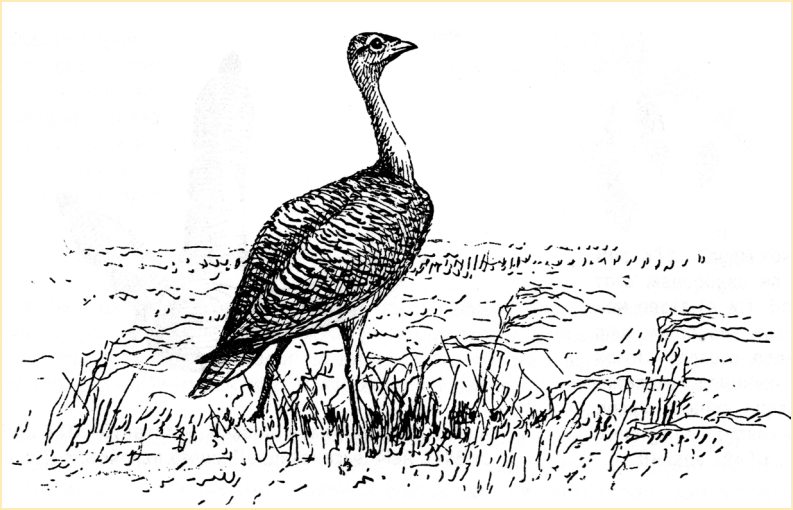
RUSSIAN STEPPE CONSERVATION STRATEGY

NGOs POSITION



Moscow 2007

BIODIVERSITY CONSERVATION CENTER
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Steppes represent one of the most intensively used in the economy and at the same time one of the most disturbed and endangered biomes within the territory of the former USSR. They are in need of special protection and restoration and in the shift towards a non-destructive usage. Meanwhile, state policy relating to steppe ecosystems use and conservation is lacking. Russian environmental NGOs and scientific experts develop their own vision in this problem area. The see the key in the intensification of wild nature conservation on agricultural lands and ecologization of agriculture in general, as well as in ecological and social responsibility of agricultural enterprises, development of non-traditional and non-public forms of territorial protection of nature on private and municipal lands and prioritization of nature conservation projects aimed at steppe conservation. This Strategy is open for further discussion and represents a basic document for developing plans of action in specific areas identified.

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Content

Foreword

Steppes in Russia represent one of biomes being most affected by economic development, most actively used, least protected, least supported financially, most represented in the Red Data Books, most important for food security provision of the country and protection of its productive lands from desertification and, last but not least, one of the most vital biomes for historic and archeological heritage conservation.

Steppes as well as steppe animal and plant species are a vital component of landscape and biological diversity and natural heritage of each and every country. The trouble is that the former steppe cover of Russia has become very scattered… Until now, efforts related to steppe nature conservation have been totally incommensurable with the threats they face, both in terms of their scale or the emphasis.

It should be admitted that there are reasons of this incommensurability. Indeed, it is difficult to provide steppe ecosystems with decent protection — due to their natural peculiarities and their specific usage and legal status or lack of public consensus in respect of steppes' value. However, it should also be acknowledged that today steppes — as compared to all other biomes within the Russian territory — have come too close to a dangerous point after which there will be no comeback.

We cannot claim that this is a new phenomenon. This situation emerged as early as by the beginning of the 20th century and since then there have been no improvements. Many prominent scientists and environmentalists, to begin with G.A. Kozhevnikov and V.V. Stanchinsky, have seen the emerging threat to steppes and recognized the need of intervention. However, the problem is that there is a gap between recognition of a threat and practical interventions and, in fact, all attempts to bridge this gap in the past century were unsuccessful.

As we all now, we live in an interesting time… Perhaps, for the first time in half a century or even more economic pressure on steppes has decreased, which gives us hope that a lot can still

be conserved and restored. On the other hand, the impact of most of permanent threats has decreased only for a short time, and some of them have disappeared only to give way instead to a whole set of entirely different new threats or well-forgotten old ones, connected, for example with private ownership of land. Probably all this altogether has led to the emergence of an active public movement for steppe ecosystems conservation. In the last decade this movement acquired certain institutional traits. Since 1997 scientists concerned with steppe problems regularly meet in the premises of the Steppe Institute in Orenburg to discuss the issue of "Northern Eurasia Steppes", and since 1998 Steppe Bulletin — an edition specifically devoted to steppe conservation and restoration — has been published.

In addition to some practical achievements as well as practical failures a common information space and common understanding of the situation and problems have been developed, and it has become clear that we are in need of a common strategy underlying Russian steppe conservation activities.

Such a strategy is needed by us as an environmental community in order to set up our priorities since our own capabilities are limited; to serve as a mutually agreed basis for our relations with public authorities, business circles and international community; to set a certain level of understanding of the situation which would serve as a point of departure for future efforts. However, this strategy is needed by the state as well since the state is obliged to protect steppes as one of the most important components of the national natural heritage but is unable to do it without our help. It is needed by agro-business, since if it does not want to be perceived as nature-killer it will have to take care of steppe ecosystems that ensure soil fertility of the main productive segment of the Russian agricultural lands. It is needed by major financial donors of nature conservation projects in order to increase efficiency of their investments and to reduce the risk of their wastage.

