Private and Municipal Forests and the Forestry Planning System in Japan – Trends and Problems after World War II

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In this paper, the author explains the characteristics of the Japanese forestry planning system and points out some of the problems found therein from the viewpoint of the management of privately-owned forests relating to the economic background and governmental policy.

The forestry planning system is a centralized type of planning, the planning beginning at the top and flowing downward and outward the periphery. In order to make this planning system an effective instrument, the district forestry planning founded under the system must approach the problem of how to combine the resources of the forest with the district's inhabitants and the forest owners; and further, the extent of the effective union of the district and the local timber manufacturing must be examined.

Preface

This paper is intended to explain the character of the Japanese forestry planning system and point out some of the problems found therein from the viewpoint of the management of privately-owned forests. The Forestry Planning System covers government forests also, but in that case there is necessarily an element of public benefit involved so that in the practical application of the system no particular contradiction arises. Therefore I have taken up the problems in the Forestry Planning System here in relation to privately-owned forest management only.

Since the relationship between private forest afforestation and those who are responsible for carrying it out is very important when discussing the problem of privately-owned forests. I first discuss the problem of the relationship to the economic background and governmental policy. In conclusion I discuss the basic attitudes necessary in forming forestry laws in the future.

Developments in postwar afforestation and those responsible for it

Developments in afforestation by farmers in the 1950's

i. Among the systems that underwent radical change after the war there was that of agricultural land. In this reorganization the tenant farmers became independent and achieved stability in management. In another area, Japan's forestry was considered a sector important for the recovery after the war, and so experienced an inflationary trend. The indiscriminate cutting during the war and the little planting activity during and just after

the conflict however, caused a rather low level of forestry activity to continue until about 1950 (Ogawa 1970). After that, however, afforestation began to progress as the condition of those taking part in it and the system itself improved with the discontinuance of the wartime control system, the free participation of forestry cooperatives through revision of the Forest Law, promotion of forest rehabilitation through the Temporary Afforestation Measures Act, and further, with the establishment of afforestation subsidies and the forestry extension system.

So, around 1950 forestry entered the first rapid afforestation period during which, up to 1956, almost all of the 1.5 million hectares of land to be reforested was planted. The greatest proportion of this land was privately owned (Fujisawa 1982).

Those who carried out the afforestation during this period were middle-level farmers who lived in an area where they could combine this activity with rice growing, having been freed by the agricultural reorganization and having achieved high productivity in rice culture. After the agricultural reorganization farming households saw a rise in farm income and stability in household finances due to progress in agricultural techniques and increases in the price of agricultural products. As a result, surplus income could be invested in silviculture. During this period it was possible to carry out forest planting with afforestation subsidies if there was a private source of labor available. This was promototed by the "Forestry Techniques Extension System." Technical guidance personnel were placed in each prefecture and, as the need arose, went into each district to explain the necessity of reforestation and give guidance in techniques. Awards for "Superior Forestry Households" and "Model Forests" were established, along with districts which were the subject of concentrated technical guidance. The main stimulus to the desire of the agricultural household to carry on afforestation was that young trees of small diameter were being sold at high prices so that a return on investment could be realized in a relatively short time.

ii. The second rapid afforestion period which began in the latter half of the 1950's was carried on, as in the first period, by middle-level farmers. A characteristic of this second period, however, is the progress in forest conversion afforestation. That is to say that the cutting away of low-quality broadleaf trees was followed by total reforestation with coniferous species. This is not unconnected with the pulp manufacturers' use of small-girth trees. As a result, advanced-growth broadleaf timber, becoming scarce, could be sold for a very high price, and even limb wood was not left unused.

However, as a result of this forest conversion reforestation, the farmers were no long able to use the byproducts of the forest for firewood or making charcoal, or to use the undergrass for livestock feed or compost. Thus, this development joined with the liberalization of agricultural products to cause an outflow of agricultural workers from forestry towns, to the extent that these settlements were sometimes totally depleted.

