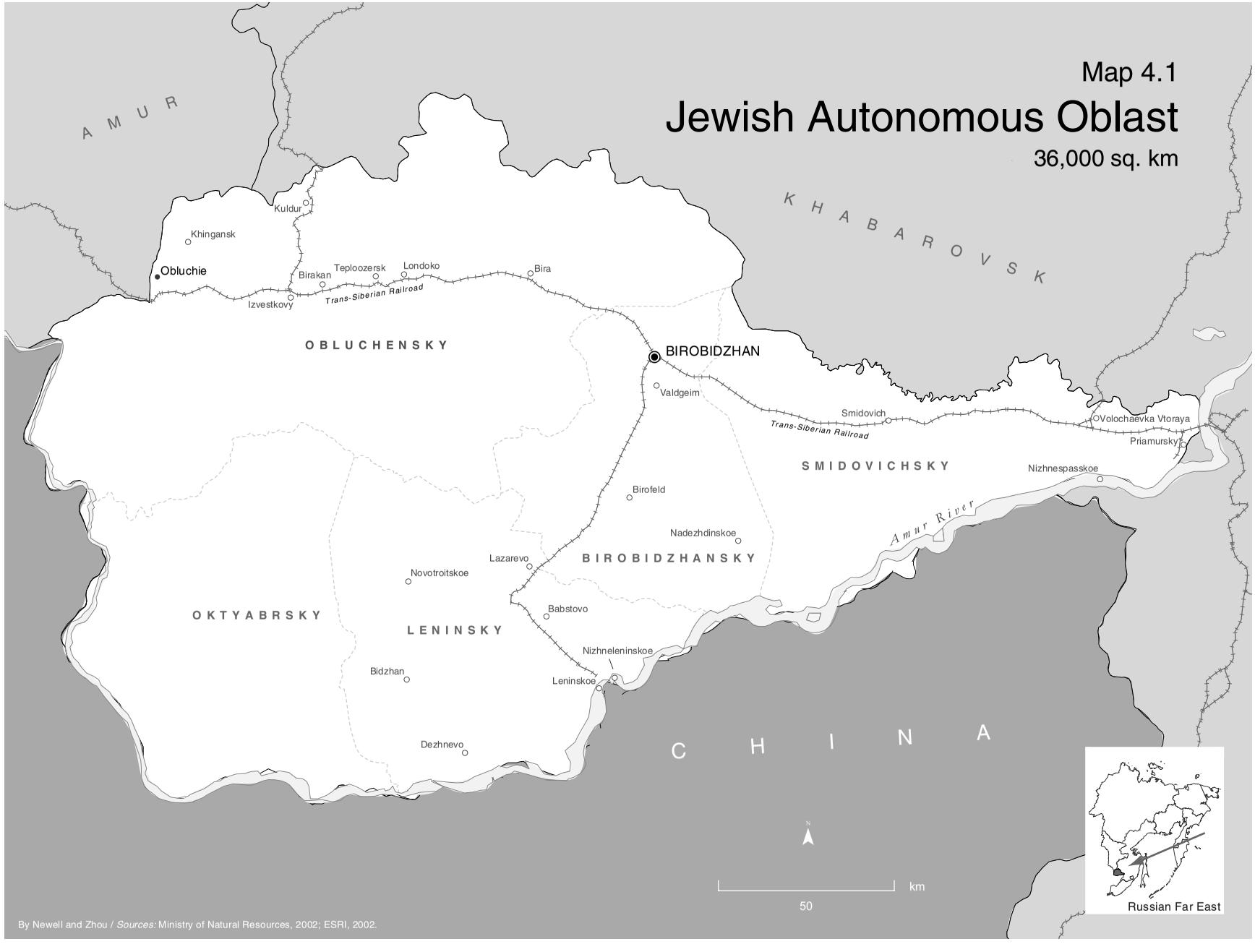


Newell, J. 2004. The Russian Far East: A Reference Guide for Conservation and Development. McKinleyville, CA: Daniel & Daniel. 466 pages

CHAPTER 4

Jewish Autonomous Oblast

Location

330 km from west to east and 200 km from north to south, the tiny Jewish Autonomous Oblast (JAO) borders the Amur Oblast to the west, Khabarovsk Krai to the north, and China to the south across the Amur River.

Size

36,000 sq. km; slightly larger than the Netherlands.

Climate

JAO's relatively mild climate is similar to that of neighboring Amur Oblast, and thus more suited to agriculture than most other parts of the RFE. Winter temperatures range from –5°C to –40°C.[1] Annual precipitation in the plains is between 400 and 450 mm, with 75 percent occurring during summer.

Geography and ecology

The JAO is divided into two main geographical regions: mountains and plains. The Khingan-Bureya range runs along the western and northwestern part of the *oblast*. Other major mountain ranges include the Maly-Khingan, Sutara, Pompeevsky, and Shuki-Poktoi. The middle Amur plains cover the eastern and southeastern portions, which are blessed with four distinct ecosystems: Amur or Manchurian mixed and deciduous forests, Okhotsk-Kamchatka spruce-fir taiga forests, East-Siberian or Angara light conifer taiga forests, and Dahurian-Mongol steppe. The Bira and Bidzhan Rivers both begin in the mountains in the western part of JAO and flow south before emptying into the great Amur River, which forms the western and southern border of the *oblast*. The region's other major river, the Tunguska, flows through marshy plains and wetlands and also drains into the Amur. The average yearly water flow totals 226.4 cu. km. The rich *blackzem* soils of the lowlands in the south and southeastern parts of the JAO provide excellent agricultural land, which totals about 15 percent of the *oblast*'s land area.

Forests carpet 44 percent of the JAO, 17 percent (395,000 ha) of which are Group I forests. About 85 percent (5,579,000 ha) of these forests are coniferous, mainly Scots pine (*Pinus silvestris*), Ayan spruce (*Picea ajanensis*), Siberian spruce (*P. obovata*), and Dahurian larch (*Larix gmelini*). Broadleaved hardwoods make up the remainder and include Mongolian oak (*Quercus mongolicus*, 60 percent of the total). Uncontrolled clear-cut logging has destroyed vast areas of forests, particularly the valuable Siberian forests growing in the Birobidzhansky, Leninsky, and Oktyabrsky Raions. Today, most of these once-rich forests are secondary, relatively species-poor deciduous forests. Over 125,000 ha

of previously forested areas are now barren. Some of the forests have regenerated naturally. However, in the central and southern parts of the JAO, natural regeneration is slow, mainly because of past and present logging, land conversion for agriculture, and forest fires. Scientists estimate about 25 percent of old-growth forests remain in the region.

Flora and fauna

In the JAO four ecosystem types come together to create a rich diversity of flora and fauna, including 60 species of mammals, 280 species of birds, 7 species of reptiles, and 73 species of fish. The JAO, despite its small size, has over twelve hundred species of plants, including 178 rare and endangered species. Notable species include the Himalayan bear (*Ursus thibetanus*), Komarov's lotus (*Nelumbo nucifera* var. *komarovii*), and numerous endangered birds and fish.

Largest city

Birobidzhan (pop. 87,000).

Population

205,000. About 4 percent of the population is Jewish.[2] A third of the population still lives in agricultural villages. There are no indigenous peoples living in the JAO.

Political status

Established in the 1920s by Stalin for Jews who were persecuted or unwanted in western Russia and to attract wealthy Jews from overseas, the region has served as a buffer between Russia and China. Prior to their arrival, except for a few Cossacks and Koreans, the region, part of Khabarovsk Krai, was uninhabited.[3] In 1934 the Jewish population peaked at 20 percent. In 1991, as the Jewish Autonomous Oblast, the region became independent.

Natural resources

The JAO is rich in mineral resources, particularly for a region so small. Tin deposits of around 17,233 tons are found primarily in the Khinganskoe and Karadubskoe regions. Copper, zinc, silver, molybdenum, gold, and other mineral deposits are found in combination with the tin. Manganese and iron deposits are primarily in two large deposits at Bidzhanskoe and Yuzhno-Khinganskoe. Placer gold deposits (in estimated reserves of 1,570 kg) are found mainly in the Sutara River. The world's second largest deposits of brushite, with commercial deposits totaling 4.38 million tons, are also found in this region; much of the production comes from Brusitovy Quarry.[4] The region's Sounenskoe graphite deposit is also one of the world's largest.[5] There are seven deposits of brown coal, including a particularly large one near Birobidzhan. Initial geological surveys reveal considerable oil and

Key issues and projects

Loss of forest cover

Because of logging and fires, the forests are shrinking by about 1 percent every four years. Heavy logging at higher elevations has disrupted the water balance of the Bira River, affecting the lower, marshy regions that are productive for agriculture (see p. 192).

