

Forest law and policy developments in Japan

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***Forest Law and Policy Developments
in Japan***

Ikuo Ota

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Forest Legislation in a constitutional state: The Japanese example

*Ikuo Ota **

Summary

With 25 million hectares or two-thirds of the land covered by forest, Japan is one of the most forest-rich countries among industrialized nations. Having 3.5 billion cubic meters of timber stock, annual growth is about 90 million cubic meters, which is roughly equal to the volume of annual domestic wood fibre consumption. However, Japan imports around 80 million cubic meters of wood and domestically produces only 20 million cubic meters.

Forest legislation and policy are responsible for such a strange situation. The Forestry Law of 1951 successfully protected and enlarged the forestland area after World War II. On the other hand, the Basic Forestry Law of 1964 failed to facilitate domestic forest production and the forest industry because they were not competitive with foreign producers. The law designated small-scale family forestry operations and forest owners association as key factors in Japanese forestry, but it was hard to achieve in reality.

Recently, the management direction of the national forest has become more environmentally oriented. Timber production is not as important as the environmental functions of the forest. For private forestland, policy direction is also shifting. A new Basic Forestry Law will be created in the very near future, and a new forest policy should be forthcoming. Keeping the balance between industrial production and environmental conservation will be a critical point of discussion in developing the new legislation.

Keywords: Japan, Forest Law, Basic Forestry Law, Forest Owners Association Law, Protected Forest.

Introduction

Japan is second in international trade of forest products after the United States. It imports huge amount of logs and timber from more than 80 countries, while most of Japan is covered by dense closed forest. The Japanese people consume about 100 million cubic meters of logs annually, of which 80 percent comes from abroad. One can suppose that Japan preserves domestic forest resources for future use and exploits foreign forests, but it is not the reality. As described later, high cost is the main reason why the Japanese forestry sector does not supply more wood from its own backyard.

In order to have a solid understanding of Japanese forestry, a comparison with major European forestry countries is useful. Table 1 indicates the size of forestland and wood fiber production as well as land area of four European countries and Japan. The land area of Japan is 37 million ha, between those of Sweden and Germany. The forestland area in Japan is 25 million ha, smaller than that in Sweden, but bigger than that in Finland, France, and Germany. The rate of forest cover is 65.5 percent, one of the highest such ratios in the industrialized world.

However, the volume of forest production is smaller than each of the four European countries. Japan has a lot of forest resources growing domestically, but it produces only a small portion of its allowable cut. The rate of self sufficiency in sawnwood is only 34 percent, quite low to compared with other countries in the table.

The timber market of Japan is highly competitive. There are no trade barriers or tariffs for forest products with a few exceptions in engineered wood products. This is mainly because of a political decision made in early 1960s, when rapid economic growth occurred in Japan after recovering from the damage of World War II. Political pressure from the US is another factor in later years. The fundamental idea of the present forest legislation was formulated in the middle of 1960s.

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This paper aims to show an outline of Japanese forestry and to describe major forestry laws. Since the 1990s, with decreasing forestry production and increasing public awareness of the environment, the government has been changing the direction of national forest policy. This paper will also try to analyze the ongoing policy change in the last section.

Table 1: Forestland area and wood fiber production in selected European countries and Japan in 1995

		Sweden	Finland	France	Germany	Japan
Total Land Area	(M ha)	41,159	30,461	55,010	34,927	37,652
Forestland Area	(M ha)	28,015	23,373	14,154	10,735	24,718
Rate of Forest Cover	(%)	68.1	76.7	25.7	30.7	65.6
Wood Fiber Production	(M m ³)	63,600	49,894	43,361	39,005	25,834
Firewood & Charcoal	(M m ³)	3,800	4,095	9,800	3,795	138
Woodchip	(M m ³)	24,600	22,968	11,414	13,104	7,497
Sawnwood & Others	(M m ³)	35,200	22,831	22,147	22,106	18,199
Softwood	(M m ³)	58,100	41,459	23,758	27,184	18,887
Hardwood	(M m ³)	5,500	8,435	19,603	11,721	6,947
Self Sufficiency Rate of Sawnwood	(%)	100+	100+	84	80	34

Source: World Resources Institute, UN Environmental Programme, UN Development Programme, The World Bank. 1998. 1998-99 World Resources. FAO. 1995. State of the World's Forests. FAO. 1998. Forest Products 1996.

Forest and forestry in Japan

Japan is composed of four big and many smaller islands. Because the islands are oriented north to south, and high mountains are found on the major islands, the climate varies from sub-alpine to sub-tropical. In addition, most of the islands are located in monsoon areas. Average annual precipitation is about 1,600 mm. These conditions make Japan rich in plant and tree species. Such natural conditions as well as continuous human efforts make two thirds of the land surface of dense closed forest.

Forest ownership pattern is shown in Table 2. Privately owned forestlands comprise more than half of total forest. However, most private forest holdings are very small. The national average for a family-owned forest is 2.7 ha. Company-owned forestlands are also small in scale, and the average size of company holdings is 34.6 ha. The national forest occupies about one-third of total forestland, and the Forestry Agency, which is responsible for managing the national forest, is the single biggest forestry organization in Japan. About 10,000 employees are in the Forestry Agency, of which 3,000 are forest workers.

Table 2: Forestland area by ownership in Japan (1995)

	Forest land area	Ratio
National forest	7,844,000 ha	31.0 %
Other public forest	2,730,000 ha	10.8 %
Private forest	14,572,000 ha	58.2 %
Total	25,146,000 ha	100.0 %

Source: Forestry Agency. 2000. Forestry White Paper.

A special feature of Japanese forests is the large stock of artificial plantations, which comprise 10 million ha out of 25 million ha of total forestland. Most of these plantations are even-aged conifer stands, planted after the initial harvest of hardwoods following the energy revolution in the 1950s, when families' energy source changed from charcoal to coal or oil. The total timber stock is about 3.5 billion cubic meters, of which 1.9 billion cubic meters are held in artificial conifer plantations, and another 450 million are held in natural conifer stands. Two of the most common species in artificial plantations are Sugi or Japanese cedar, (*Cryptomeria japonica*) and Hinoki or Japanese cypress, (*Chamaecyparis obtusa*). The average rotation age for Japanese cedar is between 40 and 70 years, and that for Japanese cypress is slightly longer.

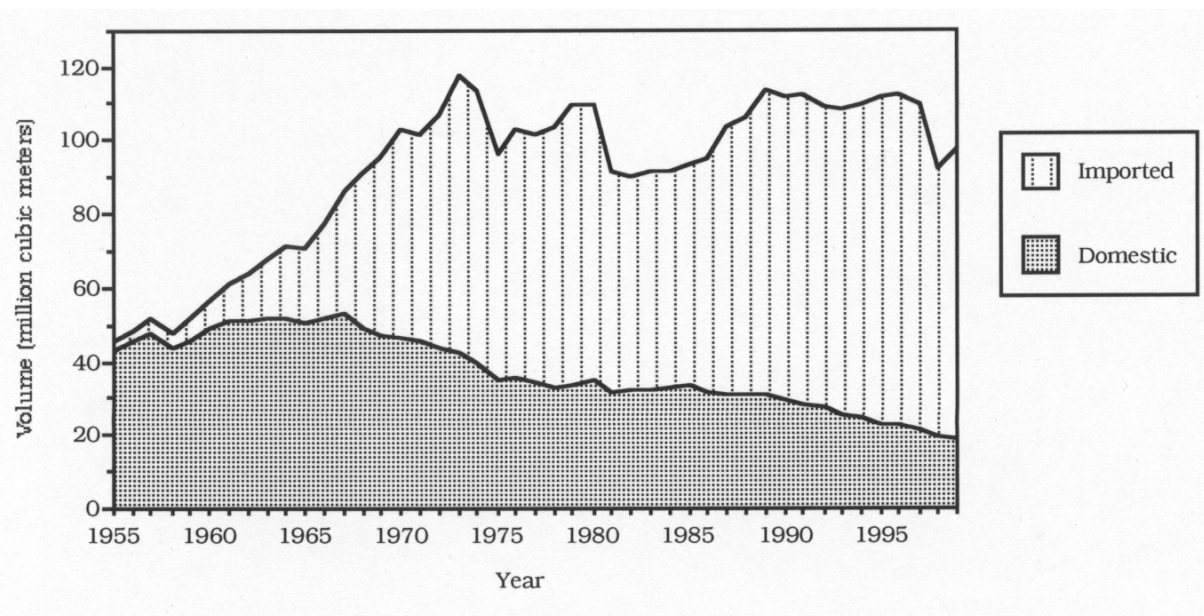
Figure 1 illustrates the trend of domestic log production and imports. Domestic production has been decreasing constantly during the past three decades, while the imported volume has been increasing. Japan used to produce around 50 million cubic meters of wood annually in 1960s, but the production volume was only 21.6 million in 1997. In the same year, Japan imported 88.3 million cubic meters of wood including wood chips for paper. Its aggregate self sufficiency rate for wood fiber was 19.6%.

This situation is not caused by a depleted forest resource base, but by the lack of competitiveness of Japanese domestic forestry. The annual increment of wood fibre is 90 million cubic meters. On the other hand, annual harvest of timber is less than one-fourth of its increment, and the national forest inventory is increasing 70 million cubic meters every year.

As a result of continuing governmental efforts promoting international free trade, forest product prices in Japanese markets have been downward trending, which while good for consumers, is not good for domestic producers. The Forestry White Paper for Fiscal Year 1997 displayed the downward trend of real prices of saw timber, logs, and stumpage. During the period 1969 to 1996, the saw timber price of Japanese Cedar dropped 6 percent, log prices dropped 33 percent, and stumpage prices dropped 55 percent. Japanese forestry is in more or less a critical situation.

Figure 1: Japanese domestic production and imported volume of wood fiber (1955-1999)

Source: Forestry Agency. (Each year), Table of wood demand and supply



Historical background

Timber has been the most important material for the Japanese people for building their houses. In addition, forests have been the main source of commodities and tools for thousands of years. For example, fuelwood was very important for cooking and heating Japanese homes until recently.

Forest and trees were also part of the lifestyle of the people. In other words, Japanese culture was deeply tied to the forest. Horyuji Temple, the world's oldest wooden building in Nara City, western Japan, is 1,300 years old, and was designated as a world cultural heritage in 1993. The timber and logs which make up the temple are a vivid example of Japanese culture, and also an example of the excellent forestry techniques which existed in such an ancient time.

The non-material services of forests have been also considered throughout Japanese history. Because of the steep mountainous landscape, the Japanese people soon learned the importance of the water holding and soil protection functions of forests. In the Middle Age, feudal loads prohibited cutting certain tree species or imposed forest protection laws. Plantation efforts were also engaged in many parts of the country by individuals, groups, and regional communities.

The first Forest Law was established in 1897 under the modern constitutional monarchy government. It is said that European forest legislation, especially French law, influenced the first Japanese Forest Law. This law established rules for forest utilization, protection and management as well as penalties for their violation. This first forest law was characterized by its strong emphasis on forest protection. The law was amended several times before the end of World War II. As described in the next chapter, the new forest law under the present constitution was enacted in 1951.

Forest legislation

There are many forestry-related laws in Japan, but the following three are the principal ones: the Forest Law of 1951; the Basic Forestry Law of 1964; and the Forest Owners Association Law of 1978. National and regional forest policy has been directed under these laws for decades.

(1) Forest Law

The Forest Law of 1951 is the basic statute for forest management in Japan. The purpose of this law is stated in its first article:

This law is intended to design a forest planning system, provide for forest protection, and address other basic issues related to forestry and to sustain forests and to increase production for the purpose of protecting national land and contributing to the national economy.

In the subsequent article, forests, forest owners, and the national forest are defined. Because forests in Japan are usually quite dense, an open forest occurs only during the early stage of succession, the definition of forest is very simple and clear. A forest is a group of living trees or bamboos and the land on which the group of trees or bamboos is growing. The exception is land with trees that are managed for agriculture, residence, or similar purposes.