Forestry and reliance on foreign timber from the '60's

The characteristics of the supply and demand patterns in timber in the '60's include; a) greatly reduced demand for firewood and charcoal and a great increase in demand for rough timber; b) a sharp decrease in the stature of domestic timber and a sharp increase in the importation of foreign timber to meet the rough timber demand; c) the increase in the demand for rough timber derived from the demand for pulp, veneer and plywood materials (Ogawa 1970). These three characteristics are interrelated. That is to say, the demand for firewood and charcoal diminished because the increase in demand for pulp material caused a sharp rise in the price of domestic timber, which in turn caused the cheaper foreign timber to be imported in larger and larger amounts. In foreign timber, types similar to Japanese cedar and cypress were especially imported in large quantities from America after 1961, having a great effect on domestic forestry to the extent that both loggers and lumber mill operators in the interior who relied exclusively on domestic products were inevitably forced out of business. As a result, the amount of cutting and reforestation in private forests diminished, creating a loss of stability in the livelihood of agricultural and forestry workers. In order to avoid the reduction in cutting and reforestation on privately-owned forest land, afforestation by public corporations and companies as public afforestation projects, and afforestation by forestry cooperatives based on the Forestry Structure Improvement Project began to appear.

Afforestation by forestry cooperatives as forestry structure improvement projects

Two measures were adopted in order to relieve the stagnant situation in forestry production. One was the "Forestry Structure Improvement Project" and the other was the establishment of public forestry corporations which were to carry out cooperative afforestation on privately-held forest land. The Forestry Structure Improvement Project was based on the Basic Forestry Law and carried out when that law went into effect in 1964.

The Forestry Structure Improvement Project, in the final analysis, had as its aim the alleviation of the problem of scattered small plots of land and low productivity land use prevalent in private forests; thus, to help forestry respond to the internationalization of the economy.

The Project has a set menu to put into effect which includes measures for enlarging the scale of the forests involved, building logging roads to increase efficiency of operation, investment in machinery and other facilities, and development of a production organization. It also grants subsidies to municipalities, forest cooperatives, and other cooperative organization within the designated districts. Also, to help the farming household enlarge the scale of holdings, it promotes the coordination and aids in procedures connected with obtaining land for the individual owner to reorganize his area into an efficient configuration by acquiring new land under the 1966 "New Common-Right Forest Land Modernization Act." Further, placing emphasis on measures to increase the scale of operations resulted in the "Forest Land Operation Plan" which turned wooded land into land for forestry operations, and went on to establish measures for a fully organized and continuing operation.

In order to break out of the slump in forestry operations after the 1973 oil crisis, the "Core Forestry Districts Promotion Measures Project" of 1976 came to grips with the problem.

One organization which works for the improvement in the structure of forestry is the forestry cooperative. These cooperatives carry out operations using their own independent work force. This work force can be thought of as an advance in the cooperative operations in forestry. The cooperatives have attempted to strengthen their organizations through combination of small district organizations; bringing more of their labor force under social security plans and otherwise strengthening the operating organization; improving the machinery and other facilities for forestry operations to raise the level of efficiency.

Other than machinery, the objects of subsidies include facilities beyond those directly connected to forestry operations, encompassing items for the improvement of the living environment of forestry settlements such as recreation, and for distribution and processing of timber etc. Thus, the efforts of the forestry cooperatives in their role of carrying out private forestry operations since 1960 can easily be appreciated.

In 1978 the "Forestry Cooperative Law" was enacted which concerned forestry operations or management consigned by members of the cooperatives, as well as privately-owned forest entrusted to a cooperative.

Afforestation by public organs such as public forestry corporations and forestry development public corporations

In order to promote afforestation during the serious scarcities of timber prevalent in 1958, the "Profit Sharing Reforestation Temporary Measures Law" was passed mainly at the urging of the pulp manufacturers. Here the landowner and the planter become co-managers and co-owners of the trees, but are exempted from being sued for claims separately as is provided in civil law. At the same

time, in order to promote profit sharing afforestation, a system of low interest loans mediated through the local government agencies was established.