Placer gold mining

To diversify the economy, the JAO government is again opening up the region, in particular to placer mining, and hopes to expand production to 500 kg yearly. Of particular concern is the opening up of the Sutara and Pompeevka Rivers to mining (see p. 193).

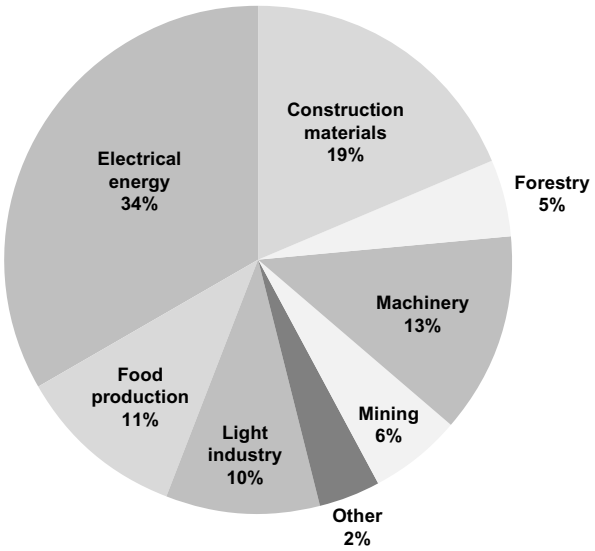
Rising interest in China

Chinese firms have interests in the region's timber, coal, and mineral resources.

Emigration

Since *perestroika*, thousands of the Jewish residents of the *oblast* have emigrated to Israel (see pp. 194–95).

Figure 4.1
Industrial production in the Jewish Autonomous Oblast, 1999



Source: Goskomstat, 2000.

gas deposits; reserves may amount to as much as 100 million tons of oil and 5 billion cu. m of gas.[6] Numerous gravel and sand reserves are used to make concrete and road construction materials. Large clay deposits are also used for a variety of construction purposes.

The region has fertile agricultural land primarily in the floodplains of the Amur, Bidzhan, and Bira Rivers. Arable land totals 161,000 ha.[7] Its close proximity to China makes the *oblast*'s shrinking forest resources attractive for logging and export. The Kuldur hot springs, famous throughout Russia, represent a considerable recreational resource.

Main industries

Energy generation, food production, and light industry, particularly the garment sector, have traditionally been the mainstays of the economy (see fig. 4.1). In Soviet times, the region also produced agricultural machinery. Analysts doubt that the machinery and light industries will revive due to competition from neighboring China, which can produce such goods more cheaply. The JAO government wants to expand gold, coal, and iron mining to diversify the economy. The *oblast* is also devoting financial resources to expanding the logging industry. Exports of raw logs to China are a major source of hard currency revenue.

Infrastructure

The Trans-Siberian Railroad and the Amur River system are two major means of transport for both freight and people. There is also a well-developed 1,900 km road infrastructure. A road across the Amur River has just been built, making it possible to drive from Birobidzhan to Khabarovsk in just two hours. The three border crossings (Nizhneleninskoe, Amurzet, and Pashkovo) with China, through which cargo and passengers travel, provide links with the Chinese cities of Tuntzian, Minshyan, and Syain, respectively. The airport connects Birobidzhan with other cities, and there are plans to modernize it and open a route with Tsyamushi in China.

Yuri Shibnev

A blue-and-white flycatcher (Cyanoptila cyanomelana) *feeds her young.*

Foreign trade

International trade does not play a large role in the economy, but trade with China is growing. In 1998, the official international trade turnover was under U.S.$10 million.[8] The other

major trading partner is South Korea. Major exports are garments and timber. In 1998, small logging companies exported about 50,000 cu. m of raw logs to China. The governor, Nikolai Volkov, has a reputation for aggressively seeking foreign trade and investment.[9]

Economic importance in the RFE

The JAO is important as a breadbasket for the RFE, where agricultural land is limited. During Soviet times, the region supplied grain, potatoes, meat, and milk to Khabarovsk Krai and northern regions of the RFE. The *oblast* also has large supplies of some scarce minerals, including brushite. Close proximity to China has given the *oblast* a new economic importance.

General outlook

Few realize how important the forests growing in the west along the Maly-Khingan and Sutara Mountain Ranges are in regulating water flow and maintaining water quality for the lower marshy plains in the east that are so essential for agriculture, the lifeblood of the region's economy. Forests used to carpet between 65 and 70 percent of the *oblast*, but the figure is down to 44 percent, and the forests are going at a rate of 1 percent every four years. Loss of forest cover has reduced the productivity of agricultural land by reducing the quality of the soil and threatens endangered species by reducing and fragmenting their habitat. Logging is a major reason for the declining forest cover, but conversion of forest land for agriculture is also a major contributor. An influx of Chinese capital to the timber industry has occurred since 1999 as Chinese firms hope to exploit the forests. Logging needs to be strictly controlled and limited to protect the remaining forests and help ensure that agricultural land remains productive. Reduced agricultural productivity will lead to increased wetland reclamation, particularly in the poorly protected Central Amur lowlands, which are, among other things, prime habitat for a host of endangered migratory birds.

With similar resources and geographies, the problems and prospects of the region resemble those of the neighboring Amur Oblast. Like Amur, the Jewish Autonomous region is faced with a declining agricultural production and the government response has been to subsidize the placer gold mining industry to diversify the economy (see table 4.1).

The regional government plans to continue to open up the central Khinganskoe belt, which is rich not only in gold but also in coal and tin. In 1999, the regional government spent nineteen million rubles, half on geological surveys of the region, half on exploration for gold. Gold mining began in earnest in the 1930s, when placer mines were developed along the Sutara River; this continued until mining ceased in the mid-1960s. The government hopes to raise gold production to half a ton—a significant increase from 1998 when only 90 kg were mined.[10] Ecologists worry that salmon

Table 4.1
Employment by industry within JAO, 1999

Industry	*N*
Education	8,542
Industry	6,417
Health and welfare	5,714
Administration	5,227
Transport	5,055
Agriculture	3,314
Construction	3,101
Culture and art	1,663
Communications	1,243
Credit and finance	803
Forestry	534
Science	342
Insurance	120
Total	***42,075***

Source: Goskomstat, 1999.

Yuri Shibnev

Small forest rivers are critical habitat for mandarin ducks (Aix galericulata)*, scaly-sided mergansers* (Mergus squamatus)*, Blakiston's fish-owls* (Ketupa blackistoni)*, and many endangered species of freshwater clams.*

spawning tributaries of the Sutara and Pompeyevka Rivers will be opened up; fish populations have declined in many lower reaches of the region's major rivers and scientists point to destructive gold mining as a major cause.

As in Amur, regional administrators are trying to retool the economy to serve the import needs of China. In addition to exporting raw logs, both regions hope to capitalize on China's expected booming demand for other raw materials such as coal, tin, and iron ore.

Always in search of an identity to distinguish itself, the region should consider stepping away from traditional methods of economic recovery, such as subsidies for the mining industry, and market itself again as a center for processing. In Soviet times, the region had thriving garment, food production, and agricultural machinery industries. It has been pointed out, however, that the region will have trouble competing with nearby China, which can produce such goods more cheaply. Some foreign investment or increased commitment from Moscow will be necessary for these industries to develop. The Kuldur hot springs remain a largely underdeveloped resource; with responsible development they could be a major tourist attraction both for Russians and those coming from abroad.

— Josh Newell

Ecology

Vasily Gorobeiko

See pp. 179–80 for an overview of the region's ecology.

