



Article

Forestland Grabbing by the Foreigners in Hokkaido, Japan: Is It a Big Concern for Sustainable Forest Development?

Kazi Kamrul Islam ^{1,2,*}  and Kimihiko Hyakumura ¹ 

¹ Institute of Tropical Agriculture, Kyushu University, 744 Motooka, Nishiku, Fukuoka 819-0395, Japan; hyaku@agr.kyushu-u.ac.jp

² Department of Agroforestry, Bangladesh Agricultural University, Mymensingh-2202, Bangladesh

* Correspondence: kamrulbau@gmail.com; Tel.: +81928024830

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Abstract: A world-wide demand in large-scale land acquisition over the past decade has been discussed as a land grab for access to natural resources. Forestland grab is the dynamics of land use changes by the foreign or national entities that can enable forests and biodiversity transformations on a wider scale. In recent times, forestland grabbing performed by foreigners in the Hokkaido Island of Japan has been increasing and causing a lot of debate. Therefore, this study analyzed the social, economic, and ecological impacts of forestland grabbing by the foreigners in the Hokkaido Island of Japan, and also analyzed the land ownership rules and regulations of Japan that have an impact on the land-grabbing process. This study is formed by an analysis of public and forestry agency documents, grey and academic literatures, interview with questionnaire and practical observation in central Hokkaido, Japan. The study found out that the forestland grabs have been taking place on the Hokkaido Island using the existing Japanese policy and legal arrangements. However, some people and print media have disagreed with the treatment of forestlands as a commodity because the land and water resources are limited and also essential for the national sovereignty and local culture. On the other hand, the small-scale forestland grabbing and development activities by foreigners were totally in the grip of the local government and no significant forest and biodiversity losses have been identified so far. The study also revealed that the entry of foreign companies has augmented the local economy and tourism industries and also provided jobs for the local people. Therefore, the foreigners-based land grabs and investments have caused an immense debate, and the study would recommend the proper execution of conservation regulations at every level instead of blocking the entry of foreign entities through law.

Keywords: Land grab; policy; social; economic; ecological; sustainability; Japan

1. Introduction

In recent times, an increasing trend of academic publication has focused on land-grabbing issues throughout the world. Usually the land grabs involve an explosion of national or transnational commercial land transactions and land speculation for the large-scale production and export of food and biofuels [1]. As with other land grabs, forestland grab for commercial activities is often considered problematic, undermining local sovereignty, allowing benefits of natural resources to be occupied by the foreigner, and causing harm to local communities' people [2–4]. Similarly, investment in the grabbed forestland is a cross-cutting issue regarding the development of the local areas and communities [5,6]. Therefore, there is contentious debate about the forestland grabs and the development issue; there is no clear data regarding forestland grabs and its impact on landscape changes [7,8]. Moreover, the destruction

of the landscape, in particular the human–environment and socio-cultural systems, would depend on how fast the amount of land grab occurred in a particular area. People and their environmental linkage also led to developing the social–ecological system science [9–11]. The idea of the social–ecological concept has been used in different fields, including sustainable forest management, in order to understand the complex human–natural system throughout the world [10]. Therefore, it is clear that a land grab has been strongly correlated with economic, social, and environmental issues of nations and people in the world [3,7,8,12–14]. In addition, to date there has been limited effort to address the forestland grabbing and the sustainable forest development from a comprehensive and integrative perspective.

Land grabbing is a common scenario in the developing countries of the African and Asian regions; however, some developed countries are already involved, not only as investors, but also as recipients. Japan is one of the examples of such experiences, in particularly the forestland grabbing by foreign entities during the last twelve years [15]. The Japanese newspapers and print media have already reported several incidences of forestland grabbing issues by the foreigners in Japan [15–17]. However, there were no previous scientific studies based on forestland grabbing and its impact on sustainable forest management in Japan. Japan consists of more than 6000 islands and has a forest area of 25 million hectares, which accounts for 67% of the country's land surface area [18–21]. Of this area, about 58% is private owned and the remaining 42% is owned by the government. The forest resources of Japan are enormous and the forest culture runs deep with the Japanese, but in present times, the economic solvency of the forestry industries has become a problem [22]. Therefore, sustainable management of the country's huge forest area is a challenging task for the public and government as well. The majority (about 94%) of the Japanese private forest owners are normal households having 1 to 20 ha of forests; of them, only 11% of households owned more than 10 hectare of forests [18,19]. Out of the five main islands of Japan, Hokkaido possesses about 22% of Japan's forestlands, of which, the government owned about 55% [20,23]. The natural forests of Hokkaido consist of major mountain ranges including Mt. Daisetsu and Mt. Hidata and contains Hokkaido, the richest ecosystem in Japan. Hokkaido's forest area is comprised of mainly coniferous trees (e.g., Sakhalin fir and Sakhalin spruce) and also broad-leaved trees (e.g., Japanese oak, birch, and painted maple), providing seasonally changing views. The climatic feature of Hokkaido is similar to Western Europe and Northern America with the appeal of a gentle and cold weather for a pleasant living environment. Hokkaido is also treated as one of the best naturally attractive prefectures in Japan, which consists of a number of camping sites, golf courses, ski resorts, and hot spring [24]. All of these make Hokkaido a well-balanced living and lifestyle environment for the Japanese and foreign nationals.

The foreign residents staying in Japan reached a record in 2016 of about 2 million long-term and permanent foreign residents, and as of 2018, this island is one of the most popular tourist destinations in Japan [25]. The number of foreign people living in Hokkaido by country indicates that the Chinese are the largest, followed by those from South Korea, Taiwan, Hong Kong, and Thailand [21]. As a result, the number of buying or grabbing of Japanese forestland by foreigners has increased. In addition, foreigners have treated the Hokkaido forestland as the most preferred location for doing recreational/commercial activities. Data from the Japan Forestry Agency showed that foreigners or foreign companies owned an area of 1589 hectares of forestland until 2017 [26] (Table 1). However, the Japanese print media also reported that this amount of land is thought to represent just the tip of the iceberg as there were many incidences of foreigners owning forestland and registering in a Japanese person's or company's name [15,16]. Moreover, about 95% of the total forestland grabs occurred on the Hokkaido Island of Japan [23]. Among them, most of the properties were owned by the companies and registered in the name of British Virgin Islands, followed by the Chinese, Australian, and other Asian companies [15,16,27].