The need in steppe conservation strategy has been voiced several times in the last decade and a half within the environmental and business community. Its practical development has been initiated by the Biodiversity Conservation Center and the Sibe-

rian Ecological Center, non-governmental organizations (NGOs) that prepare Steppe Bulletin for publication and possess certain experience in carrying out practical activities in the field of steppe ecosystems and species conservation. The first version of the Strategy and supplementary materials have been prepared by I. Smelansky and proposed for discussion to the leading Russian experts in the field of steppe studies and conservation. These materials were discussed for several months in 2006 through E-mail as well as at the expert meeting held in December 2006. During this process many substantive additions and changes to the text were suggested. Active participants formed a team that has prepared the presented text of the Strategy taking into account all relevant amendments and comments.

It is important to note that during the debate all disputable issues have been withdrawn, settled or postponed for further discussion, which gives us reasons to insist that the Strategy in general represents the views of all those who have taken part in the discussion.

Naturally, we do not assume that this text is final and indisputable. There is no doubt that many provisions of this Strategy might be supplemented or improved. Due to several reasons some qualified experts have not taken part in the discussion, and we hope that they will be able to participate in the Strategy review and updating.

Nevertheless, the Russian Steppe Conservation Strategy in its present form adequately reflects the view of a considerable segment of the expert community and existing environmental organizations. We hope it will serve as the basis for public movement consolidation in the field of steppe conservation and will become a useful tool for better understanding of the very idea of steppe ecosystems protection by state management bodies and institutions and NGOs and will guide relations between different groups of the Russian society, international and national partners.

Whether the Strategy is capable of fulfilling its intended role depends not on the quality of this document alone. To a great extent, success of this Strategy will depend upon the activity and efficiency of our own efforts as well as implementation of

action plans on specific issues identified and its integration in the ecological policy of the state and that of international organizations. In the final run, the Strategy would be considered successful only if it brings about real improvement in the situation of steppe ecosystems and species in Russia. We look forward to your participation and wish you success!

Please, send proposals and recommendations which could help improve the content and structure of the Strategy to the following addresses:

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RUSSIAN STEPPE CONSERVATION STRATEGY

Preamble

Within the framework of this document we will focus on steppe ecosystems. In doing so it is important to emphasize some issues that will help better understand the Strategy:

a) The notion of steppe ecosystem is different from the steppe geographical (natural) latitudinal zone: on the one hand, a steppe zone comprises a whole set of different ecosystems among which steppes, in fact, at the present moment do not prevail in terms of their areas, and on the other — steppe ecosystems can be found beyond the "titled" steppe zone, including in high belt mountain countries' systems that have no nature of latitudinal zone.

b) Within the meaning of this document we give a rather broad interpretation of steppe ecosystems, which includes some landscape complexes from semi-humid to semi-arid ones, i.e. forest steppes and semi-deserts, steppe shrub thickets, ecosystems of different types of saline lands connected with steppes, etc.

c) Speaking of steppe ecosystem we do not limit it by vegetation community, but include all components of the ecosystem. We also do not limit our understanding by any relief or area peculiarities.

All steps proposed are of medium-term nature, covering the period of no more than a decade. In fact, we expect that after 2015 the Strategy will be reviewed.

Need in the Strategy

As any other biome, steppes are unique and non-renewable and play a functionally important and indispensable role in the biosphere. However, if we look at the reduction of the area covered by natural ecosystems, we will see that among all biomes of the temperate belt not only of Russia or even Eurasia, but of the entire world as well steppes have happened to be most affected by

economic activities (Groom et al., 2006; Tishkov, 2005; Chibilev, 1998; Henwood, 1998). A similar result can be obtained if we compare biomes in terms of endemic and sub-endemic species that have disappeared or have lost their landscape value during a historically meaningful period of time (approximately since the 17th century).

Many species related with steppe biome have become extinct by now, have been drastically reduced in numbers, or have become related with man-made ecosystems where their very existence totally depends on human activities. The remaining sites of steppe ecosystems are rarely big enough to support viable populations of many large and mobile vertebrate animals. Steppes as the target of nature conservation activities require:

— Continuous external influence which would compensate them for the absence of some key species;
— Adoption of some special nature protection measures not only within the protected areas but on the exploited lands as well.

A critical state of steppes and specific feature of conservation explained above justify the need to develop a special strategy for conservation and restoration of steppe biome as a component of biosphere with all its natural diversity.

Current state of steppe protection

It would seem that steppe conservation should be one of the top priorities of conservation systems of those countries where steppes tend to exist; but in fact steppes represent one of the least protected biomes of the temperate belt. According to IUCN World Commission on Protected Areas estimates, herbal ecosystems of temperate latitudes represent the least protected biome of all 15 land biomes identified in the world: just about 1 per cent of the area of this biome lies within the borders of protected areas (PAs) (Henwood, 1998).

In Russia, as in other countries, steppe ecosystems are not provided with any sufficient degree of territorial protection. Out of 100 Russian national strict nature reserves (zapovedniks) only in 10 steppe sites occupy a prominent share of the total area and in another 12–14 there are insignificant steppe fragments confined to specific subtracts or relief positions. Out of 35 national parks

steppes are more or less represented in 4. At the same time, the size of steppe sites with a protected regime does not exceed several thousand hectares and usually such areas are much smaller. In general, the share of grasslands in the Russian zapovedniks and national parks (among which steppes represent only a portion, even if a major one) amounts to just over 1 per cent (while 80 per cent of the area is covered by forests, medium-range mountains and highlands). Just 0.11 per cent of steppe latitudinal zone and steppe altitudinal belts area is provided with protection, and this represents the lowest figure amongst all Russian latitudinal natural zones and altitudinal belts (Nikolsky, Rumiantsev, 2002). Accordingly, the area covered by national (federal) PAs in the steppe zone of Russia is twice as small as the average figure in the country (1.8 and 3.7 per cent, respectively), and even this small number consists mainly of non-steppe ecosystems.