With these measures to deal with the stagnation in afforestation of the period, in the main prefectures public afforestation corporations were set up which became responsible for the activity of expansion in afforestation developing in the latter part of the 1960's. At this time afforestation, which up to that time had been carried out by individual forest owners, municipalities owning forests, or in profit sharing arrangements with borrowed privately-owned forests, was surpassed by afforestation by public corporations. Even now the role assumed by public forestry corporations and other public organs in afforestation continues to increase.

Since the afforestation by public corporation is totally dependent on a system of subsidies, the oil crisis of 1973 which caused a drop in the price of timber which in turn meant that the small-girth trees from thinning could not be sold, resulted in making it difficult to pay back borrowed capital.

Another public organ that carries on afforestation is the "Forestry Development Public Corporation" which executes profit-sharing afforestation limited to protection forest which was previously reforested as public land by the national government.

It must be added here that much of the work carried out by the Public Foresty Corporation and the Forestry Development Public Corporation uses the labor force of the forestry cooperatives. In this sense the forestry cooperatives act as sub-contractors for these public corporations.

Characteristics of the Forestry Planning System and some connected problems

The evolution of the Forestry Planning System and the contents of the present system

"The Forestry Planning System" was established in 1951 at the same time as the revision of the Forestry Law. The present system, however, was evolved only after the next revision of the Forestry Law in 1962 which it used as a basic model; revised afterwards as the "Basic Forestry Law" in 1964 and again in 1968 on the occasion of the establishment of the "Forestry Operations Plan" provided for in the new revision of the Foresty Law; and revised finally in 1979 when the "Forest Lands Development Licencing System" was established.

Here we shall examine the evolution of the Forestry Planning system, concentrating on those parts that have been subject to revision (Fujisawa 1982).

The 1962 revision of the forestry planning system was concerned chiefly with three points: 1) The organization of forestry planning which had, up to then, been divided into three levels, basic forestry planning administered by the Minister of Agriculture and Forestry; forestry district operations planning, administered by the prefectural governors; and the forestry district execution planning, administered also by the governors, was reformed into two levels, national forestry planning of the national ministry, and local forestry planning administered by the governors: 2) The licencing system for cutting coniferous trees of regular forests which had not yet reached optimum age was replaced with a system requiring only notification: 3) Operations in protection forests and other restricted forests were removed from forestry planning.

The 1964 revision accompanied the Basic Forestry Law established in the same year. Article 10 of this law states that the "long range outlook concerning demand, supply and reserves of the chief forestry products must be recorded and reported to the Diet." This section was then eliminated from the Forestry Law. The local forestry planning was made to conform to basic forestry planning and to the long-range outlook of the national forestry planning which was to set up ten-year plans at regular five-year intervals.

The 1968 revision was called the "Third Period Revision" and defined the position of forestry operations planning by the different forestry owners within the forestry planning system.

The 1974 revision concerned mainly four items: 1) It provided that National Forest Planning be done by district, and added to the categories of cutting, reforestation, tending, and protection which were already in the planning, categories concerning the district forests to which the planning applied, forest development targets basic to the full development of the forests, plus the new category concerning the conservation of forest lands: 2) It delineated the character of forestry planning as one which must give appropriate consideration to the support and progress in public benefit derived from forests in terms of a superior natural environment, conservation, configuration, etc.: 3) It instituted a licencing system for land use accompanying conversion of forest land: 4) enabled "Joint Forestry Operation Planning" to be set up for areas that were heretofore in the forestry operations planning system.

The present Forestry Planning System has four sectors; 1) Basic Planning for forest reserves; 2) National forestry planning; 3) district forestry planning: 4) forestry operations planning.

