainable development advocated by the Seville Strategy could solve serious problems in certain nature reserves, especially those located in more populated areas. Ultimately a balance must be found between the development function and the maintenance of environmental monitoring. But in unsettled regions like the Arctic Taimyr Peninsula, the location of Taimyrsky Biosphere Reserve, efforts to work with a non-existent local population would be futile, and resources are far more wisely spent continuing environmental monitoring.

In some instances, a failure to fulfill all of the demands of the Seville Strategy may cause some zapovedniks to loose their status as UNESCO biosphere reserves, but regardless of what happens, environmental monitoring should be preserved in Russia's protected areas. In cases where financial resources cannot support both the continuation of environmental monitoring and the implementation of new programs to promote sustainable development, serious thought and discussion must be given to the losses associated with ending or curtailing monitoring programs.

Tatiana Minaeva *works as a Project Coordinator for the Russian Program Office of the World Wide Fund for Nature and in Tsentralno-Lesnoi Biosphere Zapovednik, Tverskaya Region. Additional consultations for this article were provided by* ***Natalia Troitskaya,*** *who organizes scientific work in zapovedniks and national parks through the Russian Ministry of Natural Resources, and* ***Valery Neronov,*** *the Deputy Chair of the Russian MAB Committee.*

Environmental monitoring has always been an important activity in biosphere zapovedniks. *Photo by T. Minaeva.*

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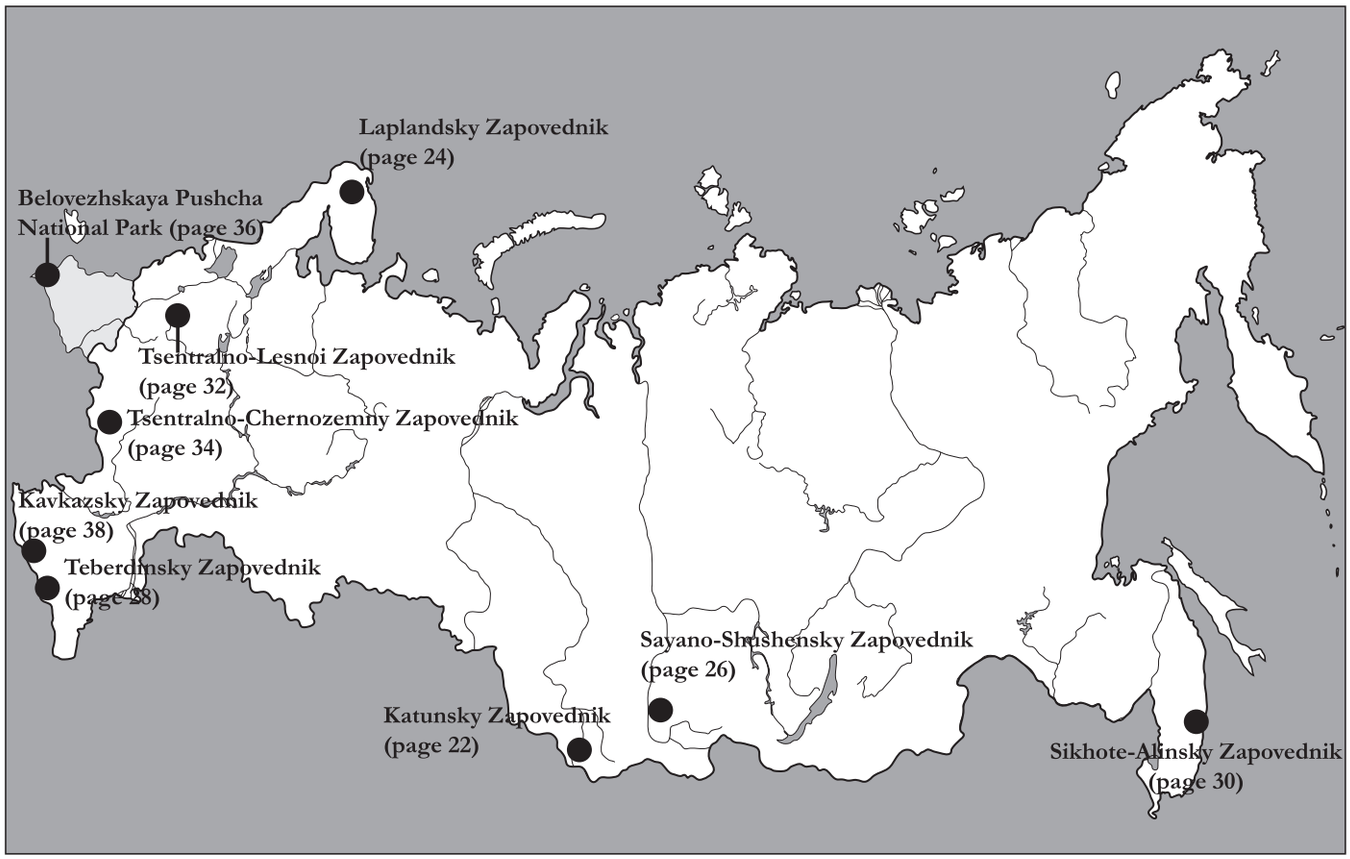
Case Studies

Introduction



Map by M. Dubinin

Editors' introduction: *The functions of biosphere reserves can play out in a multitude of ways upon the varied backgrounds of the landscapes of northern Eurasia. A number of Russian biosphere zapovedniks have already taken important steps toward becoming true biosphere reserves. As a rule, these steps are cautious and painfully slow, and successes few and far between. Almost any biosphere zapovednik director would immediately admit that the problems and challenges of changing a zapovednik's activity to follow more closely the principles of the Seville Strategy far outweigh the success stories. Creativity and hard work are not the only elements that figure into the formula of change: government bureaucracy, financial burdens, and a low level of environmental awareness in communities around zapovedniks just begin the list of factors that weigh against a biosphere reserve in Russia. This very fact makes successes all the more noteworthy.*

The following section of the journal is devoted primarily to these success stories. Case studies from nine biosphere reserves in Russia and Belarus each highlight a different aspect of reserve management and reveal a specific biosphere reserve's approach to a particular issue relevant to the region. Although Russia's 25 biosphere reserves are diverse, the lessons each has learned in the process of implementing the Seville Strategy may serve as helpful examples for other biosphere reserves. The brief articles in the pages ahead offer a sunny glimpse into the workings of various biosphere reserves. The final article, a description of problems in Kavkazsky Biosphere Zapovednik, serves as a reminder of the difficult circumstances in which biosphere reserves must operate.

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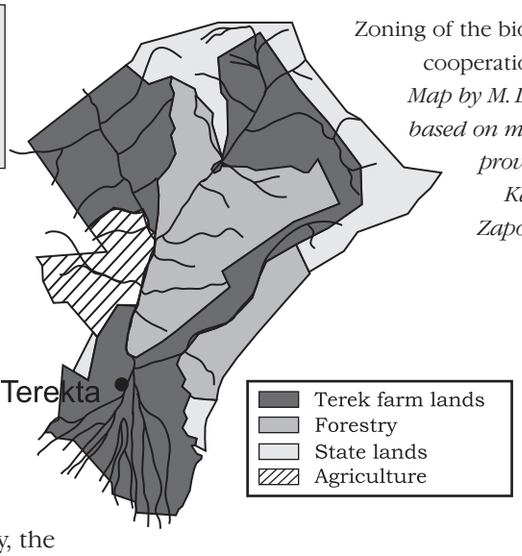
Katunsky Zapovednik. The Transition from Zapovednik to Biosphere Reserve

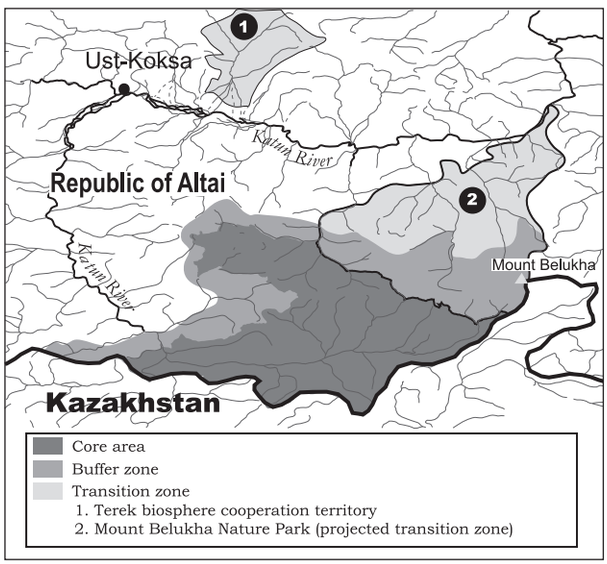
Established: 25 July1991
Area: 212,887 ha (core:151,637 ha; buffer: 61,250 ha)
General characteristics: mountain steppe, forest, and tundra
Received UNESCO biosphere reserve status: January 2000



Zoning of the biosphere cooperation area. *Map by M. Dubinin based on materials provided by Katunsky Zapovednik.*

*By **Aleksandr Zateev** and **Vera Melchenko***

In 1997, Katunsky Zapovednik looked much like any other Russian zapovednik. Located in the Central Altai Mountains where the headwaters of the Katun River form, the zapovednik protected and studied the natural high-mountain ecosystems spread throughout its 150,000-hectare territory. But although the zapovednik itself was located high in the mountains, away from human interest and interference, for decades the regions surrounding the zapovednik and especially its buffer zone were used for various economic purposes, including farming, herding, hunting and fishing, logging, and bee-keeping. Realizing that as an organization, Katunsky Zapovednik could become a leading example of working with the local population, in 1997 zapovednik staff began working with the Biodiversity Conservation Center (BCC) to transform Katunsky Zapovednik into a biosphere reserve. Symbolically and officially, the presentation of a UNESCO certificate to Katunsky Zapovednik in January 2000 recognized the zapovednik as a biosphere reserve. But the actual process of becoming a biosphere reserve was far more complex. At the beginning of their work, Katunsky Zapovednik and the BCC outlined two fundamental challenges to mold the zapovednik to fit the contemporary understanding of a biosphere reserve: changing the territorial planning of the zapovednik and working to improve employment opportunities and the standard of living at the local level.



Zoning of Katunsky Biosphere Zapovednik. *Map by M. Dubinin based on materials provided by Katunsky Zapovednik.*

In determining the best scheme for Katunsky Zapovednik, the planners looked to other examples of biosphere reserves in Russia, where biosphere polygons, the areas where human activities would be focused, had been established on territory apart from the core area. As zapovednik staff moved forward to create the biosphere polygon, however, they encountered strong resistance from the local community, local authorities, and local businesses and farms. The problem was that the word "polygon" in Russian automatically brought to mind its other uses, which usually describe military or nuclear testing areas; in other words, areas extremely hostile to human activity. The government of the Republic of Altai even received an official letter requesting that the biosphere polygon not cover an area where economic industries or settlements were located for the safety of the republic's people.

Some of the greatest opposition came from collective farms that raise marals (Cervus elaphus maral), deer-like animals common in the area, whose horns are prized for their medicinal value. The marals live in semi-wild conditions, but herders conduct annual roundups to remove the animals' horns. Raising marals is one of the leading economic industries of the Republic, and specifically

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in the Ust-Koksa District where the zapovednik is located. In order to successfully work with the local community as a whole, the zapovednik would have to find a way to cooperate with these herders.

On the basis of discussions with members of the local community, planners drew up a proposal for a "biosphere cooperation area," to be located 50 kilometers north of the zapovednik. This phrase came to replace the undesirable term "biosphere polygon." A unique coordinating council was convened to govern the cooperation zone, comprised of representatives of the regional administration, Katunsky Biosphere Zapovednik, and other nature protection institutions, including Belukha Nature Park. Representatives from the local forestry enterprise, the regional Committee on Land Use and Mineral Resources, NGOs, and members of the public were also included on the council.

In 2000, work progressed as two staff members from the BCC met extensively with government officials from the Republic of Altai and the Ust-Koksa District, as well as with representatives of the National Savings Bank in hopes of carrying out a project to offer small grants for sustainable development projects involved in the reserve's transition area. During these meetings, parties also debated the final location of the biosphere cooperation area's borders. Similar meetings held in Katunsky Zapovednik involved a broader circle of stakeholders and included detailed discussion of small grant proposals.

Discussions with local maral herders yielded particularly interesting results. Responding to a request from the Land Committee of the Republic of Altai, the zapovednik participated in a series of discussions to reform and appraise the effects of maral herding systems in the Ust-Koksa District. In demonstrating that conservation could directly benefit the resources on which marals depend, zapovednik staff were able to convince many maral herders that cooperating with the zapovednik would likewise be profitable. As a result, the maral herding collective farm "Terek," which also grew wheat and produced flour, as well as raised bees and other animals, declared its interest in helping to establish a biosphere cooperation area.

