State of Forests and Biodiversity Conservation in Primorsky Krai, Russian Far East

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ABSTRACT

The vegetation and species composition of Primorsky Krai located in the Russian Far East are very similar to those in the Korean Peninsula and Northeastern part of China. The forests in Zapovednik(a strictly protected federal nature reserve) are unique old-growth forests without human disturbances for more than 500 years. The objectives of this study were to identify the forest resources and to understand the strategies for conservation of biodiversity and sustainable forest ecosystem management in Primorsky Krai. The total forestland comprises 11,833.3 thousand ha and is classified into 3 botanical-geographical zones; coniferous forest, coniferous-broadleaved mixed forest and forest-steppe. The total stock volume is estimated at 1,752 million m³, of which 66% are made up of conifers such as Picea jezoensis, Abies nephrolepis, Pinus koraiensis and Larix species. The flora contains 2,589 vascular plants and the forest plays important roles in the distribution and conservation of wildlife. The strategies for biodiversity conservation are as follows: 1) To conserve endemic and rare species of plant and wildlife with special protection, 2) To preserve the unique and original forest ecosystem without any industrial and human activities, and 3) To develop the sustainable uses and management of forest resources. The cooperative researches among Northeast Asian countries shall provide more detailed information not only on species distribution but on its biological and ecological characteristics.

Key Words : Biodiversity conservation, Primorsky Krai, Russian Far East, Annual allowable cut, Zapovednik, Boreal forest, Sustainable forest management

INTRODUCTION

The forests grow below the taiga zone along the Sikhote-Alin Mountain Range(SAMR), which extends along Primorsky Krai⁴ and into southern Khabarovsk Krai(Russians call these forests the Ussuri Taiga). Escaping the last glacial period, the forests in these regions have evolved into one of the most

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1 Received on September 30, 2004.
2 Accepted on October 19, 2004.
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4 This research was supported by a grant on “Overseas On-site Laboratory Program” from Korea Science and Engineering Foundation(KOSEF)
4 Administrative division (or region) of the Russian Federation. The Russian Federation has twenty-one republics, six Krais, fifty Oblasts (one autonomous), ten autonomous Okrugs, and two federal cities, Moscow and St. Petersburg.
diverse assemblages of plant and animal species in temperate forests of the world.

Tree species of the boreal forest plants thrive here together with temperate and subtropical species such as Korean pine (Pinus koraiensis), varieties of maple (Acer), birch (Betula), fir (Abies nephrolepis and A. holophylla) and lime (Tilia). Ligneous lianas and medicinal plants, such as Korean ginseng (Panax ginseng) and Eleutherococcus (Eleutherococcus senticosus), combine to form an intricate mix of flora. These forests also support the majority of the Russian Far East’s rare and endangered species. Similar forests once covered areas in Northeast China, Korean Peninsula and Japan, but had largely been destroyed (Newell, 2004).

The international community and large institutions have taken a keen interest in Russian forests not only because of their global importance to the timber supply, but because of their global environmental significance. However, it is still difficult to assess and collect some data and documents with weak communication and complicated administration. The objectives of this paper were to identify the forest resources and to understand the strategies for biodiversity conservation and sustainable forest ecosystem management in Primorsky Krai, Russian Far East.

**METHODS**

Primorsky Krai is located in the southeastern border of the Russian Far East, at the border of Pacific Ocean. The total land area comprises 167,800 km² (about 1.6 times larger than the Republic of Korea) and stretches along the coast of the East Sea. The distance between the northern end (48° 23’ N) and the southern end (42° 18’ N) is 900 km and 430 km between the western end (130° 24’ E) and the eastern end (139° 02’ E) of

![Figure 1](http://www.russiabook.com)