Basic planning for forest reserves describes the Government's target for forestry. The Basic Forestry Law was established for the purpose of making clear the basic governmental policy for attaining this target. In Article 10 of this law it is provided that basic planning concerning forestry resources and the long-range outlook concerning the supply and demand of forestry products should be determined and made public. Thus, this basic planning for forestry reserves represents the peak of the forestry planning system and describes what the shape of Japan's forestry should be in ten-year periods over the next fifty years. National forestry planning is that of the national government which the Ministry of Agriculture and Forestry, according to Article 4, Paragraph 1 of the Forestry Law, must, in accordance with the outlook in supply and demand the previously mentioned basic forestry reserves planning, draw up the basic matters concerning forestry operations for the whole nation every five years, with fifteen years constituting one period.

The district forestry planning develops ten-year plans drawn up every five years at the direction of the prefectural governors in accordance with Article 5. Paragraph 1 of the Forestry Law and coordinated with the National Forestry Planning, and concerns forestry planning for private and municipal forests.

Forestry operations planning belongs to a system in which the private or municipal forest owner draws up of his own free will a plan for his forest operations over a five-year period, receives official acknowledgement of the plan from the prefectural governor or the Minister of Agriculture and Forestry and, hopefully, carries it out deliberately and efficiently. Within this forestry operations planning there are the "Single Owner Operations Planning" and the "Joint Forestry Operations Planning." The former is an operations plan carried out individually by a relatively large number of large-scale owners, while the latter has merit for the smaller owners (Oka 1980). Thus, for smaller owners, through cooperative organized planning, a) installations for outfeeding become possible, b) logging roads and other such facilities can be constructed, c)a stable labor force is made available, d) timber distribution is more economical, e) collective undertaking of forestry cooperative operations becomes possible, with a guarantee of continuing production activity (Fukushima 1982). The smallest unit to which the "Joint Forestry Operations Planning" is applicable, according to the Forestry Law enforcement ordinances, is two owners with a combined land area of 30 hectares or more.

Characteristics of the Forestry Planning System

As can be understood from the previous discussion, the forestry planning system is a structure for carrying out governmental policy concerning the national forest reserves, and is a centralized type of planning, the planning beginning at the top and flowing downwards and out toward the periphery. This can be said also of the forestry operations planning, which is made up for individual businesses by the forest owners themselves. In the forestry operations planning, while the argument that management should seek efficient administration of forestry operation within individual forest management, it should be understood that the essential function of the forestry operations planning, as part of the forestry planning system, is to put

into effect the centrally planned district forestry planning. This is also the reason for the special treatment afforded in the forestry planning system such as subsidies, special loans, tax credits, etc. In other words, the forestry planning system has the two aspects of supervision and assistance in forestry management by the Forestry Bureau (Oka 1980). There have been complaints recently that parts of the forestry planning system have become simply formalities, that though the planning is done, it does not really function. In other words, the centrally planned and concretized district forestry planning is not adapted to the actual situation in forest management.

In the process of forest operations planning, the forest owners are free and not legally restricted. Though there is an obligation to carry it out once a plan is made, the obligation is only in the form of admonishment, with no penalty for failure to carry out the plan. Forestry operations planning is intended to be means of finding self motivation in forest management, therefore, even though technical aid may be given by the forestry cooperative or Forestry Improvement Extension Personnel in drawing up the plan, there remains a need that the plan be centered throughout on the intentions of the individual forest owner. This point is recognized to some extent in the Single Owner Operations Planning, but in the Joint Forestry Operations Planning, which is more land centered, administrative guidance is very frequent. The reason for this is that in the case of the Joint Forestry Operations Planning there is a) a collection of various kinds of management bodies into one cooperative organization and b) in the case of smaller owners, forestry plays only a secondary or subsidiary part in their management scheme and household budget.

In spite of this, at present forestry operations planning covers more than half of the privately-owned forest area, which means that there is a large area under the influence of the Forestry Bureau.