Protected area system

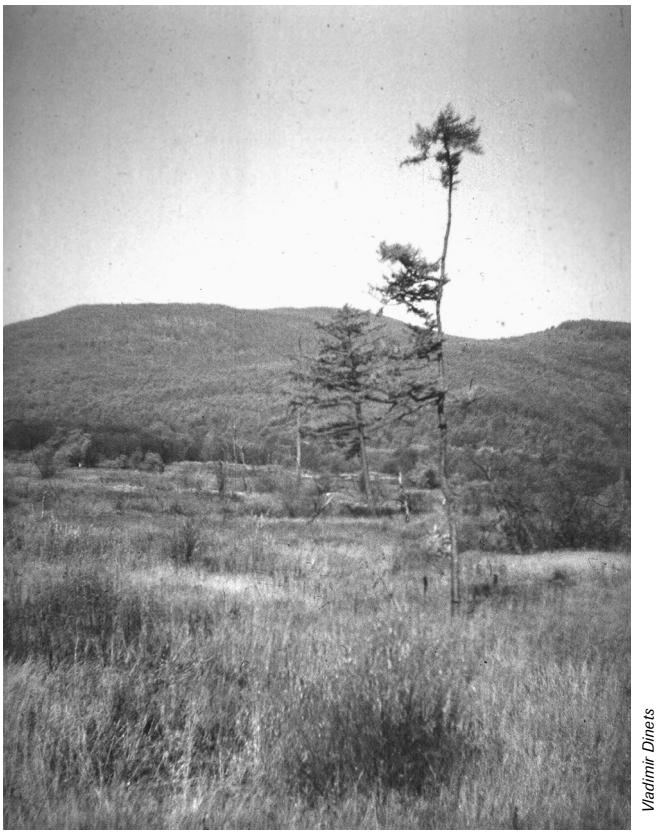
The protected area system includes Bastak Zapovednik and five regional *zakaznik*s (see table 4.2). There are also eighteen natural monuments. Although 9.8 percent of the *oblast*'s total land area is under some form of protection, one cannot say that there is a system of protected areas in the *oblast*. First, there is no hierarchical structure of protected areas. Second, those natural landscapes currently protected are similar to one another. Only four natural monuments are located in the Central Amur lowlands; all of the other protected areas are on the spurs of the Maly-Khingan range. Third, numerous natural monuments do not correspond to criteria outlined in federal protected area law. The creation of an integrated system is essential to preserving biological diversity and the unique natural systems in the *oblast*.

Given today's economic crisis and the mounting pressure from poaching, the *zakaznik*s are in an extremely difficult situation and incapable of fulfilling their function of protecting nature. Moreover, despite the impressive size of these *zakaznik*s, they are all situated on the peripheral mountain massifs of the Maly-Khingan whereas territories that should be preserved, such as the central areas of the Khingan mountain massif, wetlands, and marshes, are being actively exploited.

Table 4.2
Protected areas in the Jewish Autonomous Oblast

Type and name	*Size (ha)*	*Raion*	*Established*
Zapovednik			
Bastak	91,121	Birobidzhansky	1997
*Zakaznik*s			
Churki	85,000	Birobidzhansky & Leninsky	1982
Shukhi-Poktoy	60,000	Birobidzhansky & Obluchensky	1963
Dichun	49,500	Obluchensky	1998
Zhuravliny	40,500	Oktyabrsky	1988
Uldury	28,000	Birobidzhansky	1963

Source: JAO Committee on Environmental Protection, 2000.



Vladimir Dinets

The Amur Valley is one of the last places on Earth where large areas of tallgrass prairies are still relatively intact.

Of the eighteen natural monuments established in the JAO, only five are under the jurisdiction of the *oblast*. The others, in violation of existing laws, are under the jurisdiction of the Khabarovsk Krai and the *raion*. According to article 26 of the law On Specially Protected Nature Territories of the Russian Federation, when a natural object is declared a natural monument, it must be placed under protection, custodial obligation papers must be placed, other documents stipulated by the legislature of the Russian Federation must be prepared and certified, and the regulations of the federal Ministry of Natural Resources complied with. This procedure has been followed in only two new natural monuments, those established on November 6, 1994, by decree No. 326 by the head of the JAO administration. A number of previously declared natural monuments have now lost their nature-protection value, and no less than fifty natural and cultural areas currently unprotected need to be given natural monument status.

The protected area system in the JAO is not a single unified system, does not protect the region's biodiversity or unique cultural areas adequately, and fails to provide suitable recreational opportunities for residents and visitors. Therefore, in 1996, the JAO Committee on Environmental Protection, together with the *oblast*'s economic administration and the Comprehensive Analysis Institute for Regional Problems, a

division of the Russian Academy of Sciences (RAS), developed a plan to strengthen the system.

In 1998, the protective service for Bastak Zapovednik was developed, the forest *zakaznik*, Dichun, was established, and large tracts of rich mixed forests were protected. An ecological-economic justification (*obosnovanie*) for creating Kuldur Nature Park was completed, and certification of eight new natural monuments is being prepared. In 1999, work began on the effort to establish Zabelovsky Zakaznik. State protection will be extended to the Central Amur lowlands, the most important region in terms of biodiversity preservation, and to numerous Amur River tributaries valuable to local fisheries.

Between 2003 and 2005, efforts will be made to establish a protected area to help preserve the Pompeevka River basin. There will also be efforts to modify the boundaries of Zhuravliny Zakaznik to include the remnants of the undisturbed portions of Dahurian steppe. Further plans to improve the system include expanding the network of the natural monuments and establishing protected areas where rare and disappearing plant species are concentrated.

The primary limits to an expansion of the protected area system are lack of funds (more than 50 percent of the *oblast*'s budget is subsidized by the federal government) and the lack of administrative cohesion among the nature-protecting agencies. Currently, the *zapovednik* is under the jurisdiction of the Ministry of Natural Resources, while the JAO Hunting Service administers four of the *zakaznik*s. Another *zakaznik* and the dendrological park are under the control of the Forest Service, and, as mentioned above, the administrative responsibility for most of the natural monuments is unclear.

At present, the *oblast* administration is taking some steps to overcome this lack of cohesion. A new law On Specially Protected Nature Territories was adopted in February 1999 establishing an interdepartmental commission to improve the protected area system and an operational group to protect the biological diversity of the JAO. In accordance with the law, 5 percent of the proceeds received by the *oblast* for mining will be directed toward financing these territories. However, actually protecting these territories will be impossible without assistance from foreign organizations, foundations, and governments.

Zapovedniks. There is one *zapovednik* (strict nature reserve), Bastak Zapovednik (91,121 ha), in the *oblast*. See p. 188 for a description

Zakazniks. Within the JAO, there are four *oblast*-level nature *zakaznik*s and one *oblast*-level forest reserve. In total, these reserves cover 263,000 ha, which represents about 7 percent of the JAO's territory. The integrated *zakaznik*s are administered and funded by the JAO Hunting Service. Regulations stipulate that a minimum staff of ten rangers, two per reserve, is necessary, but in 1998, only eight rangers were employed for all of the *zakaznik*s, and in two of them, Uldury and Churki, there were no vehicles.

Salvage logging, hay harvesting, and cattle grazing are conducted inside the reserves. There are more than twenty apiaries, some of which have been privatized, on these

Yuri Shibnev

People often associate the JAO with wetlands, but the mountainous western and northwestern regions have significant forests.

reserves. These activities all lead to depletion of flora and damage to the foraging base of wildlife. A division of the Forest Service, the Obluchensky Leskhoz, administers the recently established Dichun Zakaznik.

Natural monuments. Eighteen sites of scientific, historical, aesthetic, environmental, and cultural significance have been designated as natural monuments (see table 4.3) Khabarovsk Kraiispolkom (Regional Executive Committee) resolutions No. 208 and No. 472, dated March 26, 1996, and August 27, 1980, respectively, established eight of them. Three were established by resolutions of the Oktyabrsky and Obluchensky Raion executive committees and therefore do not have a definite status on the territory of the *oblast*.

Nature parks. In accordance with the program for the Development of a System of Specially Protected Nature Territories of the Jewish Autonomous Oblast up to 2005, a draft was prepared to establish the Kuldur Nature Park (see pp. 187–88).

