

# Nature as a Heritage: A Russian Arctic Case Study

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## ABSTRACT

Nature's ability to support life and social development, as well as to restore itself, has turned out to be limited. Globalized capitalism has become an increasingly destructive force for the biosphere and thus for mankind. Using many technologies that destroy ecosystems, we have not yet found something to replace the regulating mechanisms of the biosphere. Thus the conservation of pristine environments takes on a very special significance. The Arctic and Antarctic are the last pristine, ecologically "clean" areas of the planet; they are therefore the earth's most sensitive ecosystems. Thus not only does preserving the natural environment of the Arctic mean also preserving the native cultures which so intimately depend upon it; we must think of the Arctic as a vital ecological reserve for the present and future generations of all peoples on this steadily deteriorating planet. The Arctic's pristine environment is in effect the common heritage of mankind, and therefore its preservation is the common concern of mankind.

## KEY WORDS

natural heritage	the Russian Arctic
Willem Barents Park	Arctic tourism
national park	Novaya Zemlya
biological and landscape diversity	natural heritage conservation



## Introduction

If we exclude what might be the Romantic or more specifically Kantian, detached “aesthetic” view of it, Nature is usually considered in Western ideology from two main points of view. One view holds that it is the source of physical resources, that which is consumed by living organisms, the basis of plant, animal and human life; the other view holds that nature is the physical environment of human beings, a system of physical conditions necessary to social development.

Both of these “non-aesthetic” views are of great importance for understanding the history of Western civilization. During the previous centuries they have provided for economical and social progress in the majority of the western countries. But at the same time they have not prevented a comprehensive ecological crisis from bursting out in the second part of the 20<sup>th</sup> century. Moreover, as we suppose, it is just this extremely materialistic approach that is one of the main causes of that crisis.

The obviously critical state of the natural environment has encouraged the western world to establish a new point of view about nature. This one holds that nature is not only a resource and condition, but our common heritage as well.

The notion of natural heritage is a special concept applying to the safeguarding of such matters as biological and landscape diversity as well as protected areas and other outstanding natural landmarks of particular universal value. Currently natural heritage has taken a firm place among different fields of research and in policy, both national and international. As regards to culture, the phenomenon of a natural heri-

tage was rediscovered in it again as a subject that existed in it from the very beginning.

It is a wonder time that nature appears in a culture as a heritage. Numerous relevant examples from cultures of ancient Egypt, Greece, Rome and others confirm it strictly. All the Russian culture, including painting, literature, theatre, music and so on, confirms the same as well.

The cult of nature, peculiar to Russian culture, contributed a lot to its conservation and preservation. Just the cult of nature transformed it in the human minds from rough materialistic substance into such a priority spiritual value, which we name now a natural heritage.

### Natural Heritage and Its Peculiar Features

Here and hereafter, under the term “heritage” is meant an integral factor involved in the formation and development of ethnos, materialized in natural and cultural objects and phenomena, and manifested in geodiversity. Heritage sites are distinct from other natural, cultural, and historical features by the following characteristics: greater value (their loss is irreparable), a real threat to their existence, and the presence of a heritage subject.

The natural heritage of the Russian Arctic sector is constituted by natural objects and features shared with the remaining part: the northern circumpolar region, and the whole of the Earth, in conjunction with individual features intrinsic to the territory of interest. Evidently, the latter are responsible for its unique natural aspect and are a focus of attention in the present research. At the same time, these specific features can be understood only if considered as constituent components of the more expansive natural heritage of a bigger region.

The above definition of natural heritage does not include all natural values and phenomena indispensable for the formation of an ethnos living conditions (e.g. natural resources proper). It implies only those natural objects, which carry information and are at serious risk (either real or potential) of extinction or disintegration with unpredictable consequences for the environment and man. Distinguishing the natural heritage from related entities (nature, natural property, natural values, natural conditions, natural resources, etc.) allows for its definition as a

collection of environmental objects and phenomena of special reproductive, hygienic, recreational, and aesthetic value, which in addition has other valuable characteristics, unrelated directly to the natural resource potential.