Table 1. Trends of forest land grabbing by the foreigners in Japan [26].

	2006	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	2017	Total
Company/Person	03	08	12	06	15	14	09	14	15	16	29	44	185
Area (ha)	25	87	94	362	56	157	16	194	174	74	202	148	1589

In Hokkaido, the prefectural government has already set some regulations regarding buying forestland that are situated in the water sources conservation area. However, the groundwater laws are inadequately developed in Japan, and Japan does not have good water laws [28]. Japan only has a river law, and therefore, the prefectural government tried to develop their own sustainable groundwater policy [28]. The Hokkaido prefecture already set a good example by providing the development of water resources conservation policy in the forestland areas. Nevertheless, the forestland owners also need to maintain the basic conservation regulations for doing any commercial activities in their forestland. The prefectural government cannot impose those conservation regulations to the private forestland owners; rather, they requested all owners follow the regulations. Therefore, the overall forestland grabbing in the Hokkaido Island and its social–ecological systems are attention-grabbing, which requires immediate investigation. Therefore, the objectives of the study are to identify the impacts of forestland grabbing, especially by foreigners, on the economic, social, and ecological dimension of sustainable forest management on the Hokkaido Island of Japan. The study also analyzes the policy and institutional arrangements of Japan that have an impact on the land grabbing process.

2. Materials and Methods

2.1. Conceptual and Theoretical Frameworks

There is no concrete definition of land grabbing that includes all necessary things that can be used for any geographical area. Rather, “land grab” needs to consider several aspects such as: size, people, control, usage, and legality. Considering these, the European Coordination Via Campesina [29] has shaped the definition of land grab as follows:

Land grabbing is the control whether through ownership, lease, concession, contracts or general power of larger that locally-typical amounts of land by any persons or entities public or private, foreign or domestic via any means-legal or illegal for purposes of speculation, extraction, resource control or commodification at the expense of peasant farmers, agroecology, land stewardship, food sovereignty and human rights.

On the contrary, the Food and Agriculture Organization (FAO) and United Nation (UN) refers land grabbing as land acquisitions that are large scale and engage foreign entities and local government that also exclude some actors and also impacts on food security [30,31]. They also understand that the land grab has impacts on the social and local livelihoods, and sometimes have sovereignty issues as well [3]. The International Land Coalition strongly mentioned that a land grab has a direct impact on rural poor and their livelihood and also violate human rights to some extent [13,32]. Moreover, a land grab has assumed a negative connotation, in particular a dynamic of power among those that have the control over the land [33,34]. The control over land (particularly those of bigger size) by the national and foreign entities have the main phenomenon of a land grab. In the case of Japan, the size of the forestland owned by the foreigners was not so large (such as 1 to 2 ha mainly) but the foreigners have the use and selling rights and gained controlling power over the lands. Therefore, the forestland grab is conceptualized in this research as the transfer of control and rights over property and resources from local control to the outsiders such as national and foreign entities.

On the contrary, forests provide a variety of environmental, economic, and social benefits, as well as home for the animals and plants. In order to understand how social–ecological interactions shape sustainable development of Hokkaido forests in the land-grabbing perspective, the study gathered ideas from the literature of social–ecological systems [10,35–37]. In particular, the study used the

social–ecological model to discuss how interactions between institutions, actors, and resource uses shaped the sustainable development of the Japanese forests within the effect of the land-grabbing process (Figure 1). Accordingly, the study also analyzes the land rules and regulations of Japan in order to understand the social–ecological context of the Hokkaido’s forestland grabbing situation.

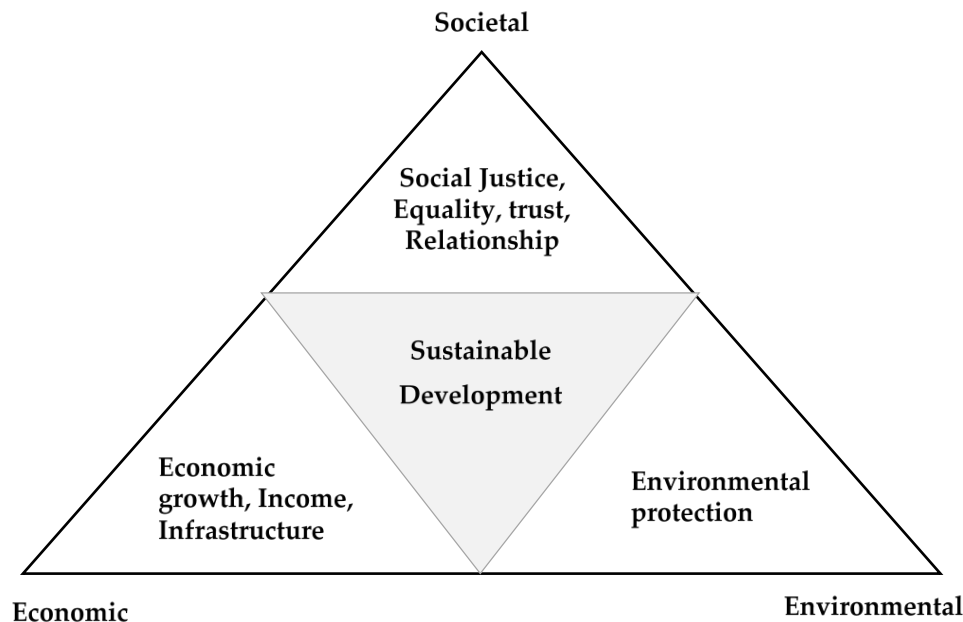


Figure 1. Sustainable development in a social–ecological framework.

The triangular social–ecological model can easily express the divergent priorities of planning in which the societal view of nature puts forward the challenge of “man versus nature” [36]. Therefore, the analysis of the triangular model based on the social–economic framework (Figure 1) is done to address the question of sustainable development of the Hokkaido’s forest due to land grabbing. The three dimensions of the framework led to three different perspectives of the land-grabbing effect on sustainable forest development. The economic aspect evaluates the impact of land-grabbing conflicts on the income, economic growth, infrastructures, and other economic development aspects of Hokkaido’s forests. The environmental dimension sees the forests as resources uses and development activities conflict due to land grabbing. The land grabbing is in competition with nature for resources and land, always possessing a threat to ecosystems [36]. The study also includes the forest water resources conflicts as a part of environmental protection on the Hokkaido Island. However, the societal aspect sees the land grabbing is in competition with social justice, equity, relationship, and ethical issues of the local communities. The three dimensions of the sustainable development represents divergent interests, and therefore led to common fundamental conflicts [36]. Therefore, understanding the sustainable development of forests due to land grabbing depends on examining its social–ecological dimensions and the potential interaction of all the associated factors [10].