Biodiversity hotspots

1. Pompeevsky area (forest and wetland)

The Pompeevka River Basin (40,000 ha) includes the southwestern foothills (73 to 912 m) of the Maly-Khingan range. The 71-km Pompeevka River, a tributary of the Amur River, descends from these hills and broadens to a 3-km-wide marshy delta at the river mouth. Various forest types cover the basin, including Ayan spruce and East Siberian fir (*Abies nephrolepis*) interspersed with Korean pine (*Pinus koraensis*), Dahurian larch, and linden (*Tilia amurensis*) in the headwaters, Korean pine and broadleaved forests in the middle reaches, and Mongolian oak and Dahurian birch (*Betula davurica*) stands in the lower reaches. Birakansky Lespromkhoz (LPX) logged these forests until the enterprise went bankrupt in 1996, but not before cutting most of the Mongolian oak, Korean pine, and broadleaved trees. Overlogging fragmented the forest habitat for the local Siberian tiger (*Panthera tigris altaica*) and goral (*Nemorhaedus goral*) populations and, by

Table 4.3
Natural monuments in the Jewish Autonomous Oblast

No.	*Name*	*Type*	*Established*	*Size (ha)*	*Raion*
1.	Duck Lake	Botanical	1994	1,825.0	Oktyabrsky
2.	Relictual pine stand	Botanical	1982	108.0	Obluchensky
3.	Cherepashy Bay	Zoological	1994	61.0	Leninsky
4.	Peshchera Bannaya	Geological	1985	12.5	Obluchensky
5.	Peshchera Glubokaya	Geological	1980	12.5	Obluchensky
6.	Peshchera Kabanya Lovushka	Geological	1985	12.5	Oktyabrsky
7.	Peshchera Kordornaya	Geological	1980	12.5	Oktyabrsky
8.	Peshchera Ledyunaya	Geological	1979	12.5	Oktyabrsky
9.	Peshchera Peschanaya	Geological	1980	12.5	Obluchensky
10.	Peshchera Sankina	Geological	1985	12.5	Obluchensky
11.	Peshchera Spartak	Geological	1985	12.5	Obluchensky
12.	Peshchera Stary Medved	Geological	1980	12.5	Obluchensky
13.	Verkhnetulovchikhinsky	Mineral Spring	1979	N/A	Oktyabrsky
14.	Nizhnetulovchikhinsky	Mineral Spring	1979	N/A	Oktyabrsky
15.	Starikovsky	Mineral Spring	1979	N/A	Oktyabrsky
16.	Lotus Bed	Botanical	1966	N/A	Birobidzhansky
17.	Lotus Lake	Botanical	1982	N/A	Smidovichsky
18.	Rose Bush	Botanical	1983	N/A	Obluchensky

Source: JAO Committee on Environmental Protection, 2000.

the 1970s, these animals had become extinct in the region.

Threats. Forests in the headwaters remain relatively intact, but local ecologists expect that both foreign and local companies will attempt to log these forests. There are also placer gold deposits, estimated at 200 kg. Placer mining is already underway in the Berezovaya River basin, which flows into the Amur 7 km downstream from the Pompeevka River mouth.

Although the tiger and goral have disappeared, the biodiversity value of the Pompeevka River basin remains considerable. The headwaters host a number of endemic species and form the westernmost spawning grounds for the autumn chum salmon (*Oncorhynchus keta*). Scaly-sided mergansers (*Mergus squamatus*), mandarin ducks (*Aix galericulata*), eagle owls (*Bubo bubo*), ospreys (*Pandion haliaeetus*), and golden eagles (*Aquila chrysaetos*) nest in the river's floodplain, which is also a feeding ground and resting area for numerous migratory waterfowl.

Vladimir Dinets

The Amur Basin forms a border between boreal and Manchurian forests. Here, two closely related butterfly species feed together. Arachnia levana *is a widespread boreal insect, while* A. bureana *is endemic to the broadleaved forests of the Far East.*

Existing protection measures. No significant measures have been taken to protect this area, nor have in-depth studies been conducted. In the 1970s, a group of ornithologists from Moscow State University and under the direction of Dr. Sergei Smirensky studied the area's waterfowl. Unfortunately, material from this research and from a botanical study, done in 1986 by Dr. V. A. Nedoluzhko, remain unpublished. The most recent forest inventory was conducted in 1986.

Recommendations. The following actions should be taken:

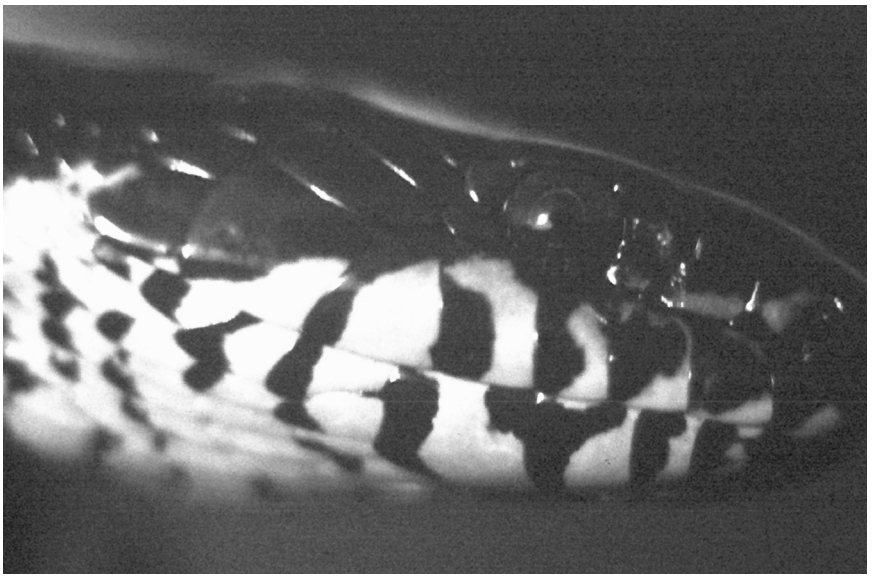
- Create a federal *zakaznik* to protect the Pompeyevka basin; recommendation made June 1996 at a scientific conference on the development of a system of protected areas in the JAO.
- Determine the most appropriate boundaries and protection regime for this *zakaznik*.

2. Kuldur Nature Park (forest)

Kuldur Nature Park (36,700 ha) is located in the northwest part of the *oblast* on the southern slope of the Maly-Khingan range, with mountains and hills ranging in elevation from 280 to 1,001 m. The territory includes the upper Kuldur River basin down to its confluence with the Karadub and Karagai Rivers. The town of Kuldur, located within the park's boundaries, includes five resort complexes, a metal beam factory, and a railway station.

The park has diverse forests, including Korean pine, Ayan spruce, East Siberian fir, Dahurian larch, birches, aspen (*Populus tremulae*), willows (*Salix*), and shrubs, together with grassy meadows and mossy swamps. The approximate border between boreal and East Asian biomes is near Kuldur, so the diversity of species is high and includes Japanese wild yam (*Dioscorea nipponica*), irises (*Iris*), Daurian lily (*Lilium dahurica*), Siberian ginseng (*Eleutherococcus maximus*), Chinese cinquefoil (*Potentilla chinensis*), and twenty other rare and endangered species.

The park's fauna is also diverse, a result of the intermingling of four geographical zones—boreal, Angarian, Okhotsk-Kamchatkan, and Manchurian—but the numbers of individuals of any one species are rather low. Boreal species include brown bear (*Ursus arctos*), Bohemian waxwing (*Bombycilla garrulus*), three-toed woodpecker (*Picoides trydactilys*), viviparous lizard (*Lacerta vivipara*), Siberian salamander (*Salamandrella keyserlingii*), and burbot (*Lota lota*). Angarian species live in the mountains. These include the mountain weasel (*Mustela altaica*), red vole (*Clethrionomys rutilus*), Siberian jay (*Perisoreus infaustus*), and willow tit (*Parus montanus*). Also in the mountains are Okhotsk-Kamchatkan species such as musk deer, spotted nutcracker (*Nucifraga caryocatactes*), and pine bunting (*Emberhiza leucocephalus*). Manchurian fauna can be found in the broadleaved forests of the valley and include Himalayan bear, yellow-throated marten (*Martes flavigula*), Ussurian wild boar (*Sus scrofa ussuriensis*), Manchurian wapiti (*Cervus elaphus xanthopygus*), Manchurian hare (*Lepus brachyurus*), raccoon dog (*Nyctereutes procyonoides*), azure-winged magpie (*Cyanopica cyana*), Shrenk's rat snake (*Elaphe schrenkii*), and Amur grayling (*Thymallus amurensis*).



Vladimir Dinets

Populations of the Schrenk's racer (Coluber schrenkii) *and other snakes of the RFE are crashing in many areas, as Chinese immigrants collect large numbers for food and for their skins.*

Threats. Mining, forest fires, poaching, and industrial waste pose a huge threat to the forests and affect fisheries and wildlife. Several studies have been made of the area's mineral resources, but few of the ecosystems. The staff of the Birobidzhan Botanical Gardens, an institute affiliated with the RAS, has done some preliminary research in the watershed.

Existing protection measures. Numerous organizations are trying to protect the area as a nature park. A May 1998 governor's decree allocated land for the park.

Recommendations. Develop well-organized tourism, which will not only improve the regional economy, but also reduce the need to mine and log the region.