The main function of natural heritage is to maintain resistance of the environment to noxious effects of external factors generated by human activity. It has been shown that human pressure on natural ecosystems leads to the loss of their capacity for self-regulation and reparation in the course of transformation from "nature" proper (i.e. a self-reproducing substance) to a more or less amorphous "medium" whose natural properties depend on ecological behavior of human communities (in the productive, social, and other spheres). The transformation of "nature" to "medium" appears to be historically inevitable; the question is how rapid it is and what form the spatial correlation between these categories assumes at a given time.

Ideally, man-induced transformation of natural ecosystems should not affect the eco-natural frame of the biosphere, that is lands and waters, expressed in linear and aggregated forms which have the highest biological and landscape diversity indices. The less damage is inflicted on the frame the better the natural heritage is preserved and the more stable is the environment in a given region and ecologically related lands and waters. Indeed, the eco-natural frame is constituted by spatial units performing the most important ecological functions and having the highest natural heritage potential.

Therefore, conservation of natural heritage is one of the key prerequisites for the maintenance of stable environment realized by means of targeted identification and effective protection of the eco-natural frame. This explains why the Maastricht Conference (1993) declared that the formation of EECONET must have the highest priority in the conservation strategy for the natural heritage of Europe (Bennett 1994). Novaya Zemlya in general and its northern part in particular will constitute important links of this network.

Characteristic features of the natural heritage in Arctic regions are listed below:

- Significant natural heritage potential in the form of biological

and landscape diversity owing to the unique geographic location;

- Vast areas occupied by intact or virtually undisturbed natural ecosystems;
- Well preserved natural heritage due to its remoteness from major environmental risk sources, i.e. industrial zones and large centers of human activity;
- High scenic value of natural land and sea landscapes of the Arctic accounting for their tourist attraction and significant recreational potential of the natural heritage;
- Enhanced vulnerability of the natural (and cultural) heritage due to the relatively poor intrinsic resistance of Arctic natural ecosystems to external impacts;
- Extensive ecosystem links with nearby and remote territories, including far-away regions of the southern hemisphere, which are maintained in the first place by migrations of animals especially birds;
- Absence of the resident human population as an obvious natural heritage subject interested in the on-site protection of natural (and cultural) values.

### Specific Problems of Heritage Conservation in the Arctic

The Arctic is traditionally considered to be a region of pioneer developments where many specimens of natural and cultural heritage irretrievably lost in other places of the Earth still remain naturally conserved. However, the amount of Arctic heritage declines even faster than in economically well-developed areas. Such a decrease is in line with what may seem an inevitable growing human interference in the Arctic, yet it comes in obvious conflict with public interests. Moreover, this process has until recently been essentially spontaneous, with unpredictable or predictably undesirable consequences, which need to be counterbalanced by the rational purpose-oriented management policy designed to promote conservation of valuable natural and cultural heritage.

The importance of research providing a scientific basis for the

heritage conservation policy in regions of pioneer developments ensues from the following:

1. Virtually undisturbed natural heritage in the form of biological and landscape diversity in newly developing areas due to their lying far from major environmental risk sources, i.e. industrial zones and large centers of human activity.
2. Well-preserved cultural heritage in the form of historical and cultural monuments, evidence of past human activity, and diversified cultures of indigenous peoples in developing areas by virtue of relatively unaltered traditional life styles and land use strategies of local communities.
3. Enhanced vulnerability of the natural and cultural heritage in developing areas owing to the low resistance of natural ecosystems to human impact and indigenous minorities to the effect of modern mass culture.
4. Enormous size of territories subject to pioneer economic developments in Russia (65-70% of its total area), which greatly exceeds that in many other countries.
5. Enhanced traditional and newly created environmental and social risk factors threatening natural and cultural heritage in developing areas during the transitional period.

At present, there are virtually no "blank spaces" on the Earth, and most of the land surface is in some way or other exploited to the benefit of man. However, the intensity of exploitation varies locally depending on the degree of economic development of individual regions. It is therefore appropriate to follow their traditional division into developed and newly developing regions (or regions of pioneer developments).