2.2. Study Area and Data Collection

Hokkaido Island is one Japan’s largest forests, which accounts for 22% of the country’s total forest cover. The study was conducted in central Hokkaido where the majority of the forestland grabs occurred by the foreigners.

The study used a mix-method approach for data collection. The data collection and analysis were based on public documents, grey, and academic literature, forestry agency and private forest cooperative reports and documents, in depth interviews of the key personnel (local and regional level government staff, headquarters and local forestry agency staff, private forest cooperative staff, and a hotel manager) working on forestland grabbing, views and opinion of experts and journalists,

published books, articles, reports, and other reliable online information. The key person interviews were comprised of a total of 14 different experts working on the forestland grab issues in the Hokkaido Island and also the responsible person from the government and private organizations (Table 2). In this research, key person interviews involved interviewing a selected group of individuals who were likely to provide the required information, ideas, and insights regarding the forestland-grabbing issue [38]. Before conducting the key person interviews, we asked the central forest agency of Japan and confirmed that those people are directly involved and treated as resource personnel in the forestland grabbing aspect. We covered all of the responsible persons working in the local government level of the study area. The study also interviewed the private forest cooperative key staff in order to get detailed information and their opinions on the land-grabbing issues. The in-depth interviews for the study used a semi-structured questionnaire that was open-ended and covered a list of topics [39]. The questionnaire was mainly gathered the ideas and opinion of key persons (experts) linked to the social, economic, and ecological dimension of forestland grabbing. The respondents also provided their experiences on tree cover loss towards the biodiversity condition of the grabbed forestland area, and the research team controlled the entire interview process as per the main objectives of this study. Together with the key personnel interview, the study also conducted participant observation techniques for data collection in the Sapporo, Akaigawa, Date, Kimobetsu, Shiribeshi, and Niseko areas of the central Hokkaido Island, Japan. The participant observation technique was another strategy used for gathering qualitative information in the field. The technique involved close interaction with the members and practical conditions [38]. We directly observed the ongoing activities of the land-grabbing companies in the field to gather the qualitative information directly. The field survey was conducted during November to December 2017 and secondary materials were reviewed from June 2017 to August 2018.

Table 2. List of experts interviewed during data collection.

Expert (No. People)	Affiliation	Interview	
		Type	Time
Expert (1)	Headquarter of Japan Forest Agency at Tokyo	Face to face interview	September 2017
Expert (1)	Hokkaido Private Forest Cooperative Office at Sapporo	Face to face interview	November 2017
Expert (3)	Hokkaido Prefectural Forest Office at Sapporo	Face to face interview	November 2017
Expert (2)	Akaigawa Village local Forest Office, Hokkaido	Face to face interview	November 2017
Expert (2)	Date City local Forest Office, Hokkaido	Face to face interview	November 2017
Expert (1)	Kimobetsu Town local Forest Office, Hokkaido	Face to face interview	November 2017
Expert (1)	Hokkaido Sub-prefectural Shiribeshi Forest Office, Kutchan City, Hokkaido	Face to face interview	December 2017
Expert (3)	Hotel Manager/Staff at Niseko Town, Hokkaido	Face to Face interview; Informal discussion	December 2017

3. Results

3.1. Policy and Institutional Arrangement

The first forest act of Japan was enacted in 1897, and the current forest act was the third one, enacted in 1951. The main purpose of the present act was to protect forests from the initially divested forests and to conserve national forest land. After the rapid economic growth in 1960s, Japan's forest

act has included the provision of establishing a basic forestry plan by the government every five years based on a cycle of a 15-year term [18]. As a result, the nation-wide forest plan is set by the Ministry of Agriculture and Forestry, the regional forest plan for non-national forest is set by the prefectural governor, and the basic forest management plan for national forests is set by the Director General of the Japan Forestry Agency [18]. Currently, the Japan Forestry Agency has 7 regional and 98 district forest offices to manage the national forests, which are about 30% of the country's total forest area. Therefore, a larger amount of forestland is owned and managed by the private owners, and they also need to prepare a 5-year forest management plan with coordination and approved by the respective mayor of the municipality. The municipalities need to gain approval of this forestry plan from the prefectural governor as well. The prefectural governor also needs to coordinate this plan together with the national forest plan prepared by the regional forest offices. Therefore, all of the national and non-national forest plans are coordinated and approved by the respective authorities.

The National Forest Land Act was promulgated in 1899 during the time Japan was establishing itself as a modern country [18]. In case of the foreign land ownership law, Japan has made a restriction on the buying of land by foreign persons or companies due to security reasons. On the contrary, Japan has joined the World Trade Organization (WTO) in 1955, and also signed the WTO treaty on GATS (General Agreement on Trade in Service) in 1995 with other countries [40]. According to GATS agreement, Japan government could not impose restriction on foreign ownership of land and services. During data collection, Kimobetsu and Shiribeshi local government staff mentioned that the Japanese government follows the WTO agreements properly, and therefore, the foreigner and foreign juridical persons registered herein could enjoy the right of land ownership. They also added that if the foreigner has had a Japanese visa for more than three months, a tax-paying certificate and a residence certificate, they are eligible to purchase the Japanese private-owned forestland. On the contrary, the agricultural land acquired and development activities (both foreign and local entities) would require prior approval from the agriculture affair committee at municipality level. However, to buy the forestland, in particularly the privately-owned forestland, would not require such permission. If we compare the Japanese land ownership rules and regulations with other Asian countries, we can see some significant differences (Table 3).

Table 3. Land ownership systems in some Asian countries [41–46].

Country	Pre-Condition	Triggers
China	Not permitted	In principle, land is the property of the government/state; however, local subsidiaries of foreign-owned businesses may achieve land-user rights with government review and monitoring.
Indonesia	Not permitted	Foreign-owned businesses or enterprises may execute on specific land after receiving development or building rights from the government.
Philippines	Not permitted	Foreign investors may lease land, which must be used only for investment purpose only.
Singapore	Permitted with restrictions	Foreign investors will need the permission from Ministry of Law to own the land and must go through monitoring systems.
India	Not permitted	Local subsidiaries of foreign own businesses or enterprises may acquire land-user rights under certain conditions.