Problems with the Forestry Planning System

First of all, it is extremely difficult to bring "self motivation" for management of individual operations under the forestry planning system. The reason is that this planning, with its centrally controlled configuration, has been combined into the aims of government policy for the national forestry resources. If the planning was done at the points of execution, the character and mode of execution of forestry operations planning would have to be revised. It is doubtful, however, whether this would be possible considering the present low level of maturity in private and municipal forest management, the volume of forest reserves and their quality, the quality of planning for and establishing managerial targets.

Secondly, the aim of planning is the full development of the forest itself and is thus limited in its scope. That is to say that it is concerned from both the point of view of quality, (of what types of trees the forest is structured, their age and rank,) and quantity in developing forest reserves which can function in the production process. In that sense, the planning concerns the development of a production base. Therefore, when considering the organization and heightening of function of the economic aspects of forestry for the development of the local economy, a different plan becomes necessary. This is because the forestry planning system concerns physical planning and is not set up to consider human organizations. Thus, there is a problem in tying in local human resources and economy with forestry reserves. For example, a new production system needs to be developed for the ordinary forest as it exists with small scattered forest ownership within the existing forest reserves (Fukushima 1982).

Thirdly, there is a very large variation among individual forest owners as to the level of consciousness of forest and forestry matters, interest in management and management aims, and level of technical knowledge. Forest management is carried on when these are all gathered together by economic motives. Thus, there is a limit to the extent to which these varied types can be united in a single management body in Joint Forestry Operations Planning. There is at least, however, an economic stimulus supplied by subsidies and preferential tax credits.

Fourthly, there are many different situations that can be thought of as to when, what, and how to organize forestry within the Joint Forestry Operations Planning. But the problem devolves down to a plan for organized development of resources through operations in a particular time and place. It is important to organize the forest owners, but the problem is, in the process of setting up the organization, who is going to supervise and regulate the organization. This is usually the role of the forest cooperative or the municipal governments.

Trends in cutting and afforestation under the Forestry Planning System – the case of Hokkaido

The situation in Hokkaido as to the planned cutting and afforestation and that actually carried out in the eighteen years from 1965 to 1983.

i. In cutting, up to 1973, 99.5 % of the planned volume was cut as a peak in 1967, the record being quite good overall with volumes around 90 % each year. In 1974, however, the amount fell drastically to 74 %, and further, after that, in the five years from 1975 through 1979 there was only 56 % to 65 % cutting actually carried out, even though the total amount designated by the plan had diminished, and in the most recent four-year total, except for 1980 when the prospected amount was exceeded, the cuttings were 72 % to 81 % of planned totals.

ii. The actual amount of afforestation executed followed the same pattern as in cutting, the totals up to 1972 and those afterwards differing greatly.

Up to 1972, with the exception of 97 % in 1971, the totals of afforestation were over 100 % of the target, and in 1969 especially, when the total was 110 % of target as prospected in the plan. But after this amounts fell below 100 % to 87 % in 1973, and diminished rapidly to 57 % in 1978, after which it continued at about the same 54 %−65 % level.

Conclusion: suggestions for the future development of the Forestry Planning System

The Forestry Planning System is intended to totally develop the forests in seeking to carry out the Government's forestry reserves policy, and since it follows method of central planning by the national government, afterward handed down through the prefectural governments to the forest owners, it has a certain contradictory private economy aspect since it concerns individual forest management bodies. For that reason the forestry planning system has a tendency to become a simple formality with more bones than meat.

Also, though the Forestry Extension System was legally acknowledged at the time when the forestry planning system began in 1951, with the revision of the system in 1962 the Forestry Improvement Extension Personnel were put in charge of forestry planning, thus separating them in the process from their original propagation activites and organizing them into a body of on-site administrative agents, an organization which is independent neither administratively nor economically. This is the problem of the forestry planning system as a whole. The role that should be filled by the Forestry Improvement Extension Personnel, on the other hand, has only increased with the Joint Forestry Operations Planning, and its later form, the "Core Forestry Districts Promotion Measures Project", since the 1973 oil crisis.