3. Bastak Zapovednik (forest)

Bastak is the first and only *zapovednik* in the JAO and protects 5,190 ha of Group I and 85,931 ha of Group III pine forests in the Birobidzhan Leskhoz. The *zapovednik* also protects spruce, fir, and birch forests in the north; birch and deciduous savannas and bush chaparral grow in the southeast. The southeastern slopes of the Bureya Range (1,200 m) form the northern border of the *zapovednik*. Because the headwaters of the Bastak, Sorenak, Kirga, and Ikura Rivers are located here, the reserve is essential for water and soil conservation. Nine hundred vascular plant species grow in the reserve, including the endangered little pond lily (*Nymphar pumila*), Amur peony (*Paeonia obovata*), tall devil's club (*Oplopanax elatus*), and pink lady's slipper (*Cypripedium macranthon*). Many ecologists consider this region the oxygen supply for Birobidzhan.

Mammals living within the reserve include musk deer (*Moschus moschiferus*), Manchurian wapiti, snow deer (*Capreolus pygargus*), moose (*Alces alces cameloides*), Eurasian lynx (*Felis lynx*), American mink (*Mustela vison*), sable (*Martes zibellina*), badger (*Meles meles*), brown and Himalayan bear, red fox (*Vulpes vulpes*), and raccoon dog. The most valuable species are the hooded crane (*Grus monachus*), which nests in the Kirga and Glinyanka River valleys, and Blackiston's fish-owl (*Ketupa blakistoni*), which lives in the Bastak River basin.

Seven people work at the *zapovednik*, and their tasks include protecting the territory, conducting scientific research, and developing ecological and educational activities. Dry weather each fall and spring increases the chance of forest fires. Because the authorities lack proper equipment and enough staff, uncontrollable fires have already destroyed portions of the reserve. The illegal gathering of rare plants and poaching of animals plague the reserve because there are no funds to protect the area.

Existing protection measures. The government of the JAO spent 35,000 rubles (U.S.$5,000) to suppress two fires in the reserve in spring 1998, in addition to the annual 50,000 rubles ($7,143) already allocated for such a purpose. Two *zapovednik* inspectors have begun regular patrols of the reserve boundaries.

Recommendations. The following actions should be taken:

- Create and post signs.
- Purchase uniforms and firearms.
- Develop the land ownership certificate.
- Complete research of the territory.
- Purchase two vehicles, a snowmobile, and maintenance equipment.
- Create an ecological center for children.

4. Zabelovsky region (wetland)

Primarily a wetland along the Amur floodplain above Novospasskoe Village, the Zabelovsky region (20,000 ha) also has a number of important rivers and lakes including the Zabelovka River and the Zabelovskoe, Umayuvskoe, and Liman Lakes. Willow and deciduous forests line the rivers. Virtually pristine, the region protects waterfowl, shorebirds, and a number of rare fish species. Migratory birds

include brant (*Branta nigricans*), graylag (*Anser anser*), lesser white-fronted (*A. erythropus*), bean (*A. fabalis*), and swan (*A. cygnoides*) geese, as well as whooper (*Cygnus cygnus*) and Bewick's (*C. bewickii*) swans, Baikal teal (*Anas formosa*), and broad-billed (*Calidris falcinellus*) and marsh sandpipers (*Tringa stagnatilis*). Eurasian spoonbills (*Platalea leucorrhodia*), Oriental white storks (*Ciconia boyciana*), and ospreys nest here. Fish species within the Zabelovsky region include the black carp (*Mylopharyngodon piceus*), smallscale yellowfin (*Plagiognathops microlepis*), yellowcheek (*Elopichthys bambusa*), and Chinese perch (*Siniperca chuatsi*). The famous Komarov's lotus also grows here.

Threats. Phenol discharges into the Amur River are polluting local rivers and lakes. Poaching of birds and fish is continuously on the rise. Seasonal fires are a continual danger; people burn grass each spring and fall to grow crops, and these fires often burn out of control.

Recommendations. The following actions should be taken:
- The government of the JAO would like to establish a federal-level *zakaznik*, but lacks the funds to do so.
- A bird-monitoring center also needs to be created.

5. Stolbovsky region (wetland)

The Stolbovsky region (15,000 ha) covers the middle Samara River basin, near Stolbovoe Village. Predominantly steppe and wetlands, there are also some Mongolian oak, Dahurian birch (*Betula davurica*), big-fruit elm (*Ulmus macrocarpa*), and Chinese hawthorn (*Crathaegus chinensis*) forests. Shrub species include hazelnut (*Corylus*), two-flowered lespedecia (*Lespedezia biflora*), Dahurian rhododendron (*Rhododendron dahuricum*), and Oriental sekurinega (*Sekurinega orientalis*). Other floral species include the *Arundintilla anomalica*, Chinese cinquefoil (*Potentilla chinensis*), Eastern edelweiss (*Leontopodium blagoveshczenskyi*), Baikal skullcap (*Scutellaria baicalensis*), Baikal feather grass (*Stipa baicalensis*), *Tromsdorviya ciliata*, Chinese prairie-smoke (*Geum chinensis*), yellow sophora (*Sophora lutea*), and Chinese fenugreek (*Trigonella sinensis*). This is one of the most diverse steppe communities in the RFE.

Threats. The fauna of this region remain poorly studied. Scientists have sighted the Dahurian partridge (*Perdix dahurica*), which is extremely rare in the JAO. During the 1960s, most of the steppe was used for agriculture. Hay harvesting and overgrazing are impacting the region now. Another danger is uncontrolled grass burning, which threatens nesting birds. Currently, there is no research of meadow steppes underway in the JAO. Therefore, knowledge of the region's biodiversity remains sketchy. In summer 1997, V. A. Nedoluzhko studied the region, but his findings remain unpublished.

Recommendations. The following actions should be taken:
- Multidisciplinary research of the regions.
- Implementation of measures to decrease human impact on the most vulnerable species.

Economy

Vasily Gorobeiko

The pillar of the economy is agriculture and, to a lesser degree, mining, the production of construction materials and machinery, light industry, food production, and until recently, forestry. The JAO was made an autonomous region because of its large tracts of arable land; development thereafter was focused on producing food for the cities of Khabarovsk, Komsomolsk-on-Amur, and the northern regions of Khabarovsk Krai.

Almost all agricultural enterprises produce grain, soybeans, and vegetables. Farmers are increasing production of buckwheat, corn, and melons and are maintaining the already sizable potato crop. Crops account for more than half of the agricultural volume of the *oblast*. In addition to tracts of land suitable for plowing, the natural grazing offers favorable conditions for developing animal husbandry, particularly of cattle.

The machinery industry consists of making equipment for farming (soil and crop cultivation), general construction, and road building. The mining industry consists of tin ore extraction and enrichment, mining alluvial gold deposits, and the extraction of materials used in construction. Coal mining also takes place, and the development of the Ushumunsk brown coal deposits is under way. The timber industry consists of timber harvesting and processing, and the production of mill wood, construction lumber, and furniture. The centers for timber harvest are located in the forests of Birakan, and the centers for wood processing are located in Birobidzhan and Nikolaevka.

Light industry in Birobidzhan consists of five large enterprises producing sewn and knitted items, socks, felt, and footwear. Other smaller companies also produce these types of goods. The food industry, located in urban centers, produces meats, sausages, and other products, such as baked goods, confectionery, pasta, milk products, alcohol, canned vegetables, and others. A network of small businesses processing agricultural goods, food products, and other consumer goods has developed in the *oblast*.

The JAO is home to two of the oldest fish hatcheries in the RFE, the Teplovka and Bidzhan hatcheries, which produce fall-run chum salmon and have a combined annual capacity of 65 million fry. Since 1988, however, they have steadily been incubating far fewer fish eggs, a result, in part, of active

license fishing downstream, increasing poaching along the migration route, unlimited fishing in the Amur River by Chinese fishermen, and violations of environmental laws by gold mining enterprises that mine on the headwaters of spawning rivers.

Each of these industries is in a deep crisis. It is doubtful that machinery and light industries will rebound to their former state, partly because of delays in receiving the necessary materials from the western parts of Russia. Competition from China and the Pacific Rim countries will also make it difficult for such industries to develop a market niche. The future for the agricultural industry is brighter, provided governmental and regional policies support it. The relatively large mineral resource base and favorable geographic position of the *oblast* makes mining another possible growth industry.

Changes in the *oblast*'s economy over recent years have had a dual effect on ecosystems. On the one hand, the drop in industrial production has decreased the release of harmful discharges. On the other hand, however, businesses lack the financial resources to not only initiate new pollution-control technologies, but also maintain existing ones. As a result, the accumulation of toxins in rivers and lakes has not decreased, but has even increased in many regions; nearly all the watercourses in the JAO that have monitoring stations show decreases in dissolved oxygen and increases in phenols, petroleum products, steel, DDT, and other harmful substances. In addition, because of high shipping and fuel (coal) costs, people have responded by using firewood to heat their houses and apartments. This wood is illegally logged from protected forest lands, as well as from the sparse natural forests near inhabited areas.

