



Russia: Second International Fire Management Week – 2013

International Scientific Conference and Field Experiment
**Post-Fire Natural Regeneration of Forests in Siberia
and**

20 Years Bor Forest Island Fire Experiment (1993-2013)

on Motor Vessel «M.Y. Lermontov» cruising the route Krasnoyarsk / Yeniseisk / Yartsevo
and Bor Forest Island
17-22 June 2013

Introduction

Between 17 and 22 June 2013 50 scientists specialized in forest protection and regeneration from Russia, Germany, Kazakhstan, Mongolia and Ukraine attended the International Scientific Conference and Field Experiment entitled “Second International Fire Management Week – 2013: Post-Fire Natural Regeneration of Forests in Siberia and 20 Years Bor Forest Island Fire Experiment (1993-2013)“.

The participants presented the results of scientific research on the fire ecology of forests in Siberia and other regions of the world. Main attention was given to the role of natural and prescribed management fires on the dynamics of forest development, with emphasis on the regeneration of forests and other ecosystems after fire.

The specialists in their presentations emphasized the role of fire as an ecological factor influencing the growth, composition and regeneration of forest stands. It was pointed out that fire may influence the stability of forests and enhance productivity, but also may have negative impacts on the condition and the sustainability of forests.

Scientists and fire management specialists took part in the discussions. Representatives of the media and public organizations expressed substantial interest in the conference.

The conference was held on the ship «M.Y. Lermontov» cruising Yenisei River between Krasnoyarsk, Yeniseisk and Yartsevo Township. The participants of the conference visited forest plots that had been affected by fires in the past to evaluate the dynamics of forest regeneration. Special emphasis was given to a visit of the Bor Forest Island where in 1993 a large fire experiment was conducted to be followed by a 200 years research period (1993-2193).

At the conference the Director of the Global Fire Monitoring Center (GFMC), coordinator of UNISDR Global Wildland Fire Network, Professor Johann G. Goldammer (Germany), presented the book entitled “Prescribed Burning in Russia and Neighbouring Temperate-Boreal Eurasia”. The book was prepared by an international group of scientists. The book summarizes the last two decades of work in the field of prescribed fire and post-fire forest regeneration. This scientific work demonstrates the profound scientific and technical experience in the use of fire in forests and includes the results of the first two decades of research on Bor Forest Island.¹

The conference participants concluded from the scientific sessions, the field work and the field visits that the Second International Fire Management Week consequently built on the results of the First International Fire Management Week and a Round Table on Fire Management, which was held in Krasnoyarsk in September 2012 and which agreed upon the "Krasnoyarsk 10-Point Programme on the Future of Fire Management in Russia".

¹ See p. 11 (this volume)

The conference participants highlighted:

- a. Siberian forests have been shaped by wildfires in the past. These forest ecosystems bear rich natural biodiversity and carbon stock and are of potential economic interest.
- b. The role and the ecological consequences of wildfires are diverse:
 - While a single intense and severe wildfire may result in the destruction of a mature or an over-aged stand, it also initiates regeneration. The subsequent development of a natural (non-managed) forest depends on the fire return intervals and the interactions between fire, insects and diseases.
 - Some pine and larch forests exist only due to the influence of fire. Light coniferous forests regularly affected by surface fires thus are less sensitive to crown fires.
- c. In economically accessible forests a wildfire may cause a partial or total destruction and loss of commercial timber. However, prescribed fire can prevent the outbreak of wildfires and has positive impacts on composition and quality of forest stands.
- d. Fire plays an important role in the regeneration of forests depending on the type of fire and effects of fire and fire severity. Post-fire regeneration on Siberian burned areas in general was successful. This has been proved by results of the Bor Forest Island Fire Experiment and sites surveyed by expedition members.
- e. Prescribed burning in forestry can be used for
 - reduction of fuel loads
 - cleaning clearcuts
 - site preparation for regeneration
 - improving forest sanitary conditions
- f. Forest fires burning under specific conditions and proper management could be regarded as a prescribed management fires.