These series of discussions led to widespread support for the new territory among various stakeholders. Although the regional administration has yet to formally authorize the designation of the biosphere cooperation area, essentially the area is already functioning. The territory encompasses land belonging to the firm "Terek" as well as the village of Terekta. Surrounded by state forestry lands, agriculture, and the Terek firm, this variation of land and land use is ideal for creating models of sustainable development. The goals for this area include raising the standard of living of the local community through using the region's natural resources, as well as preserving historical, spiritual, cultural, and economic traditions of indigenous people. They also include preserving natural systems and biological diversity while interesting the local population in this conservation through environmental education programs.

To create such models, planners have prescribed a combination of zones for strict protection, pasturelands, commercial hunting, maral herding, agriculture, and recreation. Future plans include re-examining these borders and developing promising economic activities, such as tourism. Together with the Terek firm administration, zapovednik and BCC staff have laid out tourist trails that cover attractive landscapes, maral herding areas, geological sites of interest, mineral water springs, and sites considered holy by indigenous peoples. If developed, this kind of tourism could become a profitable and constant source of income.

The administration of Belukha Nature Park is currently involved in negotiations to create a second biosphere cooperation area on the borders of the park. Both the park and the zapovednik have determined their mutual interests for the area, which is both part of a World Heritage Site, a traditional tourist center, and a haven for rare species of plants and animals.

Photo courtesy of Katunsky Biosphere Zapovednik.

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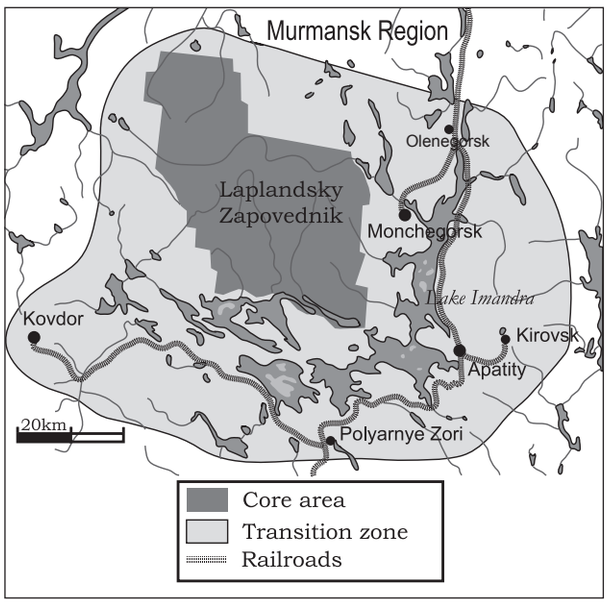
Laplandsky Zapovednik Collaboration in the Transition Zone

Founded: 17 January 1930
Area: 888,500 ha (core: 278,500 ha; buffer: 138,000 ha)
General Characteristics: Wetlands and low-mountain tundra and forest-tundra
Received UNESCO Biosphere Reserve status: 1984

In the 1930s industry began to develop on the Kola Peninsula, and today the population of the Murmansk Oblast has risen to one million people. Seventeen hydroelectric power plants have been built, along with the Kola Atomic Energy Station, several large ore mining and processing plants, metallurgical factories, and the Apatit industrial union, which mines and processes potash and phosphorous fertilizers. Within 10 to 60 kilometers of the zapovednik several cities were built up, including Monchegorsk, Apatity, Polyarnye Zori, Olenegorsk, Kovdor, and Kirosk, which now have populations ranging from 30 to 80 thousand people. In order to protect the ecosystems in the zapovednik, the Murmansk Regional Administration created a buffer zone to limit natural resource exploitation in a 138,000-hectare area around the zapovednik.

Reindeer (*Rangifer tarandus*).
Photo by A. Gilyazov.

As federal financing trickled away during the 1990s, the zapovednik had to search for ways to collaborate with its neighboring industrial enterprises and municipal administrations. The first steps in this direction proved difficult as the zapovednik began making connections with a nearby metallurgical complex only ten kilometers away and another local power plant. These industrial complexes polluted the zapovednik's forests and lakes. In order to stop the degradation of local ecosystems, the zapovednik began seeking compensation from these enterprises for the environmental damage they caused. The zapovednik filed numerous suits against this and other polluting industries. In the end, however, it was cooperation, not confrontation, that produced the most fruitful results for both the people and the environment of the region.



Zoning around Laplandsky Biosphere Zapovednik.
Map by M. Dubinin based on materials provided by Laplandsky Biosphere Zapovednik.

Although efforts to cooperate began in the 1990s, a major step forward came in 2000, when the Russian Program Office of the World Wide Fund for Nature (WWF) began guiding zapovednik staff in the creation of a management plan for the entire Laplandsky Biosphere Reserve. At this time, a number of varied stakeholders were all located in a relatively small area of the central-western Kola Peninsula, including the zapovednik, several cities, and the industrial enterprises that gave these cities life. The Kola Science Center of the Russian Academy of Sciences was also active in this region. The management plan aided cooperation efforts already in progress with local companies and organizations.

The zapovednik found a way to work with practically all of the companies, governmental administrations, and institutions located within a 60-kilometer radius. The transition area (or cooperation area) of the biosphere reserve emerged almost by itself. Representatives of all these organizations took active part in preparing a Concept for the biosphere reserve and developing the fundamental spheres of its activity. The directors of industrial enterprises and the heads of regional and municipal administrations have agreed to serve on the biosphere reserve's coordinating council. As a result, formal regulations regarding this council and its membership

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were ratified in June 2001 by an edict from the Governor of the Murmansk Region.

In 1997, Laplandsky Zapovednik sued the largest complex of the of the Kola Mining and Smelting Company, Severonikel, for $6,700,000 worth of forest damage. For the first time in history, Severonikel plead guilty to the charges. This marked a change in the relationship between the complex and the zapovednik: even before the trial was over, both sides agreed to cooperate in the future. Following many years of long and difficult dialogue, the zapovednik has developed multifaceted and stable partnerships with both Severonikel and the entire Kola Mining and Smelting Company. The zapovednik's staff monitor the environment around the complex, where most of the company's workers and their families live. In turn, Severonikel helps organize the biosphere reserve's work, reconstruct the Grandfather Frost Homestead in the zapovednik, a key instrument in regional environmental education, and prepare the annual informational magazine "Laplandsky Zapovednik."

Lake Vaikis, Laplandsky Zapovednik.
Photo by S. Shestakov.

Neighborly relations continue to form with another local company, Kolenergo. In 2000, Kolenergo constructed power lines for the zapovednik free of charge. The price of these lines was more than one-and-a-half times the sum they were required to pay the zapovednik for excessive water withdrawals from the local reservoir, which led to massive fish deaths and the desiccation of spawning grounds.

The Kola Atomic Energy Station, located 30 kilometers from the borders of the zapovednik, signed a public agreement on the conservation of Russia's wilderness. The station voluntarily agreed to support the activity of Laplandsky Zapovednik, and has followed through on this promise. Like Severonikel, it finances the zapovednik's environmental education projects and annual magazine. The station also provides material and technical support for the zapovednik's rangers.

Other partners in the reserve's transition zone include Russia's largest phosphorus mining and fertilizer producing enterprise, Apatit, which is located just 40 kilometers from the zapovednik's borders. Since 2000, Apatit has offered financial support for environmental education programs, and is currently drawing up an agreement on long-term cooperation between Apatit and the zapovednik. In spring 2001, representatives from the Olenegorsk ore mining and processing plant, located 30 kilometers from the zapovednik, met with zapovednik staff to discuss future collaboration.

Several factors influence the creation of these mutually beneficial partnerships. The first is that in recent years, the administrators of large industrial enterprises have begun looking beyond the borders of their companies to the region as a whole. Secondly, for many years the zapovednik has actively worked with the media, promoting environmental awareness among the local population and describing nature and the zapovednik's work to residents of the Murmansk Region. The administration of Monchegorsk, a city located 10 kilometers from the zapovednik, has always supported the reserve, currently financing the zapovednik's projects to preserve and study the biological diversity of the area, as well as to educate the local population about its natural riches. Beginning in the 1990s, every year special funds have been ear-marked in the city's ecological fund to support these projects.

The near future holds many challenges and goals for this biosphere reserve, but its mission has become increasingly clear. In a region like the Kola Peninsula, where the population is dependent on heavy industries for survival, Laplandsky Zapovednik has found a means to cooperate with local stakeholders to strive towards cleaner production and environmental health.

Sergei Shestakov *is the Director of Laplandsky Biosphere Zapovednik.*

Photographs by M. Maleshin.

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Sayano-Shushensky Zapovednik Hunting and Wildlife Management

Established: 17 March 1976
Total area: 1,075,368 ha (core: 390,368 ha; buffer 94,000 ha)
Total staff: 80 people
General characteristics: Varied mountain ecosystems of the Western Sayan Range
Received UNESCO biosphere reserve status: 15 February 1985

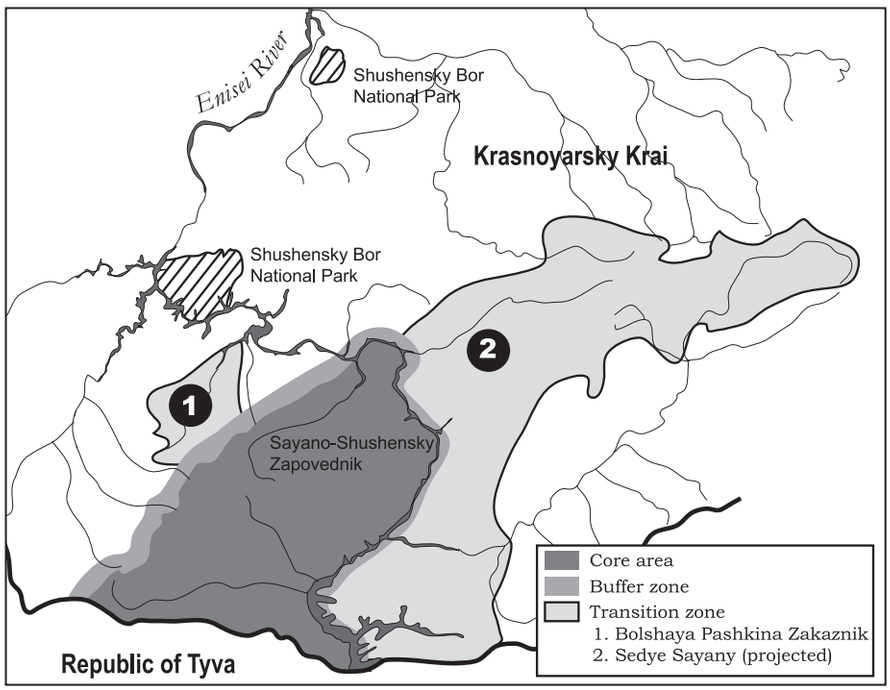
*By **Aleksandr Rassolov***

In the central region of the Western Sayan Mountains, the landscape forms a mosaic of steppe, taiga, and tundra. These mountains are home to abundant wildlife, including snow leopards (*Uncia uncia*), Siberian ibex (*Capra siberica*), roe deer (*Capreolus capreolus*), maral (*Cervus elaphus maral*), and Altai snow grouse (*Tetraogallus altaicus*). Protecting and managing these and other natural resources is one of many challenges Sayano-Shushensky Biosphere Zapovednik faces. In recent years, the zapovednik has taken a new step in its development as a biosphere reserve, striving to become a model for the organization of management, rational use of natural resources, and socio-economic development in the region. One important aspect of this development has meant going beyond the borders of the zapovednik to influence regional hunting and wildlife management.

The Yermakovsky Region is known for its abundance of wild undulates. For the past 20 to 30 years, at least 100 marals have been hunted per year. The musk deer (*Moschus mochiferus*) is the most common undulate in the region, numbering about 2,000 to 2,500 individuals. The increased demand for musk deer in recent years, however, has led to illegal hunting of the animals. Meanwhile, squirrels (*Sciurus vulgaris*) and sable (*Martes zibellina*) are quite common in the region, and ought to be hunted more.

In Russia as a whole, the lack of coordination between various conservation agencies often prevents effective nature protection. In the region surrounding Sayano-Shushensky Zapovednik hunting regulations are ineffective and poaching is often left unpunished. Realizing that overhunting around the zapovednik affected the animals the reserve protected – and which regularly wandered beyond the borders of the reserve – Sayano-Shushensky Zapovednik began pointedly working in the early 1990s to create a system of managing the region's natural resources in which strict protection was balanced with a flexible system for using natural resources.