The timber sector, although historically a minor industry, has had a significant impact on the region's ecosystems and upset the water balance of the Bira River. Recent battles with forest fires, pests, and pathogens relate to the timber industry. Once every seven to ten years, fires reach catastrophic proportions, causing tremendous economic and ecological harm to the forests. Preventative measures are virtually nonexistent due to lack of funds. Unfortunately, forests are not being regularly monitored, leaving them more susceptible to pests and diseases.

Agriculture, largely in the central and southern parts of the *oblast*, takes place primarily on reclaimed land and has also harmed the water balance. The topsoil is being eroded by both wind and water, and 15 percent of all agricultural land suffers from erosion. This has led to increased alkalinity of the soil, making it less productive. Soil nitrate levels average between 7.5 and 45 mg/DM^3.

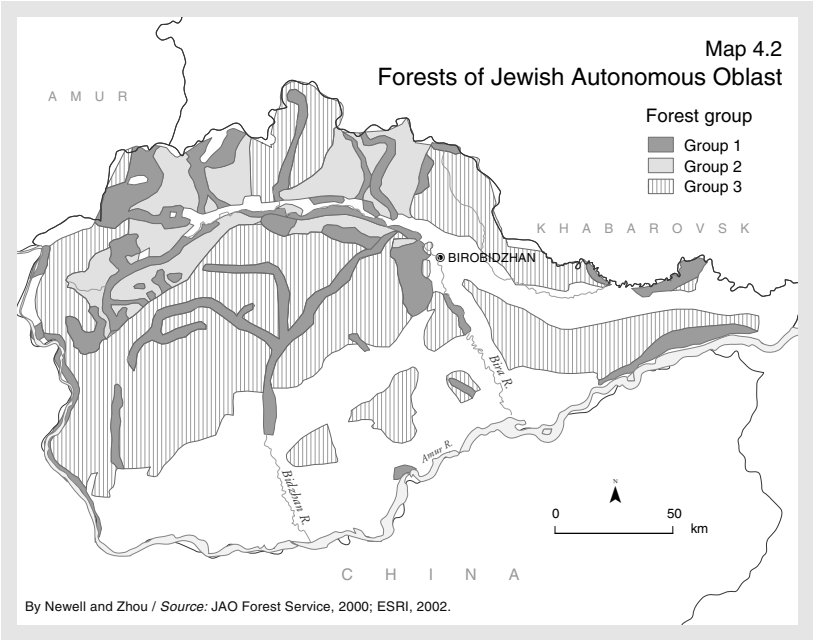
Vladimir Dinets

Edible berries and mushrooms, such as this king boletus (Boletus edulus)*, are an important food source not only for wildlife and native peoples, but also for city dwellers. In late summer and early fall, thousands of people flock to the countryside to gather them.*

Timber

Birobidzhan Lespromkhoz, established on April 1, 1964, as the May 1 Cooperative, was the first company to harvest timber on a commercial scale and logged primarily in Obluchensky and Oktyabrsky Raions until production ceased in 1995. Between 1985 and 1995, the timber harvest by the *lespromkhoz* decreased from 341,000 cu. m to 53,000 cu. m. In the final years of operation, the *lespromkhoz* logged forests on Pompeevsky Ridge, a region of great importance in protecting the water quality of the Bidzhan River basin, which supports agricultural regions in its central and lower reaches.

In 1999, however, Chinese capital flowed into the forestry sector making the situation more complex. In January, six logging leases were issued to small timber companies with annual harvesting capacities of up to 20,000 cu. m each. Five of these companies are either partly Chinese or have significant amounts of Chinese capital and use Chinese labor. These enterprises received five-year agreements, which indicates their aspiration to log as much as possible in the shortest time. Unfortunately, after five years, during which timber harvest yields never exceeded 7 percent of the annual allowable cut, *leskhoz*es



By Newell and Zhou / *Source:* JAO Forest Service, 2000; ESRI, 2002.

are eagerly offering such leases. Our information indicates that some of these companies have already started logging, although none of the timber-harvest plans have been submitted for governmental or environmental assessment.

According to a state survey, there are 21,393 sq. km of forests in the JAO, including 3,771 sq. km of Group I forests, 3,813 sq. km of Group II forests, and 13,809 sq. km of Group III forests. The overall forest area totals 2,292,700 ha, including 395,600 ha (17.3 percent) of Group I forests. The Annual Allowable Cut (AAC) is 1,281,200 cu. m yearly, including 326,400 cu. m of coniferous species. In 1991, the forestry sector employed 6,000 people, or 4.6 percent of the economically active population but this figure declined to 2,700 people by 1995.

The rapid commercial use of the Maly-Khingan region for logging dictates the need to create a network of protected territories to reduce anthropogenic impacts and preserve forest biodiversity. In conjunction with the Program for Development of the Network of Specially Protected Territories of the JAO for 1996–2005, several measures have been defined to protect the region. To promote habitat formation, protected forests include valley forests, forests near the Kuldur mineral springs, forest belts of special significance, and greenbelt forests near inhabited areas. The baseline territory includes Bastak Zapovednik. To protect resources, *zakaznik*s, among them Shukhi-Poktoi, Dichun, and Pompeevsky, reserve forest plantings, among them a plantation of Korean pine in the Birsky Leskhoz near the 30-km road from Birobidzhan to Obluchie, and nut production zones, among them Korean pine in the broadleaved forests of the Sutara and Pompeyevsky ridges, and natural monuments, among them a Korean pine grove in the Mikhailikha River headwaters have been included. A dendrological garden on the eastern border of the Shukhi-Poktoi ridge, and the Kuldur Nature Park, are included to protect recreational sites.

Chinese investment in JAO

The JAO's largest trading partner, China has shown increasing interest in the region. In July 1998, the JAO and the Chinese province of Heilongjiang signed an agreement on long-term trade and economic and scientific cooperation.[11] China is particularly interested in timber resources that can be easily shipped on the Trans-Siberian railroad and exported by boat or truck to China. In 1998, small businesses in the *oblast* exported 50,000 cu. m in logs to China.[12] In 1999, logging leases were issued to five companies that were either partly Chinese or have significant Chinese capital. Chinese investors have also shown an interest in iron ore deposits in the Obluchensky Raion.

– JN

Agriculture

From the time of the first settlers, agriculture has been the main activity in the *oblast*. Clearing of lands was widespread, and reclamation was prevalent during the 1950s and 1960s. Until 1991, when the region became independent of Khabarovsk Krai, the *oblast* produced almost 80 percent of the krai's grain, more than half of its soy beans, and almost half of its potatoes, meat, and milk. About one-third of the *oblast* residents live in agricultural villages. Agricultural lands total about 390,000 ha, of which 136,100 ha are plowed.

The transition to a market economy has led to radical changes in the agricultural sector. *Kolkhoz*es and *sovkhoz*es have been reorganized and various enterprises (collective, cooperative, public) with differing types of private ownership have been created in the villages. These enterprises now use 257,500 ha of agricultural land, or about 70 percent of the total area, including about 78 percent of all plowed land. The farming sector consists of about four hundred holdings, on which almost 20,000 ha of agricultural land is located. This land yields about 20 percent of the overall volume of agricultural production. There has been a significant decrease in the number of cattle, swine, and poultry. Yield figures for milk per cow, as well as gross milk production, were lower in 1999 than they had been for many years.

The agricultural regions belong to the "mostly warm/humid," "warm/excessively humid," and "moderately warm" agroclimatic regions. The most favorable conditions are close to the Amur River and its tributaries, the Bidzhan and the Bira Rivers. These are, however, also subject to heavy, localized flooding. Heat resources greatly determine what types of crops are planted. In the JAO, typical crops are corn, soybeans, early vegetables, and grain.