Everywhere in the world, attention is traditionally focused on planning and pursuing economic, environmental, and cultural activities in developed regions. As a rule, these regions host the bulk of the country's population having a variety of economic, ecological, and cultural demands and attendant problems. Also, they are the first to suffer adverse consequences of degradation of the environment and social milieu coupled to the complete or partial loss of natural and cultural heritage.

The socio-cultural potential and natural features in the areas experiencing pioneer economic development have long remained undisturbed thanks to the absence of abusive human activity. Moreover, these areas have not until recently been considered as being of special value in the system of priorities common to all mankind.

The majority of developing regions which comprise of land and waters with harsh natural conditions are usually remote from the main natural and artificial traffic routes, being situated at high latitudes or occupying highlands, arid territories, and wetlands. Man used to attach little or no importance to these areas throughout history as being of no practical value in terms of state or public interests. Moreover, they were not infrequently considered evil rather than good as imposing unwarranted burden on the country's budget to maintain them, without the slightest hope of reimbursement.

The situation has begun to change dramatically at the close of this century, with the increasing aggravation of numerous ecological, social, and other problems that have been arising at a progressively faster pace in developed regions. This automatically has turned regions formerly unaffected by human activity into a vitally important reserve for the future development of mankind. Evidently, the value of these territories is inversely related to their size and increases with decreasing degree of their disfigurement by previous human interference.

Hence, the importance of planning a scientifically sound and socially acceptable policy aimed to secure the natural and cultural heritage in peripheral areas of the civilized world. This work implies the establishment of protected heritage territories as an effective tool for safeguarding the most valuable natural features, historical monuments, and cultural phenomena. This issue has first been raised in our earlier publications (Boyarsky & Liouty 1994; Boyarski, & Mazourov 1997; Boyarski et al. 1997; Ebbinge et al. 2000; Gawronski et al. 1997; Mazourov 1998b).

Analysis of problems pertaining to heritage conservation in the Russian Arctic, one of the vitally important regions of the country, leads to the following conclusions and recommendations:

1. Most of the existing protected natural and historic-cultural ar-

areas have been designated to secure natural, historical, and cultural heritage in developed regions, and their protective status is not always compatible with the objectives of heritage conservation in newly developing regions. The main difficulty consists in that the majority of nature reserves in the Russian Arctic have their territories totally exempt from the traditional use by indigenous peoples. On the other hand, the experience of many countries indicates that the heritage specimens of indigenous minorities artificially preserved in national parks has nothing to do with their living culture, being nothing more than window-dressing.

2. Enthusiasts of heritage conservation in developing regions must take into consideration increasingly widespread evidence of “neo-traditionalism” in populated areas and global responsibility imperative in areas having no resident population.
3. In compliance with a priority criterion of territory population, all conceivable types of protected areas in developing regions should be classified into “traditional,” i.e. established and functioning in conformity with the present Russian legislation and international law (nature reserves, sanctuaries, national parks, etc.), and “non-traditional” ones. It is proposed to define territories included in the latter category by the term “heritage reservation.”
4. Regulation of the establishment and functioning of protected areas in developing regions implies special emphasis on specific features of individual heritage reservations as opposed to a popular trend towards their unification.

The practical approach to the heritage conservation in the western sector of the Russian Arctic is exemplified by the establishment of protected heritage reservations in the territories occupied by indigenous northern peoples (e.g. on Vaygach Island) and a national park on uninhabited islands in the Arctic Ocean, first of all on Novaya Zemlya.

### Natural Heritage Policy

Policies for the management of natural heritage are traditionally



pursued along two main lines, utilitarian (with the primary aim to derive, in different ways, material utility from natural objects and/or complexes) and conservational (from imposing minor restrictions and enforcing existing environmental regulations to ranking natural values in terms of the degree of protection they may need and placing strict prohibition on their further use). It is well known that the former approach to the management of natural heritage has for a long time been practiced worldwide and resulted in either the loss or the deterioration of many heritage sites.

