



Water Source Forest Management by Private Sector in Japan

Authors: Kiichiro Hayashi

Short title: Water Source Forest Management by Private Sector in Japan

Key Message: Business risk motivates private sector to invest forest conservation.

Suggested citation: TEEBcase by Kiichiro Hayashi (2010) Water Source Forest Management by Private Sector in Japan, available at: TEEBweb.org



Photo.1 Okudaisen mountain
Courtesy: Suntory Holding Limited

What is the problem?

Almost 67%¹ of Japan's land is covered by forests. About 41% of this forest area is planted forest². Over half a century ago, the forestry sector was one of the most active industries supporting Japanese industrialization and urbanization. Therefore, planted forests came to

¹ Forestry Agency of Japan, Government of Japan, web site, last accessed in 1 Oct 2010, <http://www.rinya.maff.go.jp/j/keikaku/genkyou/index.html>, (in Japanese)

² Forestry Agency of Japan, Government of Japan, web site, last accessed in 1 Oct 2010, <http://www.rinya.maff.go.jp/j/keikaku/genkyou/index.html>, (in Japanese)

cover the greater percentage of Japanese forest land. Now, the situation has changed. Cheaper foreign timber imports, an aging population and declining domestic forestry are leading to the expansion of unmanaged forest area in Japan³. So most of Japanese forests are now unmanaged and ecosystem services provided by forests are degrading⁴. The key issue regarding forests in Japan is not the decreasing forest area, but degrading artificial forest ecosystem services due to insufficient management, especially for privately-held land. Thus, there is a strong need for appropriate forest management.

Many beverage companies in Japan have extracted water from the ground for producing, cooling and alcoholic beverages for a long time. For a sustainable business model, these companies will be in pursuit of a sustainable business model. Several companies have conducted water source forest conservation projects contracted with land owners. We can say that these are payments for ecosystem services (PES), classified as direct negotiations between the ecosystem service beneficiary and forest owners. In other words, a beverage company, as a beneficiary, and forest owners, as cost shoulders, concluded contracts for the better management of water source forest.

Which ecosystem services were examined? And how?

The purpose of this PES is the conservation of water source forests to recharge ground water. The objective of this PES, from the point of view of a beverage company, is that the amount of water recharge to the ground should be more than that of water being extracted from the ground by their factories.

For example, Suntory Holdings Limited⁵, a beverage company based in Japan, started a water forest management project from 2003. First the company conducted hydrological and geological surveys of groundwater pass way. According to these surveys, they identified the water source and ground water pass way of factory extracting water at their beverage factories. After identifying the real water source forest of their factories, they made consultations with land owners of water source as well as local government and/or central government. And they decided the area of forest management. Then they conducted field surveys on the relevant forest and made a forest management plan with scientists in each site. Finally, they spent the cost of maintenance of the forest such as tree thinning, etc. They also used the forest maintenance opportunities for the purpose of educating their employees and their consumers. Currently, they plan to expand the area of water recharge to 7,000ha in 2011.

What policy uptake resulted from examining the ecosystem services?

This is a good example of a direct negotiation-based PES in Japan. The company understood that the ecosystem service is crucial for their business model and shouldered the cost for keeping their business model. They identified the water source of their extracting water based on scientific survey. One policy lesson is that scientific information is very useful to better understand an ecosystem service benefit so that a company who deeply depends on it can understand the importance of the ecosystem service. This fact can motivate the company to do conservation activity for their own business merits.

³ The historical background of forestry sector in Japan is summarized in the Forestry White Paper 2009, <http://www.rinya.maff.go.jp/i/kikaku/hakusyo/21hakusho/zenbun.html>, p8-9, p44-45, etc. (in Japanese)

⁴ The issue was summarized as the second crisis of Japan in the National Biodiversity Strategy of Japan 2010. <http://www.env.go.jp/en/focus/100430.html>, (summary in English)

⁵ The information of the company's activity in this paragraph was provided by Suntory Holding Limited brochure, web site (<http://www.suntory.co.jp/eco/forest/>) and personal communication with them.

Acknowledgements:

The author would like to thank Suntory Holding Limited, Prof. Kentaro Yoshida, IGES and many others for their valuable inputs for finalizing the paper.

References:

- Government of Japan (2010) Forestry White Paper 2009,
<http://www.rinya.maff.go.jp/i/kikaku/hakusyo/21hakusho/zenbun.html>.
- Forestry Agency of Japan Government of Japan, top web page: <http://www.rinya.maff.go.jp/>
- Forestry Agency of Japan Government of Japan, web site, last accessed 1 October 2010,
<http://www.rinya.maff.go.jp/i/keikaku/genkyou/index.html>, (in Japanese)
- Government of Japan (2010) The National Biodiversity Strategy of Japan 2010.(English summary, <http://www.env.go.jp/en/focus/100430.html>)
- Suntory Holding Limited, "Suntory tennensui no mori"(Suntory Natural Water Forest), brochure of Suntory Holding.
- Suntory Holding Limited, Natural water forest web site, last accessed in 2 Oct 2010,
<http://www.suntory.co.jp/eco/forest/>, (in Japanese)