But the situation was far more complicated than simply needing to protect animals across their entire habitat. Hunting had been an important industry in the region, and had the potential to bring even more benefit if managed properly and in a sustainable manner. Hunting management priorities and principles from the Soviet Era had grown hopelessly outdated under the realities of post-Soviet Russia. The organizations that once supported professional hunters and fishermen were falling apart, and current legislation offered little means for these societies to form anew as large or even small hunting enterprises. In short, the entire system of hunting management needed to be reformed.



Existing and projected zoning for Sayano-Shushensky Biosphere Zapovednik. *Map by M. Dubinin based on materials provided by Sayano-Shushensky Biosphere Zapovednik.*

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Hoping to take an active and positive role in the economic use of the biosphere polygon, the staff of Sayano-Shushensky Zapovednik began focusing on hunting and wildlife management. Local residents' lives are closely tied to the use of natural resources, so the zapovednik's challenge was to provide local communities with the opportunity to receive the highest income possible while minimizing the use of natural resources.

In 1995 the zapovednik supported the founding of the 40,000-hectare Shushensky Bor National Park. In 2000, it promoted the founding of a biosphere polygon – Bolshaya Pashkina Zakaznik – near the core area in the Eramkovsky Region. This biosphere polygon had many goals, including turning all of the protected areas within the polygon into a unified network and conducting environmental monitoring and other forms of scientific research there, as well as educating the local population about environmental issues. It was also intended to support the development and organization of traditional and environmentally sustainable economic activities, such as logging, managed hunting, breeding and raising wild game animals, maral herding, bee keeping, and recreation.

One of the zapovednik's first tasks after the polygon's creation was to find an effective way of managing the territory and the diverse interests in the land. A coordinating council was formed to govern the polygon's use, bringing together representatives of conservation organizations and natural resource-based industries, as well as government representatives, members of the public, and other stakeholders. The head of the Regional Administration chairs the council, which discusses and resolves fundamental issues for the polygon.

In May 2001 the zapovednik received permission from the Administration of Krasnoyarsky Krai to begin long-term use of animal resources in the region. Beginning this year, the zapovednik itself is responsible for regulating the number of various species taken from the region of the polygon contiguous to the zapovednik. The zapovednik's decisions will be mandated in protected areas near the biosphere polygon, and will be recommended for the rest of the region.

This new function will allow zapovednik staff to use their expertise to determine rational use of the region's animal resources. For example, on the basis of the zapovednik's recommendations, the region of the biosphere polygon chosen for managed hunting will include a small reserve, whose area will be about 25-30 percent of the total area of the managed hunting region. Evidence shows that these kinds of reserves help to stabilize animal populations more effectively than completely separate protected areas.

The creation of a biosphere polygon in the Ermakovsky Region has helped to facilitate the zapovednik's activity beyond its borders as well as unite local protected areas so that they function together as a more unified and efficient body. While neither Sayano-Shushensky Zapovednik nor Shushensky Bor National Park are capable of resolving all of the problems that arise even within their new, expanded jurisdiction in the biosphere polygon, they must collaborate with other partners in the polygon, especially the Coordination Council.

Already results of this collaboration are visible in the lives of local residents. The biosphere polygon has brought a new life to the Ermakovsky Region, offering new jobs and new investments. By federal tax estimates in 2000, hunting tourism alone has brought nearly $5,000 dollars to the region, quite a sizeable sum for a single, isolated region in the Sayan mountains.

Sayano-Shushensky Zapovednik's most recent plans include a joint project with other regional zapovedniks to expand the biosphere polygon to 650,000 hectares. This new biosphere polygon, called "Sedye Sayany," would allow the zapovednik to even further assert its influence in the region.

Aleksandr Rassolov *is the Director of Sayano-Shushensky Biosphere Zapovednik.*

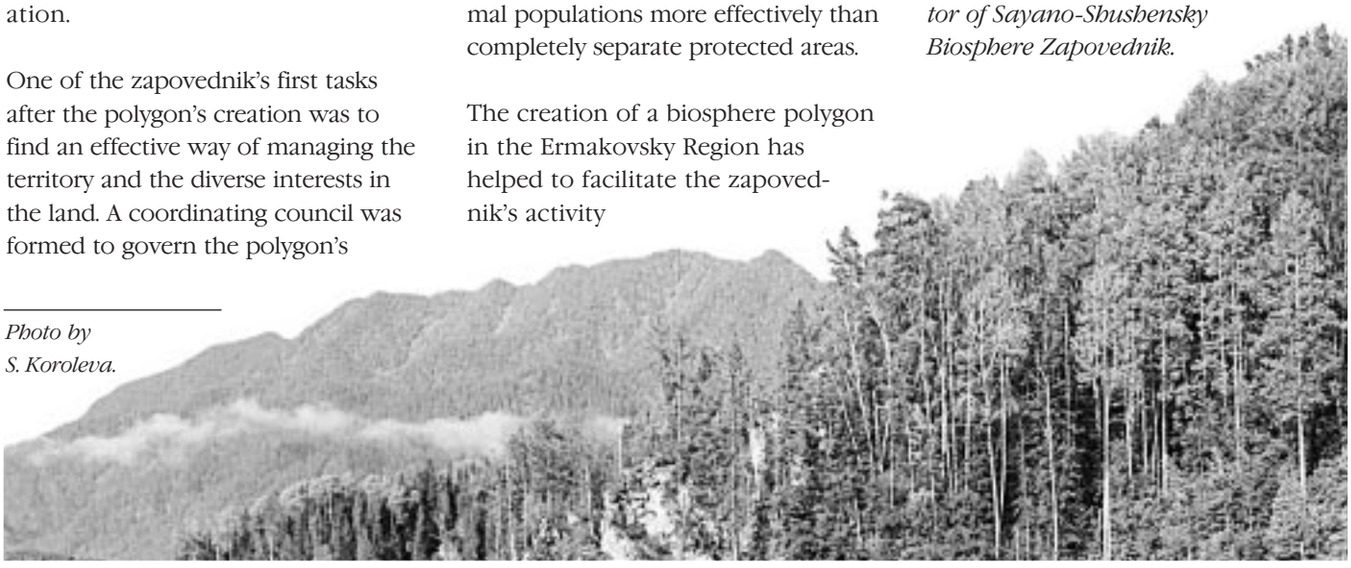

Photo by S. Koroleva.

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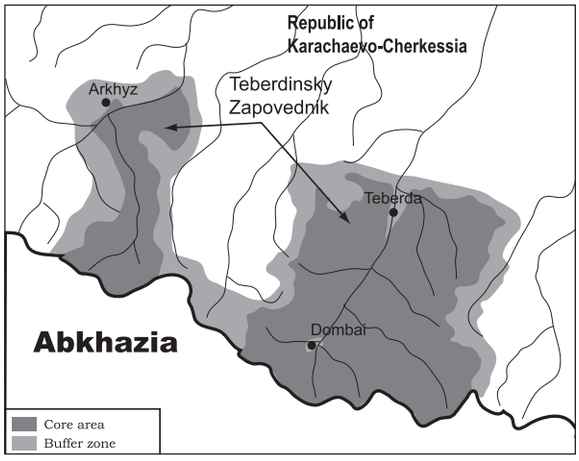
Teberdinsky Zapovednik Environmentally Sustainable Tourism

Established: 5 March 1936
Area: 536,000 ha (core: 85,000 ha; buffer: 150,000 ha)
General characteristics: High mountains and coniferous forests of the Great Caucasus Range
Total staff: 174 people
Received UNESCO biosphere reserve status: 1997

*By **Yuri Sarkisyan***

Such canvases of wondrous beauty!
The everlasting thrones of snow
Displayed immobile peaks, appearing
A chain of clouds to eyes below;
While in their circle stood a titan,
Two-headed, crowned in sparkling ice:
Majestic and immense Mount Elbrus
Shone white against the clear blue skies.
– Aleksandr Pushkin

Throughout all of history the rugged beauty of the Caucasus Mountains has awed the region's residents and guests. These sharp peaks, lofty glaciers, turquoise lakes, and virgin forests are home to a great diversity of wildlife, bringing the region one of the highest ratings for biological diversity in Eurasia. Although the Caucasus was once a land of exile for Russian writers and poets, beginning in the late 19th century daring mountain climbers and ordinary tourists alike began flocking to resort towns such as Teberda, Dombai, and Arkhiz. Indeed, beginning in the 1920s this region served as one of Russia's primary tourist locations, and it was not without reason that the initial decision to create a zapovednik – Teberdinsky – in the region in 1936 pointed out the important role the zapovednik would play in supporting tourism without bringing harm to the natural systems of these mountains. By the 1970s to 1980s, as many as 700,000 tourists were visiting Teberdinsky Zapovednik each year.



Existing and projected zoning for Sayano-Shushensky Biosphere Zapovednik. *Map by M. Dubinin based on materials provided by Sayano-Shushensky Biosphere Zapovednik.*

As an industry, tourism created a sizeable infrastructure in the republic, and specifically in and around Teberdinsky Zapovednik, whose administrative center was located in the city of Teberda. Indeed, three popular resort towns with a total population of about 8,000 people fell within the territory of the zapovednik. Hotels, health resorts, restaurants, cafes, and tourist centers were built, providing jobs and income for the people in the region. Indeed, for many years tourism was a cornerstone of the regional economy in the Republic of Karachaevo-Cherkessia.

But from the mid-1980s to 1990s, changes in the political and economic structure of the country brought tourism almost to a standstill. Fighting in the nearby republics of Abkhazia and Chechnya frightened many potential tourists away, particularly foreigners. Meanwhile, economic collapse in Russia further depleted the tourist industry. Resorts in Dombai and Teberda sat empty. In response, the local population began to seek new forms of income through alternative economic activities that were often not as sustainable as tourism had been. Residents began increasing both the number and size of their herds, even allowing them to graze in the zapovednik. But in trying to maximize the number of livestock in the limited space around the zapovednik, people exceeded the carrying capacity of fields. Instead of rising, the standard of living fell.

Photo courtesy of Y. Sarkisyan.

Moreover, following the breakup of the Soviet Union, it was not just the local people who needed the income

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tourism brought, but also zapovednik, which had lost the greater portion of its federal financing.

In short, with both the economic and environmental health of the region spinning downward, someone needed to act to promote a healthy relationship between the region's people and its natural resources. Teberdinsky Zapovednik stepped in to take an important role in reviving the tourist industry in the Republic of Karachaevo-Cherkessia, and with it the livelihood of the region. The zapovednik's challenge was both to protect the ecosystems within its territory and also, considering the social situation in the region, to help the local population raise its standard of living. Receiving the status of a biosphere reserve in 1997 helped this work advance.

In 1999, a Global Environment Facility (GEF) project was launched, aimed at developing environmental education and tourism by using the Teberdinsky Zapovednik's organizational and natural resources as a base of operations. Other organizations knowledgeable in the development of environmental education and sustainable tourism, including the Ecocenter "Zapovedniks" in Moscow, the development fund "Dersu Uzala," joined in this work, helping the program with the experience of specialists. Further support came from a USAID program, ROLL (Replication of the Lessons Learned), for developing tourism in the region. Local government authorities also actively supported these activities.

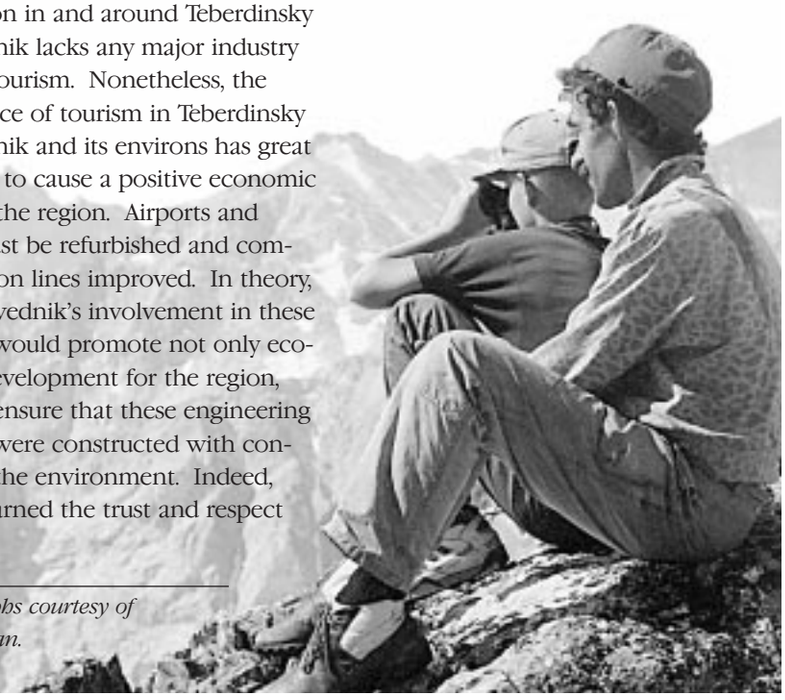
In essence, this project supported a pact between the zapovednik and the local population. Local residents needed to receive a two-sided guarantee. First off, a decrease in agricultural pressures would ensure maximal conservation of the zapovednik's natural systems in their pristine state, a requirement for long-term plans for tourism. Secondly, the zapovednik itself would directly promote the development of environmentally sustainable tourism focused on wilderness sites in the Caucasus. In practice, however, this theory is lost on the general public. Providing an economic motivation for the local population to support the zapovednik had to be the first step in cooperative efforts.