Table 3. Cont.

Country	Pre-Condition	Triggers
Bangladesh	Not permitted	In principle, foreign people cannot own any land. However, if the foreign companies register in the Joint Stock Companies and Firms in Bangladesh, they may be considered as a local entity and can enjoy the land user rights.
South Korea	Permitted with restriction	Foreign companies will need to apply for the permission of land-user rights in accordance with the alien land law, and after getting permission/notice they can get land.
Japan	Permitted in the private own land	Foreign companies can buy private-owned land, in particularly the forestland without restriction (maintains the WTO treaty).
Vietnam	Permitted with lease systems	A foreign company or person can lease land from the Vietnamese Government to implement a project regarding the production of agriculture, forestry, fisheries, or salt production.

Most of the leading Asian countries would not provide any room for foreigners to buy or own land directly, even if the foreign person was living or doing business in the country for a long time. However, the institutional arrangement is not a limiting factor for the foreigners to buy and develop forestland in Japan. Therefore, the foreign investments with a proper development plan regarding the forestlands are always welcome by the Japanese forestry agency and government.

3.2. Economic Aspect of Forestland Grabbing

Foreign investment in lands are not new features throughout the world, but the interest in forestland for commercial activities has been increasing in Japan, in particular after the recovery of economic crisis and great earthquake in 2011. The study's findings and practical observations in the central part of Hokkaido clearly showed that foreigners invested a lot of money for recreational and commercial purposes in relation to mainly the tourism business. They were not investing money for agricultural production or agribusiness; rather they built hotels, condominiums, golf courses, ski resorts, or other leisure activities, including summer camps in their grabbed forestland areas. The economic aspect of Japanese forestland grabbing has represented a quite different picture; therefore, the study would like to provide a detailed economic analysis of Japan's forestland grabbing, in particularly the investment and tourism perspectives.

According to the Bureau of Tourism, the demand for tourism was returning to normal in 2012, and it continued throughout Japan. An estimate of 53.1 million tourists was recorded in 2013, compared to the previous record of 52 million tourists in 2009 [24]. Like other parts of Japan, the number of foreign tourists in Hokkaido reached 1,153,100 in 2013, which was 45% higher than the last fiscal year [24]. Major foreign tourists were coming from China, Taiwan, Hong Kong, South Korea, Thailand, Australia, and Canada. Hokkaido Island has been designated as the best nature attraction place in Japan, and the tourists prefer the winter season (December to March) in order to visit this naturally beautiful island [24]. As per the information from the local government, about 45% of the winter season tourists came to Hokkaido to gain a ski experience or enjoying the snowfall. However, there were a number of tourists that came to enjoy the beautiful and mild summer weather of Hokkaido. In terms of the amount of money that was spent by the tourists per tour, the inbound tourist from Hokkaido spend around 13,271 Japanese Yen, while other areas' tourists spent about 69,670 Japanese Yen (1 USD \approx 110 JPY). However, the amount of money spent by the average foreign tourist in Hokkaido was 122,128 Japanese Yen (Table 4) [21]. According to the information, the tourists' increasing rate varied in each year, and after the great tsunami in 2011, the tourism sector had greatly recovered in 2013 [24]. The Bureau of Tourism, Department of Economic Affairs has provided research data

up to 2013; the study made an estimate of only a 5% increasing rate of tourists after 2013 onwards (Table 4).

Table 4. Estimated amount of money spend by the foreign tourists in the Hokkaido Island.

Visited Year	Number of Total Tourist	Amount of Spend Money/Tourist (JPY)	Total Amount of Spend Money (Million JPY)
2013 *	1,153,100	122,128	140,825.8
2014	1,210,755 **	125,499 ***	151,948.2
2015	1,271,293	125,515 **	159,565.9
2016	1,334,857	125,512 **	167,541.2
2017	1,401,600	125,522 **	175,931.5

* According to the information of the Bureau of Tourism 2014. ** An estimate of 5% increasing rate of tourists after 2013. *** The annual variation of consumer price index (CPI) in percentage, (i.e., 2014, 2015, 2016, 2017 CPI = 2.76, 0.79, −0.11, 0.47, respectively) [47].

On the contrary, there was no exact information on how many or percent of foreign tourists visited the foreign-owned properties on Hokkaido Island in each year. A foreign-owned hotel manager stated that at least 10% of foreign tourists visited the foreign-owned properties in the Hokkaido area, and that number was increasing sharply. Therefore, the study assumed that at least 5% of the total foreign tourists visited the foreign-owned tourism activities, and their average money expenditure was 8797 million Japanese Yen in 2017. This sort of amount would add an additional money flow to the local economy and the development of the forestry sector as well.

The Japanese private forest owner has faced a shortage of labor, due to an ageing problem of Japanese people, which had a negative effect on the proper management and production of the private forests [15,17]. The experts also mentioned that the price of local forestland was going down, and all of this inspired private forest owners to sell their land instead of continuing forest production and also paying the government taxes. They also stated that a number of foreign companies bought the low-cost forestland to make golf and ski courses, hotels, condominiums, resorts, and summer camp activities in order to do commercial activities related to tourism on the Hokkaido Island. However, we also found some Chinese companies who did not know the rules of keeping at least 50% tree cover for making a golf course in their grabbed forestland. One Chinese company planned to clear the tree species below 50% in their working plan and the respective local government authority already asked to revise their working plan immediately. The local authority also made a plan to visit the site and evaluate their revised plan according to the prefectural conservation guidelines. The study also found that a Thai company bought a local Kiroro Sky Resort (43 km west of Sapporo city) from a local Japanese company; the deal was about 1.9 billion Japanese Yen or 25 million USD and the land area was only 48 hectares [16]. Therefore, the foreign investment in the grabbed forestland for business was a remarkable example. If we considered the 185 total foreign companies/persons that invested into the Japanese local economy, it would be a big amount of foreign investment.

The foreign companies who opened the ski resorts, golf courses, hotels, and other leisure business have also created employment opportunity for the local Japanese people. The study interviewed two young Japanese staff members working at the foreign-owned hotel in the Niseko area, and found that most of the (except one or two foreign people working at reception) staff working in that hotel were Japanese. One of the young staff stated that he came from Nagano Prefecture (outside of Hokkaido) in order to work at the Niseko area only for the winter time. He worked in the Hong Kong-based hotel in the Niseko area and earned 1800 JPY/hour and he also enjoyed the beautiful winter season of the Hokkaido Island. Therefore, the foreign-owned properties have also created employment opportunities for the Japanese people in the Hokkaido area.

