

**Report to the Third United Nations Forum on Forest (UNFF)
on Japan's Implementation of IPF/IFF Proposals for Action**

March 2003

Japan

(Draft)

This report to the United Nations Forum on Forest (UNFF) describes Japan's principal efforts over the past several years to implement the Intergovernmental Panel on Forests and Intergovernmental Forum on Forests (IPF/IFF) Proposals for Action, as well as the support Japan has provided for implementation of the IPF/IFF Proposals for Action in developing countries through such means as official development assistance (ODA). There are many IPF/IFF Proposals for Action, and Japan's efforts on some of these will be addressed at the Third United Nations Forum on Forest (UNFF), to be held in May and June of 2003. Information contained in last year's report, presented to the Second United Nations Forum on Forest (UNFF) in March 2002, is related in abbreviated form in this report (where appropriate, references to information contained in last year's report are provided in the relevant sections). Because various topics are covered here only briefly, this report does not purport to offer a detailed consideration of every aspect of the activities discussed.

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Report on Implementation of IPF/IFF Proposals for Action

Japan

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Introduction

As noted in last year's report, Japan has worked to promote sustainable forest management, in consideration of the importance of the forest ecosystem, based on laws such as the Forest Law and Forestry Basic Law, which lie at the heart of Japan's National Forest Programme.

To address citizens' increasing and diversifying forest-related needs in recent years, these laws were revised largely in 2001, in order to ensure the sustainable fulfillment of forests' multiple functions, and a new framework for forest policies designed to promote sustainable forest management has been established.

In addition, Japan is providing support for developing countries through various ODA schemes to address the problem of deforestation and degradation of forests worldwide. Japan has also actively contributed to international efforts in this area, taking part in the UNFF and other international discussions and dialogues concerning sustainable forest management.

By providing information in this report on its efforts to achieve sustainable forest management, particularly in the context of three items on the agenda of the third session of UNFF, Japan seeks to share its experiences and knowledge on these issues with the rest of the international community.

1. Economic Aspects of Forests (Including Trade)

Formulating policies to achieve continuing fulfillment of the multiple functions of forests

Japan has maintained its forest resources and indicated policy goals related to the timber industry based on the Forestry Basic Law and has promoted sustainable forest management based on various legal systems, including the Forest Planning System and the Protection Forest System, prescribed by Japan's Forest Law. In recent years, however, citizens' forest-related needs have increased and diversified, encompassing such various functions as conserving headwater resources, conserving national land and the natural environment, producing lumber, mitigating global warming, and providing venues for education and recreation. In Japan, where a broad range of sophisticated economic and cultural pursuits are carried out within a relatively small expanse of

mountainous land, the various functions of forests have to be carefully coordinated, and it is necessary to promote better forest maintenance.

For this reason, the Forestry Basic Law was completely revised in July 2001 and the Basic Law on Forest and Forestry was enacted, which sets forth a basic framework for forest policies designed to ensure the continuing fulfillment of the multiple functions of forests. The Forest Law was also drastically revised, and a new framework for forest policies was established to promote sustainable forest management.

The new concepts embodied in the Basic Law on Forest and Forestry were given concrete form when the Basic Plan on Forest and Forestry was formulated in October 2001 to ensure steady progress on individual policy measures. In order to ensure the sustainable fulfillment of the multiple functions of forests, the plan addresses the most important functions of forests and sets forth a zoning scheme comprising three categories: (1) “forests for water and soil conservation,” in recognition of the role forests play in conserving headwater resources and preventing natural disasters; (2) “forests for the people,” in recognition of the role forests play in preserving an environment for daily life and contributing to health and culture; and (3) “forests for cyclic use,” in recognition of the role forests play in producing timber and other resources. The plan demonstrates the basic direction of forest policies founded on the principle of proper forest maintenance aimed at fulfilling various important functions of forests.

Under the Forest Planning System, which is based on the Forest Law, categories and criteria, for the forest plan zoning are provided and guidelines for forest management practices articulated at each of the three levels national, regional (prefectural), and local (municipal)—in line with the goals and principles of forest maintenance set forth in the Basic Plan, so that appropriate forest management is promoted based on the local natural conditions as well as the region’s diverse forest-related needs.

Economic valuation of the functions of forests

We reap a variety of benefits from the multiple functions of forests, such as conserving headwater resources, conserving national land and the natural environment, producing lumber, mitigating global warming, and

providing venues for education and recreation. In order to help citizens to better appreciate the importance of forests by assigning a quantitative economic value to their functions, the Forestry Agency has conducted economic evaluations of the publicly beneficial functions of forests, publishing the results of these calculations in 1972, 1991, and 2000.