The creation of an Environmental Education and Information Center in Teberdinsky Zapopvednik was an important means to coordinate the work of government and public organizations in the sphere of education and tourism on the local level. Some attention was given to including as broad a public sphere as possible in the planning and implementation of tourism, included supporting small businesses and local trades. The development of new models for producing souvenirs, as well as advertising for the zapovednik, have already brought a significant increase in the interest for locally produced goods. Today the tourist industry directly involves about 80 percent of the local population, or 5,000 people.

The region in and around Teberdinsky Zapovednik lacks any major industry beyond tourism. Nonetheless, the renaissance of tourism in Teberdinsky Zapovednik and its environs has great potential to cause a positive economic effect in the region. Airports and roads must be refurbished and communication lines improved. In theory, the zapovednik's involvement in these projects would promote not only economic development for the region, but also ensure that these engineering projects were constructed with concern for the environment. Indeed, having earned the trust and respect of local officials and the public at large, the zapovednik would be in a position to influence much of the development of the region. This kind of relationship between zapovednik and local population still lies in the future, but it is a concrete goal for the zapovednik staff. Properly organized work in developing and managing tourism in the region in and around Teberdinsky Zapovednik offers profit for the zapovednik, the local population, and for the region as a whole.

Ultimately an important symbiotic relationship is forming between the zapovednik's activity – and the environmental ethics it supports – and the local economy. The zapovednik needs the income tourism provides for preserving its ecosystems, while tourism requires the zapovednik's infrastructure and natural beauty to attract tourists. In the northern Caucasus, it is precisely this kind of intricate relationship that can help to forge sustainable development and promote alternative use of natural resources.

Yuri Sarkisyan *is the Deputy Director of Environmental Education in Teberdinsky Biosphere Zapovednik.*



Photographs courtesy of Y. Sarkisyan.

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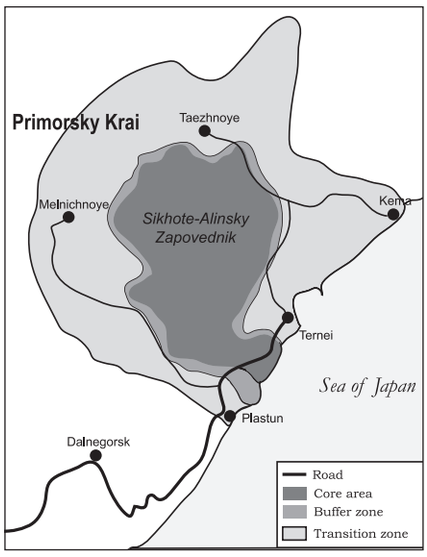
Sikhote-Alinsky Zapovednik
Being an Advisor for the Region

Established: 1935
Total area: 469,088 ha (core: 401,428 ha; buffer 67,660 ha)
Total staff: 147 people
General characteristics: Low-elevation mountain forests of the Russian Far East
Received UNESCO biosphere reserve status: 19 February 1979

*By **Anatoly A. Astafev***

At the eastern edge of the Eurasian continent, where the waters of the Sea of Japan crash against the Sikhote-Alin mountains, a blanket of forests stretches as far as the eye can see. When first founded in 1935, the nearly 2,000,000-hectare Sikhote-Alinsky Zapovednik was the largest nature reserve in the world; today the reserve is less than one-third of its original size, but maintains its historic role in protecting the unique mountain forests of the Russian Far East and the animals that live there, including the endangered Amur (Siberian) tiger (Panthera tigris altaica), the world's largest cat. While once upon a time this wilderness was far from human influence, today several communities lie in the biosphere reserve's transition zone. Learning to work with the local population has been a key feature in the reserve's activity over the past 25 years: having gathered a wealth of knowledge on the region from their research within the zapovednik, the reserve staff have moved beyond their park's borders, using their expertise and creativity to take a leading role in the region's development.



Zoning around Sikhote-Alinsky Biosphere Zapovednik. *Map by M. Dubinin based on materials provided by Sikhote-Alinsky Biosphere Zapovednik.*

As one of the oldest zapovedniks in Russia, Sikhote-Alinsky has a long and respected tradition of scientific research, including studying the effects of human activity on natural systems. Between 1974 and 1986 Sikhote-Alinsky Zapovednik served as the center for coordinating the work of all of the zapovedniks of the Russian Far East. This work caught the attention of both local government officials and the general public, drawing them into environmental protection work and facilitating the process of creating new protected areas. In the 1980s, the zapovednik used its Nature Museum to educate and inform the local community of its nature conservation work. The effect of this education was stunning: not only did illegal logging and trespassing in the zapovednik decrease, but a "peoples' lobby" formed to defend the zapovednik.

The zapovednik also began working with children in the region. The reserve's staff regularly sends books, pamphlets, magazines, videotapes, and other materials on environmental topics to local village schools. The environmental awareness department of the zapovednik works with teachers to organize contests for which the winners receive prizes from the zapovednik, including a grand prize of a free ten-day trip to the zapovednik's environmental camp. There children not only rest in the beauty of the zapovednik's wilderness, but also learn valuable lessons about nature and the complex relationship between nature and society. Specialists from the zapovednik give lectures and guide the children on field trips. In this way, a new generation is raised with a stronger respect for nature and a deeper understanding of the interaction between people and nature.

Despite the positive results of promoting environmental awareness in the Sikhote-Alinsky region, this work alone was not enough to create a balanced relationship between people and nature or to support sustainable development, a key function of biosphere reserves. The zapovednik needed to support the local population, cooperating with communities to advise on environmental issues and share in the work of simultaneous conservation and development. To this end, while continuing the zapovednik's educational mission, staff began to branch out in support of the local population in the villages near the reserve.

The reserve staff went beyond the borders of the zapovednik, using their scientific knowledge and experience to benefit the region. For example, environmental monitoring research begun in 1979 produced

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interesting results that were applicable to a region beyond the zapovednik 500 square kilometers in area. At the end of the 1980s the zapovednik staff took active part in creating a Regional Environmental Program for the Primorsky Krai. Their expertise was particularly valuable for determining priorities in the creation and function of protected areas in the region.

In a relatively short period of time, the administration of the zapovednik was able to establish fruitful contacts with both local and regional government officials, as well as with nature protection agencies and state forestry enterprises. Together they worked to support specific law-abiding logging companies active around the perimeter of the zapovednik in hopes of decreasing logging in the immediate area of the core area, elaborating strategies and techniques for sustainable forestry. Indeed, the amount of illegal logging fell significantly as a result of this cooperation and the heads of logging companies' tightening environmental controls in their companies.

The zapovednik administration has also worked closely with local farms spread along the perimeter of the core and in the buffer zone since the farms first appeared toward the end of the 1980s and the beginning of the 1990s. The zapovednik offers jobs to members of the farmers' families, including working as patrol rangers in the reserve. This kind of cooperative work provides noticeable positive changes in the protection of the borders of the reserve's core area. Moreover, in actively promoting the growth of tourism in the region, the zapovednik uses foods and other goods produced primarily by local farmers and industries. It also recommends tourist agencies that cooperate with the zapovednik or work independently in the region do the same. Farmers encounter many difficulties trying to find a market for their products, and this help provides tangible support for their work. Moreover, zapovednik administrators seek to further aid these farmers by actively drawing the attention of local government officials to developing tourism and supporting small and mid-sized businesses.

In some cases, cooperation between local farmers and the zapovednik has had an even more direct impact on preserving the region's wildlife. As part of an internationally, nationally, and regionally sponsored project to save the Amur tiger, the zapovednik staff and local partners founded an anti-poaching campaign. One of the key elements of this campaign was a plan to offer farmers compensation payment for any domesticated animal killed by a tiger. This long-term program had unquestionable benefit for preserving tigers that live close to farms in the region while simultaneously made tiger attacks less of an economic threat for local farmers.

The trust that the zapovednik has built with the local community and the effort it has made to work with regional environmental organizations and government agencies, including local police, continues as a fruitful partnership. For example, recent joint efforts have worked to reduce illegal trade in natural resources. The only road connecting the north and south of the Primorsky Krai cuts directly through the core region of the reserve. A special inspection station at the entrance of the zapovednik allows checks of vehicles and cargo entering or exiting the zapovednik. This inspection point has brought a perceptible decrease in the illegal transport and trade of natural resources. Meanwhile, clamping down on illegitimate businesses also offers a boost to legitimate enterprises in the region.

Naturally all of this work would not have been nearly as successful, or in some cases even possible, without funding from a number of outside sources to supplement the zapovednik's federal budget. But the real success the zapovednik has achieved has come directly from becoming an important part of the culture and economy of the region. Creativity and cooperation between the zapovednik and local communities has created the foundations of a stable and symbiotic relationship between the reserve and local residents, offering bright hope for the future of this biosphere reserve, its mountain forests, and the people who call the Sikhote-Alin region their home.

Anatoly A. Astafev *is the director of Sikhote-Alinsky Biosphere Zapovednik.*

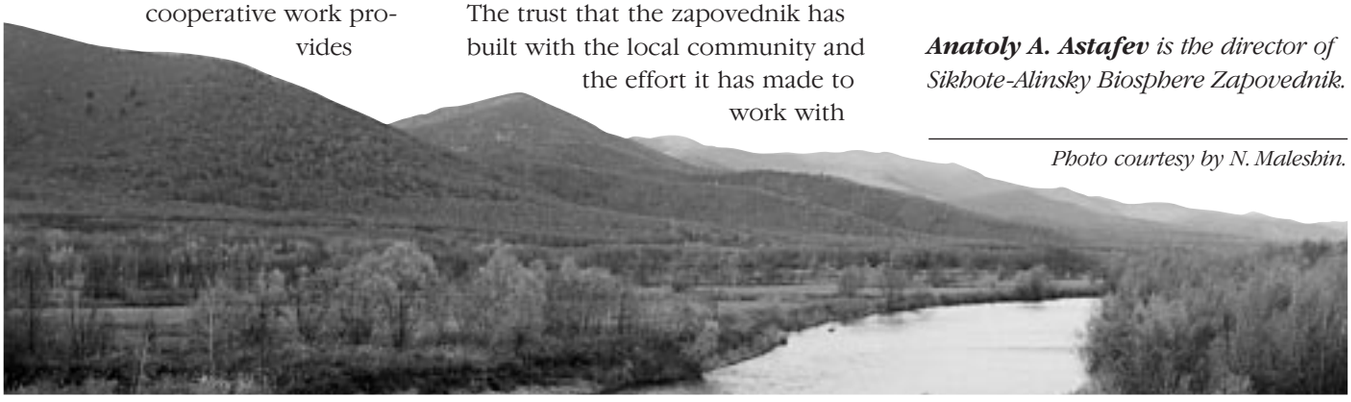

Photo courtesy by N. Maleshin.

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Tsentralno-Lesnoi Zapovednik Environmental Education

Established: 1931
Area: 24,500 ha
General characteristics: Taiga and forest wetlands
Received UNESCO biosphere reserves status: 1985

*By **Marina Rubtsova***

One of the fundamental factors in changing and improving the relationship between people in nature is changing people's mentality toward the environment, teaching them to respect nature and recognize its value. In Russia, most adults do not fully appreciate the threat of an ecological crisis, and convincing them to change their behavior with respect to nature is a formidable challenge. Meanwhile children, Russia's future, are generally much more responsive toward environmental issues. For this reason, protected areas in Russia in recent years have actively created specialized educational centers that not only distribute information, but literally submerge children in the real world of nature, offering them the opportunity to learn about the world on their own by observing it.

The infrastructure in Tsentralo-Lesnoi Zapovednik includes an environmental education center (a visitors' center, field trips, and lectures), a resource center (a library, scientific information, databases), the Tverskaya Oblast Monitoring Center, and a cultural center. The zapovednik's environmental education department was founded in 1999, and despite its small staff of five people, is continually gaining experience and developing its work in multiple directions. Three staff members have advanced degrees as teachers of biology, geography, and philology, and have taken special continuing education courses through the Ecocenter "Zapovedniks" to raise their qualifications. One of the staff members earned a second degree in psychology.