The forest planning system is one of the distinguishing features of this law. This part of the law has been amended many times since 1951 because the government has always been willing to improve the system to fit the real situation of the forest. The present system was established in 1991. Figure 2 shows general concept of the present forest planning system.

The "Nation-wide Forest Plan" is the upper most plan of the Japanese forest planning system with a fifteen-year time horizon, and it is revised every five years by the Minister of Agriculture, Forestry, and Fishery. The plan is made in accordance with the "Basic Plan for Forest Resources" and the "Long-term Perspective for Demand and Supply of Important Forest Products," both of which are occasional legal perspectives for forests and forestry prepared by the government. In the Nation-wide Forest Plan, the following subjects must be addressed for 44 regions of the country: Objectives of forest improvement, harvesting, plantations, thinning and tending, special forest practices, forest

roads, rationalization of practices, forestland conservation, forest protection facilities, and others subjects as well.

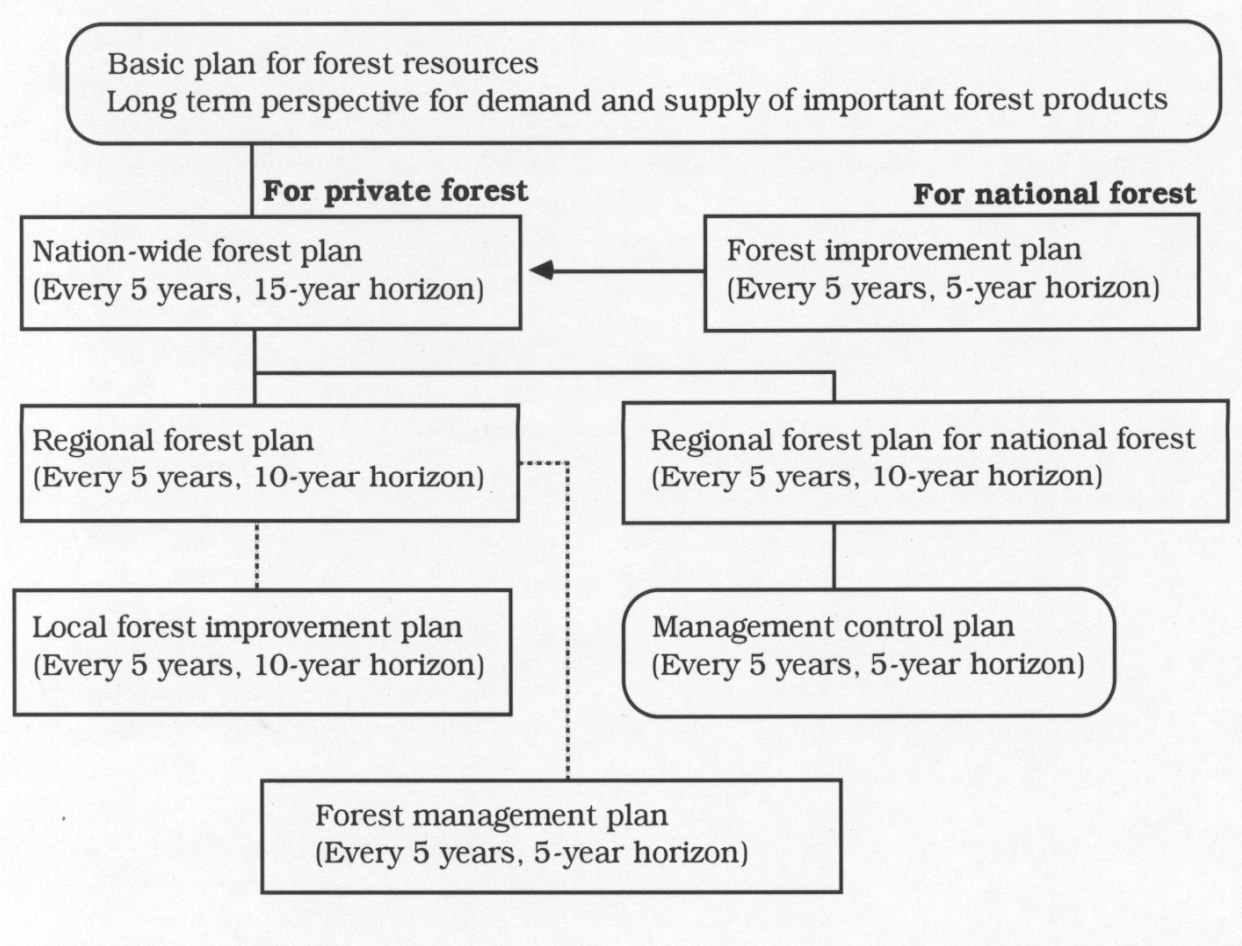


Figure 2: Forest planning system in Japan

Source: Ryoichi Handa. 1996. Forest Policy. Buneido. 274p.

Under the Nation-wide Forest Plan, two parallel regional plans are prepared. For the national forest, the regional director of the national forest is obliged to make a "Regional Forest Plan for the National Forest," and for private and municipal forests, the governor of the prefecture is obliged to make a "Regional Forest Plan." Both plans are written with a ten-year time horizon and revised every five years. The River Basin Forest Management System, which divides the nation into 158 river basins, is the basic unit of the regional plan.

In the Regional Forest Plan, the following subjects must be addressed: Mapping of forests, forest types and areas, volume of harvest, area of plantations, volume of thinnings, area of special forest practices, plans for road building and maintenance, plans for collaboration and rationalization of forest practices, conservation of stumps and land surface, improvement of protected forests, and so on. The Nation-wide Forest Plan and the Regional Forest Plan have to be strongly and rationally related. For example, total volume of harvest in the Nation-wide Forest Plan must be kept the same as the sum of the volume in all regional plans.

The "Local Forest Improvement Plan" is not obligatory for all local governments. It is requested to be made for selected municipalities having above a specified amount of forest area. Having a private forestland area of over 2,000 ha, an above average amount of artificial forest, and similar factors are

the usual grounds for the request. Around 60% or 2,000 out of 3,200 municipalities are make a Local Forest Improvement Plan. In it, more site-specific subjects are addressed.

In addition to these three levels of governmental forest planning, individuals may have a “forest management plan” for their own forestland. It is not an obligation but a recommendation. Forest inventory, harvest scheduling, and afforestation and reforestation are the major items of the plan. There are two types of the plan: individual and collaborative. Those who hold a forest management plan receive advantageous subsidies, loans, and tax treatment.

Protected forest is the other major concept developed in the Forest Law of 1951. There are seventeen different categories of protected forest. The Minister of Agriculture, Forestry, and Fisheries is able to designate protected forest in case the necessity to protect the forest is high.

Table 3 indicates the area of protected forest by type. The total area of protected forest is 8.86 million (8.33 million excluding the overlap) ha, which is about one-third of total forestland area in Japan. Protected forest does not mean totally preserved forest. There are some restrictions of activities in protected forests, but they depend on the type. For example, one can harvest trees in a headwater-protected forest with the governor’s permission. In the case of a headwater-protected forest, the upper limit of clear cutting is 20 ha, but it is 10 ha for soil erosion protection or land-collapse prevention forests.

Table 3: Area of protected forest in Japan (1993) in 1000 ha

Headwater protection	6,052	Fog prevention	51
Soil erosion protection	1,945	Avalanche prevention	19
Land collapse prevention	46	Stone fall prevention	2
Shifting sand defense	16	Fire break	0
Windbreak	55	Fish breeding forest	28
Flood prevention	1	Navigation target forest	1
Tide damage prevention	13	Recreational forest	561
Drought damage prevention	42	Scenic beauty forest	27
Snowbreak	0		-----
		Total (excluding overlapped area)	8,330

Source: Ryoichi Handa. 1996. Forest Policy. Buneido. p. 119

(2) Basic Forestry Law

In contrast with the Forest Law of 1951, which is intended to provide a framework for sustainable use of forest resources, the Basic Forestry Law of 1964 establishes the basic policy for forestry activities. The Basic Forestry Law is very short. It concisely specifies roles and prospective efforts for national and prefectural governments and forestland owners. It mentions promotion of forest production, structural improvement of forestry, demand and supply of forest products, prices, workers, organizations, and forest administration council.

This law requires an annual "Forestry White Paper" to be presented to the Diet. The Basic Plan for Forest Resources and the Long-term Perspective for Demand and Supply of Important Forest Products are also required by this statute. The purpose of this law is designated in the first article:

This law, with the understanding of the important role of forestry and forestry professionals in the national economy, is intended to clarify goals of forest policy and provide basic policy measures in order to develop forestry, improve the social status of forestry professionals, keep forest resources secure, and promote national land conservation, with consideration for an expanding national economy and progress of society.

The objectives of a national policy for forestry were clarified by this law in 1964. Continuous development of forestry was the first objective. Increasing gross production volume and improvement of productivity were two of the more concrete ideas expressed for accomplishing this objective. Increasing income of forestry professionals as well as improving their social status was the second objective. Both of them were critical problems at the time of enactment, and the situation has not been fully resolved yet today, unfortunately.

The Basic Forestry Law is unique in its simple facilitation of forestry as an important primary industry. It also emphasizes the role of small-scale family forestry and forest owners associations rather than middle- and large-scale forest companies. In other words, small-scale family forestry with the help of forest owners associations was expected to be the driving force of Japanese forestry.

The law also mentions forestry structural improvement, stabilization of forest production and timber prices, consideration of adequate imports, rationalization of distribution and processing systems, facilitation of forestry education and research, among other things. The Forestry Agency and municipal governments are involved in numerous policy measures based on this law.

(3) Forest Owners Association Law

The legislative definition of forest owners associations (forestry cooperatives) used to be in the Forest Law of 1951, but it was superseded by passage of a comparable version in the Forest Owners Association Law of 1978. In Japan, forest owners associations are legally established, non-profit cooperatives like agricultural cooperatives.

Two major objectives of forest owners associations are: (1) to raise the socioeconomic status of forest landowners; and (2) to increase the efficiency of timber production while facilitating the growth of healthy forests. There were about 1,250 forest owners associations in Japan in 1999, and 50 percent of private forest landowners or 73 percent of the total private forest land area comprise the forest owners association system (excluding prefectural forests).

The Forest Owners Association Law designated required and optional activities for associations. Required activities include management guidance for members, management and silviculture practices of a member's forest by entrustment, acceptance of a member's trust for forestry purposes, and protection of member's forest. Optional activities include making loans for forestry activities, processing, distributing, stocking, and selling of forest products, building of forest roads, providing facilities for forest workers to improve their efficiency, creating recreational facilities, making forest management plans and providing education and information services to members.

The forest owners association plays a very important role in private forestry. It is an independent voluntary organization, and forestland owners in the region are free to join it. However, most of the forest landowners join the association because it is advantageous. For example, governmental subsidies for silvicultural practices such as planting and pre-commercial thinning are provided through the association. Members can receive the full amount of subsidy with the presence of association in the area. Forest owners associations play an important role as the public administration organization at the lowest hierarchical level. Forest owners associations are not a branch office of the Forestry Agency, nor is it a public corporation, but usually the salary and working conditions are comparable to those of public agency such as municipal government.

(4) Other related laws

In addition to the three fundamental laws described above, many other laws directly and indirectly affect forest policy. They are listed and briefly described below.

Promotion of Securing Forest Workers Law of 1996 enables municipal governments to support forest owners associations and other private companies in recruiting and training forestry workers. The law also allows governors to create a prefectural center for securing forest workers. This policy is one of the more promising public support systems for revitalizing Japanese forestry.

Special Measures for Stable Timber Supply Law of 1996 aims to facilitate development of forestry and the forest industry. The law allows forest owners, forest owners associations, and timber processing

entrepreneurs to establish a plan for stabilizing timber supply. It also allows governors to create prefectural centers for facilitating a stable timber supply. The main role of the center is to guaranty loans for forestland owners and others for their forestry activities.