Within the network of PAs of provincial significance (natural parks, wildlife refuges, nature monuments) steppe ecosystems are in no better position. In Russia in general data are unavailable — the fact that in itself deserves particular attention. Some attempts have been made to measure steppe representation in the PA networks of different parts of the steppe zone (Tishkov, 2005, 2006; Smelansky, 2004). In all provincial PA networks analyzed steppe ecosystems have turned out to be less provided with protection, and this have been seen both in the provinces where steppes have been virtually destroyed (Rostovskaya Oblast, lowland part of Altaisky Krai), and in the regions where they continue to occupy a prominent place in landscape (Chitinskaya Oblast, Tyva Republic, foothill part of Altaisky Krai). Provincial PA networks include a disproportionately small share of steppe areas both in terms of the number of sites and in terms of their total area, and in any case it is impossible to say that the existing PA network is capable of maintaining steppe ecosystems' biodiversity in a sustainable way.

As far as steppes located outside PAs are concerned, it should be noted that in Russia there are no regulatory acts or state programs aimed specifically at their protection; on the opposite, there is a number of legal norms that actually facilitate destruction of steppe ecosystems and block their spontaneous restoration.

Therefore, it should be admitted that steppe ecosystems despite their top priority in the global nature conservation agenda are too weakly protected in the Russian Federation.

The analysis of conservation projects financing in Russia from 1990s to early 2000s performed under a GEF project has demonstrated that just a small portion of foreign and international donors' funds has been allocated to steppe regions and even a much smaller share has been actually used for steppe ecosystems conservation (Tishkov, 2003a). In recent years the situation in this field has somewhat changed for the better, and in 2004–2007 several projects were launched or were to be launched that helped to attract more or less considerable funds for the Russian steppe zone and even, particularly, for steppe ecosystems conservation activities. At least, we should refer to a TACIS project "Sustainable Integrated Land Use of the Eurasian Steppes" (7 million Euro for a period of 3 years, out of which Russia will receive less than 3 million, with 200 thousand already used for preparation of the project proposal), a UNDP/GEF projects on WWF Global 200 eco-regions Daurian/Mongolian Steppe and Altai-Sayan Mountain Forests (about 1 million and nearly 3,5 million US dollars in the form of direct financing, respectively) and a possible UNEP/GEF project "Development of territorial protection of biodiversity on the basis of land use ecologization in the old developed Russian regions in the course of land market establishment" (the sum requested amounts to 14 million US dollars, with uncertain prospects of securing these funds). Some other major projects are implemented in the steppe zone of Kazakhstan, Ukraine and Mongolia, although they do not involve Russia.

However, it is not the amount of secured funds that matters most but an adequate understanding of problems and correct identification of goals and objectives. There are concerns that a large portion of funds allocated for major projects will be used inefficiently, in any case in terms of their influence on the situation with steppe conservation.

In the last 5–10 years there have been numerous attempts to identify the most common problems and priorities in the field of steppe conservation and some important suggestions on strategy development have been made (for example, Mirkin et al.,

1998; Elizarov et al., 1999; Tishkov, 2003a, b; Chibilev, 2004), although a clear all-Russian strategy has not been elaborated so far despite a well-recognized need in its elaboration and an established basis for it.

Steppes peculiarity from conservation point of view

Distressing state of steppe ecosystems can be explained by the fact that on the most part of their area the use of steppes for agricultural purposes results in their destruction and replacement by farmlands (plowing fields, gardens, vineyards). In fact, in Russia this process has started a long time ago, and as a result agro-landscapes consisting of very large fields and forest strips that divide them now occupy a major part of the plains in the geographical steppe zone, as well as that of steppe intermountain depressions in the mountains of South Siberia (such as Kuznetskaya, Kuraiskaya, Minusinskaya depressions).

Intensive agrarian usage is supplemented high settlement density in the steppe zone which in itself represents a factor of steppe ecosystems disturbance and a threat to many species related with them.

Public mentality phenomena represent an important although rarely noticed reason as well (undoubtedly connected with material circumstances and with the history of steppe development). Russian society lacks understanding of particular importance and significance of steppes as an ecosystem with their internal regularities. Steppes (as compared to forests, for instance) rarely make up the target of public attention, and society does not look at them as something that has its own independent value (Levykin, Chibilev, 2002). Consequently, steppes' particular importance is recognized neither in the existing pattern of nature use (particularly, in agriculture, particularly in the process of planning and management), nor in the natural resources legislation. The latter, in which steppes are not even mentioned as such, in certain cases complicates the possibility of their conservation and restoration on farmlands. The existing and newly established legal and economic mechanisms, at best, do not stimulate sustainable agro-steppe landscape restoration and, at worst, provide

incentives for their extensive development and destruction (Smelansky, 2001; Krassov, Luzhetskaya, 2002–2003).

Is should be also emphasized that in contrast to land cultivation in all its manifestations the second leading branch of agriculture — animal husbandry — does not present a deadly threat to steppe ecosystems in itself. Livestock grazed in steppes replaces wild ungulates (or supplements those that still remain there — for example, in Dauria, Kalmykia and mountain steppes of Altai) and functions in fact as a component of a semi-natural steppe ecosystem. With the rare exception, livestock grazing, as well as haying can be a significant factor of this ecosystem's disturbance, but not the reason of its disappearance. However, all this is true only when steppe is used as a natural pasture or hay grassland. "Improvement" of pastures and hay grasslands which is in fact equivalent to their plowing and replacement with perennial herbs (not to speak of annual fodder plants that are no different — from ecological point of view — from usual cereal crops) represents quite another case. Therefore, the border lies not between the branches of agriculture but between the ways of steppe landscape usage, i.e. performed or not performed direct destruction of the steppe ecosystem.