3.3. Social Dimension of Forestland Grabbing

In the land-grabbing debate, it is very important to bear in mind the relevance of human rights and the importance of land for local peoples' culture. The study asked the respondents whether the forestland grabbing has violated the human rights or not, and was there any evidence found in the study area. In response, 100% of respondents said that there was no direct societal or human rights violation that have been occurred due to the land grabbing by the foreigners/companies. The study only found two thirds of local community houses were closely situated in the land-grabbed areas, and so far, there was no formal complaint by the local communities. The results of the study clearly found that there were no displacements of local communities/people due to forestland grabbing. Furthermore, the local government officials had not faced any complaint from the local Japanese people as well. In most of the cases, the grabbed forestlands were situated in the remote mountainous areas, except for some commercial hotels and resorts in the Niseko town.

On the contrary, the local Japanese people did not have detailed information on which foreign companies bought the local forestlands and what would be their future working plan. That meant there was a clear information gap regarding foreign land deals that has arisen in the study area. At the same time, the local Japanese forestland sellers were not interested in disclosing the land deals information to the public as per the agreements. During an interview with the Akaigawa local government staff, the study found that some foreign companies did not cooperate or share their information to the public or others. In addition, some of the newspapers and print media also illustrated the fears of using water resources of the grabbed forestland. The Japanese newspapers and print media had criticized the secret agreements and requested to disclose the information to local people [16,17,27]. In the Kimobetsu town, a Chinese company bought 210 hectares of forestland in 2011, which is situated in the base of Mt. Yotei, Sapporo prefecture. This area was used for a golf course, in which only the Chinese owner played golf once or twice in a year. Recently, the Chinese company accepted the Japanese people to play golf there but the detailed information on landowner and related advertisement remained secret. Miyamoto (2017) [48] also reported that some of the local peoples' perceptions towards that Chinese company and their golf course was very negative. In Date city, one Hong Kong company (Chinese owner) bought the Toyako Resort and did not execute the master plan proposed in 2010. Seven years after the land acquisition, their development plan was still in vain and the resort looked like it was in an untouched state. Therefore, the process of hindering information, in particularly the foreign land deals, has been criticized by the local journalists, print media, and experts as well.

On the contrary, the study did not find any evidence of violation of human rights, conflict with local people, or displacement of local communities through the land grabbing. One of the government staff from the Shiribeshi area also mentioned that two Australian people started to live in his village and they were running a hotel business in the Niseko area. He also mentioned that the local villagers got a scope to enjoy the Australian culture and there was no complaint from the villagers. Therefore, the social issue of Japanese land grabbing gave us a completely different scenario.

3.4. Ecological Aspect of Forestland Grabbing

3.4.1. Forest and Biodiversity

Land grabbing has apparently created some impacts on reducing some species; however, the extent of its consequences may be difficult to identify and quantify properly. The study observed that the construction of hotels, resorts, motels, golf courses, or ski resorts could create a loss of biodiversity through the decline of species. Usually the land grab companies/people used clear-felling techniques to harvest trees and also cleared the understory floras. Therefore, it was common in the construction site that the land development activities had created some forest fragmentations towards loss of tree species, and in field observation, the study also found that the construction of golf and ski resorts destroyed a number of tree species. In a simple analysis of the satellite images of a Chinese company owned golf course since 2010 located in the Date City (Figures 2 and 3), the study argued

that the forest cover did not change over time, although it destroyed some tree cover to make free space for the golf course.

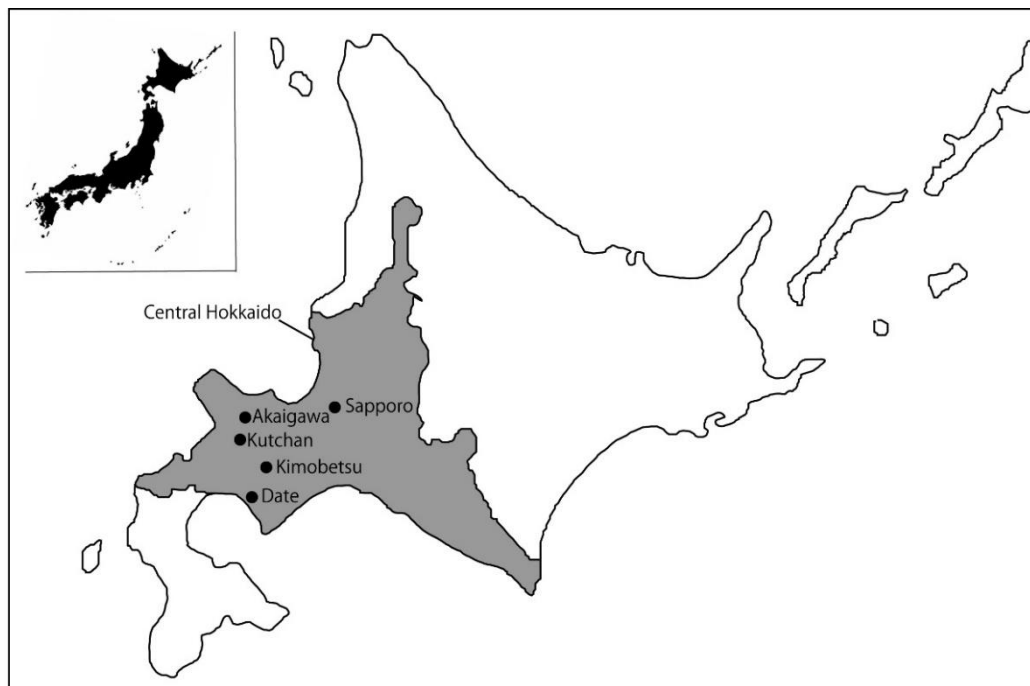


Figure 2. Study areas in the central Hokkaido of Japan.