In order to make the forestry planning system an effective instrument, fundamentally the individual forestry operation plans should be given their place within individual economies and district forestry planning should be accomplished by municipality as the unit of local economy giving the planning a configuration of from point of execution to center instead of vice versa. In other words, in setting up forestry operations planning, the participation of the owners themselves is very important (Shimotori 1971).

Of course, considering that forestry is one nation's industry, it is natural that there should be a national plan. But this plan should never be simply for the purpose of securing a certain simple volume of raw material resources to meet the demand of the timber industry. That is why it is necessary to

have an industrial plan created at the bottom or points of execution, where there can be full comprehension of the conditions of those who actually carry out forestry operations and the system by which the industry works.

R. Ohsaki also comments on this point that, first of all, it should be remarked that the basic plan concerning forest reserves is the central support, and the long-range outlook of the demand for important forestry products as well as the supply are related to this in a subsidiary fashion. In this way, when considering the problems of afforestation and cutting, the forestry planning must use the standards concerning forest land use, labor force, capital investment structure, etc. from the standpoint of those actually involved in forestry production (Ohsaki 1970). He thus points up the problems with planning that is totally at the mercy of timber demand, ignoring those actually taking part in the industry.

From the aspect of managerial techniques, for long-range forest planning it is necessary that cutting and renewal should be a consciously unified aim based on the forest's ecology. That is to say, it should be thought impossible without this kind of long-range planning to secure the function of public benefit of the forest, increase forest resources, or raise the level of forestry productivity.

Simply basing a plan on the natural situation, however, is not really enough. The involvement with human beings must also be fully taken into account. That is, it is here that the economic aspects of planning appear. And it is within the involvement with human beings that the aspects of national economy and individual economy are tied together. In fact, in order to, as it were, "bring the planning down to earth," it is necessary to see the importance of individual economies.

Further, in order to establish a forestry plan in a particular district, the tree-type structure, tree size, quality, and quantity of forest reserves, etc. all the special characteristics obtaining in a particular stand of forest must be determined at the same time. There must be an appropriate grasp of the existing configuration of the labor force, the amount, and the labor outflow situation within the district economy where it is important to know to what extent all these can be tied together. In other words, district forest planning within the forest planning system must approach the problem of how to combine the physical resources of the forest and the district's inhabitants and the forest owners; and further, the extent of the effect of the union of the district and the local timber manufacturing must be examined. For this the forestry cooperative must be considered very important as fulfilling the role of intermediary and guide.

In passing, it is necessary to touch upon the development of the forestry cooperatives which have been mentioned as the cooperative industry of those who actually carry out the operations, and to what extent there is a connection to the household economies of those who are members of the cooperative. Certainly the forestry cooperatives developed instead of individual economies; it might even be said that as the individual economies got weaker, the tendency for the development of forestry cooperatives got proportionately stronger. This, however, was a temporary phenomenon, and it would be a mistake to consider it a permanent and stable trend (Noguchi 1981). There are two points important for the forestry cooperatives to maintain a base for development; 1) that there is a stable re-use of workers who carry out operations and, 2) there is an increase in the contracts from individual forestry households which are the subjects of operations. For the latter, however, it is absolutely necessary that the individual forestry household be stable, since in unstable conditions there would be no investment in afforestation and care in expectation of future income.

Recently there has been an increase in areas where the forestry cooperatives have performed the role of coordinator and supervisor in the formation of the district forestry. Here, in the district forestry operations planning process an important role is being played in forest management by locally oriented cooperative organizations.

Finally, I would like to reiterate that I believe that the problem lies in not beginning the planning at the bottom, at the "individual forestry plan," thence to the district forest planning on which coordination of the national forest planning with supply and demand of the national economy can be based.

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Part V

POLICY ANALYSIS USING FOREST SECTOR MODELS