Major factors affecting steppe conservation

Ecological and land-use factors

1. Even sustained steppe ecosystems in Russia are practically everywhere affected by agricultural activities, particularly by their use as pastures and periodic steppe fires (frequently also resulting from steppes' use for pasturing), and to a less extent — by haying. This is typical not only of some segments of the European part and Western Siberia integrated in the agrarian landscape, but of mountainous steppes of Altai-Sayansky mountain region as well.

2. In itself, grazing rarely has an irreversible impact up on the steppe ecosystem, with the only exception — i.e. overgrazing on sands, steep slopes and saline lands. In all other cases even the most serious overgrazing leads rather to the disturbance, than to destruction of the ecosystem. Usually, grazing induced degrada-

tion of steppe vegetation is not accompanied by the loss of plant species making the community, although they are not seen in the aboveground level. Even decades spent in the depressed state due to overgrazing do not deprive the community of the restoration capacity. Haying does not have irreversible implications either.

3. Steppe fires represent an important factor. Their effect upon steppes is disputable and is a matter of a lengthy discussion. Their effect depends on the season, the state of vegetation and weather conditions. Obviously, they can lead to depression of many species, possibly even to disappearance of some species making the community (mainly shrubs, and semi-shrubs, some insects and birds). But even very big steppe fires occurring in the worst season do not have disastrous consequences and never lead to the disappearance of the ecosystem as a whole. Usually, the evident effect of a steppe fire is seen for a year and in exceptional cases — for 2–3 years. Besides, it is not only the extent of steppe fires that matters, but their recurrence as well. Anthropogenic fires occur much more often than natural ones and their effect is obviously more devastating.

4. On the other hand, grazing and/or steppe fires represent necessary disturbances, which are normal for the steppe ecosystem. Consequently, their total elimination will result in ecosystem's degradation and sometimes to its actual disappearance (replacement with another type of ecosystem what is irreversible without special restoration efforts).

5. The only devastating effect on steppe is produced by its direct extinction which includes destruction of root-inhabited layer of the soil cover, which is produced by different types of agro-technical activities, particularly by plowing (not only for crops, but also for fodder and afforestation) as well as mining. It should also noted, in particular, that plowing destruction of the steppe ecosystem is perpetuated by the establishment of an artificial ecosystem instead of the steppe one (crop or forest).

6. Viability of many large steppe vertebrate populations are relatively independent of natural vegetation presence. As we all know, steppe ecosystems have lost, to a large extent, their distinct landscape significance and remain only as fragments within the agrarian landscape. This situation has continued at least for

some 100–300 years. As a result, some species of vertebrates that have formerly lived in steppes have become extinct (for example, European wild horse and aurochs). On the other hand, populations of many large birds and mammals (to a less extent) during this time — through strong press of natural selection — have managed to adapt to a new environment and become related with this agricultural landscape in general, rather than with steppes themselves. Usually, they continue to use lowly disturbed steppe areas as well, but only as stations within their life cycles (e.g., as a part of individual home range or stop in seasonal migration routes). Of critical importance are those biotops that usually are not associated with wildlife and usually are not viewed as targets for conservation activities — degraded pastures, sown fields, dumps and other dumping grounds, barns, watering places, and farms areas, etc. Abandonment of such agricultural habitats leads to an unexpected distress of populations of some endangered and vulnerable species, such as steppe eagle, imperial eagle, golden eagle (to some extent), saker, long-legged buzzard, great bustard, sociable lapwing, black-winged pratincole (for Russian examples see: Kariakin, 1998–1999; Khrokov, 2000; Solomatin, 1997; Belik, 2004a, b); this effect is even expected for saiga (Abaturov et al., 2005), as well as some suslik species. Due to these reasons, evaluations of steppe areas based on vegetation and invertebrates data, on the one hand, and large vertebrates data (particularly birds), on the other, may differ drastically.

7. On a major part of its area steppes in Russia currently exist in the form of small patches dotted through the agrarian landscape. Evidently, there are exceptions, but they are extremely few. For example, in Samarskaya Oblast (with the area of more than 5.3 million ha), there are no more than 5 compact steppe sites with the area of 1000 ha, and not a single one with the area exceeding 3000 ha. In Altaisky Krai (with the total area of about 16.8 million ha) steppes have survived somewhat better, although even here there are only 10 known steppe tracts (including old-fields, old fallow crops, and small forest areas inside) that come close to or exceed 5000 ha. This explains landscape incompleteness of an overwhelming majority of steppe sites — extremely rarely they include full ecosystem's catena and a representative set of landscape

elements. It should be noted that the importance of catena structure represents one of the most characteristic features of steppe ecosystems on the landscape scale (Mordkovich, 1982).

8. With a resettlement source available, steppe ecosystems restore relatively easily and quickly after their full destruction. The speed and coverage of this process vary to a great extent depending on the steppe type and peculiarities of a particular succession. Obviously, a considerable share of steppe areas in entire steppe zone — from its forest-steppe to semi-desert segment — in fact represents old-fields, on which steppes have been restored after crops. After 20 to 50 years old-fields become real steppe ecosystems differing from the original ones only in their soil profile.

Social factors: legal, economic, political, etc.