This infrastructure enables Tsentralno-Lesnoi Zapovednik to better answer federal plans for zapovedniks in the next decade. These plans point out that zapovedniks' work in environmental education and awareness "will offer a palpable result if it is long term, goal-oriented, systematic and integrated, if it touches people's intellectual and emotional sides, if it develops people's skills and knowledge, and is built upon a solid methodological and material base." Environmental education will develop successfully only if it receives sufficient support from within the zapovednik and incorporates other interested educational and conservation organizations of multiple levels. In other words, educational initiatives must use successful methods to answer relevant issues and problems in the region.

In the case of Tsentralno-Lesnoi Zapovednik, such problems include the local population's view of

Photo courtesy of A. Vlasov.

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and demands on the forests surrounding the zapovednik. For generations, local residents have made use of the natural resources in their vicinity, never even thinking about the long-term effects of this use. When Tsentralno-Lesnoi Zapovednik has taken a stand with regard to the use of the valuable forest stands around the zapovednik, serious conflicts surround tree cutting, berry and mushroom collecting, hunting and fishing, and the development of small businesses. In working with local children, the zapovednik staff hopes to minimize these conflicts in the present and the future.

Internal problems within a zapovednik can strongly hinder its educational mission, however, and must be addressed. Does the administration of the zapovednik understand the significance and possible paths for environmental education? Is the staff qualified to teach children and adults of various ages? Is it they taking advantage of existing data and experience in environmental education? Is the zapovednik's budget being wisely distributed among the multiple branches of the reserve's work?

The zapovednik's educational work must be multi-faceted. It should draw those residents who are favorably disposed toward conservation into the decision-making process when addressing specific issues in biosphere reserve management. By educating and training members of nearby communities, the zapovednik can prepare future staff members, who in turn value not only the zapovednik, but also its educational mission. Educating the local community also keeps the zapovednik in closer touch with local residents, allowing staff to form better socio-economic bases for further reserve development. Ultimately, education should allow the local population to understand how the zapovednik offers them a true benefit.

As a whole, environmental education helps to raise the prestige of the zapovednik in the eyes of local communities. This may be particularly true in the western side of the Tverskaya Oblast, where Tsentralno-Lesnoi Zapovednik is the only major cultural and scientific center. Only a part of the zapovednik's potential as an educational center is being used, but its achievements are already noteworthy. Environmental education programs based in Tsentralno-Lesnoi Zapovednik show that it is necessary to make full use not only of a protected area's resources, as well as young naturalists' stations, museums of local culture, biology clubs and other extra-curricular activities.

Over the course of the past three years, the staff of Tsentralno-Lesnoi Zapovednik have turned their environmental education programs in numerous directions, working with local children from kindergarten to the university. Some programs are tried and true, having existed since the 1930s, while others are still being developed and tested. The zapovednik welcomes visitors and offers information to those who seek it, but also takes an active step by reaching out into local communities with educational initiatives.

Training programs for high school and college-age students teach young people skills for conducting field research, as experienced zapovednik staff guide them on field trips and field research projects. In the summer, environmental camps and summer schools offer children the chance to learn while enjoying recreation in the forest. Special days for collecting trash, planting trees, and cleaning natural springs are also a part of this work. Children have joined "Heritage Preservers," youth groups active in nature protection that fall under the joint watch of Tsentralno-Lesnoi Zapovednik and the Tverskaya Oblast Committee on Natural Resources.

The importance of working with teachers and educational organizations should not be ignored. Beginning in 2000, the zapovednik has offered special courses for teachers to improve their knowledge and qualifications for teaching about ecology and environmental conservation. Special courses specifically for biology teachers have been offered since 2001. The zapovednik also collaborates with regional educational agencies in the Tverskaya Oblast. Schoolteachers actively take part in special events, such as March for Parks (a park clean-up), "Wild Animal Defense Week," "Day of the Birds," and contests involving crafts, books, drawings, and photographs have become common.

Much of the zapovednik's advertising campaign is also aimed at children. Souvenirs from the zapovednik – field journals with the zapovednik logo, calendars, and informational booklets – are quite popular with children. Information has been prepared for the zapovednik's website. Four times per year the regional newspaper dedicates a page to the zapovednik.

By definition, environmental education is a long-term process, whose ultimate results will become visible only when the current generation of children has grown up. Nonetheless, the experience of Tsentralno-Lesnoi Zapovednik shows that a zapovednik – and especially a biosphere reserve – can and should take an active role in teaching local communities about the nature reserve itself and the importance of its natural wealth.

Marina Rubtsova *is the Head of Environmental Education at Tsentralno-Lesnoi Biosphere Zapovednik.*

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Tsentralno-Chernozemny Zapovednik Scientific Research in Biosphere Reserves

Established: 1935
Total area: 12,967 ha (core: 5,284 ha; buffer: 7,683)
Total staff: 64
General characteristics: Oak forest and high-grass steppes
Received UNESCO biosphere reserve status: 19 February 1979

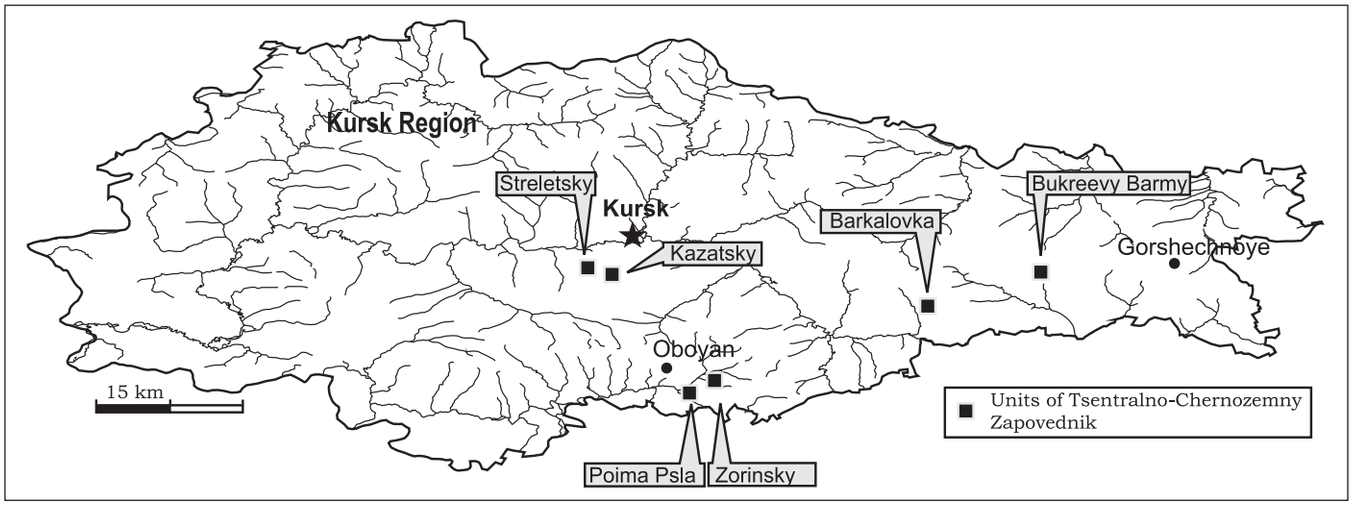
A note from the editors: As noted in Tatiana Minaeva's article earlier in this issue of RCN, since their origins, biosphere zapovedniks have excelled at scientific research and monitoring, and should not be forgotten amid new efforts to promote sustainable development around the zapovedniks. Indeed, support for science and research continues to be an important function for all biosphere reserves. The following article examines the important role of scientific research in one of Russia's oldest and most prestigious biosphere zapovedniks.

*By **Andrei Vlasov***

"How wild and fresh the air is! How alive everything is: the steppe blushes, burning, and shining blue with flowers. Quails, bustards, gulls, grasshoppers, thousands of insects, all of the whistling, buzzing, crackling, shrieking, and suddenly forming a harmonious choir. And none of it stops, even for an instant." With these words the famed Russian-Ukrainian writer Nikolai Gogol described the expanses of wild steppe as they appeared at the end of the 19th century. Today little remains of these steppes, but small island-like regions remain preserved in Tsentralno-Chernozyomny Zapovednik in the Kursk Region, where Russia's grasslands meet the temperate forest belt. Tsentralno-Chernozemny Zapovednik plays a vital role not only in the preservation of these islands, but also in the study of their flora and fauna.

Since the reserve's founding in 1935, long-term scientific research has occupied a leading role in the reserve's activity. Today 30 people work in the reserve's scientific department, including three doctors of biological science and four doctoral candidates. Research led by reserve falls into two broad categories: environmental monitoring through the "Chronicle of Nature" (Letopis' prirody) and independent research. The Chronicle of Nature is a unique and detailed annual record of climate conditions, geological data, and plant and animal species, individually kept by all Russian zapovedniks. When recorded over several decades, this chronicle contains a wealth of systematic information on soil, water, flora, microbes, fauna, and local ecology. Many sites in Tsentralno-Chernozemny Zapovednik have been included in the reserve's chronicle for more than 50 years.

Beyond the Chronicle of Nature, the zapovednik has played an active role in numerous other scientific research projects. One of the most interesting of these involves comparative experiments to monitor and study steppe succession. Scientists divided the reserve into regions and implemented various regimes to test their



Tsentralno-Chernozemny Biosphere Zapovednik's island-like units are spread throughout the Kursk Region. *Map by M. Dubinin based on materials provided by Tsentralno-Chernozemny Biosphere Zapovednik.*

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hypotheses. Human intervention is strictly prohibited in certain areas, creating a control region for comparison. Other regions are mowed to imitate the effects of grazing, as for thousands of years wild animals such as steppe horses (now extinct) and saiga (*Saiga tatarica*) roamed across these grasslands. Still other regions are tested with cattle grazing or controlled burns. These experiments have yielded fascinating results about the intricacies of steppe systems and have provided examples for scientific groups in other parts of the world interested in practical methods for restoring grasslands. They have also contributed to the economic development of the region, as the zapovednik allows local farmers to mow and graze the land, providing important income and supporting favorable relations between the zapovednik and the local population.

The energetic and creative approach the biosphere reserve takes to scientific research creates an atmosphere that promotes fruitful collaboration with various academic institutes. Some of the most prestigious scientific research institutes in Russia have taken advantage of Tsentralno-Chernozemny Zapovednik: the Institute of Geography of the Russian Academy of Sciences, the Institute of Population Ecology and Evolution of the RAS, Moscow State University, other state universities, and many others. Every year the Timiryazevskaya Agricultural Academy conducts an excursion in the reserve for teachers and graduate and undergraduate students of various German universities that specialize in landscape and soil sciences. These national and international scientific exchanges continue to develop.

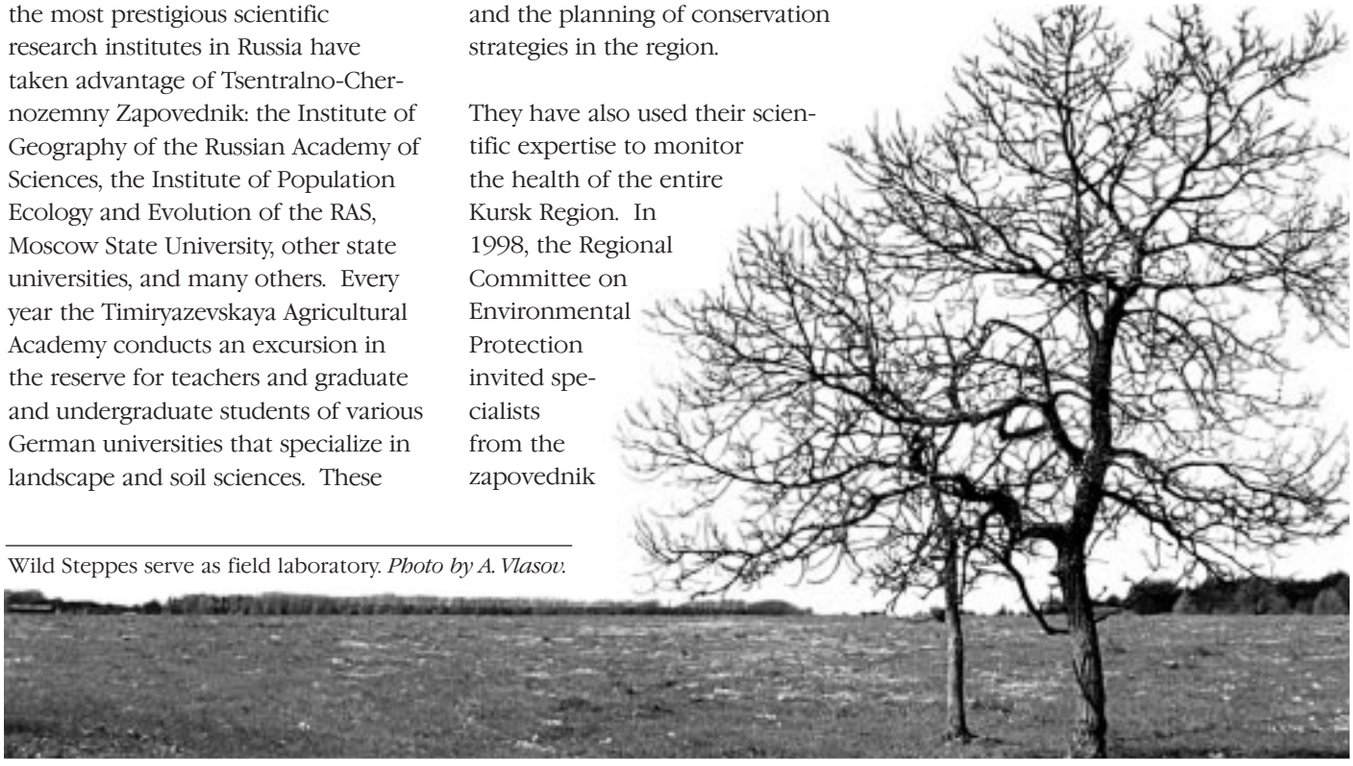
The zapovednik's scientific research serves the international scientific community in other ways as well. The many years of research in the biosphere reserve following strict methodology form part of the foundation of global environmental monitoring. Moreover, zapovednik staff have recognized the value of their vast research and published much of it. In all, the scientific staff of the zapovednik have published 450 scientific articles and treatises. Sharing this data is one of the most important means of contributing to conservation of grassland areas worldwide.