Conference Resolution

The conference participants endorsed the validity of the recommendations of the First International Fire Management Week of 2012. Taking into consideration the conducted research and the presented reports at the Second International Fire Management Week the participants proposed to:

1. Develop monitoring technologies for post-fire regeneration by enhancing the capabilities of the Satellite Fire Monitoring System of Rosleskhoz.
2. Develop a new methodology to evaluate the necessity of reforestation of burned areas.
3. Develop recommendations to carry out activities for restoration of forests damaged by fires.
4. Develop evaluation criteria of a selective approach towards forest fire suppression taking into consideration the fire management zoning and forest health conditions.
5. Develop new techniques to evaluate economical losses caused by forest fires.
6. Develop decision-support software for forest fire suppression.
7. Revise the current forest and fire management terminology considering the amendments in the forest legislation and scientific and technical advances.
8. Provide appropriate information to the general public about the positive role of controlled fire in natural regeneration and about the real situation related to reforestation of burned areas.
9. Initiate research concerning post-fire regeneration in burned areas of different ecosystems continue long-term post-fire research in different ecosystems including the Bor Forest Island Fire Experiment site.
10. Ensure involvement of young specialists for continuation of long-term scientific studies in forest conservation, protection and reproduction.

Nikolay A. Kovalev, Chairman
Adviser of the Head of the Federal Forestry Agency of Russia *Rosleskhoz*

Johann G. Goldammer, Co-chair
Director, Global Fire Monitoring Center (GFMC), Freiburg, Germany

Sergiy V. Zibtsev, Secretary
Director, Eastern European Fire Monitoring Center (REEFMC), Kiev, Ukraine

Photo Gallery



Motor Vessel «M.Y. Lermontov» a floating conference venue cruising River Yenisei



The Round Table was chaired by Nikolai A. Kovalev and Johann G. Goldammer



Galina Ivanova, Sukachev Institute of Forest, introduced the fire ecology of Central Siberian forests



The audience: Scientists, fire management practitioners and decision makers of Russia



Final berth of «M.Y. Lermontov» at Yartsevo, the closest port to Bor Forest Island



Ferrying of the field expedition from Yartsevo to Bor Forest Island by a MI-8 helicopter



Bor Forest Island 20 years after the large fire experiment in July 1993



The «Appendix» of the island was separated from the fire and continues serving as landing and camping site



Progress of regeneration of the pine forest among the downed stems of the burned stand



Lichen, mosses and fungi representing the post-fire colonization and biodiversity



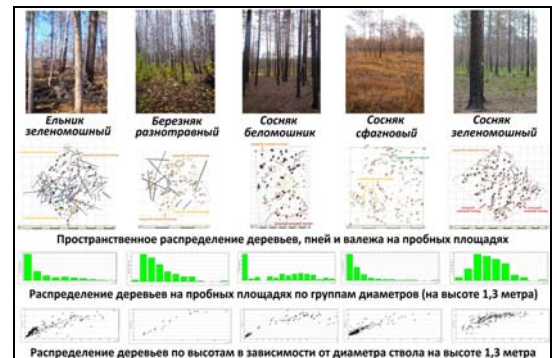
Renewal of the reference points of the research plots to facilitate the multi-decade monitoring process



Inventory of downed woody materials for monitoring carbon fluxes during the coming decades



The forest inventory team applying advanced methods to measure distribution and size of dead timber