Fortunately, the latter policy with a prominent ecological slant is receiving a greater priority as human society comes to better understand harmful consequences of the loss of natural heritage. This global process leads to the development of a network of specially protected areas and its gradual transformation to an integrated system in certain regions such as the Arctic where this tendency has become expressly apparent during the last decades.

At present, most of the Arctic territories of natural, cultural, historical, and recreational importance are protected some way or other. This is true of all the eight Arctic states including Russia which has the largest Arctic sector covering 6,300,000 sq. km out of the total 14,800,000 sq. km occupied by Arctic sectors of all these countries taken together or indeed by the entire Arctic region.

Because the necessity to protect the most valuable natural objects and areas in high latitudes has long been recognized by the international community, the Arctic states had a powerful incentive to establish national and nature parks, reservations of different types, game refuges, and other protected territories. As of the mid-1990s, there were 280 specially protected territories in the Arctic counting only the most important and large (over 1,000 ha) ones. Their total area exceeded 2,000,000 sq. km (14% of the entire Arctic region) (Nikiforov & Mescherskaya 1999; Prokosch 1999), which is not so bad a coverage, all things considered.

Recently, there has been an especially rapid rise in both the number and the surface area of protected territories in the Russian Arctic. As many as five new state nature reserves were designated in the early

1990s in the Russian Arctic sector. As a result the total area of nature reserves in this country increased by 25% and more than two-fold in its northern quarters. In addition, other types of protected areas, besides nature reserves, were established, such as the largest nature sanctuary "Zemlya Frantsa Iosifa (Franz Josef Land)," on the archipelago of the same name, having a total area of 4,200,000 ha (including off-shore waters) and "Severozemel'sky" Sanctuary on Severnaya Zemlya (total area 421,700 ha). The two sanctuaries have the status of protected territories of national importance.

Thus, most of the Russian Arctic regions have specially protected territories of different status, largely that of nature reserve, sanctuary, and natural monument. Novaya Zemlya appears to be the sole exception having not a single officially protected natural, cultural or historical area within its bounds despite numerous heritage sites of great value.

Obviously, such a situation is in conflict with the currently prevailing tendency in the circumpolar region and incompatible with the regional and national interests of Russia. Now, that most of the formerly populated areas on Novaya Zemlya and in other northern regions have been abandoned and fallen to desolation, the country does not seem to have a comprehensive policy for the management of the natural heritage on the archipelago. Its conservation is practically non-existent while continuing exploitation leads to further deterioration and is at variance with public interests.

It is evident from the above that the Russian Arctic hosts a highly valuable natural heritage of regional, national, and international importance. There is an urgent need to develop and implement an effective government policy aimed at safeguarding the natural heritage of this region and its rational use. The policy must envisage the following measures:

1. Comprehensive evaluation of the natural heritage based on the results of long-term field studies and estimate surveys.
2. Identification and inventory of natural heritage sites.
3. Classification of the known natural heritage sites with regard to provisions of the international law, federal and regional legislation, traditions and vital interests of the local population.

4. State registry of natural heritage sites recognized to have special value and to be given an adequate protective status; promotion of the system making all those concerned with the preservation of heritage sites actually alive to their responsibilities.
5. Development and/or improvement of legislative machinery for the conservation and rational use of natural heritage.
6. Integration of the natural heritage and its management into regional plans for land use and territorial development; conducting location surveys, if necessary.
7. Environmental and natural heritage monitoring after the restoration of its former infrastructure, taking advantage of up-to-date instrumentation including telecommunication facilities.
8. Environmentally-compatible development of tourism and the related infrastructure.
9. Integration of measures for the optimal management of natural heritage into regional programmes of socio-economic development; in case of necessity, the development and implementation of special regional programmes for the conservation and rational use of natural heritage.
10. Harmonization of natural and cultural heritage conservation, also its coordination with the conservation of the natural and cultural heritage of the adjoining territories and at different territorial levels.
11. Dissemination of knowledge about the natural heritage of the given region through all available channels.
12. Support of public organizations concerned with exploration, conservation, rational use, and popularization of natural heritage.