Special Measures for National Forest Reorganization Law of 1998 explains the reasons for reorganization of the national forest, to declare new objectives for national forest management, and to designate many special measures. The law declares the main objective of managing the national forest is changed from continuous timber production to pursuing public benefits. It also orders abolishment of a self-supporting national forest accounting system and transfers 2.8 trillion Yen of cumulative debt out of 3.8 trillion in total debt into a general account budget for repayment. The law indicates a big change in forest policy in Japan. Among the results of this change is the number of regional forest offices was reduced from 14 (including 5 branch offices) to 7, and district forest offices were reduced from 229 to 98. A big decrease in the number of forest workers employed by the Forestry Agency was also a result.

The *Natural Park Law of 1957* aims to preserve natural beauty and facilitates the use of parks for recreation and education of the public. The law designates three levels of natural parks: National Park, Quasi-National Park, and Municipal Natural Park. Parks are not necessarily publicly owned land but legally designated area regardless of ownership. The total area of National Parks in Japan is about 2 million ha. Over 60% of the area in natural parks is in national forest.

The *Conservation of Natural Environment Law of 1972* aims to facilitate policy measures for environmental conservation. The national government is obliged to gather basic information about geographical, geological, and biological status of the country around every five years. The government is also obliged to prepare a principal environmental conservation plan. One of the distinguishing features of this law is the article on wilderness preservation. There is not a big area of untouched nature left in Japan, so wilderness areas are highly valuable to keep untouched for future generations.

The *Conservation of Endangered Wild Species Law of 1992* provides authority for the Minister of Environment to designate endangered species. This law also protects internationally designated species within Japan. Designated endangered species must not be kept, killed, injured, traded, sold, purchased, and displayed.

The purpose of the *Basic Environment Law of 1993* is maintaining a healthy and rich cultural life for the public by conserving a good environment. The law establishes the basic concept of environmental conservation for the nation. The Basic Environment Law is very short just like the Basic Forestry Law, and it simply declares the basic idea of environmental conservation and clarifies the responsibilities of government, companies, and people.

A new direction

Forest policy in Japan is moving in the direction indicated by the recent drastic change in national forest management objectives. The Basic Forestry Law of 1964 was intended to promote timber production as the primary goal of national forest policy, but the situation today is far different from the ideal foreseen by that law. Therefore, a new version of basic forestry law, namely the basic forest and forestry law, is to be implemented in 2001. As described above, small-scale family forestry has survived with the help of government subsidies based on the policy of the Basic Forestry Law. The government pays large sums of money to support roads or machinery to enhance rural forestry every year. In the 1960s and 1970s, when forestry was strong, forestry practices realized both timber production and environmental services at the same time, which was referred to as "preestablished harmony" in forestry. However, such harmony has since disappeared, because appropriate practices are now lacking. Abandoned plantations on steep terrain can easily cause environmental disasters such as wind throw, soil erosion, or landslides. Unfortunately, the number of such abandoned forests is gradually increasing because small-scale forestland owners can no longer afford to maintain their forestland in many cases

The primary goal of forest policy under the forthcoming new basic forestry law will be to implement various environmental services. In addition to the above-mentioned domestic reasons, the law is also

influenced by an international movement for sustainable forest management practices following the 1992 Earth Summit in Rio de Janeiro. Timber production will thus have to relinquish its position of primary importance, although in reality it has not held this position for some time. Forestry will continue to play an important role in land stewardship and will no longer be concerned merely with timber production.

The position of small-scale family forestry as the driving force of domestic forest production may or may not change. Integration of forest management by accumulating dispersed holdings is planned under the River Basin Forest Management System. This would mean less and less family forestry units can survive in the future. However, in most cases, small-scale family forestry will continue to manage their own forestland for as long as possible. Because forestry practices are necessary in maturing plantations, government assistance to forest owners must continue for at least two or three more decades. In addition, direct income compensation or similar public support systems for forest owners are under consideration. Because there are no giant forestry corporations in Japan, and the national forest is no longer a highly productive organization, family forestry and forest owners associations should continue to play a leading role in domestic forestry. New legislation will recognize this reality or it will fail to attain its policy goal.

Conclusions

Forests and people have been intimately related throughout the history of Japan. However, in the 19th century and the first half of 20th century, large areas of forest were devastated, and timber inventories decreased. The First Forest Law has been the primary breakwater against expansion of forest exploitation and conversion of forests into other uses. Especially in war time, natural forests were destroyed across the country.

After the World War II, the New Forest Law provided for a nation-wide reforestation effort. Most of the 10 million ha of plantation forest had been planted during the 1950s through 1980s. Forest inventories steadily increased year-by-year. In spite of such favorable resource conditions today, domestic forestry has been struggling. Forestry development aimed at in the Basic Forestry Law was never fully achieved because of the flood of less expensive imported logs and timber into the market.

To summarize the situation, the Forest Law of 1951 did a remarkable job as forest resource policy during post-war period, but the Basic Forestry Law of 1964 did a rather poor job as forestry related industrial policy. Recent policy direction toward environmental protection is good, but the production side of forest policy should not be forgotten because the renewable resources it provides will be needed both in the present time and in the future. Balancing environmental protection and timber production along with considering both urban demand and rural employment will be the key to the success of forestry legislation in the 21st century.

References

- Forestry Agency. 2001. Forestry White Paper. 293 p. (In Japanese)
- Handa, Ryoichi. 1996. Forest Policy. Buneido. 333 p. (In Japanese)
- Ota, Ikuo. 1997. Regenerating forestry workers in Japan. Proceedings of IUFRO Symposium in Kyoto 1997: 72-79.
- Ota, Ikuo. 1999. Declining situation of Japanese forestry today and its challenges toward the 21st Century. Natural Resource Economics No.5: 103-124.
- Murashima, Yoshinao. 2001. Economics of forest and trees. Nippon Ringyo Cyosakai. 185p. (In Japanese)

Progress in environmental legislation in Japan

*Ikuo Ota**

Abstract

Environmental legislation in Japan has evolved since the late 19th century. There are two main streams of environmental legislation. One is the legislation about pollution control, and the other is about nature conservation. Hundreds of laws and ordinances have been developed during the last century, while the effort to put them together has only been done in very recent years. The Basic Environment Law in 1993 is the one that became the central body of environmental legislations in Japan. This was a total revision of the Basic Environmental Pollution Control Law with absorbing some part of the Conservation of Natural Environment Law. The Basic Environment Law provided principles of Japanese environment policy. In addition, the Environment Agency, established in 1971, was upgraded to become the Ministry of Environment in 2001 and all governmental works related to environmental issues have been assembled within this ministry so far. The paper aims to analyze historical progress of environmental legislation in Japan and explains the principles of Japanese environmental legislation today.

Keywords: Basic Environment Law, Basic Environmental Pollution Control Law, Conservation of Natural Environment Law, Forestry Law, Natural Parks Law

Introduction

Environmental legislation covers a variety of matters related to governmental policy. Historically, there are two main streams of environmental legislations in Japan - pollution control and nature conservation. These two streams coincide with the citizen's movement for nature conservation and against environmental pollution. As the two movements had been merging into one big stream of environmentalism in recent years, legislation about environmental issues was expected to be unified in one contemporary and fundamental law.

Japan was famous for its tremendous human damages caused by many different kinds of industrial pollutions during the 1950s, 1960s and 1970s. Minamata disease caused by organic mercury poisoning, Itai-itai disease caused by cadmium pollution, and Yokkaichi Asthma caused by air pollution mainly from sulfur oxide were typical examples. Countermeasures for such environmental pollutions were always one or two step behind, but legislative progress had been going on slowly but steadily since the 1960s. The natural park scheme was established a little earlier than pollution control laws. Because our land was composed of many islands with high mountains, scenic beauty was in everywhere. There existed numerous cultural properties, and a system to keep this valuable nature and cultural heritage was urgently needed. The first law designating national parks was established in 1931 and the Natural Parks Law that created the system of nature parks was established in 1957.

In December 1993, the Basic Environment Law was promulgated. This law was a combination of the Basic Environmental Pollution Control Law of 1967 and of the Conservation of Natural Environment Law of 1972 with new principles for national environment policy. The Basic Environmental Pollution Control Law used to be a fundamental legislation against environmental pollution, and the Conservation of Natural Environment Law was one the fundamental legislation for nature conservation together with the Natural Parks Law. This paper describes the historical progress in environmental legislation and explains a couple of important laws related to environmental protection and nature conservation in Japan.

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History of legislation in nature conservation

By the Meiji Restoration in 1868, hundreds years of feudal era had come to the end and Japan started to be a modern nation state. The Meiji Constitution, established in 1889, was provided under the thorough investigation of those in European countries such as England, France and Germany. Rapid industrialization caused by large-scale devastation of the natural environment here and there, but regulatory legislation was not imposed for decades. However, as serious flood and other natural disasters began to happen frequently in the late 19th century, the central government finally made up to undertake the job.

The Forest Law in 1897 was one of the first regulatory legislations against overuse of nature. Establishment of rules and penalties for forest utilization, and creation of protected forests were the major subjects of this law. The River Law of 1896 and the Erosion Control Law of 1897 were other examples of such regulatory legislations. The former designated the role of the state and municipal governments regarding flood control measures. The latter was to designate the area and counter measures against soil erosion. These three laws were famous under the name of “water control trio”. In 1918, the Wildlife Protection and Hunting Law was adopted. This law primarily aimed to conserve wild game animals for hunting or trapping purposes.

In 1919, the Historical Sites, Scenic Beauty, and National Treasury Law was promulgated. This law was to preserve culturally and naturally important monuments and places. While, there had been some laws and ordinances that aimed to preserve historical temples and shrines beforehand, this law was the first major legal basis to preserve important cultural heritages in Japan. The National Park Law was established in 1931. The idea of national parks was introduced from the United States in early 20th century, and Japanese people started to realize the importance of preserving natural beauty not at the spot of the place but to a large extent of the area. However, land ownership in Japan was not so simple like it was in the “new world”, so national parks were designated as the area regardless of ownership. This is why private lands as well as municipal or national lands are composing the national parks in Japan.

Until 1945, Japan was a nation of imperialism. Sovereignty of the nation was on the emperor, and democracy among the people was limited. After World War II, however, Japan had experienced tremendous changes in all the aspects of society under the strong influence of the US occupation army. The new constitution created in 1947 was totally different from the old one, especially its Article 9, renunciation of war, was very unique. Many laws were amended or newly created under the new constitution. For example, the Forest Law was amended in 1951 and the River Law in 1964. On the other hand, the National Park Law was absorbed by the Natural Parks Law in 1957. The Natural Parks Law designated three classifications of parks: National Parks, Quasi-National Parks, and Municipal Nature Parks. As shown later, there are 28 National Parks, 55 Quasi-National Parks, and 308 Municipal Nature Parks today. The network of the nature park scheme is contributing largely to conservation of nature and people’s recreation activities.

The Conservation of Natural Environment Law of 1972 was another leading legislation for nature conservation. It designated Wilderness Area, Natural Environment Conservation Area, and Municipal Natural Environment Conservation Area. The purpose of these conservation areas was to substitute the nature park scheme. Total land surface of these conservation areas was limited, but more strict preservation measures than in natural parks were applied. There are 5 Wilderness Areas, 10 Natural Environment Conservation Areas, and 530 Municipal Natural Environment Conservation Areas. Total area of three classifications of conservation areas is about 100 thousand ha. In 1992, the Protection of Endangered Wild Species Law was created. This law aimed to protect rare, threatened, and endangered wild species living in the country, and also to regulate the trade of internationally designated endangered species such as those on the lists of CITES.