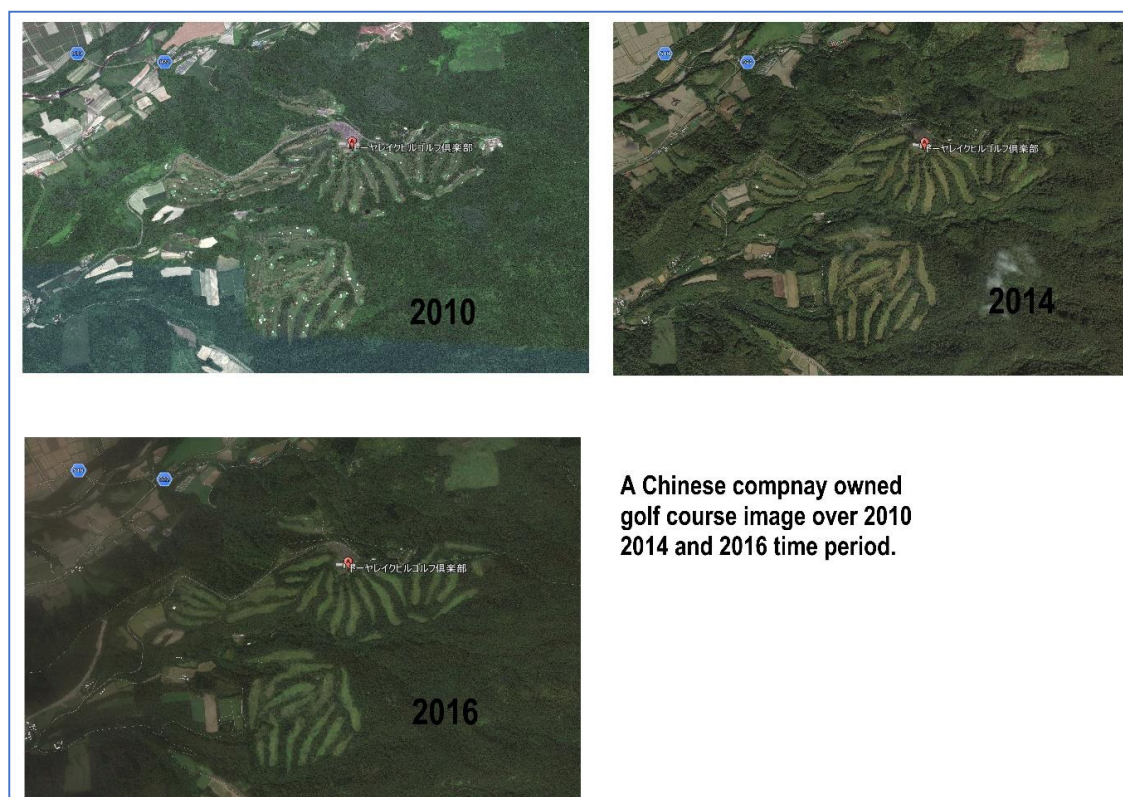


Figure 3. Satellite images of a golf course in the study area shows forest cover and fragmentation. Map source: Google, Digital Globe.

The study also observed that the grabbed forestlands of Hokkaido were scattered and less than a one or two-hectare area (most of them), which made it difficult to identify the biodiversity loss. The total grabbed area was very small and the question of tree cover species loss towards biodiversity was inappropriate, as mentioned by the Sapporo regional forestry agency staff. As a result of the interview with the local government and private forestry cooperative staff, it was also clear that the foreign-owned forestland and their development schemes had not made any significant negative impact on the forests and biodiversity of the Hokkaido Island. In addition, the Kimobetsu town local government staff clearly mentioned that the foreigners who wanted to convert the forestland must go through a formal approval process from the local government. The screening and monitoring process would strictly follow the conservation guidelines and regulations (Table 5) set by the Hokkaido prefectural government.

Table 5. Permission systems for the development of forestland in Japan (<1 ha land).

Types	Purpose/Issues	Details	Activities
Private Forests: (other than national and protection forests)	If the forestland is more than 1 ha in area	Need permission from local government city/town/village office.	Development of hotel, resort, golf course, ski resort, amusement park, factories, roads, soil dump, solar and wind power, etc.
Development works in private forests	1. For making road/path	Permission is needed for 3 m wide and over 1 ha land for making road.	Even making the way or path for the construction materials.
	2. Joint development	Permission is needed even if each owner has less than 1 ha land but all owners together have over 1 ha in land area.	A common plan is needed.
	3. Step by step development of the land	Permission is needed even if the owner developed the land step by step (each step less than 1 ha land) but in total, the land area is over 1 ha.	In each step, if the development process consists less than 1 ha land but totally over 1 ha, it needs a common plan for approval.
General criteria (forest should not any damage) for permission in the private forests	1. Prevent landslides	Through development there is no damage of sediment discharge, collapse, or other discharges occurring around.	Measures should be taken in such a way that the highest degree to prevent disasters and facilities are ensured.
	2. Flood prevention	Through development there is no risk of flood in in the watershed area.	Securing and adjusting facilities for the flood prevention would be necessary.
	3. Water sources	The further development activities may not affect the water sources or water quality in the area.	Measures should be taken to secure the water sources and maintain the quality of the water.
	4. Protection Environment	Any dimension of environment and landscape of the area.	Prevention measures should be necessary through the plan.
Protection or keeping forests area	1. For making cottages, ski resorts.	Keep 60% or more forested area.	Maintain tree cover of at least 60%.
	2. For making a golf course, and leisure activities.	Keep 50% or more forested area.	Maintain tree cover of at least 50%.
	3. For making Factories and offices.	Keep 25% or more forested area.	Maintain tree cover of at least 25%.
	4. For making a residential complex, apartment, etc.	Keep 20% or more forested area.	Maintain tree cover of at least 20%.
Violation of rules and regulations	Everybody has to receive supervisory dispositions (immediate cancelation/stop) and penalties according to the existing forest laws.		

The study found out that the forestry development permission systems was operated by the respective prefectural office in Japan. For example, Hokkaido prefectural authority fixed that the ski resort would need at least 60% tree cover area. This rule for further development activities in the designated forestland might be a good example for sustainable forest development in the Hokkaido area. The study also observed that all of the foreign companies had strictly followed the conservation regulations in order to make their further development activities. Moreover, the development activities in the forestland having less than 1 hectare of area also needed to follow the general development plan fixed by the provincial government.