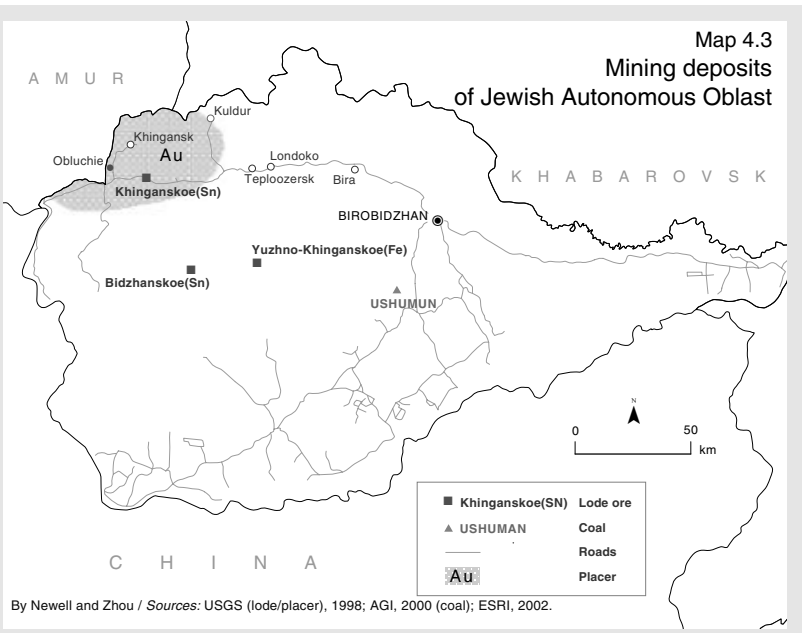
The *oblast* is primarily a forested territory. These forests are central to making the landscape stable and the lower, marshy reaches productive for agriculture. Forests used to carpet between 65 and 70 percent of the area, but now cover only 44 percent of the area. Every four years the forest cover is reduced by an average of 1 percent, principally the result of conversion for agriculture. Today, deforestation in some of the regions is catastrophic. Decreased forest cover has affected water levels and the climate. Between 85 and 90 percent of the forests essential in containing the snowpack has been lost; this has affected soil productivity in the plains and lower reaches of the rivers. Loss of the tree cover has also led to an increase in frequency of the *sukhovei*, the hot, dry wind of the Far East. According to scholar Y. Zarkhina, a loss of between 20 and 25 percent of the snow cover causes the temperature to drop by 1°C, which in turn leads to a loss of between 2.5 to 3.0 centers per ha of soybean crops.[13] In ten to fifteen years, the soil will lose up to a third of its humus content and soil productivity will drop by a factor of one or two. This process most markedly affects the structurally weaker soils of the Oktyabrsky and Leninsky Raions, where, after five or ten years, the productive soil layer has been blown away, and wind erosion has formed areas of denuded land, in the form of basins. These basins also form on cultivated peat soils. Loss of forest cover also disrupts water flows and levels, causing localized floods during heavy rains. This, in turn, causes an increase in surface and wind erosion of the soil. Erosion rates have ranged between 40–50 and 100–130 tons/ha.

A systematic analysis of agriculture of the region, conducted in 1993, allows us to reach some important conclusions:

- Biota and soil cover are the first to be affected by the large-scale industrial use of land that results in rapid degradation, with reduced forest cover, loss of wetlands to reclamation, and the pollution of waterways. The effects of crop cultivation on biota and soil cover could be minimized if management decisions were made with more environmental awareness.
- The continued decline of the environmental health of the region has made agricultural techniques less effective and productivity has declined.
- Measures to protect biota and soil should include, foremost, a reassessment of the structure of land management and ownership. This includes the adoption of regulations for particularly valuable ecological resources. Such regulations should include buffer zones near river systems and lakes and restrictions on land use where there are large numbers of rare plant and animal species, in areas susceptible to erosion, and in popular recreation sites.

Mining

Mining in the region began in the period between 1857 and 1886, when the geologists F. B. Schmidt and P. P. Anosov discovered alluvial gold deposits in the Sutara River basin. The first claims to mine the placer deposits were made in 1880, and mining began in 1889. Until 1960, gold was mined at twenty-nine fields, the largest being Kazansky, Lyubavinsky, Frolovsky, Mikhailovsky, and Viktorovsky. After the Russian revolution and until 1928, only small cooperatives extracted gold. In 1928, the state began managing placer prospecting and exploitation. The first major enterprise was Soyuzzoloto Trust, and later, after 1932, Primorzoloto was the major mining company. The gold was mined mostly by hydraulic and dredging methods. In 1964, gold mining in the *oblast* ceased, and it did not begin again until the 1990s, when small private cooperatives began mining again. According to estimates by the geologist V. Buryak, the total amount of gold extracted in the *oblast*, since mining began has been about 20 tons.[14] As a result of this placer mining, more than 40,000,000 tons of tailings



Opening up the region to mining

Gold mining ceased in the JAO in 1964, but in the mid-1990s, small *artel*s of gold miners began operating. The *oblast* administration plans to expand gold mining from the current annual production of 100 kg to more than 500 kg per year. *Artel*s currently mine all of the gold. Mostly placer deposits, gold reserves are estimated at 20 tons.[15] Geologists have been focusing on the placer reserves located along two river systems in the mountainous northwestern region of the *oblast*, the Sutara and Pompeyevka Rivers. The Pompeevka River lies within one of the *oblast*'s biodiversity hotspots and has valuable Korean pine forests, and the upper reaches are spawning grounds for autumn chum salmon. Gold mining is already under way in the nearby Berezovaya River, which lies just 7 km to the south. The Sutara River basin has been heavily mined for decades and millions of tons of tailings have been dumped in the river, which feeds directly into the Bira River, one of the largest in the JAO and of primary importance for agriculture. The main gold mining *artel* is Arktika, and another gold mining company, Zolotaya Sutara, recently won a tender to exploit twenty gold placers with proven reserves of more than 2 tons. In the summer of 1998, twenty-eight placer gold deposits and one ore deposit, all in the Obluchensky Raion where the Sutara River is located, were tendered.

Geologists also expect to find another 42 million tons of brown coal at the region's only major coal deposit, Ushuman, which has confirmed reserves of 104 million.[16] This reserve is conveniently located on a rail spur just south of Birobidzhan. A strip mine, Sebtrany, is being built, and administration officials hope that they can eventually produce 1.5 million tons of coal. Initsiativ, a joint-stock company, plans to do the mining.

The *oblast* is also looking for foreign investment to develop its considerable iron ore deposits in Obluchensky Raion, in the northwestern part, near the Sutara River. There are three large deposits: Kimkanskoe (with probable reserves of 200 million tons of ore), Sutarskoe (probable reserves of 600 million tons), and Kostenogeskoe (probable reserves of 200 million tons of ore).[17] All the reserves are located close to the Trans-Siberian Railroad, making shipment convenient. In the 1960s, the Soviet government planned to build a processing facility in neighboring Amur Oblast and the iron ore would have come from the JAO, but this plan was shelved after the huge Amurstal works were built in Komsomolsk-on-Amur, Khabarovsk Krai.

– JN

were dumped in the Sutara region, destroying the original landscape.

The Maly-Khingan region also has tin ore deposits. The AO (joint-stock company) Khinganolovo extracts industrial tin at the main deposit, Khinganskoe. Tin was discovered in 1944 and on May 25, 1945, the State Defense Committee decided to build an ore-enrichment plant. Mining ceased during World War II, but resumed after the war. The plant was known to have the highest efficiency rate of tin concentrate extraction from ore in the Soviet Union, which allowed it to produce the cheapest tin in the country. Extraction was done by open-cast mining, but now shaft mining is the dominant method. Accompanying indium and sometimes fluorite were also extracted. The current goal is to extract other components of tin ore, including lead, zinc, copper, and silver. In total, more than 45,000 tons of tin concentrate have been extracted.

Brusitovy Quarry, which has been operating since 1980, is one of only three brushite mining quarries in the world. The brushite is transported to the Sverdlovsk Oblast to be processed for magnesium. There is enough brushite to greatly increase production, as there are large, unexploited, high-quality surface deposits. Only high-grade ore is being extracted. Materials for the construction industry, including limestone, dolomite, clay, and quartz sand, are also mined, usually by open-cast methods. Open-cast coal mining takes place at the Ushunmunsk deposit.

In 1993, the Committee on Environmental Protection analyzed the social and economic condition of Obluchensky Raion and, to improve the economy, recommended the *raion* create an industrial mining complex. Our analysis showed that the stable development of such a complex would be possible only if recreational territories are enlarged to allow the ecosystems to function naturally. To some degree, the Kuldur Nature Park could perform this task.

The industry poses a threat to the environment because of the open-cast methods used; they alter landscapes and leave large amounts of tailings in mine dumps. These gold dredge tailings contain large amounts of mercury, which was widely used in Soviet times.

Most present mining enterprises are unprofitable; the industry needs to be completely restructured. Mining experts estimate that 5 percent of the employed population works in the industry, which supports entire communities, such as the mining towns of Khingansk, Teplozersk, Londoko, and Priamursky. Decline of the industry has had drastic social implications; these areas have the highest unemployment levels and the lowest life expectancy of any region in the *oblast*. Due to the territory's rich mineral resources, the regional government hopes to attract foreign investment to this industry to revitalize the region's economy.