1. Steppes' legal peculiarity consists in the lack of peculiarities. In contrast to forests or water bodies steppes do not represent an independent legal entity identified in a separate legislation and they are not regulated by any specific piece of law. Relations between the society and steppes are regulated exclusively by the land and agricultural legislation. As mentioned above, legal peculiarity of steppe ecosystems is connected with the fact that they predominantly fall in the category of farmlands and consist of grazing lands and to a considerably less extent — of hay grasslands.

2. In terms of property rights steppe ecosystems are usually located on lands (plots of land) owned by individuals or legal entities or disposed by municipal authorities (in the latter case property rights can belong to the local municipality itself, to an entity of the Federation, or the plot can be in an undivided state property, which is a common practice). Usually, lands occupied by steppe ecosystems are characterized by high diversity of right holders and forms of property.

3. Particular steppe sites differ from each other considerably in terms of persons that hold property rights to them as well as in terms of interested persons and authorities. Usually, we deal with a situation when a relatively large steppe site is divided between several right holders having different rights and interests. Meanwhile, there is no single or basic hierarchic structure that could regulate the use of the territory in general (like forestry authorities

in respect of plots of the forest fund). Presumably, territorial planning or land resources management bodies or local authorities could have claimed this role, but the fact that such an alternative exists demonstrates that in practice such regulation rather is lacking.

4. Land deficit and use of every area (even if not intensive) is typical. Even the agricultural crisis of the 1990s has led to withdrawal from agricultural use on the average of only 10 per cent of areas within the Russian steppe zone. But even areas that are not used actually have formal right holders interested in their rights' preservation. Among other things, this is seen as one of the obstacles blocking the establishment of new "strong" PAs (particularly zapovedniks) for steppe ecosystems conservation.

5. In terms of economy steppe ecosystems are mainly used as a means of production in cattle-breeding and therefore their fate generally depends on the developments in this economic sector in Russia.

6. The Russian society generally perceives steppe ecosystems as having no imminent internal value, and thus their degradation and disappearance does not become a matter of concern. To be more precise, such phenomena are simply "not recognized" by the society and even if they have been recognized, one could expect that they would not have been perceived as totally negative. Today's idea of steppe conservation does not reflect social demand; in fact it rather contradicts the overwhelming public perception.

Thus, in order to ensure the fullest possible conservation of steppe ecosystem with all its functional elements it is necessary to maintain traditional agricultural activities as well, including both the use of steppe sites and conservation of agriculture induced habitats pattern on landscape scale. Possibly, in no other biome this combination of protection and use looks so acute — not just because total termination of economic activities in most cases is undesirable, but also because — due to steppe lands use peculiarities — it is difficult to find a territory on which all economic activities could be actually terminated completely.

Main threats

What endangers steppe ecosystems? Seemingly, at present there is no urgent major threat of critical significance for that biome (like large-scale transformation into arable lands of the 1950s or 1860–

1900s). At the same time, there is a set of vital threats that do not have universal significance but are of local importance. They include a usual set — plowing and other agro-technical effects, mining, agro-chemicals pollution, afforestation and fragmentation by infrastructure facilities. Usually, such threats are relevant to particular sites with the area of several thousand ha or less each and can endanger separate, although very valuable steppe tracts.

There are some potential threats as well. First and foremost, they include mass realization of private property to land as we have witnessed in Armenia and Moldova. This process involves the appearance of millions of small plots, which can lead to a considerable increase in the remaining steppe sites' fragmentation.

Steppe ecosystems located within the Russian territory are too diversified and are involved in very different socio-economic relations, so it will be incorrect to use just one list of threats and one scheme for all cases. To identify specific threats it seems practical to make use of the following characteristics: a) predominant type of steppe ecosystems; b) predominant type of farming; c) predominant forms of property rights to land and land relations; d) share of arable lands; e) main species of special conservation concern.

It is also possible to single out specific ecological and geographic situations and threats complexes:

1. Meadow steppes of the plain territories of the European part of Russia and a segment of Western Siberia represent a practically lost part of biome. These steppes have been destroyed most by transformation into arable lands, urban and rural development, while many species typical of them have become extinct. Currently, the most common threats include transformation into arable lands due to the change of property rights and investment in agriculture, infrastructure development and urban encroachment, mass recreational activities, spontaneous and planned afforestation. The intensity of these threats is high, inter alia because the share of natural and semi-natural ecosystems in landscapes is extremely small. Illegal hunting in itself presents the least threat to species, although mass removal of plants and animals from the wild as a result of recreational activities could be regarded as an important factor here. Indeed, this region first and foremost requires active restoration of steppe communities to replace the destroyed ones.

2. Mountain steppes of different types, mountain deserted steppes and plain semi-deserts (Caucasus, mountains of Southern Siberia, Kalmykia, southern regions of Trans-Volga), Dauria steppes (southern part of Chitinskaya Oblast) and, possibly, Buriatia steppes look more or less safe. The main threat here until 1990s presented overgrazing, while today there are practically no actual big threats. Some communities and species (frequently non-steppe ones, such as wormwoods of desert type and psammophyte desert communities) are first of all threatened by the reduction of agricultural activities (particularly, grazing). Currently, it is steppe fires that produce the strongest influence, but we regard the degree of their threat to steppe ecosystems as low (although they can be critical for some species' survival). The state of some species is adversely affected by the threat of direct human activities, particularly illegal hunting. In the short-term forecasts potential threats are of rather local nature. These include mining, hydro-facilities construction, local farming (frequently irrigated), etc. Probably, in this region it is most practical to combine steppe conservation efforts with support to pastoralism.