3.4.2. Water Resources

Water resources management in the Hokkaido area has been considered one of the important issues for the Japan forestry agency and the provincial government. According to the content analysis

and interviews with experts, the study found that the major critiques and concerns on Japanese forestland grabbing are related to water resources because the forestland owner acquired the rights to water resources through law. In Japan, the water laws are inadequate and do not have any clear information on forest water resources [28]. That means the foreign companies/people do not have any restriction to use the water sources in their purchased forestland. On the other hand, Japan is one of the countries in the world having good water resources [17], therefore, the issue of foreign land ownership and its water resources has created lot of debate. Furthermore, the study found out that only one foreign company's land was situated near the natural water resources area and the company did not try to use or occupy the water resource. However, the journalists mentioned that the fears of local people on using water resources (including groundwater) remained. The study also revealed that the Hokkaido provincial government already fixed the guidelines (Table 6) in order to purchase the forestland situated in or nearby the water resources areas, and also fixed the water resource conservation zones through a clear mapping system.

Table 6. Basic guidelines for conservation of water resources in the Hokkaido prefectures.

Articles	Guidelines	Detail Activities
16. The governor shall formulate the "Basic Guidelines" on securing land use for water resources conservation zones.	<ul style="list-style-type: none"> Basic matters concerning water resource conservation areas; matters considering the designation of resource conservation areas; landowners considerations. 	<ul style="list-style-type: none"> In establishing basic guidelines, the governor must discuss and listen to the opinion of the Water Resource Conservation Council (WRCC). After establishing basic guidelines, the governor should publish it without any delay. The provision of changing the designated area and landowners' consideration should be changeable.
17. In accordance with guidelines, the governor can designate the area to be used by the public (surface and groundwater), and if necessary, should secure the land use for conservation.	<ul style="list-style-type: none"> In relating to the proposal, if the areas are situated in the city or town/villages, the mayor should design the areas for conservation. To do this the Governor should maintain the harmony with forestry industries and other institutions situated there. Designation should be done after setting the basic guidelines. 	<ul style="list-style-type: none"> Regional guidelines must specify the basic matters related to designated area and landowners' matters. After preparation of the guidelines and the setting of designation areas, the governor should ask the opinion of the residents and interested persons. The governor should notify the public through notice at least 14 days before finally fixing the designated areas.
18. Cooperation with the landowners by the Hokkaido prefectures.	<ul style="list-style-type: none"> Prefectural and regional government must cooperate with the landowners regarding the basic guidelines in order to fix the water resources conservation areas. 	
19. Landowners must maintain the guidelines when using the designated land for further uses.	<ul style="list-style-type: none"> The governor should advice the landowners on proper methods and other uses criteria and also hear the opinion of landowners and WRCC on this issue The governor should also seek the cooperation from the head of the Municipal offices regarding this issue. 	
20. Contract of land purchases and selling	<ul style="list-style-type: none"> Those who transfer the land title situated in the water resource conservation area are required to submit the notification three months before signing the agreements. 	<ul style="list-style-type: none"> After receiving the notification, the prefectural government should meet the municipality where the land is situated and also send the contract to the WRCC. The prefectural governor provides the advice to the transferor. Then the transferor should notify the transferee about the advice given by the governor.
21. Governor requests the landowner (land situated in water resources conservation areas) to submit a report.	<ul style="list-style-type: none"> As per the basic guidelines and advice by the WRCC, the landowners (holding new land title) should submit the necessary reports and materials concerning the relocation of land in the water conservation areas. 	
22. Revise/correct the notification or report	<ul style="list-style-type: none"> The governor should set the reasonable time frame so that the landowners can revise the concern areas or false statements that violate Article 20. 	<ul style="list-style-type: none"> The governor should consult with the respective Municipality heads and ask his/her cooperation in this regard.
23. The governor should publish or disclose the defaulter statements when he/she is not satisfied by their explanations.	<ul style="list-style-type: none"> Before publishing to the public, the governor should ask the landowner's opinion about the basic guidelines. 	

The study found out that the land ownership rules and regulations of Japan have no direct guidelines with regard to using the surface or groundwater resources. The above-mentioned guidelines only apply to those lands that are situated in the designated water resources conservation zones. Therefore, the forestlands situated outside the water resources conservation zones are not obliged to follow the water use rules and regulations. The study revealed that the majority (except one case) of the foreigners' land areas were situated outside the water conservation zones. The land agreements for the landowners did not have any clauses or regulations that could stop the use of groundwater. However, the Shiribeshi area's local government authority said that they already put an informal restriction on the use of groundwater and any sort of development activities in the water conservation zones. The study did not find any formal restriction on using the groundwater by the landowners in other study areas.

4. Discussion

Through the analysis of rules and regulations using secondary data, it was clear that the Japanese institutional and legal arrangements were not a limiting factor for foreigners to purchase or own the forestland in Japan. Together with land ownership, the foreigners have also attained the rights to water resources of that land. In some Asian countries, the law has restricted the rights of foreign land ownership. However, many countries in the world have weak legal institutions and even weaker land governance regimes to resist land grabbing [34]. Foreign company's investment also depends on domestic law, international investment contracts and agreements, and human rights conventions [34,49]. Most of the foreign land transactions and investment information in Japan was not publicly available, and thus a lot of fears and public concern has arisen. From the expert viewpoints, the foreigners' land deals have lack of public information, in particular, the commercial development plans. The Hokkaido prefectural authorities made conservation regulations and declared the water conservation zones through mapping; these sorts of activities have provided good governance examples in Japan. In addition, since 2012, the person or organization who bought forestland, including foreign people or companies, must inform the local government offices about their land transactions according to the revised forest act. All of the interviews of local government and forestry agency personnel clearly mentioned that there was no need to stop the existing land purchasing systems because there was no concern about losing water resources and destroying forest areas due to foreign investment; moreover, local people enjoyed the benefit of selling their lands. Rather, the restriction of using groundwater regulations might be a good option for the Hokkaido case.