But scientists in Tsentralno-Chernozemny Zapovednik have not limited themselves to conducting research only within the reserve's core area, or to using their scientific knowledge only to increase global knowledge on steppes. In recent years, the staff helped to prepare the Red Data Book of the Kursk Region, an invaluable contribution to both the body of scientific research on Southern Russia and the planning of conservation strategies in the region.

They have also used their scientific expertise to monitor the health of the entire Kursk Region. In 1998, the Regional Committee on Environmental Protection invited specialists from the zapovednik to investigate the effect of the Kursk nuclear power plant – identical in make to the Chernobyl reactor – on the surrounding environment. The scientists studied the soil, water, and flora of the region around the station, and discovered that radiation extended far beyond the 30-kilometer radius promised by power plant officials. Moreover, they found that wind patterns carried significant radiation to the nearby city of Kursk, population 400,000. With the information from these studies, the zapovednik was able to halt further nuclear development in the region until the power plant promised to renovate its equipment and decrease radiation levels in emissions.

In this way, the Tsentralno-Chernozemny Zapovednik has proven that thorough and long-term scientific research can bring a multitude of benefits, not only to the zapovednik itself, but also to the local and world community.

Andrei Vlasov *is the Director of Tsentralno-Chernozemny Biosphere Zapovednik.*



Wild Steppes serve as field laboratory. *Photo by A. Vlasov.*

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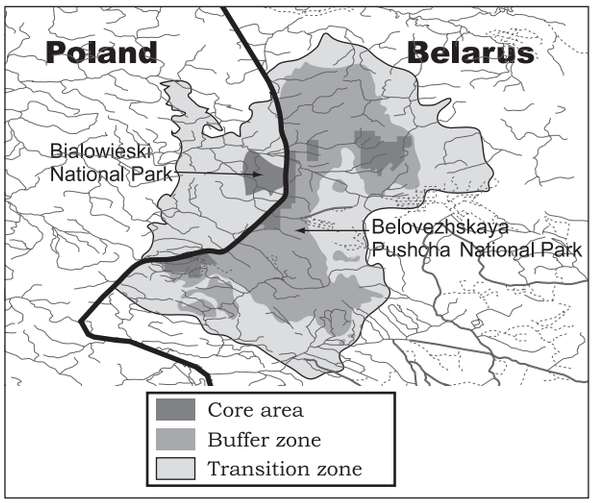
Belovezhskaya Pushcha Creating a Transboundary Biosphere Reserve

*By **Heorhi A. Kazulka***

The idea of cooperative nature protection across political boundaries arose long ago but continues to spawn frequent discussion. Transboundary biosphere reserves are designed to impede the fragmentation of valuable natural landscapes, form a cooperative strategy and take joint responsibility for the condition of the ecosystems, share in the development of mutually beneficial tourism, and work together to manage the natural resources of the entire region in a sustainable way. Five transboundary biosphere reserves exist in Europe today.

Meanwhile, Europe holds more than 40 protected areas that abut or cross national borders. Two of them – Bialowieza National Park in Poland and Belovezhskaya Pushcha National Park in Belarus – if joined, could become the first transboundary biosphere reserve in Europe to protect a flat expanse of forest and wetlands. Both of these national parks are already national biosphere reserves:



The zoning of Bialowieski and Belovezhskaya Pushcha biosphere reserves. *Map by M. Dubinin based on materials provided by Belovezhskaya Pushcha National Park.*

the Polish park earned this status in 1977, the Belarusian park in 1993. Their combined core areas have been included in the List of World Heritage Sites as a single entity, and the parks together received a Diploma from the European Council for particular service in the protection of nature in 1997.

Virgin forests incorporate old-growth and decaying trees. *Photo by V. Aleshko.*

The two parks are both located in an area that was historically a single protected area, quite possibly the oldest in all of Europe. Belovezhskaya Pushcha is a vast old-growth forest (indeed, the word pushcha in Slavic languages means 'dense, wild or virgin forest') comprised of coniferous and broadleaf trees that houses a multitude of wildlife including wolves (Canis lupes), lynx (Lynx lynx), and European bison (Bison bonasus). Belovezhskaya Pushcha has been known as a protected natural area since the end of the 14th century, when the Lithuanian Prince Yagello declared it as such, allowing only himself and his brother the right to hunt in these woods. Later on the entire territory of Belovezhskaya Pushcha fell alternatively under the control of Polish kings, Russian tsars, German occupying forces, the Polish government, Soviet powers, and Hitler's regime.

Following the division of Belovezhskaya Pushcha between the Soviet Socialist Republic of Byelorussia and the Republic of Poland, management of the territory took two divergent paths. In Belarus, the entire forest (74,500 ha), which had been subject to logging in the early 20th century, was named a nature reserve and came under strict protection. Nonetheless, the forest still encountered environmental problems. Various drainage projects altered the land of Belovezhshskaya Pushcha significantly, although several large wetlands (such as Dikoye Marsh, 7,700 ha) remain to this day. Undulates overpopulated forest, spurred by efforts to raise and release wild undulates when the area was a federal game reserve from 1957 to 1991. But because clear-cutting and cutting old-growth trees were not practiced, almost the entire area of Belovezhskaya Pushcha in Belarus remained in a relatively untouched state.

In comparison, the Polish side suffered greatly from commercial logging. Only the most historical region (4,747 ha) was protected by Bialowieza National Park, while the remaining 53,000 ha became the property of forestry enterprises. Naturally, this turnover led to clear-cutting and artificial reforestation. More than half of the Polish forest was cut, a quarter of it replanted. Only now are plans promoting the expansion of Bialowieza National Park over the entire area of Bialowieza Forest in Poland.

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Further differences between the two sides of the forest are apparent in the two countries' approaches to management. Belarus uses a system of collective farms for agriculture, while Poland private enterprises. The administration of Belovezhskaya Pushcha National Park has nearly complete control over all activities in the forest, while its Polish counterpart has limited influence over any activities in regions outside the park. The Belarusian park has a large scientific department, while the Polish park has only a few scientists; nonetheless, three large independent scientific research institutes lie in the Polish forest outside the borders of Bialoweiza National Park, and its scientists conduct their research in and around the park.

Despite these organizational, conservation, and economic differences, both sides have supported mutually beneficial cooperation almost since the first days of their existence as strictly protected areas. An example of this cooperation was the transfer of five European bison to Belarus in 1946 to promote a revival of the species.

With time, relations between the two protected areas progressed, mostly in the realm of science and informational exchanges. In the early 1980s, a physical barrier divided the two parks when a fence was built along the border of the Peoples' Republic of Poland and the Soviet Socialist Republic of Byelorussia in response to the labor movement «Solidarity.» Wild animals, such as deer and bison, were unable to migrate between the two sides of the forest. Despite this seeming break in relations, it was precisely during this period of change that relations between the two parts of Belovezhskaya Pushcha began to develop rapidly in all fields, including cultural and social. Unique Polish and Belarusian legislation now allows increased freedom of movement between the two national parks at a special border crossing in the center of Belovezhskaya Pushcha.

Indeed, for years Belovezhskaya Pushcha has already had de facto existence as a transboundary biosphere reserve, even though it still lacks a UNESCO certificate. Agreements between the two parks allow for close collaboration in science and conservation. Joint seminars, conferences, and symposiums are common and the two park directors are members of the science councils of their partner parks. These councils meet annually to discuss bilateral management issues and resolve common problems. The two parks also work together and discuss conservation projects, such as restoring river valleys, preserving cultural and natural heritage, and using with GIS technology to map the reserve. Cooperation also exists in local government, school education, and tourism.

Not only the parks collaborate across the border. Other organizations, such as the Mammal Research Institute, the Geobotanical Station, and the Department of Natural Forests of the Forest Research Institute, on the Polish side work with their Belarusian colleagues in joint research on bison, carnivorous mammals, invertebrates, old-growth forests, the invasion of non-native species, and the conservation of rare species of plants and animals. Recently a joint project also monitored chemical pollution. Scientific and other information is constantly exchanged among these groups.

Just over a year ago, at a joint Belarusian-Polish-Dutch conference on conserving the biological diversity of Belovezhskaya Pushcha funded by the environmental organization «Natuurmonumenten,» all sides gave their support to the founding of a transboundary biosphere reserve. The Polish and Belarusian national MAB committees later agreed to begin working to found Belovezhskaya Pushcha Transboundary Biosphere Reserve, offering further support to this idea. The flexibility of the current concept for the functioning of transboundary reserves is an important prerequisite to the future success of the reserve. Initially establishing a transboundary biosphere reserve required only a similar management structure and a joint administration. But now a far more important criterion should be met: close collaboration in a unified strategy for conserving transboundary ecosystems and promoting sustainable development. Belovezhskaya Pushcha's long work in meeting these criteria puts it well on its way to becoming an international biosphere reserve.

Belovezhskaya Pushcha is a haven for the European bison (*Bison bosanus*). *Photo by I. Shpilenok.*

Heorhi A. Kazulka *is the Deputy Science Director in Belovezhskaya Pushcha National Park and Biosphere Reserve, Belarus.*

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Kavkazsky Zapovednik Biosphere Reserve Development in Adverse Conditions

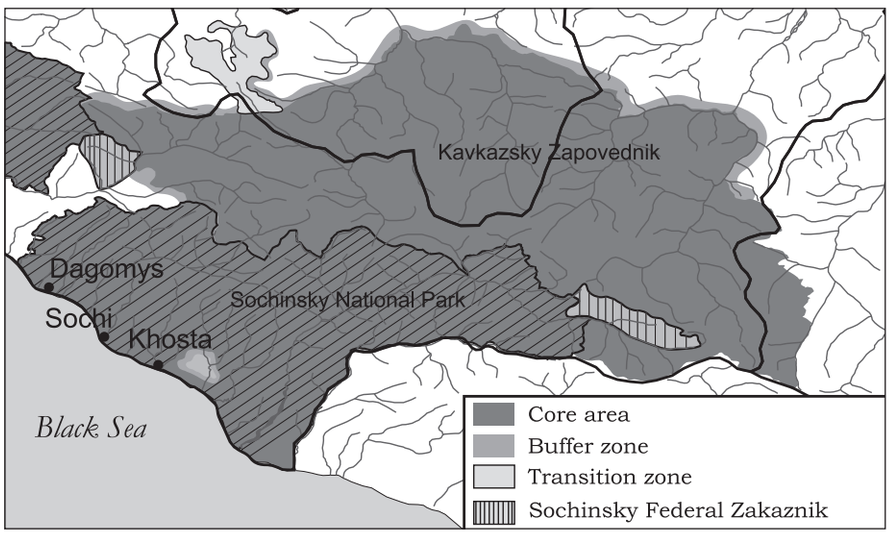
Established: 12 May 1924
Total area: 280,000 ha (core: 267,000 ha, buffer: 15,000)
Area of biosphere polygon: 13,500 hectares
Total staff: appx. 170 people
General characteristics: Mountain forests of the Western Caucasus Range
Received UNESCO biosphere reserve status: 19 February 1979

Note from the editors: *Not all the biosphere reserves in Russia have success stories to tell. Despite their efforts to follow the biosphere reserve concept and implement the Seville Strategy, the staff of biosphere zapovedniks and the agencies that govern them often hit up against a society not accepting of either the mission or the authority of biosphere reserves. Perhaps nowhere is this truer than in the Caucasus, where traditional strong-arm politics combined with rampant corruption create an environment hostile to the operation of biosphere reserves.*

By ***Valery Brinikh***

As one of the largest nature reserves in Europe and a territory of exquisite beauty and natural value, Kavkazsky Zapovednik achieved world renown in November 1999 as a World Heritage Site, on par with areas like Lake Baikal, the volcanoes of Kamchatka, or the Grand Canyon. It is one of the most biologically diverse regions of Eurasia, and the only place on earth where it is possible to see herds of 100 to 200 turs, or Caucasian mountain goats (Capra caucasia) and herds of 300 red deer (Cervus elaphus). But this value also makes the zapovednik and its resources coveted commodities in the Caucasus region, where adverse circumstances threaten the future of the reserve.