Table 1 List of major legislations related to nature conservation in Japan

Year	Name
1889	Meiji Constitution
1896	River Law
1897	Forest Law
1897	Erosion Control Law
1918	Wildlife Protection and Hunting Law
1919	Historical Sites, Scenic Beauty, and National Treasury Law
1931	National Park Law
1947	New Constitution
1951	Forest Law (amended)
1957	Natural Parks Law
1964	River Law (amended)
1972	Conservation of Natural Environment Law
1992	Protection of Endangered Wild Species Law
1993	Basic Environment Law

Source: Ministry of Environment Web Site (www.env.go.jp)

History of legislation on pollution control

The first notorious environmental pollution problem in modern Japan was Ashio mining pollution appearing in 1880s. Ashio was the biggest copper mine in Japan, and copper production was one of the key elements for industrialization and militarization of the country at that time. Victims of mining pollution were estimated at more than 1,000, but mining and smelting at Ashio continued for decades after the affair was found out. The idea of making legislation in pollution control had not been taken into consideration by the imperial government. Problems of water pollution and air pollution occurred in many places with the rapid economic growth after World War II. Minamata disease caused by organic mercury poisoning, was an example of this tragedy. Thousands of people were killed or suffered heavily by eating polluted fish. The same disease happened in Niigata, and other kinds of pollution caused diseases happened one after another in the 1960s. Protest movement against such pollutions grew bigger and bigger. Pollution control became a nationwide big social issue in late 1960s, and the Basic Pollution Control Law was established in 1967. In other words, there were no effective measures to control industrial pollution at the state level until 1967, except some specific ordinances in municipalities.

The Basic Pollution Control Law declared the principles of pollution control policy and measures, and many individual pollution control laws were made following this legislation. Air Pollution Control law of 1968, Noise Regulation Law of 1968, Water Pollution Control Law of 1970, Soil Pollution Control Law of 1970, and Odour Control Law in 1971 are prominent examples. The Environment Agency was created as an independent governmental organization to fight against pollution problems in 1971. Nature conservation issues were also covered by this agency. Legislations in pollution control have been amended frequently under the supervision of the Environment Agency since then. Thirty years later, in 2001, the Environment Agency became the Ministry of Environment.

In 1993, the Basic Environment Law was established. This law was a synthetic law of pollution control and nature conservation. The Basic Pollution Control Law and a part of the Conservation of Natural Environment Law were unified into this new law. The Environment Impact Assessment Law was created in 1997. The idea of having such a law had been argued for many years in the state government, but opposition from industry and ministries such as transportation and construction was big. Therefore the creation of this law was an epoch-making event in Japan.

Table 2 List of major legislations related to pollution control in Japan

Year	Name
1948	Agricultural Chemicals Regulation Law
1956	Industrial Water Law
1967	Basic Pollution Control Law
1968	Air Pollution Control Law
1968	Noise Regulation Law
1970	Water Pollution Control Law
1970	Law for Prevention of Marine Pollution and Maritime Disasters
1970	Soil Pollution Control Law
1971	Odour Control Law
1976	Vibration Regulation Law
1993	Basic Environment Law
1997	Environment Impact Assessment Law
1998	Law Concerning the Promotion of the Measures to Cope with Global Warming

Source: Ministry of Environment Web Site (www.env.go.jp)

Major environmental legislations today

Natural Parks Law of 1957: The purpose of Natural Parks Law is written in Article 1 as follows: *This law is intended to protect excellent natural beauty and enhance utilization of the place, in order to contribute to health, recreation, and education of the people.* The Natural Parks Law designates three classifications of natural parks as follows: (1) A National Park is a distinguished scenery that can represent the beauty of Japan; (2) A Quasi-National Park is an excellent scenery that is in the second position after the national parks; and (3) A Municipal Nature Park is a place of natural beauty other than National Parks and Quasi-National Parks. As shown in Table-3, there are 391 Nature Parks in Japan today, and the total area is 5.37 million ha, that is about 14.2% of land surface of the whole country. The authority to designate parks belongs to the Minister of Environment for National and Quasi-National Parks, and to the municipalities for Municipal Nature Parks.

Table 3 Area of Nature Parks in Japan (as of March 2004)

Classification	National Park	Quasi-National Park	Municipal Natural Park	Total
Number	28	55	308	391
Area (ha)	2,061,040	1,343,882	1,962,220	5,367,142
% in Land Surface	5.5	3.6	5.2	14.2

Source: Ministry of Environment Web Site (www.env.go.jp)

Management of National Parks and Quasi-National Parks determined by the Park Plan which has to be made by the Minister of Environment with the assistance of committees of experts and stakeholders. Parks are usually including not only national forests but also other public and private lands. Therefore, considering the protection and utilization of the whole area of the park, land and water surfaces are to be classified by several different zones. Table-4 shows the classification of zoning and the regulation of harvesting trees in each zone.

There is a compensation rule for disadvantages caused by the regulations under Natural Parks Law (Article 35). It provides the same amount of economic compensation in case of suspension of applied activities such as harvesting trees or building houses to landowners. However, it is very rare for private landowners to be monetarily compensated, because such activities would be permitted in most of the cases. Not many of private lands are classified as Special Protection Zone or Class 1 Special Zone and the regulations are not very strict for the majority of private lands out of these limited preservation zones. For example, clear cutting is permitted in Class 3 Special Zone and Normal Zone.

Table 4 Classification of zoning in National and Quasi-National Parks

Classification	Specification	Regulation of harvesting
Special Protection Zone	Excellent natural scenery or wild area	Forbidden
Marine Park Zone	Surface with excellent undersea scenery	Forbidden
Class 1 Special Zone	Scenic beauty with needing protection, and rank is next to Special Protection Zone	Selective cutting with less than 10% volume
Class 2 Special Zone	Special Zone other than Class 1 and 3	Selective cutting with less than 30% for timber, less than 60% for fuel wood smaller than 2ha with 30% of crown closure required
Class 3 Special Area	Rather lower importance of protection with small risk of damage by agriculture, forestry, and fishery activities	No regulation
Normal Zone	Areas without classified above	Reporting is required

Source: Ministry of Environment Web Site (www.env.go.jp)

Activities of primary industry and tourism are largely admitted in parks. In that sense, the Natural Parks Law is somewhat development oriented instead of protection oriented. This is why the Conservation of Natural Environment Law of 1972 was desired, and very strictly preserved areas like Wilderness Areas were designated outside of Nature Parks. However, it is also understandable that the conservation areas under this strict law are limited.

Basic Environment Law of 1993: The Basic Environment Law is the principal law among hundreds of environmental regulations in Japan. Before this law was enacted the Basic Pollution Control Law and the Conservation of Natural Environment Law had been the two main instruments for promoting environmental policy. As shown before, these two laws played an important role in tackling industrial pollution problems and conservation of valuable nature. However, they became outdated in dealing with newly appearing problems such as global warming and unsustainable life style of urban society.

The Basic Environment Law of 1993 replaced Basic Pollution Control Law and a part of the Conservation of Natural Environment Law, adding many new ideas for fundamental environmental policy of the nation. It was created in consideration of the results of UNCED (Earth Summit) at Rio de Janeiro in 1992. The purpose of Basic Environment Law is declared in Article 1 as follows: “*The purpose of this law is to comprehensively and systematically promote policies for environmental conservation, to ensure healthy and cultured living for both the present and future generations of the nation as well as to contribute to the welfare of mankind, through articulating the basic principles, clarifying the responsibilities of the State, local governments, corporations and citizens, and prescribing the basic policy considerations for environmental conservation.*”

The law provides for three basic principles of environmental policy: (1) Enjoyment and future succession of environmental blessings, (2) Creation of a society ensuring sustainable development load, and (3) Active promotion of global environmental conservation through international cooperation. It is useful to show the text of the relevant articles:

Article 3: Enjoyment and Future Success of Environmental Blessings.

Environmental conservation shall be conducted appropriately to ensure that the present and future generations of human being can enjoy the blessings of a healthy and productive environment and that the environment as the foundation of human survival can be preserved into the future, in consideration that preserving the healthy and productive environment is indispensable for healthy and cultured living for the people, and that the environment is maintained by a delicate balance of the ecosystem and forms the foundation of human survival, which is finite in its carrying capacity and presently at risk of being damaged by the environmental load generated by human activities.

Article 4: Creation of a Society Ensuring Sustainable Development with Reduced Environmental Load.

Environmental conservation shall be promoted so that a society can be formulated where the healthy and productive environment is conserved and sustainable development is ensured by fostering sound economic development with reduced environmental load, through practices on environmental conservation such as reducing as much as possible the environmental load generated by socio-economic and other activities, which are voluntarily and positively pursued by all the people sharing fair burden; and so that interference with environmental conservation can be anticipatively prevented through enhancing scientific knowledge.

Article 5: Active Promotion of Global Environmental Conservation through International Cooperation.

Global environmental conservation shall be actively promoted in cooperation with other countries, utilizing Japan's capacities and resources, and in accordance with Japan's standing in the international community, in consideration of the fact that global environmental conservation is a common concern of mankind as well as a requirement in ensuring healthy and cultured living of the people into the future, and that the Japanese economy and society is closely interdependent with the international community.

In short, these three basic principles are focusing on the environmental right of the people (Article 3), creating sustainable development in harmony with good environment (Article 4), and promoting international cooperation (Article 5). They are the fundamental policy directions of Japanese environmental policy today.

From Articles 6 to 9, the law designates the responsibilities of the state government, local governments, corporations, and citizens. In Article 14, the law mentions guidelines for policy formulation, and in the following articles describes a variety of subjects such as implementation of policies for environmental conservation. For example, Article 20 mentions the promotion of environmental impact assessment. This article became the basis for the Environment Impact Assessment Law of 1997. International cooperation measures are mentioned in Articles 32 to 35. Global climate change and monitoring related issues are the major concern in these articles. Such issues were very new for Japanese legislation.

Discussions and Conclusion

It is worth mentioning that there is criticism of the environmental legislation in Japan. Generally speaking, the Ministry of Environment is a small ministry in terms of its human resources and budget. Environment protection and nature conservation are not in a position of first priority within the governmental policy arena. Development with high economic returns is still regarded as a favourable measure for welfare and happiness of people. This is the reason why we have many golf courses and ski resorts in National Parks and Quasi-National Parks all over the country. On the other hand, Wilderness Areas, in which no human activity is allowed, amount only to 5,631 ha in total and are not expanding since 1980. Human use is more important than setting aside the nature, basically. In addition, most of the special protection zones and Class 1 special zones in National Parks and Quasi-National Parks are designated on public land. The reason of less private land in such strict protection zones is avoiding monetary compensation of regulatory measures on such land.

The Basic Environment Law is also not sufficient for creating and protecting good environment for the people. One example is that the environmental right mentioned in Article 3 is vague and weak. It is said that this article would surely not designate the environmental right as one of the rights to life declared in the constitution. The meaning of sustainable development is also unclear in the law. Although, introducing the idea of sustainable development into the Basic Law can be appreciated, a clear definition of the words would be necessary.

The Environment Impact Assessment Law is also regarded as a law with full of loopholes. According to the law, the size of targeted public works is relatively big, so that many of small and medium sized

works are not required for EIA. In addition, if the EIA process would be sufficient and the report is submitted properly, it is hard to re-consider the ongoing public works. This means that the contents of the report, or the accuracy of the anticipated impact analysis, are not examined in a strict manner by any of the governmental organizations with enough responsibility.

Protection of Endangered Wild Species Law also has many weaknesses. Penalty of violation of the law is not severe, and the inspection system related to this law is not sufficient. This is why Japan has been one of the worst countries of violating CITES in the world for many years.

Industrial pollution has been decreased since 1970s, and the general environmental conditions have become better in Japan. Levels of pollution in the air and water are surely improving during the last 30 years. It clearly shows that human efforts for pursuing good environment can make fruitful results. Environmental legislations have been making great contributions for that. The Ministry of Environment has been getting more and more political power in recent years. The present situation of environmental legislation in Japan is not sufficient, but it means there are huge spaces for improvement in the future.

References

Gyousei Publishing (2002) Compendium of Environment Laws.