3. Genuine and dry steppes (frequently regarded as a xerophyte variety of genuine ones) in the zonal position — on plains and foothills (Russian and Western Siberian Plains, Southern Urals, as well as steppe landscapes of Altai, Sayany and other Southern Siberian mountains' foothills in Altaisky and Krasnoyarsky Krais, Khakassia and so on). This is the area of maximum development of large-scale farming, and it here that endless fields divided into cells 2x2 km each are located. Consequently, intact steppes have been destroyed practically everywhere, remaining on some 10 to 20 per cent of the total area. Currently, the main part of old-fields is found here. The list of threats in this region is particularly lengthy, and the situation here at present looks most unclear. Though there are no large-scale pressing threats, there is a number of local ones. Particularly, they (same as some opportunities) are connected with private investment activities development and with spontaneous restoration of steppe cover. Potential threats here are also less evident and may include resumption of tillage on lands that currently are not utilized and chemicals use growth.

Basic provisions of the Russian Steppe Conservation Strategy

Mission

Conservation and restoration of steppe biome as a full component of biosphere and a target of sustainable and economically efficient land use.

Goals

To provide long-term sustainable conservation of steppe biome in the Russian territory, which implies, in particular, the need to ensure sustainable preservation of the existing diversity of natural and semi-natural steppe ecosystems as well as the existing diversity of species belonging to steppes (and those related with steppes initially) within their historically established habitats.

Principles

1. The problem of steppe biome destruction has been evident in Russia for nearly two centuries and should be considered in the context of a deep-rooted cultural tradition. Therefore, public recognition of steppes' value and a related policy decision-making should take the priority over all other actions (changes in the legislation and administrative practice, economic measures, etc.).

2. In terms of practical activities, steppe conservation at this stage should be viewed as a part of the issue of biodiversity conservation on agricultural lands. In fact, whenever this issue is settled it would facilitate the provision of steppe biome conservation in Russia, since unless it is not settled no other actions would be able to ensure its long-term conservation.

3. The tools of steppe conservation should be flexible and opportunistic enough to take into account the variety of forms of property rights to steppe sites and a number of stakeholders usually interested in each site.

4. Steppe conservation and restoration measures should be based as far as possible on economic incentives for landowners and landholders.

5. Turning to the administrative issues, the main focus should be placed on agricultural and land management institutions, as well as to territorial planning instruments since they actually affect the use and the status of steppe ecosystems.

6. The issue of some "flagship" steppe-inhabiting species preservation should be considered separately from that of steppe vegetation conservation, but must be closely linked with agricultural landscapes biodiversity conservation in general.

7. Specific schemes of action related to steppe ecosystems conservation should be specifically tailored to natural-economic regions.

Main areas

1. Providing steppes with the status of an entity perceived by society as having an intrinsic value, inter alia in legal regulation and administrative management.

2. Integrating econet principles and other conservation concepts in territorial planning and land management, promoting biodiversity-friendly land use techniques into agriculture and territorial development.

3. Increasing focus on grasslands within the framework of the state environmental policy and environmental NGOs, educational and research institutions' activities.

4. Raising status of natural forage grasslands in lands and agricultural management as well as in the state investment policy; making fair evaluation of natural forage grasslands resource value.

5. Targeting steppe restoration activities.

6. Researching understudied issues of steppe ecosystems management, their usage and economic value.

Main objectives

1. Political recognition and legal establishment of the concept of multifunctionality of agricultural lands.

2. Recognition and legal and institutional establishment of high nature value and significance of the largest tracts of natural ecosystems (grasslands specifically) outside the State Forest Fund and the federal PA network.

3. Development, legal and institutional establishment as well as implementation of a conservation support schemes within the framework of the tax legislation, particularly the land tax issue.

4. Strengthening of Russia's participation in international programs involving agricultural biodiversity conservation with an immediate task of developing and implementing a long-term international program related to conservation of the elements of agro-biodiversity of European significance in Russia.

5. Steppe ecosystems protection as an integral part of land management, particularly agricultural land management.

6. Establishment of a system linking the investment policy in agriculture with both protection of biodiversity within agricultural lands and development of schemes of environmental responsibility of companies that hold and/or use non-forest ecosystems.

7. Development of schemes of ecological responsibility of companies that use non-forest (grasslands specifically) ecosystems.

8. Inventory-making of viable steppe tracts actually existing in Russia.

9. Within PAs network: mainstreaming and prioritization of grasslands conservation, improving quality of grassland ecosystem management.

10. Promotion of steppe conservation ideas in the educational process at different levels.

11. Making social climate and public opinion favorable for steppe conservation.

Desirable activities

Law and administrative practice

1. *In the field of the land and agricultural legislation.*

Political recognition and legal establishment of the concept of multifunctionality of agricultural lands, including:

- Recognition of high priority of state support of those agricultural lands' functions producing public, not private values;
- Legislative support of the opportunity to combine targeted designation of lands located within the borders of one land plot or to expand agricultural lands designation in order to take into account their role in biodiversity conservation;

— Consideration of multifunctionality of agricultural lands and concerns of biodiversity conservation on agricultural lands in implementation of federal agricultural policies[1] and a relevant national project;
— Removal of those provisions from land legislation that define arable lands priority over other types of lands (leveling of land types taking into account that due to economic reasons arable land has a natural priority and does not need any additional non-economic legal preferences), supplementing it with new norms intended to ensure protection of pasturing and hay grasslands;
— Raising the practice of conservation easements and restrictions as a flexible tool for ensuring specific regimes of lands plots use;
— Full introduction of agricultural lands in the State Land Cadastre and the Unified State Register of real property rights and dealings with it.