Considering the exceptional importance of preserving the unique natural systems of the western Caucasus, a creative approach to governing such a significant and multifunctional region is imperative, as is effectively coordinating the activities of individual political regions with one another. For this reason, the staff of Kavkazsky Biosphere Zapovednik have promoted a plan to completely reconfigure the biosphere reserve, uniting three protected areas in close proximity to each other: Kavkazsky Zapovednik, Sochinsky National Park, and Sochinsky Federal Nature Zakaznik. This reorganization would create a larger reserve with more financial resources at its disposal. Under a unified system of management, these resources could be used more effectively, ultimately making the reserve more effective in all of its varied functions.



Projected zoning for Kavkazsky Biosphere Reserve outlines a core area that encompasses the strictly protected areas of Kavkazsky Zapovednik, Sochinsky National Park, and Sochinsky Zakaznik. *Map by M. Dubinin based on materials provided by Kavkazsky Biosphere Zapovednik.*

But implementing these changes is easier said than done. A number of factors present major obstacles to implementing the theory of biosphere reserves. For example, Kavkazsky Zapovednik plays an important geopolitical role due to its location in the western extremities of the Great Caucasus Range, which separate almost the entire northern Caucasus region – an area of ethnic and civil unrest – from the Black Sea coast, Russia's marine connection to the Mediterranean Sea and the location of the country's only warm-water ports. For this reason, both local and federal government officials pay close attention to the region, and use the zapovednik as pawn in political games aimed at improving the effectiveness of federal control in the northern Caucasus.

The zapovednik also attracts special attention from many sides because of the wealth of natural resources

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within its borders. A multitude of valuable ores lie untouched under in the zapovednik, and relatively undisturbed forests span nearly 100,000 hectares. Wildlife is abundant. The numerous hunting enterprises (both legal and illegal) located near the zapovednik, benefit from this wealth, subsisting by hunting animals that were born and grew to maturity in the zapovednik.

The biosphere reserve's recreational potential is another enormous asset. Its territory has long attracted tourists and nature lovers with its stunning landscapes, picturesque mountains and caves, and revitalizing mountain air. Many are eager to see wild animals in their natural habitat without the aid of binoculars. But from an economic perspective, many feel that the zapovednik's strict protective regime creates a barrier to the economic growth of local communities in the northern Caucasus, instead advocating uncontrolled tourism. Indeed, the zapovednik interrupts roads that would otherwise connect the resort district of the northern Caucasus with resorts on the Black Sea. The zapovednik's charter strictly forbids construction of roads and service lines within the zapovednik's borders, but these federally established regulations are often simply ignored. Plans are already underway in southern Russia to construct roads, tunnels, and tourist infrastructure right inside zapovednik.

Local authorities and businessmen often perpetuate this kind of lawlessness. Though their interests in the zapovednik are often private and financial, they hide them by claiming to act in the interest of the people living in close proximity to the reserve. For some elected officials, the easiest way to gain authority in the local community is not to solve socio-economic problems, but to blame the zapovednik, saying it contains a wealth of resources which it refuses to share. In this way, local authorities make the zapovednik seem like an enemy, a federal agency that hides natural resources from their rightful inheritors, the people. Local leaders – especially in national republics such as the Republic of Adygeya – generally use this argument as a tool for fighting federal authorities and their attempts to strengthen federal power in Russia.

Unenforced or unenforceable federal and local laws are another sore point for the Russia's biosphere reserves. Often various laws contradict each other, allowing bureaucrats on the local level to interpret legislation as they wish, which often means decreasing the effectiveness of the biosphere reserves' activity. Moreover, politics and business in the area are wrought with corruption, decreasing the positive influence of legislation even further.

By itself, the biosphere reserve lacks the power to stand against this kind of onslaught. It has neither the media power nor the financial resources to support counterpropaganda and expose corruption. Within its jurisdiction, Kavkazsky Zapovednik can only protect the core region of the reserve and promote federal politics by supporting contacts with local communities. Ultimately, only a change in the mentality of the regional population – from local farmers to high government officials – will secure the future environmental and social health of the Caucasus Region.

Valery Brinikh *is the Director of Kavkazsky Zapovednik.*

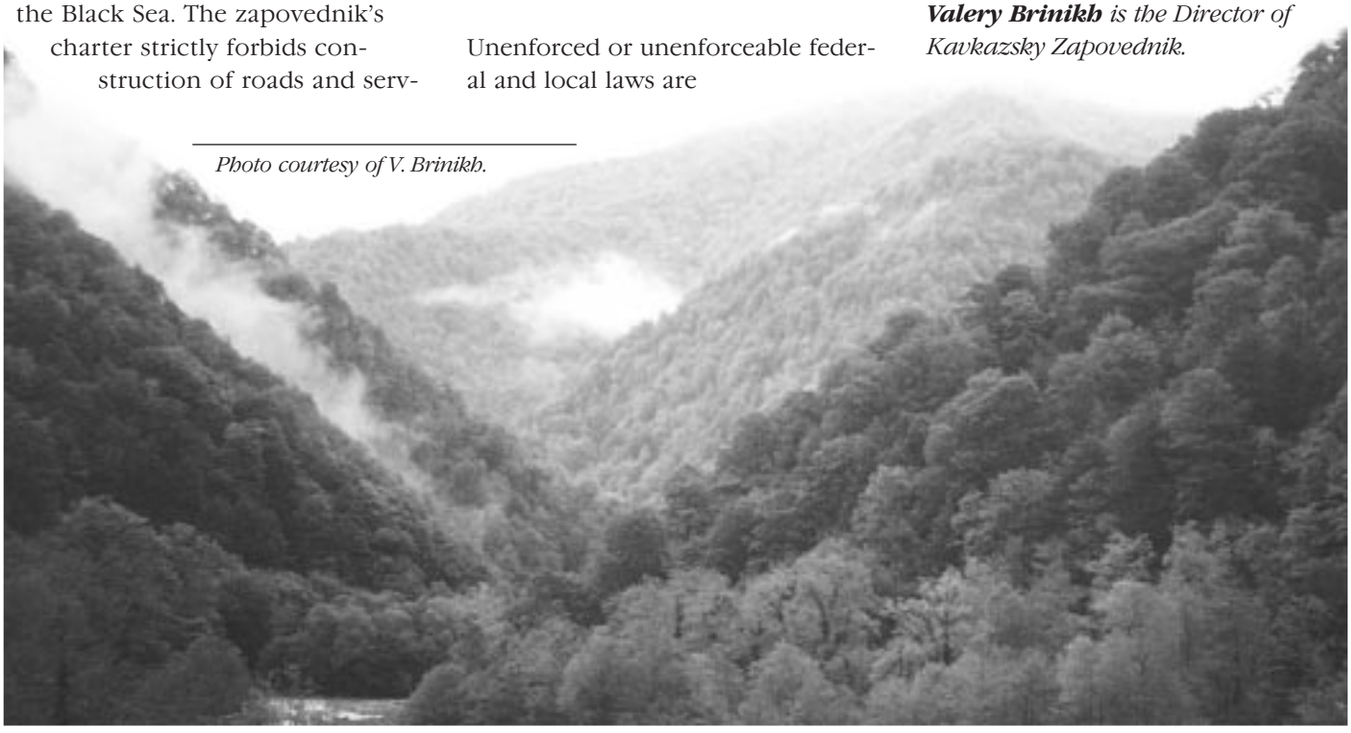

Photo courtesy of V. Brinikh.

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The Future

Implementing the Seville Strategy in Russia: a Glance at the Future

*By **Vsevolod Stepanitsky***

The future of existing and planned biosphere reserves in Russia involves their integration into the socio-economic structure of the regions in which they lie. A number of factors will be crucial to achieving these goals. The first aspect is the role that biosphere reserves play in the local economy. In regions with a high level of unemployment, biosphere reserves play an important role by providing new jobs, often using federal financial support. Moreover, biosphere reserves can and should contribute to the development of tourism and local craft industries. Some biosphere reserves are capable of promoting sustainable agriculture and managed hunting and fishing. Finally, zapovedniks and national parks – in particular those with international status – promote additional investments in the region, including foreign investments for ecological research and sustainable development.

As an institution for nature protection, biosphere reserves play a key role in developing the regional nework of protected areas. Having access to funding and scientific personnel, biosphere reserves should be active in locating and surveying prospective sites for new protected areas, as well as guiding the process of founding new protected areas through the legal jungles of government bureaucracy. Moreover, zapovedniks and national parks could become effective managers for zakazniki (special purpose preserves) and nature monuments located in close proximity. In this capacity, zapovedniks and national parks may also act as support for agencies of the Ministry of Natural Resources that carry out inspections both within the reserves and in contiguous protected areas.

Similarly, the scientific purpose of biosphere reserves can be expanded in many ways in Russia. Making use of their highly developmed ecological monitoring capabilities, biosphere reserves can serve as regional consultants or environmental monitoring centers. They should also focus study on species pertinent to the health and economy of the region, including researching both rare and vanishing species of flora and fauna as well as animals used for commercial hunting and commercially valuable plants and trees. Biosphere reserves should also expand existing links with academic institutions, including encouraging college and graduate students to conduct research in the reserves.

Finally, biosphere reserves in Russia should become centers for spreading environmental education and awareness, working with all levels of the population from school children to educational and news organizations.

Indeed, the economic, conservation, scientific, and educational benefits biosphere reserves offer a region should be publicized by the reserve itself. This is true not only of biosphere reserves in Russia, but indeed of all federal zapovedniks and national parks, which all have the potential to become something much more than simply a protected area. Taking into account the past century's work of zapovedniks in Russia, the Biosphere Reserve Concept, and the Seville Strategy offer a bright future for the preservation of biosphere and landscape diversity in Russia.

Vsevolod Stepanitsky is the Deputy Director of Environmental Protection in

Rural agriculture in Russia's Bryansk Region. *Photo by I. Shpilenok.*

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New Biosphere Reserves Established in Northern Eurasia

Name: Issyk-Kul (Kyrgyzstan)
Area: 4,311,588 ha (core: 145,072 ha)
Based in: Issyk-Kul Zapovednik, est. 1948

Name: Visimskiy (Russia)
Area: 179,606 ha (core: 13,631 ha)
Based in: Visimsky Zapovednik, est. 1971

Name: Vodlozersky (Russia)
Area: 862,360 ha (core: 92,141 ha)
Based in: Vodlozersky National Park, est. 1991

Name: Nerusso-Denianskoe-Polesie (Russia)
Area: 128,394 ha (core: 17,631 ha)
Based in: Bryansky Les Zapovednik, est. 1987, and Bryansk Regional Forest Service

*By **Elizabeth Zelljadt***

Eighteen new sites in thirteen countries were added to UNESCO's World Network of Biosphere Reserves in September, including four areas in the former Soviet Union (see map on page 3). The new sites and extensions were approved by the Bureau of the International Coordinating Council of UNESCO's Man and the Biosphere (MAB) Programme at its September meeting at UNESCO Headquarters in Paris. The biosphere reserves were all proposed by the countries in which they are located. The World Network now consists of 411 sites in 94 countries, in which local populations work together with all other concerned parties toward sustainable utilization of natural resources.

Bryansky Les Zapovednik. *Photo by I. Shpilenok.*

The new biosphere reserves in northern Eurasia differ greatly in size, population density, ecological features, and land use challenges. The largest in area of the new additions is located in Kyrgyzstan on the edge of the stunning Lake Issyk-Kul, after which the reserve is named. This high-altitude region consists of semi-desert and subalpine meadow and pastureland. Regional stakeholders hope to combine regulated animal husbandry with ecological preservation of the land used for grazing.