Hatakeyama, Takemichi (2001) Lectures of Nature Conservation Legislation, Hokkaido University Press.

Ministry of Environment (2004) Environment White Paper.

Ota, Ikuo (2004) Conservation and Preservation of Natural Environment in Forest Policy (Sakai, Masahiro ed.), Japan Forestry Investigation Committee.

Activities and significance of forest owners' cooperatives in Japan

Ikuo Ota *

Abstract

Japan is one of forest rich countries in advanced countries. Two third of the land surface, or 25 million hectares, are covered by dense forests. The majority of the forestland is owned by the private sector, and there are about 2.5 million households having forestland over 0.1 ha in Japan. The average area of individual forest owners is about 2.7 hectares, and most of them are very small in scale. Forest owners' cooperatives were established by the amended Forest Law in 1907. However, creating forest owners' cooperatives was not popular in those days. In 1939, legislation for forest owners' cooperative was changed, and newly designed forest owners' cooperatives were compulsory organizations in order to supply timber for national demand, i.e. military purposes. After World War II, the government reformed the Forest Law under the occupation by the United Nations, and forest owners' cooperatives were also totally reformed.

The present system of forest owners cooperative is determined by the Forest Owners' Cooperative Law of 1978. This law aims to improve the economic and social status of forest owners, to sustain forest inventory and to raise timber productivity by means of facilitating cooperative organization of forest owners, and to contribute to the development of the national economy. Major activities of forest owners' cooperative are as follows:

- Helping forest owners making forest management plans,
- Improving forestry practices such as plantation, weeding, or thinning according to the order of forest owner,
- Logging and sales of timber according to the order of forest owner,
- Pest control in member forests,
- Extension services for forest owners,
- Sales of forestry related tools and materials.

Forest owners' cooperatives are very important for most of small forest owners who cannot manage their forest well themselves. Recently, consolidations of forest owners' cooperatives are going on by governmental direction. Average size of the organization is becoming bigger so as to strengthen their economic basis. There are 846 forest owners' cooperatives and about 1.62 million members altogether in Japan. The importance of forest owners' cooperatives has been increasing under the difficult situation of domestic forestry sector in Japan.

Keywords: Forest owners' cooperative, forest law, extension, plantation, subsidy, Japan.

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Introduction

Because of its climatic condition and human intervention 2/3 of the total land surface of Japanese islands is covered by forest. Of the 25 million hectares of forest 2/5 or 10 million hectare are artificial plantation forests. Most of them have been established with softwood species such as Japanese Cedar (*Cryptomeria japonica*), Japanese Cypress (*Chamaecyparis obtusa*), Japanese Red Pine (*Pinus densiflora*), and Japanese Larch (*Larix leptolepis*). The majority of plantations were created as expansive afforestation after the World War II, and are becoming matured now. The forest ownership pattern is as follows; national (31%), municipal (11%), and private (58%). Private forest is dominant but there are no giant forest companies in Japan except a few pulp and paper companies. Most of the private forest holdings are small in scale. There are about 2.5 million households owning forestland over 0.1 ha, and the average forest area of such individual forest owners is about 2.7 hectare.

Although forest resources are growing, forest production is shrinking in Japan. More than 60 million cubic meters of timber were produced annually in the 1960s while only 16 million cubic meters have been produced in recent years. Instead of domestic timber, imported logs, sawn timber, and wood chips satisfy the big demand of wood fiber in this country with 127 million people. Only about 20% of the annual increment of timber is cut and the rest is stocked year by year. Depopulation in rural areas is a severe social problem in Japan. The majority of young people tend to go out from rural towns to the city, so that only aged people are left in the countryside. Quite a few private forests are held by such households. Therefore, forest management as well as timber harvesting is becoming more and more difficult for private forest owners. Forest owners' cooperatives become the key organization in the rural forest sector under such circumstances. This paper describes the system, the activities, and the historical and present status of forest owners' cooperatives in Japan, and analyzes their importance for the country's forest sector.

Brief history of forest owners' cooperative in Japan

During the feudal era, i.e. before the middle of 19th Century, the great majority of Japanese people were farmers living in rural mountainous areas. Land titles of ownerships were not clear and forests belonged either to local landlords or to communities with a few exceptions. There existed rather strict rules for the utilization of forests so that they had been sustained for hundreds of years. After the Meiji Restoration in 1868, the new government introduced a whole new system of politics, economy, military, education, and technology from Western countries such as UK, France and Germany. A new land tenure system was also introduced and modern forest ownership was created. Most of the land which used to belong to feudal lords became governmental possession, so that not many large scale private forest holding were created in that period.

Because of rapid industrialization and militarization of Meiji government forest resources were devastated over the country, and landslides and floods occurred frequently in the late 19th Century. The first Forest Law was created in 1897 under such circumstances. The main purpose of the law was to protect forests from overuse (Ota, 2004). Forest Owners' Cooperatives were legally established in 1907 with an amendment to the Forest Law. Four different kinds of cooperatives were designated: practice cooperatives, silviculture cooperatives, road construction cooperatives, and protection cooperatives. However, not many people were interested in joining such cooperatives and only 3.2% of the private forest land was under the control of cooperatives in 1926, twenty years after the establishment by law. In 1939 the forest cooperative system was totally reorganized in order to come up to the wartime timber demand. Private forests were obliged to supply timber for military purposes through forest owners' cooperative. Because of this unfortunate experience some people tended to have a negative impression about forest owners' cooperative for many years even after the war.

The present Forest Law was established in 1951 under the occupation by the United Nations. Forest owners' cooperatives also were totally renewed in the law. Two kinds of forestry cooperatives were designated; forest producers' cooperative and forest owners' cooperative. A forest producers' cooperative was an organization of the former communal forest which was collectively owned by village people. It was a special form of private forest and the area of such cooperatives was limited. On the other hand, forest owners' cooperative was a general cooperative for all the non-national forest owners including municipal forest, individual private forest, temple and shrine forest, corporate forest and others.

Basically, the unit of forest owners' cooperative was a natural village, and there were more than 5,800 forest owners' cooperative in early 1950s. In accordance with rapid economic growth in 1960s, activities of forest owners' cooperative especially timber marketing expanded so that merging of cooperatives accelerated with governmental support. In addition, teams of forest workers were created in the cooperatives as to increase harvesting in members' forests. Characteristics of forest owners' cooperatives in Japan today were formulated in such a way. Table-1 shows the trend of the number of forest owners' cooperatives. The number of individual forest owners' cooperatives has been decreasing as this was caused by a consolidation of the cooperatives; the total number of members or the total area has not been decreasing much through the years.

Table 1: Trend of the number of forest owners' cooperatives in Japan (1960-2005)

Year	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
Number	3,905	3,077	2,524	2,187	1,933	1,790	1,642	1,455	1,174	846

Source: Forestry Agency (Each year) Statistics of Forest Owners' Cooperatives

Forest Owners' Cooperative Law

The system of forest owners' cooperative was designated in the Forest Law of 1951. However, with the growing importance of forest owners' cooperatives in the forest sector independent legislation for forest owners' cooperative was desired. Then in 1978 the Forest Owners' Cooperative Law was established. This law aims to improve the economic and social status of forest owners, to sustain forest inventory and to raise timber productivity by means of facilitating cooperative organization of forest owners, and to contribute to the development of the national economy (Article 1). The law designated the necessary and possible activities of forest owners' cooperatives. Necessary activities are as follows:

- Guidance of forest management to members,
- Forest management with entrustment by members,
- Accepting trust of members for forest management purposes,
- Pest control and other forest protection activities,
- Any activities related to above mentioned matters.

Major possible activities are as follows: Loan for forest owners, supply of forestry equipments, transport of logs, process of logs, sales of timber, process and sales of forest byproducts, building and running forest recreational facilities, making forest plan, and information service for improvement of forestry techniques (Article 9). A forest owners' cooperative should be non-profit organization. It is prohibited to gain commercial profit for the organization itself. Therefore, in case of having surplus from its activities, the cooperative should give dividends to the members, i.e. forest owners, and the amount of dividends is considered in the accounting statement (Articles 4 and 7).

Forest owners' cooperatives have two different objectives: To sustain forest resources and to improve status of forest owners. This must be a unique feature of forest owners' cooperative in Japan. Forest owners' cooperatives are the organization for pursuing economic utility of forest owners, but are the organization for pursuing public benefit at the same time. Many of the governmental subsidies are provided to forest owners through forest owners' cooperative. To some extent, the government expects forest owners' cooperatives to play a role of branch organization of public office.

Structure and activity of forest owners' cooperative system

Forest owners' cooperatives exist in all of the 47 prefectures and their total number is 846 as of March, 2006. Total number of members participating in forest owners' cooperative is 1,618,386, and the total area of members' forest is 11,148,271 ha or 71% of private forests in the country. The system of forest owners' cooperative is constructed at 3 levels: Individual forest owners' cooperatives, prefectural federation of forest owners' cooperatives, and the national federation of forest owners' cooperatives. Individual cooperatives are located in local areas where the forests exist.

Most of the cooperatives used to be established in towns and villages as a unit but with the continuous efforts of consolidation a cooperative tends to cover more and more broader areas. Prefectural federation of forest owners' cooperatives are established in each prefecture. There are 46 prefectural federations in 2006. There is no federation in Osaka Prefecture because they have only one forest owners' cooperative. The role of a federation is to facilitate cooperation of individual cooperatives, to provide training courses for forest workers, to sell timber, and to financially support individual cooperatives. The national federation of forest owners' cooperatives is located in the capital city, Tokyo. Its role is to coordinate activities of forest owners' cooperatives, to be a window of access to the central government, to deal with national forest insurance, and with other activities such as advertisement and research related to forestry.

Within the 846 forest owners' cooperatives, 787 of them have permanent fulltime employees. The total number of such employees is 8,028, within that 470 are executives, and 7,558 are officers and workers. Breaking down of 7,558 officers and workers, 5,714 are male and 1,844 are female, and the average number in single cooperative is 9.6. In addition, most of the cooperatives employ engaged forest workers. There were 33,871 engaged forest workers in 2005. More than half of forest workers in the country are engaged in forest owners' cooperatives. Accounting of each forest owners' cooperative is independent, so that the financial status depends on activities of individual cooperatives. Even though each individual cooperative is not a big economy, the total amount of 846 cooperatives is rather big in the domestic forest sector. The total amount of subscription by members was 51.6 billion Yen and the total sale of all the activities was 230.8 billion Yen in 2005.

Significance of forest owners' cooperatives

In 1964, the Basic Forestry Law was established. This legislation aimed to facilitate domestic forest production in the context of an economic boom of those days. Because of scattered ownership pattern of forest in Japan the law assumed that individual forest owners should play a central role in private forestry, and so do forest owners' cooperatives. Various governmental support programs such as construction of forest roads, creating log auction markets, and purchase of forestry machinery were carried out with the help of local forest owners' cooperatives.

Activities of forest owners' cooperatives have been expanding since then (Ota, 2002). Therefore, local forest owners' cooperatives have become the most important organization for small scale private forest owners who depend on their daily matters about forest management. Especially, silvicultural practices such as plantation, weeding, pruning, and thinning are among the main activities forest owners' cooperatives are providing for

members. About 90% of plantation and the majority of pre-commercial thinning on private forestlands are done by forest owners' cooperatives.

The result of the activities of forest owners' cooperatives is shown in Table-2. There are two kinds of sales activities in the table. "Sales only" means an activity of timber sales that are harvested by forest owner and forest owners' cooperatives only selling the timber at their log market or other ways. "Production & Sales" means an activity that forest owners' cooperatives harvest and sell the timber by order from forest owners.