2. *In the field of conservation legislation.*

Recognition and legal and institutional establishment of high nature value and significance of the largest tracts of natural ecosystems outside the State Forest Fund and the federal PAs network, including:

— Legislative establishment of special rights of the Russian Federation and the Federal Subjects (property rights only optionally) to relevant lands of federal and regional significance, creation of a special management and use and disposal rights change regimes for such lands, possibly using the concept of ecological framework;
— Designation of an administrative body (within the framework of the existing systems established by the Ministry of Natural Resources or the Ministry of Agriculture), responsible for conservation of such valuable lands of federal significance;
— Focus on these steppe tracts in the process of federal PAs establishment.

[1] Currently these include "Development of the Russian Rural Areas Until 2010" (2002) and "Conservation and Restoration of Agricultural Lands' Soil Fertility and Agro-Landscapes as Russia's National Heritage for 2006–2010" (2005) Federal State Programs.

Also related to this field:

— Development and approval of recommendations related with farmlands' biodiversity conservation in UNESCO biosphere reserves (considering them the most adequate PA' form for that purpose);
— Development and approval of standards for assessing damage of natural ecosystems on agricultural lands.

3. *In the field of tax legislation and enforcement:*

— Support of the practice of tax incentives for land tax on agricultural lands occupied with natural ecosystems (some example of such practice are available by this time);
— Likewise — in respect of PAs of regional and local significance;
— In the longer term — linking the state of natural ecosystems to the land tax rate so that this rate increased with deterioration of ecosystems' state and vice versa.

4. *In the field of international relations and international law.*

Strengthening of Russia's participation in international programs involving farmlands' biodiversity conservation with an immediate task of developing and implementing a long-term international program related to conservation of the elements of agro-biodiversity of European significance in Russia, including:

— Compliance with commitments taken by Russia in respect of biodiversity conservation;
— Establishment of a Pan-European Ecological Network, identification and conservation of high nature value farmlands — important bird areas, important plant areas, prime butterfly areas, sites meeting the criteria of the Emerald Network, etc.;
— Russia's joining to the Bern and Bonn Conventions, implementation of Global Strategy for Plant Conservation and Global Strategy on Invasive Alien Species;
— Russia's joining to initiatives launched within FAO framework.

5. *In the field of the state investment policy (including state regulation of private and international investments):*

— To make sure that investments in agriculture and land market development in Russia are related to the state of agro-

biodiversity as the basis for sustainable development of agriculture;
- These investments should also support and encourage the development of ecologically responsible agriculture in Russia;
- Biodiversity protection should be included in the set of basic criteria for selecting investment targets in agriculture.

6. *Development of a system of accounting for the multifunctional nature of farmlands:*
- Development and introduction in the reporting and accounting practice facilitating identification of natural ecosystems among different types of agricultural lands;
- Development of a system of payments for ecosystem services provided by natural ecosystems on agricultural lands.

Lands management

1. Development and implementation of a program obliging the state and allowing stakeholders to pay for non-use of some plots within agricultural lands (like the Conservation Reserve Program in the USA or similar programs in the EU countries). In particular it is required to keep away from plowing the old-fields, which were abandoned during collapse of agriculture in the mid-1990s, as well as ensure their use as pastures.

2. Analyzing and support of initiatives launched in Russia in respect of biodiversity conservation on farmlands and development of formal recommendations of the Ministry of Agriculture and the Ministry of Natural Resources on that basis.

3. Development and support of adaptive landscape land planning in that points which facilitate biodiversity conservation on agricultural lands. In particular, it is required to establish contacts with experts active in this field of agricultural science and to develop common approaches to the issue of making land planning more conservationally focused.

4. Support of initiatives taken by land holders to transform cost-inefficient crops into erosion-prone forage fields, paying particular attention to the use of an agro-steppe method.

5. Making land planning more conservationally focused, particularly development of a model plan for transforming cost-inefficient crops into pastures at the regional and farms level, which

would take into account the need to conserve and restore steppes and ecosystem network in general.

Relations with companies

1. Support and development of "eco-labeling" systems for agricultural products (particularly for foodstuffs sold on the retail market), which take into account not only proper environmental characteristics but biodiversity conservation considerations as well.

2. Development and introduction of a system of ecological responsibility of agribusiness, pharmaceutical and mining companies that make use or dispose of land sites occupied by grasslands ecosystems.

3. Strengthening of such companies' participation in financing projects related to steppe ecosystems and species conservation.

Information and research

1. Development of a system of criteria and inventory making of major steppe tracts in Russia, verification of their provision with a special status (PAs, or high nature value farmlands — HNVF, important bird areas, important plant areas — IBA and IPA, etc.).

2. Provision of recurrent nationwide monitoring of major steppe tracts and their biodiversity.

3. Support of applied studies in the following priority areas:

— Study of non-traditional usage methods such as intensive use (including populations maintenance) or semi-domestication of economically valuable wildlife (marmots, wild ungulates, great bustard, etc.);
— Study of important but yet unclear steppe ecosystem management issues, such as optimal frequency, time-frame, and methods of steppe fires, steppe tract fragmentation influence on biota in the short and long term, finding out necessary and sufficient connectedness between steppe sites for their long-term conservation, influence of landscape catenas incompleteness on the entire ecosystem, etc.;
— Study of the role of major economic impacts upon steppe from the ecosystem point of view, relating to grazing and hay cuting (including effect of their shortage);
— Study of economic mechanisms facilitating a sustainable use of steppe ecosystems.