Many examples confirm the distinguished importance of nature as a heritage in present culture, research and policy in a contemporaneous Russia. One of them is a history of study and preservation of the natural heritage of the archipelago Novaya Zemlya in the Russian Arctic.

## Novaya Zemlya at the Turning Point

There are perhaps few places in the world that are so synonymous with grave ecological disaster as Novaya Zemlya. In addition to the infamous Bikini (USA) and Moruroa (France) atolls in the Pacific Ocean, this archipelago became another tangible symbol of an impending nuclear nightmare beginning in the mid 1950's. When the largest explosion ever to shake the earth was detonated from Novaya Zemlya in the fall of 1961, the archipelago earned its image as a nuclear wasteland. Soviet leader of that period Nikita Khrushchev named this blast "Pol-Ivan," literally meaning half of Ivan (the most typical and wide spread Russian name), implying that this single explosion constituted half of the USSR's nuclear capability.

While the 1961 event was likened to the horrible explosion at Hiroshima and Nagasaki, Japan, in fact, the Russian explosions occurred in very different circumstances. Unlike Japan, the remote Novaya Zemlya was sparsely populated due to its remote location. The few settlements on this archipelago were liquidated with the advent of nuclear testing. Altogether, about 340 people—two-third Nenets and one-third Russians were evacuated and relocated in the north of mainland Russia. This unfortunate event enhanced the impression of an abandoned and isolated nuclear desert on Novaya Zemlya. The "iron curtain" further perpetuated this impression by precluding the dissemination of any official information. Moreover, Novaya Zemlya was off-limits to all scientific research for many years. This virtual vacuum of information on Novaya Zemlya gave free reign to rumors of fabled nuclear monsters, such as furless reindeer, bears, and other mutants (Boyarski & Mazourov 1999; Mazourov 2000a).

Recent investigations on Novaya Zemlya have confirmed that significant radioactive fallout affects only ten tracts and patches within the military base. During the nuclear testing conducted here, efforts were made to mitigate the radioactive contamination of Novaya Zemlya. For instance, all air tests, even the most intensive, were specially designed to avoid contact with the archipelago surface. Whether conditions, such as wind direction, were also taken into consideration to lessen the effect of local radiation. Although these tests contributed to

global nuclear pollution, the radioactive fallout on Novaya Zemlya itself was kept to a minimum.

Despite new findings, however, the myth about Novaya Zemlya as a nuclear wasteland still persists. It seems as if someone is poised to profit from this delusion. The question is who? Most likely it is those who envision Novaya Zemlya as a huge landfill for toxic and radioactive wastes. The manifestation of such a landfill is not merely wishful thinking, but an actual threat to Novaya Zemlya. Unfortunately, this is not the only hazard.

Thanks to its remoteness from populated regions and industrial zones, Novaya Zemlya's pristine natural heritage has endured through the ages. Yet today, human footprints on this land are becoming more evident. A recent study identified that natural resources on Novaya Zemlya are currently being used in many ways, including seasonal fishing; poaching of polar bears; tourism, including ecotourism, led by both Western companies and Russian scientific organizations catering to expanding interests in the Arctic; ship traffic in the coastal waters and harbors; helicopter landing strips; and scientific and military investigations, new technology experimentation.

Although the majority of these activities are conducted on a local scale, their cumulative effect may induce considerable harm to Novaya Zemlya's highly sensitive ecosystems. Thus, the proper allocation of land, water, and air resources is now a very relevant issue, especially as considerable, large-scale dangers loom on the horizon, including:

- Oil and mineral prospecting and extraction, for instance of the lead and zinc nonferrous metal deposits in Bezymyannaya Bay;
- Creation of landfill for nuclear and chemical wastes;
- Accumulation of contaminants transferred in increasing quantities by the North Atlantic stream;
- Intensification of ship traffic;
- Soil and vegetation degradation due to settlement restoration and tourism development.