Table 2: Result of selected activities of forest owners' cooperatives in 2005

Activity	Utilization				Sales	
	Plantation (ha)	Weeding (ha)	Pruning (ha)	Thinning (ha)	Sales only (m ³)	Production & Sales (m ³)
Amount	18,722	108,499	24,986	201,286	2,040,499	2,817,707

Source: Forestry Agency (2007) Statistics of Forest Owners' Cooperatives

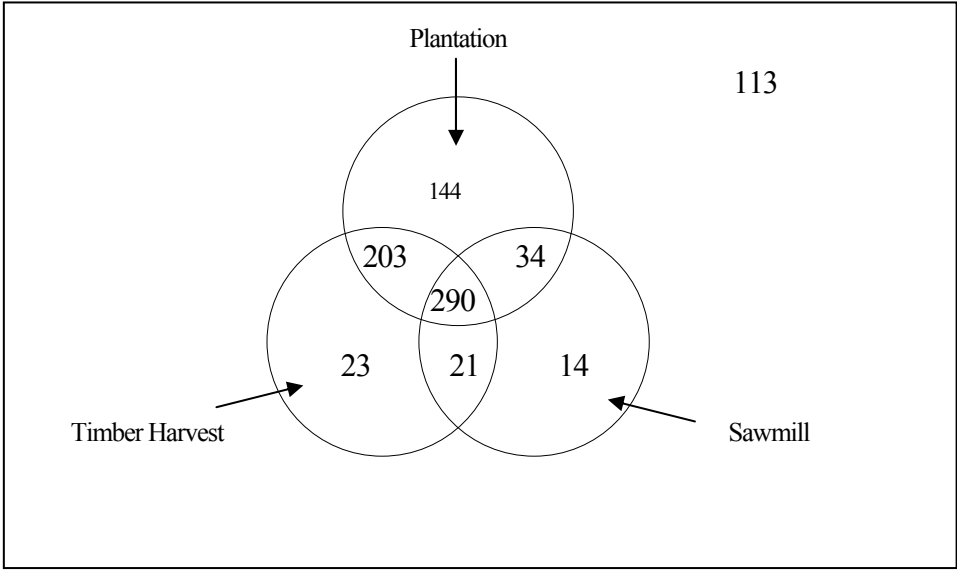
The central government provides subsidies for forest management. The reason of such subsidies is explained as the enhancement of environmental functions of private forests. Therefore, plantation and primary practices after plantation such as weeding and thinning are subjects for governmental subsidy. The amount of a subsidy depends on the location, soil type, tree species and other factors. For example, in case of softwood re-plantation, the maximum amount of subsidy is 68% of the standard cost of the activity. Forest owners' cooperatives are the organizations that the government designated as a commission agent of such subsidies. Therefore, all subsidies from the government to forest owners must go through the forest owners' cooperative. That is why most of the primary forest practices are done by forest owners' cooperatives.

In addition to subsidized activities, forest owners' cooperatives are doing spontaneous activities such as timber production, timber sales, timber processing, and sales of forest by-products. Doing or not doing any of such activities depends on individual cooperatives, so that some cooperatives do many of these activities while others not. Figure-1 shows a number of forest owners' cooperatives of doing three major activities in 2005. Within 842 cooperatives, 671 cooperatives or 79.7% did plantation activity, 537 cooperatives or 63.8% did timber production activity, and 359 cooperatives or 42.6% did sawn timber production activity. As shown in the figure, cooperative without these three activities were 113 or 13.4%. Under the severe condition of domestic forestry today, private forestry enterprises such as lumberjacks or small sawmill owners are going to retire from their business. Therefore, the share of forest owners' cooperative in many fields of forest sector is increasing gradually.

Some cooperatives run souvenir shops of woody crafts and local foods, and others manage camping sites or rural tourism facilities. Thus, forest owners' cooperatives are contributing to the local economy in various ways, and they are one of the leading enterprises that provide employment for local people in many cases.

Table-3 shows the turnover of major activities in forest owners' cooperatives. With the downward trend of domestic timber production and prices, turnover of sales & production has been decreasing for decades whereas those of sawmill production and silviculture has not decreased much. This indicates the importance of forest owners' cooperatives for rural society in sustaining forestry.

Figure 1: Number of forest owners' cooperatives with doing three major activities in 2005



Source: Forestry Agency (2007) Statistics of Forest Owners' Cooperatives FY2005

Table 3: Turnover of major activities in forest owners' cooperatives (1990-2005)

Year	Timber Sales & Production (MM Yen)	Sawmill Production (MM Yen)	Purchase (MM Yen)	Silviculture (MM Yen)	Others (MM Yen)	Total (MM Yen)
1990	124,173	35,430	21,843	143,102	35,836	360,385
1995	102,287	40,709	20,956	186,772	38,246	388,970
2000	77,555	40,441	16,434	167,376	40,325	342,131
2005	57,190	34,290	12,221	111,287	40,685	255,673

Source: Forestry Agency (2007) Forestry White Paper FY2007; Forestry Agency (2007) Statistics of Forest Owners' Cooperatives FY2005

Yusuhara Forest Owners' Cooperative - An example of an excellent cooperative

Yusuhara Town belongs to Kochi Prefecture in Shikoku Island, located in the southwest part of Japan. The area of this municipality is 23,651 ha and 91% of its surface is covered by forest. Population has been steadily decreasing since 1950s; it was 10,651 in 1955, 7,011 in 1970, 5,407 in 1985, and 4,860 in 2000. This kind of depopulation is common in rural area of this country. Population of Yusuhara is 4,098 and the number of households is 1,794 as of March 1, 2008.

Because of large areas of forests and limited farmland, forestry is one of leading economic activities in this small town. Yusuhara Forest Owners' Cooperative (YFOC) was established in 1956 and has been expanding its activities since then. Membership is 1,245 households which means that almost all of the forest owners in the town are the member of YFOC. There were 36 fulltime employees and 33 engaged forest workers in YFOC in 2004. Almost all of employees are from Yusuhara Town. Activities of YFOC are any kind of forest practices and management in members' forest, road building, timber harvesting, timber sales, and sawn timber production as well as extension and information services for members.

Forest road density in Yusuhara is around 50m per hectare which is three times more than the national average. This is because of the continuous efforts by YFOC and Yusuhara Town. YFOC introduced GIS mapping on their members' forests in 1990s and is pursuing efficient forest management which individual small forest owners are not able to do. YFOC got a forest certification from Forest Stewardship Council (FSC) in 2000. It was the second organization that took FSC forest certification in Japan. The area of certified forest was 2,249 ha at the beginning, but it increased year by year and became 11,370 ha in 2007. The great majority of forest owners in Yusuhara are participating FSC forest certification scheme now.

YFOC runs a small sawmill. It was built in 1979 for processing small diameter logs that used to be sold at very low price or discarded formerly. Sawn timber production was not a big business for YFOC until recent years, but after getting FSC certification, things have changed. House builders in urban cities interested in using FSC labeled sawn timber for their house construction, and demand for FSC timber increased drastically since 2003. YFOC added a new line of sawmill and kilns for drying timber, and expanded sawmill production (Ota, 2006b). In 2004, net profit of YFOC was 81 million Yen and 32% of them were from sawmilling production. Regarding the fact that the share of sawmill profit in 1996 was only 0.3%, FSC certainly brought new business to YFOC. Even though timber price is very low and forestry is in bad situation, forest owners' cooperative like YFOC can contribute to forest owners by using its human resources as well as the growing forest resources in their home town.

Conclusion

As described in the paper, forest owners' cooperatives are indispensable for the forest sector in Japan today. The reasons for it are as follows:

- Private forest occupies a majority of land but most of them are small in scale. Therefore, forest owners' cooperatives are necessary for many of the owners to get bargaining power.
- Central government established Forest Owners' Cooperative Law and placed a special status on them. They are not only organizations seeking benefit for members but also organizations conserving forest as an environmental good.
- Organizational structures of national and prefectural federations of forest owners' cooperatives are well established.
- Central and municipal governments provide preferences such as silvicultural subsidies through forest owners' cooperatives because they are the representatives of private forests which have environmental functions.

There are more than 800 forest owners' cooperatives and over 1.6 million forest owners are the member of them. Total area of members' forest covers 71% of private forests in Japan. Considering the situation that no giant forest companies exist in the country, forest owners' cooperatives should be playing major role in domestic forest sector in the near future.

Forest production in Japan has been decreasing for more than 40 years. However, because of the decreasing volume of imported wood fibers in recent years, domestic forest production would increase from now on. In addition, forest resources are getting bigger and bigger because plantation softwood trees which have been planted after the World War II are getting mature nowadays. People's expectation and the importance of forest owners' cooperatives will be higher.

References

Forestry Agency (2007) Forestry White Paper FY2007.

Forestry Agency (2007) Statistics of Forest Owners' Cooperatives FY2005.

Ikuo Ota (2002) Forest legislation in a constitutional state: The Japanese example. Proceedings of the 3rd International Symposium of IUFRO RG 6.13.00. Jundra, Bulgaria: 27-37.

Ikuo Ota (2004) Comparison of forest laws and national forest management system in France, Japan, and USA. Proceedings of the 5th International Symposium of IUFRO RG 6.13.00. Zidlochovice, Czech Republic: 30-38.

Ikuo Ota (2006a) Progress in environmental legislation in Japan. Proceedings of the 7th International Symposium of IUFRO RG 6.13.00. Zlatibor Mountain, Serbia: 198-205.

Ikuo Ota (2006b) Experiences of a forest owners' cooperative in using FSC forest certification as an environmental strategy. *Small-scale Forest Economics, Management and Policy* 5 (1): 111-126.

Ikuo Ota (2007) A forest owners' cooperative in Japan: obtaining benefits of certification for small-scale forests. *Unasylva* 228 Vol.58: 64-66.

Japan's National Forest Programme and its Implications

*Ikuo Ota **

Abstract

There is no single written document named “National Forest Programme (nfp)” in Japan. Instead, the Basic Forest and Forestry Plan and the system of the national forest plan form Japan's nfp as a whole. This paper aims to describe the legislative basis of the plan and the system, and digests the content of the Basic Forest and Forestry Plan. It also tries to evaluate the Japanese situation by using the “Principles of nfps in Europe” which were introduced in the Vienna Resolution 1 of MCPFE in 2003. As a result, it is evaluated as a good and sincere policy, but there is not a small space for improvement in Japan's nfp.

Key words: Basic forest and forestry plan, Japan, national forest programme, Vienna resolution

Introduction

The idea of a national forest program (nfp) is launched in the Agenda 21 of the United Nation Conference on Environment and Development at Rio de Janeiro in 1992. The principal objective of nfp is to establish basic national direction of forest policy along with the idea of sustainable development regarding all the related field of industry and society in a country. Countries belonging to the UN are expected to create their original nfp.

In Europe, nfp is regarded as one of the key issues of the Ministerial Conference on the Protection of Forests in Europe (MCPFE). In order to promote sustainable forest management, nfp is considered as an important tool for all the countries in Europe. Resolution V-1 of the 4th MCPFE at Vienna in 2003 mentioned about SFM and nfp as follows: *Strengthen synergies for sustainable forest management in Europe through cross-sectoral co-operation and national forest programmes.*

Most of the European countries either have accomplished or are on the process creating their nfp. Some of the countries such as Finland and United Kingdom have already revised their nfp after thorough evaluation of the first one in recent years. On the other hand, Sweden, the biggest forest country in Europe, does not like to create nfp as a single published document unlike most other neighbours. Swedish people seem to think that the government must not regulate or intervene in free market activity of forest related industries that are rather enjoying a good prosperity in today's economy.

Japan also does not have a single written document named “national forest programme”. Instead, a system of forestry related laws and forest plans that have been established decades ago and revised time to time are regarded as the nfp of the country. This paper describes the present status of Japan's national forest programme and its implications.

Basic Forest and Forestry Law

The Basic Forest and Forestry Law of 2001 is one of the most important laws in the field of forestry in Japan. This law is the amendment of the Basic Forestry Law which was established in 1964. The most noteworthy change was the fundamental purpose of domestic forest management. The previous law placed timber production as the primary objective of forest management, but on the contrary, the purpose of the new law is to place environmental functions as the primary objective and timber production as the second. It means forest policy direction in Japan has drastically changed at the beginning of this century from production to protection.