Three of the new reserves are spread across western Russia. Vodlozersky National Park forms the core of the 862,360-hectare biosphere reserve bearing the same name in the extreme northwestern region of the Russian Federation. Primarily a boreal forest ecosystem, it contains some of the last remaining uncut pine-spruce forest in Europe. Socio-economic integration efforts include incorporating use of fish resources with the official monitoring of fish populations, as well as attempts at reviving of traditional forms of forest agriculture such as berry cultivation and harvesting. Vodlozersky is the first national park in Russia to be named a UNESCO biosphere reserve. Visimsky Zapovednik in the central Ural Mountains northwest of Ekaterinburg is also among the sites recently named biosphere reserves. It includes several river basins and large expanses of coniferous forests. The westernmost of the new biosphere reserves is Nerusso-Desnianskoe-Polesie, an area that stretches across southern Russia to the border of Ukraine, and whose core area encompasses the entirety of Bryansky Les Zapovednik. It includes wetlands and a mixture of subpolar and broadleaf forests and woodlands. These latter two biosphere reserves have few concrete plans as yet for socio-economic integration, but rather are first extending their scientific monitoring and inventory procedures, such as meteorological data and tracking of endangered species migrations. This can help determine the best possibilities for sustainable economic use of the regions in the future.

***Elizabeth Zelljadt** is an intern for Russian Conservation News.*

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Resolution

of the UNESCO-MAB Training Seminar for Biosphere Reserve Managers "The Paths to Implementing the Seville Strategy for Biosphere Reserves"

Krasnoyarsk, Shushenskoye, and Sayano-Shushensky Federal Biosphere Zapovednik

From June 18–23, the international training seminar "The Paths to Implementing the Seville Strategy for Biosphere Reserves" was held in Sayano-Shushensky State Biosphere Zapovednik. Over 60 specialists from Spain, Germany, France, Finland, Estonia, Belarus, Slovakia, as well as Russia took part in the seminar.

Seminar participants noted that the fundamental directives of the Seville Strategy have been accepted and are already being implemented in Russian biosphere reserves. In this resolution, the term "biosphere reserve" implies existing federal nature zapovedniks and national parks of Russia that either are already fulfilling the three basic functions of biosphere reserves as described by the Seville Strategy, or that have the potential for fulfilling these functions.

Taking into account the necessity of practical implementation of the concept of sustainable development, being guided by the Seville Strategy for Biosphere Reserves, and supporting the recommendations accepted at the conference "Seville +5" (Pamplona, 2000),

the participants of the seminar have resolved:

1. To consider the future growth of the network of biosphere reserves in Russia (both models of pristine nature and degraded territories), including those based in existing national parks, an important challenge; to review the following protected areas as highest-priority for subsequent UNESCO nomination: Bryansky Les, Visimsky, Kerzhensky, Komandorsky, Bolshoi Arkticheky, and Ust-Lensky Zapovedniks, Vodlozersky, Urga, and Smolenskoye Poozere National Parks.

2. To note the significant potential that biosphere reserves posses as instruments to fulfil the requirements ensuing from the Convention on Biological Diversity and other international conventions and accords.

3. To direct the attention of biosphere reserve directors particularly toward publicizing the idea of sustainable development and the goals behind the creation and operation of biosphere reserves, in the process attracting all interested parties on the regional level to aid in distributing information.

4. To note the importance of using the potential that individual biosphere reserves posses to develop specific kinds of sustainable farming, conduct well-organized hunting within a managed hunting structure, and coordinate commercial and amateur fishing.

5. To note the importance and necessity of biosphere reserves' contribution to the development of ecotourism, as well as to the corresponding infrastructure and local businesses that accompany ecotourism; to recommend that biosphere reserves use all means to strengthen efforts to involve the local population in this work.

6. To note the necessity of widely publicizing the role that biosphere reserves play in ensuring direct economic benefit for the local population, including:

   – creating jobs;

   – assisting to the local population to receive technical, higher, and supplemental education;

   – ensuring systems of beneficial natural resource use (lending plots of arable land to reserve employees, supplying timber under favorable circumstances, etc.);

   – practically implementing measures to ensure the sustainable existence of indigenous peoples and long-time residents who practice traditional use of nature resources;

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– operating breeding centers to raise animals of high commercial and hunting value that are particularly significant to commercial hunting in the provinces.

7. To recommend that biosphere reserves collaborate with large commercial enterprises located in their activity zone on mutually advantageous projects to promote sustainable development.

8. To impart particular significance to using the informational and intellectual potential of biosphere reserves within the framework of environmental impact assessments, conducting federal environmental advising, and advancing social and economic development and environmental protection programs in Russia's provinces.

9. To consider broad coordination between the work of biosphere reserves and regional government bodies, local self-government bodies, business, and non-governmental organizations imperative to the implementation of environmental and socio-economic programs and projects; in light of this, to create coordinating councils in every biosphere reserve; to propose that the Department of Environmental Protection and Ecological Safety and the Ministry of Natural Resources of Russia develop an standard statutory framework for the coordination of councils in biosphere reserves.

10. To propose that those biosphere reserves lacking biosphere polygons take the necessary steps to create them, bearing in mind the practical experience already tested in Russia.

11. To continue developing a management and development plan in every biosphere reserve.

12. To note the importance of the future organization and growth of the network of trans-boundary biosphere reserves partially based in Russia, specifically including Pasvik Zapovednik (Russian-Norwegian reserve), Paanajarvi National Park (Russian-Finnish reserve), Curonian Spit National Park (Russian-Lithuanian reserve), Bryansky Les Zapovednik (Russian-Ukranian reserve), Ingermanlandsky Zapovednik (Russian-Finnish reserve), Katunsky Zapovednik (Russian-Kazakh reserve), Sailyugemsky Zapovednik (Russian-Mongolian-Chinese reserve), Bolshekhekhtsirsky Zapovednik (Russian-Chinese reserve), Usbunurskaya Kotlovina Zapovednik (Russian-Mongolian reserve), Komandorsky Zapovednik (Russian-American reserve), Kurilsky Zapovednik (Russian-Japanese reserve).

13. In the fields of monitoring and scientific research:

– To promote the renewal of a network of background environmental monitoring stations in biosphere zapovedniks;

– To note the importance of broad incorporation of biosphere reserves in both nationwide and regional monitoring programs;

– To consider the development of collaboration between scientific research establishments, academic institutions, federal nature zapovedniks, and national parks essential to promoting the organization of scientific research and the training of new specialists in the fields of environmental protection and sustainable development;

– To propose that the Committee on Protected Areas of the Russian Academy of Sciences, in cooperation with the Russian Ministry of Natural Resources, prepare a plan for publishing summaries of the many years of research in Russia's biosphere reserves and search for the resources to fund this publication.

14. For the future development of ecotourism:

– To recommend that biosphere reserves make broader use of opportunities related to the certification of local products (goods, labor, services) and the use biosphere reserve logos;

– To recommend that regional associations of zapovedniks and national parks strengthen their work in coordinating ecotourism activity based in biosphere reserves in the provinces.

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15. For the growth of small businesses in zapovedniks:

– To note the necessity of summarizing and distributing information about Russian and international experiences in initiating and crediting pilot projects to development small businesses;

– To recommend wide study and practical implementation of the cooperative experiences of the Biodiversity Conservation Center, Ugla and Smolenskoye Poozere National Parks, and Katunsky Federal Nature Zapovednik as part of the development and use of mechanisms to support small businesses;

– To recommend that biosphere reserves increase efforts on the regional level to attain tax and other financial privileges, following similar experiences already tested in Russia.

16. For the successful implementation of the fundamental ideas of the Seville Strategy and the future development of biosphere reserves in Russia:

a) To consider expedient the broad distribution and implementation of the experiences of those biosphere reserves in Russia that have achieved substantial success in the practical realization of the Seville Strategy.

b) To request that the Ministry of Natural Resources of Russia:

– develop and submit in proper form a proposal for a regulatory act defining the joint operating mechanism of federal government bodies and regional government bodies in the creation and functioning of biosphere reserves;

– strive to introduce essential changes and additions to the federal law "On specially protected natural areas," to be placed in the part of the law addressing the organization of biosphere polygons, including in necessary cases those that border currently operating federal nature zapovedniks;

– strengthen (including increasing the size of the permanent staff) the corresponding structural subdivisions of the Department of Environmental Protection and Ecological Security of the Ministry of Natural Resources of Russia in hopes of increasing the effectiveness of the coordinating and organizational work of biosphere reserves;

– create a system for the exchange and accumulation of information on biosphere reserves with the cooperation of the Russian MAB committee.

c) To request that UNESCO-MAB, the Commission of the Russian Federation for UNESCO, and the Ministry of Natural Resources of Russia use all possible means to assist in strengthening and increasing the effectiveness of the Russian Committee of the UNESCO Program "Man and Biosphere."

d) To request that MAB-UNESCO and the Ministry of National Resources of the Russian Federation organize and carry out similar training seminars on the implementation of the basic proposals of the Seville Strategy for local executors of federal government bodies, local self-government bodies, and large businesses in those regions where biosphere reserves already exist or are planned.

e) To request that the UNDP use all possible means to promote the practical implementation of the decisions and recommendations in this resolution while preparing and implementing GEF projects.

The participants of the seminar express their sincere appreciation and gratitude to the leaders and staff of the Department of Environmental and Natural Resources Management of Krasnoyarsky Krai, Sayano-Shushensky Federal Nature Biosphere Zapovednik, and Shushensky Bor National Park for their invaluable contribution to organizing and conducting the seminar, as well as for their kindness and hospitality.

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Resources for Further Study

A Message from the Russian MAB National Committee

*By **Valery Neronov***

The nations of the former Soviet Union have participated in international biosphere study since its very origins back in 1968, when two representatives of the Academy of Sciences of the USSR attended the international biosphere conference in Paris. This conference conceived the idea of a global network of nature reserves that later became a key component of the Man and Biosphere (MAB) Program. In 1974 an interdisciplinary committee formed to carry out MAB projects in the Soviet Union. This committee worked closely with the Academy of Sciences, the State Committee on Science and Technology, and the Ministry of Foreign Affairs. At the initiative of this committee, the 1st International Congress on Biosphere Reserves was held in Minsk in 1983, a great step for the program's development. At the height of its activity, the MAB program in the Soviet Union conducted scientific conferences and seminars that coordinated more than 1,000 field projects involving more than 4,000 specialists. During the 6th All-European MAB Conference in 1997, delegates decided that the Secretariat of EuroMAB would be based in Minsk for the next three years, under the guidance of the Belarusian MAB National Committee.

At the current time, the Russian MAB Committee has given special attention to developing and strengthening the network of biosphere reserves. Scientific research in Russian biosphere reserves continues to be a particular priority. Inventories of flora and fauna continue along with appraisals of the impact of climate change on biological diversity. In April 1999, an international conference on studying and conserving the flora and fauna of northern Eurasia was held in Moscow, opening new horizons for interregional collaboration to realize the Convention on Biodiveristy. Transboundary collaboration has a special place in the East Asian Network of Biosphere Reserves, of which Russia became a member in 1999. Although financial difficulties have limited the Committee's activity, it continues to uphold all of the earlier MAB projects.

Valery Neronov is the Deputy Chair of the Russian MAB Committee and Director of the MAB project on Biosphere Reserves.

The Russian MAB Committee welcomes all inquiries into the development of the MAB program in Russia. Questions should be addressed to the Secretariat, Ul. Fersmana 13, Moscow, 117312 Russia.
Tel: + (095) 124–60–00.
Fax +7 (095) 129–13–54.
E-mail: mab.ru@relcom.ru.

A List of Helpful Resources

The United Nations Educational, Scientific, and Cultural Organization (UNESCO)
In English: http://www.unesco.org
In Russian:
http://www.unesco.org/general/rus
UNESCO in Russia:
http://www.unesco.ru
The Man and Biosphere (MAB) Program: http://www.unesco.org/mab/

Helpful documents:
http://www.unesco.org/mab/docs/document.htm
The Seville Strategy...Statutory Framework for Biosphere Reserves...Seville +5 Recommendations...Recommendations for the Establishment and Functioning of Transboundary Biosphere Reserves...Biosphere Reserves Nomination Form...Periodic Review Form.
**Documents in Russian are available through the searchable document index:
http://unesdoc.unesco.org/ulis/rus/index.html

Contact information for MAB national committees:
http://www2.unesco.org/mab/mab-cont/index.asp
Many biosphere reserves are also World Heritage Sites or Ramsar Convention Sites:

The World Heritage Center:
http://www.unesco.org/whc/nwhc/pages/home/pages/homepage.htm
The Ramsar Convention on Wetlands: http://www.ramsar.org
Joint Ramsar-MAB website:
http://www.unesco.org/mab/ramsarmab.htm

Information on Russian Zapovedniks and National Parks
Protected Areas Informational Net:
http://www.wildnet.ru
A Tour of Wild Russia (descriptions and photographs of zapovedniks):
http://www.wild-russia.org
The World Network of Biosphere Reserves:
http://www.unesco.org/mab/wnbr.htm
Contact information is listed on the back cover.

CONSERVATION CONTACTS

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