A classified proposal to construct a landfill for nuclear and chemical waste in the southern part of Novaya Zemlya poses an especially great environmental hazard. We wonder if environmental inter-

ests will be taken into consideration in the event that this project, or any other, is implemented? Undoubtedly, Novaya Zemlya's future depends on the shattering of its reputation as a nuclear wasteland, replacing it instead with a picture of wild, untrammelled nature.

### The First National Park in the Russian Arctic

The last explorations at the Barents Sea region have demonstrated and proved a high level of wilderness and biodiversity in the northern part of the Novaya Zemlya archipelago (Amirkhanov 1997; Gawronski 1997; Mazourov 1998b). This is a strong argument for conservation of this area. At the same time history makes North of Novaya Zemlya especially attractive for heritage tourism due to a lot of unique historical landmarks connected with heroic polar investigations. The area is also of great interest for specialized Arctic tourism. Therefore it should not be turned into a fully protected reserve ("*zapovednik*" in Russian), but it should receive the status of National Park, where the interests of conservation and recreation can be combined.

Most Arctic territories with a natural, historical, cultural or recreational value have received some sort of protective status during the past years. Novaya Zemlya seems in this respect to be the only exception. Although numerous valuable heritage monuments are presented there, Specially Protected (natural and cultural-historical) Territories (SPT) are still lacking on this archipelago.

Various specialists have recently expressed the need for such SPTs (Boyarski & Liouty 1994; Ebbinge et al 2000; Mazourov 1999). It has been proved that not only separate SPTs, but also a unified system of natural, historical and cultural SPTs should be created on Novaya Zemlya. Such a system has to be combined with and adjusted to the activities of the present Central Range (Nuclear Testing Polygon) of the Russian Federation. Only a comprehensive approach will ensure the effectiveness of the SPT-conservation policy in the area without permanent population, except of some army camps and Arctic stations.

Our concept for an SPT-system on Novaya Zemlya includes several protected areas of different levels of strict. The North of the archipelago, which is outside of the Central Range area, is considered the

most promising for the first stage of SPT development. This particular area is directly connected with the name of the outstanding Dutch navigator Willem Barents. Here, together with his crew, he spent the last year of his life wintering at Ice Harbor. In the northwest of the island, approximately at Ivanov Bay, he found his last place on the Earth. That is why this area is particularly interesting for tourists from both the Netherlands, where Willem Barents is treated as a national hero, and other countries, where he is also well known.

The historical sites reflect the cultural diversity of Novaya Zemlya and are related to the main events of both the international history of geographic discoveries and the (scientific) exploration of the archipelago itself. They have an everlasting value for Russia as well as for the international community. Therefore, the regional policy regarding the three proposed areas should give priority to conservation of the environment and to protection and sustainable use of the cultural and natural potential.

According to our proposals the future "Willem Barents Park" as a SPT in North of Novaya Zemlya stretches from Cape Zayats on the west coast to Vitney Bay in the east including the Bolshiye Oranskiye, Maliye Oranskiye and other groups of islands. The most important historical and cultural sites here are (Boyariski et al. 2000):

- The wintering camp of Willem Barents and his crew in the "Ice Haven" Bay (1596-1597) with the remains of their log cabin, a memorial cross and the Dutch memorial stone (erected by the Russian-Dutch Arctic expedition of 1995);
- Probable burials of Willem Barents and Claes Goutijk in the area of Ivanov and Inostrantsev Bays and Cape Sakharov;
- The memorial stone on one of the Maliye Oranskiye Islands, established in 1881 by the Dutch expedition with the navy ship "Willem Barents" to commemorate the discovery of Oranskiye Islands by Willem Barents on 1st July 1594;
- Memorial sites and material remains at Cape Zhelaniya and Cape Flissingsky connected with the expedition of the famous Russian polar navigator Georgi Sedov in 1913;
- Memorial sites connected with the expedition of the famous

Arctic discoverer Vladimir Rusanov with the “Dmitry Solunsky” in 1910;

- One of the first in Russian Arctic, the polar monitoring station “Mys Zhelaniya” founded in 1931;
- A variety of over 20 interesting sites, such as stone *guri's*, crosses, log cabins, lighthouses, buildings of the Soviet period and graveyards.