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The purpose of the Basic Forest and Forestry Law is shown in the first article: “*This law is intended to design fundamental idea related to forest and forestry measures, and to designate basic matters by which the idea is to be realized. Also, it is to promote forest and forestry related measures synthetically and deliberately by clarifying roles of national and municipal governments, so as to stabilize and to improve national life and to pursue sound development of national economy*”.

Basic Forest and Forestry Law of 2001 mentions about the significance of variety of environmental functions of forests in article 2, and the importance of forestry on rural economy in article 3. It designates the Basic Forest and Forestry Plan in article 11. This article 11 is the legislative basis of the central part of the Japan’s nfp.

The Basic Forest and Forestry Plan is the highest governmental guideline of forest policy with about 20 years of perspective time horizon. Basic Forest and Forestry Law provides that the government should revise the plan in about five years intervals with considering changes of surrounding situation of forest and forestry. The present Basic Forest and Forestry Plan was created in September, 2006.

The law provides that the plan has to include the following contents:

- 1) Basic policy direction of forest and forestry issues.
- 2) Targets for realizing multiple functions of forest, timber production, and its utilization.
- 3) Overall and planned policy framework for forest and forestry by the government.
- 4) Deals related to forest and forestry other than mentioned above.

Basic Forest and Forestry Plan of 2006 - General direction of forest policy

The previous Basic Forest and Forestry Plan was created in October 2001, three month after the establishment of the Basic Forest and Forestry Law. The present plan intended to overcome problems of previous one that arose from changing circumstances around forest and forestry during the last five years.

In the first chapter of the plan four focal points are described. First of all, insufficient management of plantation forests is mentioned. There are over ten million hectares of plantation forests in Japan, and the majority of them are under fifty years old. This means that most of the plantations have been established after the World War II. Thinning is the most critical practice that is necessary for such young forests, but low economic return of domestic forestry has been retained forest owners from doing thinning operations for decades.

Plantation forests in Japan are not like tropical plantations with fast growing exotic species or short rotation fibre trees, but with domestic tree species of forty or more years of rotation period. It is more like a semi-natural softwood forest with a good forestry management such as spruce forest in Czech or pine forests in Poland. The reason we call them plantation is that we plant seedlings on the site after clear cutting either softwood or hardwood forests existed before. Major tree species of plantation forests are Japanese Cedar (*Cryptomeria japonica*), Japanese Cypress (*Chamaecyparis obtusa*), Japanese Larch (*Larix kaempferi*), Japanese Red Pine (*Pinus desiflora*), and Pihuta (*Abies sachalinensis*).

Secondly, the diversification of people’s need for forest is mentioned. Environmental issues such as flood, avalanche of rocks and earth quake with destruction of tree cover, endangered species, and global warming are strongly related to the condition of forests. More social issues like shortage of water, animal damage for agriculture and forestry, protection of beautiful scenery, and forest therapy are also related to forest management. Although many of such needs for forests often have conflicts each other, satisfying as many needs for the public as possible is critical for governmental policy.

Thirdly, changes in timber utilization and wood supply are mentioned. Housing construction is one of the major wood consumption in Japan, but recent changes of construction methods diversify wood supply sources. Timber from North America, Russia, and Southeast Asian countries are

lowering their position in the Japanese timber market; instead timber from Europe is gaining importance. Domestic timber products are also regaining its status, and the self sufficient rate of wood is slightly going up since 2002. Increasing production of wood biomass and technological improvement of wood plastics are also expected.

Lastly, structural weaknesses of domestic forestry and forest industry are mentioned. Forestry has suffered from high cost and a low profit situation for many years, so that not a few of forestland owners are interested in keeping their forestry activities. Fragmentation of forest land is still a big problem as well as steep terrain and heavy rain in summer due to the monsoon climate. Small business with low efficiency in forest industry, especially in the sawmill industry, is another obstacle for expanding the domestic forest sector. Governmental policy direction for correcting such an outdated situation is strongly needed.

Based on the mentioned problems which Japanese forest and forestry are facing, the new Basic Forest and Forestry Plan designates reflective and positive perspectives as follows:

1) Respect for needs of the public: It is necessary for the government to promote sound forest management for satisfying people's diverse needs for providing a long run , constant and less expensive supply of domestic timber, and for offering correct and useful information about forest, forestry, and forest products to the general public.

2) Contribution for environmental conservation: It is necessary for forestland owners, both public and private ones, to practice sound forest management so as to provide various environmental functions as well as full utilisation of forest resources.

3) Development of aggressive forest policy against recent changes in situation: It is necessary for central and municipal governments to engage an aggressive forest policy so as to push small enterprises and groups of people including forest owners associations that are operating some kind of successful activities related to forestry in remote mountainous villages such as: intensive management of forestry, mechanization, high density road system, technological innovation for wood products, experimental export of special timber products, and other activities.

Basic Forest and Forestry Plan of 2006 - Objectives

In order to achieve nationwide establishment of sustainable forest management, the Japanese government designated a zoning system with three kinds of forests: "Forest for soil and water conservation", "forest in symbiosis with people", and "forest for repeating utilization".

Forest for soil and water conservation is the most popular forest located in mountainous area. The desirable state of this forest is described as follows; trees are not too dense so as to have appropriate sun light coming through the forest floor, vegetation of understory is growing, root system of trees and shrubs are deep enough to stabilize the soil, aggregate structure of forest soil is well developed and high water holding capacity is achieved, and necessary erosion and flood control works have been done.

Forest in symbiosis with people is the forest surrounding residence areas as well as scenic and cultural areas. A desirable state of this forest is described as follows; forest with primeval nature preferable for rare animal and plant species, forest with natural beauty or historical sites, forest with protective functions such as prevention from noise or wind, and forests with recreational and educational functions. They may have some facilities for recreation, culture and education for people to visit.

Forest for repeating utilization is mainly for timber production. The desirable state of this forest is described as follows; certain areas of productive forest standing on the site of good soil with appropriate commercial tree species, and with a high growth rate and high CO₂ sequestration capacity. Proper forestry infrastructure, such as forest road systems, should be facilitated.

Objectives of national forest policy designated in the Basic Forest and Forestry Plan are to establish mentioned zoning system over the country including all forests belong to state and in

municipal and private ownerships. In order to make progress clear to the public, the government prospected the goals both for environmental functions and timber production within certain time horizon.

For measuring the accomplishment of environmental functions, desirable forest areas with zoning are targeted. *Table-1* shows the present status and targeted state of forest area with three zones and three different kinds of forest management. “Single-story management forest” means usual even-aged softwood plantation forest. “Multi-storied management forest” means close to nature managed forest with a multi-storied canopy system. “Natural regenerated forest” means more natural forest stands without active human intervention.

Table-1 Present status and targeted state of forest area in Japan (2005, 2025) (Unit: 1,000 hectare)

		Plantation (man-made)		Natural regenerated	Total
		Single-story	Multi-storied		
Forest for soil and water conservation	2005	7,300	700	9,000	17,000
	2025	7,200	1,300	8,500	17,000
Forest in symbiosis with people	2005	400	100	2,700	3,200
	2025	400	100	2,600	3,100
Forest for repeating utilization	2005	2,700	200	2,200	5,100
	2025	2,600	300	2,100	5,000
Total	2005	10,400	1,000	13,900	25,300
	2025	10,200	1,700	13,200	25,100

Source: Ministry of Agriculture, Forestry and Fishery (2006)

The biggest change which will be desired to happen is the increase of multi-storied forest. It shows that the Japanese government is eager to convert even-aged softwood plantation forest into more close to nature forest in order to enhance its environmental functions. .

The plan also expects the increase of timber inventory of the nation from 4.34 billion cubic meters in 2005 to 5.30 billion cubic meters in 2025. Average timber inventory per hectare should mount from 173 cubic meters in 2005 to 211 cubic meters in 2025. On the other hand, annual increment of timber inventory is expected to decrease gradually because of maturing and aging of plantation forest. Total national annual increment in 2005 was 81 million cubic meters, but will be 58 million cubic meters in 2025.

Table-2 Present status and the target of domestic timber production and utilization 2004, 2015 (Unit: 1,000 cubic meters)

		2004	2015
Production		17,000	23,000
Utilization	Sawn timber	11,000	14,000
	Pulp	4,000	5,000
	Plywood	1,000	3,000
	Others	1,000	1,000
	Total	17,000	23,000

Source: Ministry of Agriculture, Forestry and Fishery (2006)

Table-2 shows the present status and the target of timber production and utilization. Domestic timber production has been shrinking for decades since 1970s, but it turned into increasing in recent years. The plan prospected constant and stable increase in timber production as well as enhancing environmental functions as described above.

Total consumption of wood in 2004 was about 90 million cubic meters and has been slightly decreasing in recent years. Self-sufficient rate of wood in 2005 is around 20%, but it is expected to go up from now on.

National System of Forest Plan

The nationwide system of forest plan has been introduced in 1951. The forest Law is the legal basis of the system. The system experienced minor changes several times since then, and the present system of forest plan was established by the amendment of Forest Law in 1998. As shown in *Figure 1* the Basic Forest and Forestry Plan is placed on the top of the system. It means that the whole system of forest plan is aimed at realizing the purposes and targets of the Basic Forest and Forestry Plan.

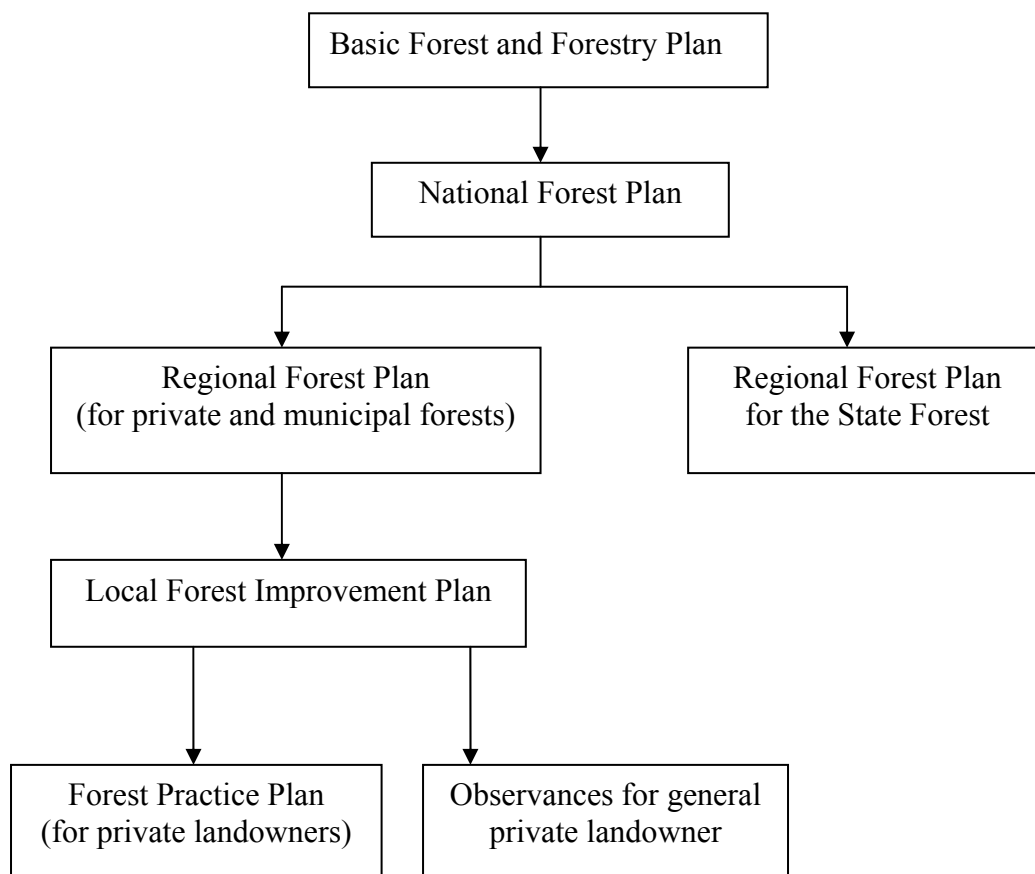


Figure-1 National System of Forest Plan in Japan

Within the system, there are 4 stages of forest plans. The first stage is the National Forest Plan. This plan is strictly based on the Basic Forest and Forestry Plan. It will be made by the Minister of Agriculture, Forestry and Fishery in every 5 years with 15 years of time horizon.

