

SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP

(This is quite the unique topic-Rich)

Tropical Timber Market Report

Volume 25 Number 3 1st – 15th February 2021



The ITTO *Tropical Timber Market (TTM) Report*, an output of the ITTO Market Information Service (MIS), is published in English every two weeks with the aim of improving transparency in the international tropical timber market. Its contents do not necessarily reflect the views or policies of ITTO. News may be reprinted provided that the ITTO *TTM Report* is credited. A copy of the publication should be sent to ti@itto.int.

Radiocaesium contamination of logs in Fukushima undermines prices

A recent study of the impact of radiation on trees surrounding Japan's Fukushima Daiichi nuclear power plant has been released. The publication focuses on radioecological experience and data acquired and lessons learned in Japan following the nuclear accident at the Fukushima Daiichi nuclear power plant in March 2011. The research focused on radionuclide interception by forest trees and a few agricultural crops.

The major part of Fukushima Prefecture is covered by forest, so research projects were established in forests to quantify the rate of reduction of the external gamma dose rate from radiocaesium and to better understand soil chemistry. The studies also evaluated the distribution of radiocaesium within different components of trees (wood, bark and leaves) to gain knowledge about the amount of radiocaesium in timber and firewood, wild plants, fungi and wild animals and to analyse the time trends of activity concentrations in such products.

Approximately 70% of the territory affected by the Fukushima Daiichi accident is covered by forest and forests in Fukushima Prefecture consist of about 0.34 million ha. of forest plantations and 0.58 million ha. of natural/semi natural forest.

Radiocaesium dynamics within forest ecosystems are more complex than in agricultural land because trees are perennial plants and forests are highly structured ecosystems. Leaves/needles, branches, bark, forest floors and soil surface organic layers were initially contaminated at the time of deposition.

The report notes "The important long-term contamination pathway for trees is root uptake. Both the soil surface organic and the mineral soil layers are sources for uptake of radiocaesium by trees and



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understory species via roots or mycelia. The above processes lead to redistribution of radiocaesium within a forest ecosystem, eventually forming a quasi-equilibrium steady state of the radiocaesium activity concentrations in the tree and soil”.

There is a direct economic cost from this contamination as mills in eastern Japan pay more for less contaminated logs. The additional costs were covered by TEPCO compensation. The authors of the report say “For sustainable long-term production, remediation methods are needed to produce wood that conforms to the standard limits”.

See:

<https://www-pub.iaea.org/MTCD/Publications/PDF/TE-1927web.pdf>

<https://www.iaea.org/publications/14751/environmental-transfer-of-radionuclides-in-japan-following-the-accident-at-the-fukushima-daiichi-nuclear-power-plant>

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