The rich natural heritage of this area consists of denudative plains, plateaus with high-arctic polar deserts, glaciers and some Arctic tundra in the narrow strip of coastal lowland in the southwest. Its west part is characterized by severe weather conditions and by impressive polar scenery. It comprises the middle and high-altitude ridges of the Lomonosov and Mendeleev mountains, which are separated from the coastal lowlands by steep cliffs. They represent extremely dissected glacial mountains with single peaks protruding from the ice; the highest of them is 1,013 m. There are outlet glaciers of the northern Novaya Zemlya ice cap, which move slowly toward the sea. On the shore these glaciers form ice barriers several tens of meters high with large blocks (icebergs) breaking off. A preliminary inventory of the most valuable natural heritage contains the following categories: geological, geomorphologic, glaciological, zoological and landscape subjects.

During the decades of the Soviet epoch, industrial development had a strong priority in the Russian Arctic. Essential degradation of the natural ecosystems was a relevant payment for this kind of development. Currently the mentioned above priority is factually replaced by nature conservation as the main direction of the Russian environmental policy in the Arctic. That is why to organize now some nature reserves in the Russian Arctic is much easier than national parks. Some experts on environmental management are afraid of degradation of the fragile Arctic nature under the pressure of recreational activities in national parks and other areas opened for tourism.

Today we have more and more data on the new resources of oil, gas, ores and minerals in the Arctic seas and the coastal territories. Obviously mining and national parks as well as other forms of nature protection are not compatible. Everybody realizes that conservation



takes a lot of money meanwhile mining can give a large benefit. Unfortunately for the natural conservation the waters surrounding Novaya Zemlya are abundant with oil and gas; the islands of the archipelago contain essential resources of valuable minerals.

All these facts indicate the rising problem of conflicting interests concerning the Arctic territories and aquatories, particularly in the Barents region. In such situations, the creation of national parks and some other kinds of multifunctional protected areas seems to be a good compromise solution for economy and conservation. Any way, sustainable development in the Arctic could be a kind of reality in the case of nature preservation priority only.

While nature (ecological) tourism generally, and Arctic tourism specifically, is not now developed in Russia, many believe that it is poised for rapid growth (Grenier 1998). The situation represents a real and unique opportunity to integrate conservation goals into Arctic tourism development in Russia while it is still in its embryonic stage. The WWF Principles and Codes of Conduct for Arctic Tourism can provide guidance for this development, steering it in a direction that will help to ensure that the inherent potential for environment degradation from mismanaged tourism activities does not materialize in the Russian Arctic.

In particular, the issue of developing tourism in protected areas in Russia has generated a great deal of interest and concern among experts. On the one hand, enthusiastic interest originated from the potential of these often unique, remote, and pristine areas to provide highly desirable tourist destinations in the Arctic. The mentioned areas offer perhaps the greatest opportunity to harmonize tourism, education, and conservation goals in a relatively controlled environment. On the other hand, there is a real concern that tourism development in these areas poses a significant risk of diminishing or even destroying the very characteristics that distinguish them for protection. There is also concern that in the current political and economic situation in Russia, the monitoring and enforcement of restrictions needed in protected areas may not be reliable.

Anywhere Arctic tourism requires special efforts to meet the

challenges of accessing and operating in remote and rugged places. These challenges are compounded in Russia, with an already high degree of uncertainty and unpredictability regarding infrastructure and administrative support for such activities. Furthermore, as pressure for productive economic development increases, tourism itself may not be viewed as a first priority and may compete with potentially conflicting interests of industrial development in the northern territories. Finally, economic benefits are frequently not directed to local or even Russian economies: logistics are typically arranged in areas outside of the destinations, or even out of Russia. This stems from a shortage of educated, informed, and trained individuals who can assist in planning and conducting tour operations in the Russian Arctic.