4. Support of studies of the cultural aspects of existence and use of steppes in Russia.

Protected area system development

1. To seek to increase the share of the types of ecosystems (particularly steppes) that are less represented within the PAs system, to develop methodological instructions for provincial conservation bodies.

2. To develop and formally adopt guidelines on steppe ecosystems management within PAs.

3. To develop and adopt methodological recommendations on farmlands and steppe ecosystems conservation within the framework of UNESCO biosphere reserves, considering this form of PAs to be the most adequate for steppe conservation purposes.

Education

1. Ecologization of both higher and secondary special agricultural education as well as the system of professionals and managers' training.

2. Use of the informational and methodological service of the Ministry of Agriculture of Russia in order to train agricultural landholders in the basics of steppe-friendly agricultural production.

3. Establishment of local training courses and development of local components of school programs for steppe regions that place steppe knowledge in the educational context and reflect the tasks of steppe conservation.

4. Support of cooperation between the expert community and agricultural science organizations (Russian Academiy of Agricultural Science institutes, research institutes of the Ministry of Agriculture, agricultural universities) and joint development of methodological guidelines on sustainable farming.

Social climate and public support development

1. Awareness-raising of the historical and cultural reasons of steppe conservation taking into account the traditions of indigenous peoples and old residents of the Russian steppe regions.

2. Development and support of eco-tourism in steppes both inside and outside national parks (subject to priority of steppe conservation goals over tourism profit-making considerations).

3. Establishment in Russia of a large network of steppe conservation experts, particularly among stakeholders who make direct use of steppes that affects their state.

4. Identification and demonstration of national and international significance of steppe conservation in Russia.

Practicability of measures proposed

1. Currently, the legal and administrative practice development trend is in fact quite the opposite to the desired one.

2. Establishment of alternative biodiversity protection systems on farmlands is complicated by the existence of legal barriers such as lack of a flexible system of liabilities and servitudes and property rights transfer.

3. The main international agent that could make Russia adopt more ecologically suitable norms of farmlands use is the European Union. However, we could hardly expect that EU would take any steps in this direction unless it reconsiders its position in respect of investments in agriculture.

4. In recent years we have witnessed an increase of governmental and private investments in agriculture in Russia. Although investments create many threats to farmlands' biodiversity (see above), there is a possibility to use a portion of this capital flow for financing conservation on agricultural lands, including steppes.

5. Similarly, Russia's joining to Kyoto Protocol although being a matter of concern at the same time opens new opportunities for conserving steppe soils and steppe vegetation since Chernozem and Kashtanozem soils seems to be an important carbon depot.

Priority tasks of NGOs

1. Development and introduction in the country of the concept of agricultural lands multifunctionality.

2. Support of activities aimed at the inclusion of this concept in the legal space.

3. Practical activities aimed at the creation of alternative farmlands' biodiversity protection systems (direct relations with landholders, municipial PAs, tax benefits at the municipal level, etc.).

4. Practical activities related to inventory making of the most valuable steppe tracts and most valuable natural sites located on agricultural lands in Russia — HNVF, IBAs, IPAs, etc. and related public awareness-raising activities.

5. Development of "a common space" on the issue (publications, web-sites, meetings facilitating contacts between different stakeholders).

6. Establishment of a new formal entity in order to strengthen NGOs' role in steppe-related issues — an NGO coalition based on the principle of equal relations between all the stakeholders.

7. Focusing attention (inside the country and within international organizations) on steppes as a natural phenomenon requiring protection.

8. Elaboration of relevant methodological approaches to and development of direct relations with those who make investments in agriculture.

9. Public monitoring of implementation of international environmental conventions and other non-commercial international obligations in Russia in order to avoid their negative impact on the state of steppe ecosystems:

- International conventions on desertification and climate change control (including the Kyoto Protocol) are a matter of particular concern since they encourage mass afforestation, especially that of arid regions, which in Russia are represented only by steppe regions;
- It is necessary to examine the role of non-forest lands (including steppes) as a carbon depot in order to take these lands into account in activities carried out within the framework of the Kyoto Protocol.

Proposals for international agreements, organizations and donors

1. Development and implementation of a long-term international program to conserve in Russia the elements of agro-biodiversity of the European significance, including:

- Russia's inclusion in the Pan-European Ecological Network, identification and conservation of HNVF — keystone natural ecosystems meeting the criteria of the Emerald Network,

important plant areas, prime butterfly areas and other important natural areas, support of identified important bird areas;

— Russia's accession to the Bern and Bonn Conventions, implementation of Global Strategy for Plant Conservation and Global Strategy on Invasive Alien Species , and other international agreements affecting agro-biodiversity, meaningful participation in the IUCN Red List updating;
— Support and encouragement of implementation of commitments taken by Russia in respect of biodiversity conservation and indigenous traditional farming patterns restoration.

2. Financial support of inventory making of particularly valuable natural sites on farmlands in Russia meeting the criteria of HNVF, IBA, IPA, etc., as well as desirable activities enumerated above.

3. Taking account of farmlands' biodiversity conservation concerns or at least of that of sites of special importance or status (HNVF, IBAs, IPAs, PAs of IUCN III-VI, etc.) in appropriating foreign investments in agro-business (in case of public investments — to the full extent; in case of private investments — with the help of the system of benefits and non-tariff regulation):

— Particularly for the EU countries: to harmonize the requirements set for making investments in Russia's agro-business with the EU internal norms (in the context of EU Common Agriculture Policy).

4. Allocation of financial resources specifically for steppe conservation activities; in doing so it is desirable to build upon the forces that exist in the country without establishing any competitive structures or processes.

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