

# JRTR

Japan Railway & Transport Review

Feature

## Railways and The Environment (part 3)

- Rail Transport and Environmental Costs—Policy and Research in Europe
- Japanese Railways and Their Outlook: An Environmental Perspective
- Railway Protection Forests—Reducing Natural Hazards and Enhancing Environmental Values
- JR East Efforts to Prevent Global Warming
- Development of Dual Mode Vehicle and its Effects
- JR Freight Approach to Infrastructure Development for Modal Shift
- Contributing to A Sustainable Future

51

Feb 2009



# JAPAN RAILWAY & TRANSPORT REVIEW

February 2009 No. 51

Published by **East Japan Railway Culture Foundation** (EJRCF)

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JRTR is printed in Japan.



Snowdrift protection forest on Ou Line  
(Yamagata Shinkansen) in Honshu  
(Yosuke Masui)

## Editorial

### Back to Nature

Railway sleepers in Japan used to be made of chestnut and other hardwoods but have been switched to concrete today; one would be hard pressed to find any natural materials now used for building railways. It is no overstatement to say that railways rely on artificial materials for everything from rolling stock through track beds to station buildings. From the perspective of utilizing nature directly, only railway forests remain and they got their start from forests planted by Nippon Railway\* in 1893 along the Tohoku main line from Iwate to Aomori prefectures. The purpose was to prevent snowdrifts and avalanches. Later, railway forests were planted across Japan for other purposes, such as protecting tracks from strong side winds and drifting sand. The acreage of mostly cedar and other evergreens peaked in 1961 with 17,500 ha managed by JNR.

As urbanization spread, the area of railway forests declined rapidly but JR East, which now owns 4200 ha has reassessed the value of railway forests and their major role in disaster prevention and environmental preservation. As a result, the company is actively promoting forestation in conjunction with its forest development campaign.

It is interesting that the company is increasing the number of tree species and planting diverse, multilevel forests that are more ecologically sound, when analysis of the function of railway forests shows a need to heighten their disaster prevention function. The idea is to come as close as possible to a more natural ecology fitting the region. Expectations are high with ideas like bird boxes as a means to help in nature conservation encompassing the whole ecosystem.

\*Nippon Railway was Japan's first private railway company established in 1881. It operated lines from Tokyo through the Kanto and Tohoku regions and was nationalized in 1906.

K. Aoki

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