First results of the inventory presented by Alexander Brukhanov and his team



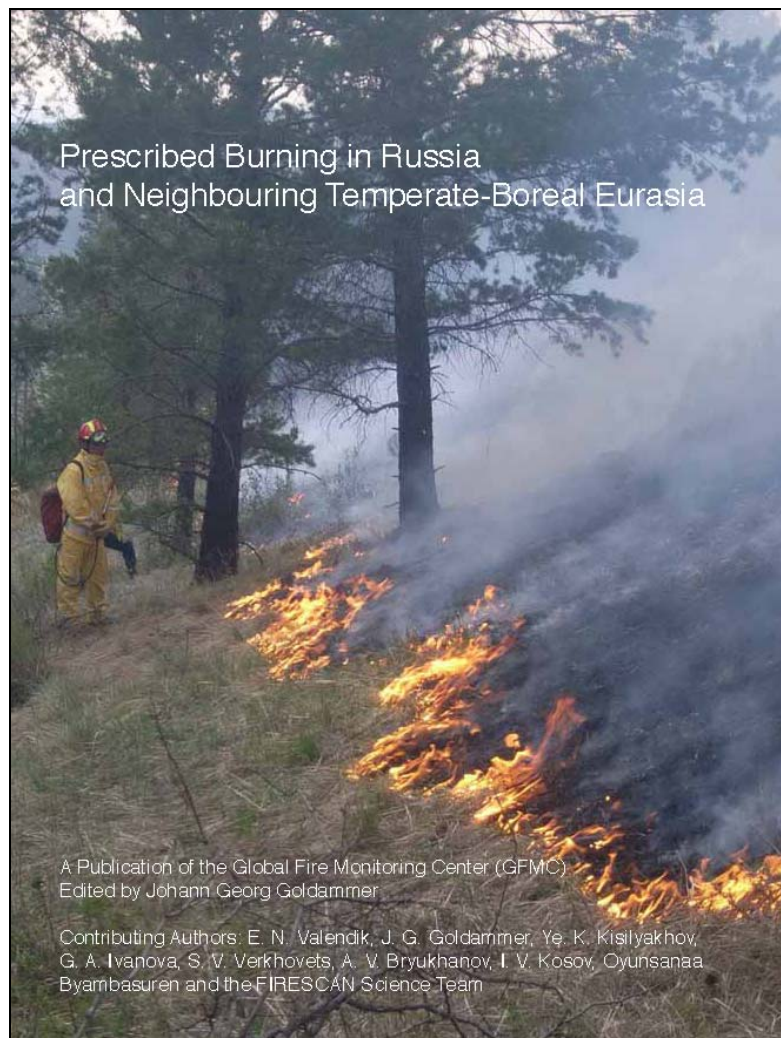
The Bor Forest Island Team – Farewell photo taken on the “Appendix” on 22 June 2013

**Handing over the first print of the book volume
“Prescribed Burning in Russia and Neighbouring Temperate-Boreal Eurasia”**

Starting with the first East-West international conference “Fire in Ecosystems of Boreal Eurasia” and the Fire Research Campaign Asia-North (FIRESCAN) and its “Bor Forest Island Fire Experiment”, organized in 1993 in Krasnoyarsk, Russian Federation, the scientific dialogue revealed the rich knowledge of the fire ecology of temperate-boreal Eurasia. The results of the following two decades of joint scientific research encouraged the participation of forest authorities in devising new concepts in fire management and to consider replacing fire exclusion policies by integrated fire management approaches, which would include the use of natural fire and prescribed burning (prescribed management fires).

Fire scientists of the Sukachev Institute for Forest, Russian Academy of Sciences, Siberian Branch, Krasnoyarsk, and the Fire Ecology Research Group at the Global Fire Monitoring Center (GFMC), Freiburg University / United Nations University, Germany, summarized experience and provided targeted advice to the development of advanced fire management policies in a dedicated volume.

At the Second International Fire Management Week in Krasnoyarsk Krai 2013, which revisited the international Bor Forest Island Experiment, the book volume was publicly presented and handed over to the participating institutions and the practitioners and decision makers.



Source

Goldammer, J.G. (ed.) 2013. Prescribed Burning in Russia and Neighbouring Temperate-Boreal Eurasia. A publication of the Global Fire Monitoring Center (GFMC). Kessel Publishing House, 326 p. ISBN 978-3-941300-71-2. <http://www.forestrybooks.com/>