Toward sustainable development

Vasily Gorobeiko

The JAO needs to develop a program for stable long-term development that takes into account the needs of all social, economic, and political groups and movements. Some factors do exist that would support the creation of such a plan. They include:

- Rich natural resources. The region has mineral, energy, soil, biological, and recreational resources.
- Advantageous geographical location. The region is close to border and transit routes, and is well connected with the interior of Russia and the countries of the Pacific Rim.
- Stability. The social and political atmosphere is relatively stable.
- Flora and fauna. Large numbers of plant and animal species found within the *oblast* are rare and endangered; also the area is graced by unique and diverse landscapes
- Climate. The climate of the JAO is better than it is in many other parts of the country.

The most important requirement for future development must be to restructure industry. This should include:

- Making interagency structural changes that promote sectors which create consumer products.
- Minimizing wasteful use of energy and natural resources
- Using ecologically safe technologies.
- Minimizing transportation expenses.
- Creating industrial structures that can adapt to the new market economy.

Restructuring would improve the quality of life, conserve ecosystems, improve the condition of the environment, develop a more highly educated workforce, and increase employment opportunities. Limiting the transience of residents must be an essential element to sustainable development of any RFE region, as economic and social stability is impossible without a long-term resident population.

Taking into account the JAO's economically inefficient objectives and the necessity to produce goods and materials more cheaply, it would be appropriate to close some enterprises. Declining industrial production has led to emigration from the region, but preventing emigration by maintaining old industrial structures creates parasitic tendencies, decreases the quality of labor, and lowers the morale of workers. Also, a declining population is harmful for the defense and the strategic goal of increasing the presence of the Russian state in this region, which borders China. What is happening today in the JAO's economy? The system continues to deteriorate with no signs of abating. There are no elements of a new system in place that might reverse the industrial collapse and reduce state support for inefficient industries. Because of the rich natural resources of the *oblast* and its current economic and social situation, the region must improve its social and labor resources, which requires increasing social expenditures to spur consumer activity and to encourage the production of consumer goods. This, it is to be hoped, will lead to increased investment and restructuring of the economy. This expenditure must be supported with minimal investment expenses, just enough to maintain the viability of industrial sectors vital for population growth and production, to create financial resources for consumer demand, and to support the production of goods for the general public.

Legal issues

Vasily Gorobeiko

Prompted by ecological organizations and the public, some basic laws have been adopted, including laws on special protected natural areas, forest use, hunting and the hunting industry, and trade and exchange in plant and animal resources. Two more *oblast* laws are being created, one on public inspectors for nature protection and another on land reserves. In 1994, an *oblast* Commission of Rare and Endangered Animal, Plant, and Fungi Species was created. Lists of rare and endangered vertebrates and vascular plants were compiled and included in the *Red Data Book*. In 1998, the first volume of the *Red Data Book* was published. Still, many aspects are not currently regulated by local laws. The rights and duties of public inspectors of nature protection and of resource-using enterprises have not yet been legally determined. The export of resources from the Russian Federation is not legally controlled, and there are problems with collaboration between agencies. For example, the protection of the Amur River must be determined on the international level, yet there are differences between laws among the neighboring regions of Russia. Most legal problems can be solved only on a federal level.

Perspective

Lucy Jones

A Jewish homeland focuses on its people

As the train draws into the station of the Far Eastern Russian city of Birobidzhan, two things seem distinctly unfamiliar: the presence of bright lights and noncyrillic lettering. Blazing

on top of the recently renovated station, the city's name is lit up in Hebrew, signposting Birobidzhan's status as capital of the Jewish Autonomous Republic, declared as such by Stalin in 1934. There are more clues: the out-of-town synagogue, a Jewish Sunday school and secondary school, Russia's only Yiddish newspaper, and a busy Israeli repatriation agency.

But many of the Jews here, who recreated these traditions post *perestroika*, have left for Israel. Of the region's 20,000 Jews, the Jewish Agency of Russia estimates that 70 percent have left, and most of those are young. The Jewish Theater has since moved to Moscow, and the social club for young Jews has closed. "We want to leave because Israel is our homeland; it's as simple as that. We've had to live in an anti-Semitic country all our lives, facing discrimination and intimidation, and now we have a chance to leave, so why stay?" said Slava Sherman, head of the Jewish Agency of Russia. The agency helps Birobidzhan residents leave for Israel by giving them information and help with plane tickets.

For many people, the choice of whether to stay or go is economic, tinged with hope of a more lively existence; Birobidzhan has little entertainment with the exception of a Jewish theater and a popular microbrewery restaurant. Factories have been closed, and in those that remain, the pay is low and irregular. Boris Vassilyev works in a television factory and has not been paid for six months. "At least if I go to Israel, I'll be guaranteed a pension, even work; it's more than I'll get here," he said while in line to see the repatriation representative.

But in 1927, when the Jewish professor Boris Brook arrived in the swampy area between the Bira and Bidzhan Rivers, there was a genuine belief among Jews that a homeland could be created. After the Soviets opened the area for settlement, in part to populate an area vulnerable to Japanese expansion, more than three hundred Jewish families arrived from Argentina, Venezuela, America, Germany, Switzerland, Byelorussia, and Poland, as well as from across Russia.

Some were communists, like Iya Beyekherman, 92, one of the fifty Argentinians who came to the area. Beyekherman lives in Birobidzhan still. "We arrived by train on the 20th of March. We had absolutely nothing but the wish to rejuvenate our culture and create a homeland. We built communes; life in the commune still remains a ray of light in my life. It was a very pleasant life; we ate fish we caught from the river and drank milk from the cows we kept. We all dreamed we would create a great industrial and agricultural city; life was very peaceful," he said. Beyekherman recalls the commune's football, volleyball and basketball teams, the library, and the Spanish-language radio station.

But after 1930, repression eclipsed the ideals of the fledgling homeland. First there were provocations; the secret services burned down the houses of prominent Jews. Then many of the Jewish families from abroad were declared spies and forced to leave; the director of the commune was shipped off to a concentration camp, where he spent fifteen years. The twenty-six Jewish schools, the synagogue and the library were closed, and the Hebrew and Yiddish languages were banned. "It was a black and tragic period for the region and one of the reasons why so few people today speak Yiddish," said Inna Dmitrienko, editor of the *Birobidzhan Stern*, published in Yiddish and Hebrew and circulated in Ukraine, Byelorussia, America, and Israel.

"Many of our writers and poets were arrested, and some of them did not survive. Our tradition was destroyed. When the region was established, people only spoke Yiddish; today very few people know Yiddish," she added. At the state-operated Jewish School, which is in its fifth academic year, efforts are being made to teach the children Yiddish and Hebrew. Of the 130 pupils, whose number is continually diminished by families leaving for Israel, 40 percent are Jewish. Pupils attend lessons in Hebrew, Yiddish, Jewish tradition, Jewish dancing and music, and take part in Jewish festivals.

But the school feels more support could be given by Israel. "They promise books, but they never arrive. My feeling is that they (the Jewish government) do not like the idea of any other Jewish state than Israel," said Anna Piskovets, Deputy Head of the Jewish School. A representative from the Israeli embassy in Moscow visits Birobidzhan every month, but support is more moral than financial. "It's very important to help them learn more about their history, about their tradition because they know very little about it, almost nothing," said Aliza Shennar, the Israeli ambassador to Russia on her first visit to Birobidzhan.

"But many people are talking about Jewish autonomy and I don't know the meaning of it. It's very hard to see why they want to learn Yiddish in schools instead of Hebrew because the common language is Hebrew. The Bible was written in Hebrew. Of course, we dream of seeing all the Jews come to Israel. However, we understand that some of them are going to stay here, and Israel is going to support them in many ways." The regional government tacitly supports the new attempts to resurrect Jewish culture in the region, while at the same time fearing Jewish nationalism.

Victor Bolotnov, mayor of Birobidzhan, said, "The Jewish element gives the region identity and puts the place on the map." However, he hastened to add he was not Jewish but fully Russian. In the local government's glossy guide to the region, there is no mention of the region's Jewish culture and population. In the suburbs of Birobidzhan, next to a Baptist church, is the synagogue, partly funded by an American organization headed by Boris Kaufman. "The Holocaust has overshadowed the persecution of Jews in Russia," Kaufman observed. "But Jews in Russia have suffered immensely. Now is our opportunity to recreate the Russian Jew, but whether it will happen, I don't know."[18]