Throughout the world, the conflict between economic developments, environmental protection, and social equity is illustrated in the context of land grabbing. The contribution of natural resources, such as forests, has successfully contributed to the economic development of the country in the globe [50]. The study found out that the investment of foreign currency and employment opportunities was an important factor to be considered in the Hokkaido area, and every foreign company's investment came with a unique set of investment schemes. The Japanese private forest owners could sell their lands, and through this opportunity, the foreign investments came to their localities. Borrás and Franco (2012) [51] mentioned in their study that the land deals played an important role in how benefits of land deals are defined and whether they have been realized. On the other hand, a land deal that improves local investment and employment opportunities may result in environmental deterioration [52]. The Bureau of Tourism (2014) clearly mentioned that the number of foreign tourists has increased since 2012. However, one of the respondents (an expert) mentioned that about 10% of the total foreign tourists came to visit the foreigners' tourism activities on the Hokkaido Island. As there was no exact statistics on how many foreign tourists came to visit the foreign-owned properties on the Hokkaido Island, the study only estimated 5% foreign tourists and made the calculation in Table 4. On an average a foreign tourist invested 122,128 Japanese Yen in 2013, and the estimated figure was much higher (125,522 Japanese Yen) in 2017. The study also observed that a number of young Japanese people were employed in the foreign-owned properties at the Hokkaido area. Canadian and Australian

clubs were established in the Niseko area where a number of Western people came and spent their time together with other Asian and European people. As a result, the Japanese people were getting opportunities to exchange cultures. Often the cultural significance of land has been overlooked and treated land as a commodity, although the land means a social status and lifeline for many rural households [53]. Land is also often closely bound with cultural identity and linked to cultural practices for many communities that have been badly affected by the land grabbing [54]. The study did not find any social conflict or displacement of local Japanese people through the development activities of the foreign companies' grabbed land in the Hokkaido Island. Regarding the human rights, there was no formal complaint against foreigners and the respondents clearly mentioned that they did not find or face any conflict related to land deals in the study area. However, a lot of critiques and concerns were arising regarding the land ownership of the Chinese companies as their land deals information have been kept secret. The study argued that the local people and print media have the rights to know the detailed agreements and information of those companies and their future development plans.

Hokkaido Island has approximately 60,000 km² forests that supplies 20% of Japan's food [24]. The forest, biodiversity, and natural beauty of the islands is unique and attracts foreigners to buy forestlands. The plant species diversity and richness of the Japanese forests are very important to maintaining, conserving, and restoring biodiversity [55,56]. About 40% of the Japanese forests are plantation types, and like other parts of Japan, the Hokkaido's forest followed thinning and clear-felling harvesting techniques for both planted and natural forests [22]. However, thinning (through coppicing) has been commonly practiced in Japan, which also has a good reputation regarding maintaining forest biodiversity rather than using a clear-felling technique [57]. The percent of tree canopy cover appeared to be a significant parameter explaining the changes in the understory plant community [58]. This means the forest management systems have a deep relationship with biodiversity. On the contrary, forest fragmentation could not decrease overall species richness, some species (especially rare one) have been shown to be particularly sensitive to habitat fragmentation [55,59]. In the western part of Japan, forest fragmentation had a decreased species richness of lucidophyllous forests [55]. The results of the study found out that the land-grabbed companies used a clear-felling technique to open the forestland and created some forest fragmentations. Simple satellite images in Figure 3 clearly show that the forest cover of the Chinese golf course remained the same over the time period although the company destroyed many tree species and caused forest fragmentation. One of the scientific study concluded that 21 to 33% of tree cover was damaged in the road construction process in the steep terrain forests of Turkey [60]. The study also mentioned that around 12.23% to 16.13% forest cover was destroyed through road construction work in the mountainous area. Moreover, among the human-made activities that caused species loss, the infrastructure development produced some of the greatest rate of eliminating local species [61–65]. Therefore, it was common for the human-made development activities in the grabbed forestland to affect the forest tree-cover loss. On the contrary, the interviewed person mentioned that the amount of forestland owned by the foreigners was very small (only 15.8 Square kilometer in all of Japan) in order to measure the impacts of tree cover or species loss. They also informed that the foreign companies maintained the basic criteria for keeping tree cover (percentages) for further development plan in their purchased forestland. One Chinese company needed to change their development plan due to deviation of the tree cover criteria. Therefore, the screening and monitoring system of the Japanese local government was very strict and there was no scope of violating the conservation criteria. These monitoring and execution systems of Japan have clearly showed a positive sign for the future development and conservation of biodiversity in the grabbed forest areas. The fears of local people regarding China's land grab based on Hokkaido's water resources [15,27]; furthermore, the inadequate water rules and regulations of Japan is a limiting factor for developing a sustainable forest water use policy [28]. Scientist argued that water resources, more than any other resources, are affected by the development activities of the society [60]. Water and food security became a hot topic and a lot of land grabbing by the foreign companies was also taking place worldwide [10,34,54]. The Hokkaido local and provincial government authorities clearly stated

that they welcomed the foreign investment; however, the foreign entities also needed to ensure the proper uses of water resources and conservation criteria. Therefore, from the government and expert viewpoint, there was no need to worry about the negative ecological impacts of forestland grabbing at that moment. On one hand, the development activities in the designed forestlands have created some tree cover loss, and on the other hand, those activities have created good economic outcomes, the expansion of tourism, and employment opportunities for the local people. Therefore, the local government and forestry agencies staff did not want to stop the foreign investments process through the law or strict intervention.

5. Conclusions

Foreigner-based land grabbing has occurred in a small scale in Japan, and most of the characteristics of the Japanese land grabs have showed different pictures from that of African and Asian examples. After the biggest tsunami, the Japanese economy and tourism seems to be steadily gaining strength; meanwhile, a number of foreign companies bought forestland and started commercial development activities, in particular on Hokkaido Island. The study, therefore, concludes that the foreign investment has augmented the local economy and tourism industries and provided jobs for the local people. At the same time, the regulations of foreign land ownership and its water user rights has drawn great criticism from the Japanese media and some people. The lack of public information on those foreign investments, in particularly the Chinese, also created negative attitude from the print media and some people. However, the study also summarized that the foreign companies and their development activities in the grabbed forestland had not created any significant tree cover biodiversity losses and the situation is totally controlled by the local government. In a broad sense, the social–ecological system is strongly influenced by human activities, and therefore, the biodiversity of the grabbed forest area depends on the management plan and action of the concerned authorities. The overall picture is that forestland grab, whether by the foreign or local entities, has been taking place in the Hokkaido region by using the free land ownership rules and regulation of the state. There are some people and environmentalists who disagree with treating land as a commodity, even if it has created some economic benefit, because land and water are limited resources that remain essential to the sovereignty of the people and their culture. Therefore, the land-grabbing scenario of the Hokkaido case has both positive and negative sides. Within this context, the study would recommend the execution of water and biodiversity conservation regulations set by the Hokkaido provincial government at every level, and also the foreigners should require prior approval from the local government before any forestland transactions occur in Japan.

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