Exploring tourism's potential benefits for a wide sphere of people and nature itself, experts consider some probable approaches to meet these challenges. These approaches should support and enhance the conservation prospects for this special region. Some highlights of the potential benefits identified by the specialists include:

- Linking tourism and scientific research activities to increase understanding that will enhance the Arctic environment and cultural conservation efforts;
- Providing an economic alternative to industrial development in the Arctic, thus benefiting the environment, tourism, and local communities with traditional lifestyles;
- Generating support for the effective supervision of existing protected areas including appropriate tourism components;
- Promoting the designation of new protected areas in the Russian Arctic regions that successfully combine tourism, education, and conservation.

It's evident for experts that these benefits will materialize only if the links between tourism and conservation are integrated successfully throughout the tourism development in the Russian Arctic. The suggested Willem Barents Park could be one of the very first areas for collecting of the appropriate experience in this field.

## Nature as a Social Phenomenon

Economic development of the Arctic and the entire planet in the twentieth century, mainly oriented toward fast growth, resulted in unreasonable damage to the natural environment. Mankind has encountered the contradiction between growing needs of the global community and the inability of the biosphere to provide for these needs.

The resources of nature and nature's ability to support social development, as well as nature's ability to self-restore, have turned out to be limited. The growing power of economy has become a destructive force for the biosphere and mankind. Thus civilization, using a huge number of technologies, destructive for ecosystems, has not in fact offered anything to replace regulating mechanisms of the biosphere. This has resulted in the real threat to vitally important interests of future human generations.

Elimination of the current contradiction is only possible within a framework of sustainable social-economic development, which will not destroy its natural foundation. Improvement of quality of life should be ensured within the economic capacity of the biosphere; over-exploiting it will lead to destruction of the natural biotic mechanisms of environmental regulation and to global changes in the biosphere. Ensuring these conditions is only guarantee to preserve the normal environment and to provide for the existence of future generations.

The transition to sustainable development provides for the gradual restoration of natural ecosystems to the level which will guarantee the stability of the environment. This can only be achieved by the joint efforts of all mankind, but each country should start implementing these goals independently.

However, transition to sustainable development, particularly in the Arctic, is impossible as long as we maintain the current stereotypes of thinking, which ignore the ability of the biosphere and engender the irresponsible attitudes about the environment and toward ecological safety among citizens and juridical persons.

Ideas of sustainable development are very relevant to the traditions, spirit, and mentality of Russia. The natural environment really plays a very important role in Russian science, culture and, during last

decades, in politics. Probably, this phenomenon is the most clearly reflected in Russian literature, particularly in ecological non-fiction (Mazourov 1998a). It is well known that Russia is the most northern country in the world. That is why the northern theme occupies a prominent place in Russian literature. The last, like any other literature, is a kind of cultural heritage. Now it is a time to use its “northern potential” to contribute to the salvation of the natural heritage of the Russian Arctic.

### Conclusion

The heritage in general and natural heritage in particular is believed to be crucial for sustainable development and the promotion of the development as such. Natural heritage conservation is necessary everywhere but for the Arctic region it's most important. The Arctic is still the last big pristine and ecologically clean area of the planet. At the same time just the Arctic is the most sensitive ecosystem on the Earth. It means we can consider it as a global ecological reserve for our and future generations. Thus, the Arctic needs much more attention from human society and much more effort to preserve its nature, for it is the common heritage.

### NOTES

\* Despite a paucity of verified information, newspapers in the 1980's were crammed with accounts on Novaya Zemlya written by numerous so-called experts. Not surprisingly, this shower of false or unproven information completely misled people. Before my first visit to Novaya Zemlya in the early 1990's as a member of the Integrated Marine Arctic Expedition (IMAE), I, too, was wary about the environmental situation there despite assurances from my colleagues. Feeling uneasy, I constantly measured radiation levels, which to my great astonishment seemed to be within reasonable limits and did not exceed the level of background radiation.

When I visited Novaya Zemlya again, I determinedly searched for any signs of increased radiation, but all of my attempts were in vain. As

I had anticipated, my discovery about the lack of contamination was met with skepticism. For instance, if I offered some stones or plants to my friends as souvenirs from Novaya Zemlya they refused to accept my gift, shying away from it as if from leprosy (Yuri Mazourov).

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