There are two plans at the second stage. For the state forest, independent regional forest plan for the state forest will be made by the regional forester. For the non-state forest, a regional forest plan will be provided by the governor of the prefecture. Of course, these regional forest plans have to be based on their upper classed plan. Both of the regional plans are made in every 5 years with 10 years of time horizon, and should be coordinated among each other.

The third stage is the forest improvement plan for municipality. All of the municipalities, i.e. cities, towns, and villages, in the country must have a forest management plan made by the mayor for

every 5 years period with 10 years of time horizon. This obligation for municipalities is new and the most recent amendment of the Forest Law.

The final stage are forest managements plan for private forestland owners. It is not an obligation but a recommendation mainly for large owners or group of owners. Forest owners associations are the main planner of such documents in most of the cases. Forest owners who have forest practice plan can get some benefit from the government such as tax reduction. For forest owners who do not have a forest practice plan, general observances by the law are adapted.

Through the system of forest plans, governmental policy directions are intended to penetrate into all types of forest owners' categories in the country. Especially, the three categories of zoning applied to all the private forests would be the most unique feature of Japanese forest policy, which is realized by this system of forest plan.

Discussion

As mentioned in the introduction to this paper, European countries and MCPFE are very much interested in establishing national forest programmes. For improving nfsp in member countries, MCPFE adopted the Vienna Resolution 1 in 2003, and publicized the "MCPFE Approach to National Forest Programmes in Europe" as an annex to the resolution.

In the Approach, 11 principles of nfps in Europe were introduced. They are comprehensive and clean-cut principles for improving nfps for European countries, and are also applicable to all the other regions in the world. Therefore, the author examines the Basic Forest and Forestry Plan as nfp in Japan by using these principles.

Principles of nfps in Europe and results of evaluation are shown in *Table-3*. Concerning the principles of "Iterative process with long-term commitment", "Consistency with national legislation and policies", and "Integration with national sustainable development strategies", the evaluation results are excellent. Because the Basic Forest and Forestry Plan is a bureaucratic product, it is easy to understand why the plan is consistent with various legislations and national policies. As provided in Article 11 of the Basic Forest and Forestry law, the Basic Forest and Forest Plan should be in harmony with the Basic Environmental Plan which is the basis of national environmental policy in Japan.

Table-3 Evaluation of Japan's nfp by the Principles of nfps in Europe

Principles	Evaluation
Participation	Poor
Holistic and inter-sectoral approach	Fair
Iterative process with long-term commitment	Excellent
Capacity building	Good
Consistency with national legislation and policies	Excellent
Integration with national sustainable development strategies	Excellent
Consistency with international commitments recognising synergies between international forest-related initiatives and conventions	Fair
Institutional and policy reform	Good
Ecosystem approach	Good
Partnership for implementation	Poor
Raising awareness	Fair

On the other hand, in terms of the principles "Participation" and "Partnership for implementation", the evaluations show a rather poor result. The law also designates the obligation for the government to organize an expert council for establishing the Basic Forest and Forestry Plan, and notification with questioning time for the public after establishing the draft plan. It seems to have enough participatory process, but there is no open public discussion during the process so that it

should not be satisfactory to fulfil the requirement of the Vienna resolution. The same critique is to be done to the principle about partnership. These are the major weak points for Japan's nfp.

For the other principles, evaluations are either good or fair. About the principle of "Holistic and inter-sectoral approach", evaluation is fair because not many of the different industrial sectors are mentioned in the plan. About the principle of "Consistency with international commitments recognising synergies between international forest-related initiatives and conventions", the evaluation is also fair. The plan mentions international cooperation, especially partnership against illegal logging, but it seems weak in contrast with a large national economy of Japan. Thinking about the fact that Japan is one of the major importers of forest products in the world, more and more efforts in the field of international cooperation should be done.

Overall evaluation of Japan's nfp is good but not excellent. It sincerely mentions the broad issues related to forest and forestry in Japan, but does not covers many of the other sectors. There is a fairly big space for improvements ahead.

Concluding comments

National forest programmes are more important for developing countries in the tropics than for developed countries in the temperate zone. However, as European countries emphasised in a resolution of MCPFE, national forest programmes are a good tool for all the countries to move on to the direction of sustainable forest management. Because of having a nationwide system of forest plan as well as a basic policy for forest and forestry, Japan does not intended to establish independent document of nfp.

It must be a sound political decision not to make another complicated document, but evaluation of present Japan's nfp which is represented by Basic Forest and Forestry Plan and the system of national forest plan, the status is not much satisfactory. By learning from the experience of Europe, the Japanese government would have a chance to rethink the status and to establish newly created nfp by overcoming weaknesses of the present system as described in this paper.

References

Ministry of Agriculture, Forestry and Fishery (2006) Basic Forest and Forestry Plan

Ota, Ikuo (2001) Forest legislation in a constitutional state: The Japanese example. Experiences with new forest and environmental laws in European countries with economies in transition: Proceedings of the Third International Symposium; Jundola, Bulgaria, June 2001. Forstwissenschaftlich Beiträge der Professur Forstpolitik und Forstökonomie der ETH Zürich (2002), Vol. 26: 27-37.

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10/1 Ota Ikuo

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The Role of Indigenous Knowledge in Forests and Woodland Management in India's Conflicting
Cultures. Source: *Woodland Cultures in Time and Space – tales from the past messages for the future*,
50-56. Embryo Publications, Athens, Greece. (9 Pages)
ISBN 978-960-8002-53-1

09/4 Rametsteiner Ewald / Schmithüsen Franz

National Forest Policies in Europe – A Review Based on MCPFE Qualitative Indicators for
Sustainable Forest Management. Source: *State of Europe's Forest 2007 – The MCPFE Report on
Sustainable Forest Management* (2007): 105-139. (39 pages)

09/3 Lanly Jean-Paul

Les influences européenne et américaine en matière de politique forestière à l'Organisation des
Nations Unies pour l'Alimentation et l'Agriculture. Traduction du texte publié dans Sample V.A. and
Anderson S., Eds. 2008: *Common Goals for Sustainable Forest Management – Divergence and
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L'évolution continue des valeurs sociales, économiques et politiques relatives à la foresterie aux États-
Unis et en Europe. Traduction du texte publié dans Sample V.A. and Anderson S., Eds. 2008:
*Common Goals for Sustainable Forest Management – Divergence and Reconvergence of American
and European Forestry*, p. 278-299. (18 pages)

09/1 Schmithüsen Franz

Forêts Européennes – Héritage du passé et options de l'avenir. Source: Traduction du texte publié dans
Sample V.A. and Anderson S., Eds. 2008: *Common Goals for Sustainable Forest Management –
Divergence and Reconvergence of American and European Forestry*, p. 126-248. (24 pages)

08/5 Schmithüsen Franz / Mekić Faruk / Herbst Peter

Forstrecht in den Reformstaaten Mittel- und Osteuropas 1990 – 2006. Quelle: *Forstwirtschaft und
Forstrecht in den Reformstaaten Mittel- und Osteuropas 1990 – 2007*, (2008): 1-10.
Forstwirtschaftliche Fakultät der Universität Sarajevo, Bosnien und Herzegowina. (10 Seiten)

08/4 Lanly Jean-Paul

European and U.S. Influence on Forest Policy at the Food and Agriculture Organization of the United
Nations. Source: Sample V.A. and Anderson S., Eds. 2008: *Common Goals for Sustainable Forest
Management – Divergence and Reconvergence of American and European Forestry*, p. 300-319.
Durham, North Carolina, Forest History Society. (15 pages)

08/3 Le Master Dennis C. / Schmithüsen Franz

The Continuing Evolution in Social, Economic and Political Values Related to Forestry in the United
States and in Europe. Source: Sample V.A. and Anderson S., Eds. 2008: *Common Goals for
Sustainable Forest Management – Divergence and Reconvergence of American and European
Forestry*, p. 278-299. Durham, North Carolina, Forest History Society. (16 pages)

- 08/2 Schmithüsen Franz
European Forests: Heritage of the Past and Options for the Future: Source: Sample V.A. and Anderson S., Eds. 2008: *Common Goals for Sustainable Forest Management – Divergence and Reconvergence of American and European Forestry*, p. 126-248. Durham, North Carolina, Forest History Society. (24 pages)
- 08/1 Schmithüsen Franz
Innovation in Forest Policy and Economics Teaching and Research. Source: *Works of the Faculty of Forestry of the University of Sarajevo*, Vol. XXXV (2005) No 1: 1-23; published in 2008. (18 pages)
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Multifunctional Forestry Practices as a Land Use Strategy to Meet Increasing Private and Public Demands in Modern Societies. Source: *Journal of Forest Science*, 53, 2007 (6): 290-298). (14 pages)
- 07/1 Schmithüsen Franz / Sasse Volker / Thoroe Carsten
Public Policy Impacts on European Forest Sector Development.
Source: Dubé, Y.C.; Schmithüsen, F., Eds., 2007: *Cross-sectoral policy development in forestry*, 163-173. Oxford U.K., CAB International / Oxford University Press. (16 pages)
- 06/6 Schmithüsen Franz
Préservation du patrimoine naturel dans la politique et la législation forestière nationale et internationale. Source : *Forêts tropicales et mondialisation: Les mutations des politiques forestières en Afrique francophone et à Madagascar*, 2006 : 25-31. Paris, Harmattan. (9 pages)
- 06/5 Schmithüsen Franz
The Role of Forest Policy and Law in Managing the Natural Renewable Resource Base.
Forstwissenschaftliche Beiträge Tharandt – Contributions to Forest Sciences, Nr. 28: 157-170, Stuttgart, Ulmer. (16 pages)
- 06/4 Schmithüsen, Franz / Seeland, Klaus
European Landscapes and Forests as Representation of Culture. Source: *Cultural Heritage and Sustainable Forest Management – The Role of Traditional Knowledge*. Volume 1; 217-224 (2006). Ministerial Conference on the Protection of Forests in Europe, Warsaw, Liaison Unit. (12 pages)
- 06/3 Wild-Eck Stephan / Zimmermann Willi / Schmithüsen Franz
Extension for Private Forest Owners – Insights from a Representative Opinion Poll in Switzerland. Source: *Small-scale Forest Economics, Management and Policy* (2006) 5 (2): 161-174. (14 pages)
- 06/2 Dubé, Yves C. / Lange, Glenn-Marie / Schmithüsen, Franz
Cross-sectoral Policy Linkages and Environmental Accounting in Forestry. Published in *Journal of Sustainable Forestry*, Volume 23 (2006), Number 3: 47-66. (16 pages)
- 06/1 Sasse, Volker / Schaaff, Constance / Schmithüsen, Franz
Coordination of Policies Related to Forest Management. Source: *Forest Science Contributions Forest Policy and Forest Economics* No 35 (2006): 116-125, Zurich, Swiss Federal Institute of Technology, ETH. (12 pages)
- 05/12 Magnago Lampugnani, Vittorio
The Construction of Nature – Central Park Revisited. (16 pages)
- 05/11 Magnago Lampugnani, Vittorio
Die Konstruktion von Natur – Central Park neu besichtigt. *Schweizerische Zeitschrift für Forstwesen* 156 (2005) 8 : 288-296. (17 Seiten)
- 05/10 Corvol, Andrée
Mutations et enjeux en forêt de Soignes: les années 1900. Source : *Journal forestier suisse* 156 (2005) 8 : 279-287. (18 pages)