In November 2001, the Science Council of Japan prepared a report, entitled “Evaluation of Multiple Functions of Agriculture and Forests in relation to the Global Environment and Human Livelihood,” in reply to the request of the Minister of Agriculture, Forestry and Fisheries. The report offered a systematic breakdown of the functions of forests, relating the details and an evaluation of each function. It presented figures for those functions, chiefly physical functions, that could be evaluated in monetary terms, reconfirming the vital importance of forests.

Column: Multiple functions of forests reported by the Science Council of Japan

Multiple Functions of Forests: Categories	
(1) Protecting biodiversity	Protect genetic diversity, species of wildlife, and ecosystems
(2) Protecting the global environment	Absorb carbon dioxide, a cause of global warming; provide a substitute for fossil fuels; help stabilize the global climate
(3) Helping to protect soil and prevent desertification	Prevent surface erosion and loss of top soil, prevent desertification, prevent landslides, provide windbreaks and protection against snow
(4) Conserving headwater resources	Help ameliorate flooding, store water resources, adjust water volume, help purify water
(5) Creating a comfortable environment	Help ameliorate climate, purify air, create a comfortable living environment
(6) Providing for health and recreation	Provide therapeutic effects, foster good health, offer venues for outings and sports
(7) Fostering culture	Provide scenic beauty, venues for learning and education, artistic pursuits, religious rituals, traditional cultural pursuits, and preservation of geographical diversity

- (8) Offering a source of material products
Provide sources of lumber, food, industrial materials, and material for crafts

Evaluation of Multiple Functions of Forests

Function	Evaluation method	Amount
Absorb carbon dioxide	replacement cost	¥ 1.2391 trillion/year
Substitute for fossil fuel	replacement cost	¥ 0.2261 trillion/year
Prevent surface erosion	replacement cost	¥ 28.2565 trillion/year
Prevent loss of top soil	replacement cost	¥ 8.4421 trillion/year
Ameliorate flooding	replacement cost	¥ 6.4686 trillion/year
Conserving headwater resources	replacement cost	¥ 8.7407 trillion/year
Purify water	replacement cost	¥ 14.6361 trillion/year
Health and recreation	household expenditures (travel cost)	¥ 2.2546 trillion/year

Source: “Evaluation of Multiple Functions of Agriculture and Forests in relation to the Global Environment and Human Livelihood,” report by the Science Council of Japan, and appendices (November 2001).

Notes:

- (1) Because the evaluation methods vary according to function and because the functions evaluated represent only some of the multiple functions of forests, no total amount is shown.
- (2) The calculation for health and recreation is based on only a very limited segment of the activities embodied by this function.
- (3) All the replacement cost methods are based on figures arising from a comparison between the current situation and an imaginary scenario in which no forests exist. Thus, these figures are merely based on calculations intended to yield very rough estimates, and as such they must be interpreted with due caution.

Economic measures for encouraging sustainable forest management

Last year’s report contained a discussion of the Forest Law, one of the most basic laws intended to ensure sustainable forest management in Japan, and of the Forest Planning System, the Protection Forest System, and other programs established by the Forest Law. By applying these systems to privately owned forests, in combination with economic policy measures, the government seeks to ensure the protection and conservation

of forests in accordance with the respective aims of these systems and to provide appropriate guidance for forest management practices.

The Forest Planning System, for example, sets forth long-term policy directions and goals for forests and forestry in forest plans for each level national, regional (prefectural), and local (municipal)—as well as guidelines for forest management, which forest owners and others are expected to observe. A forest owner or the like can voluntarily prepare a five-year forest management plan that conforms to the guidelines for forest management practices set forth in the municipal forest plan and obtain approval from the mayor of the municipal government. Tax relief is provided to offset lower profits or higher costs incurred by those who pursue forestry activities according to the approved plan.

For protection forests, which are forests designated for specific public benefits such as conserving headwater resources, preventing natural disasters, and preserving the environment for daily life, the designation is accompanied by constraints on the right to dispose of the forest's wood through the restriction on cutting, as well as restrictions to change the physical figure of the land. In order to offset any decrease in property value caused by these sorts of controls and restrictions, tax relief measures are provided, along with measures to compensate for economic losses arising from restrictions on cutting.

Partnerships to share the costs of sustainable forest management

In recent years, Japan has witnessed an increasing number of cooperative efforts between downstream and upstream communities to assist forest management by planting trees in headwater areas, thinning trees, and other such activities. There has also been an increase in programs establishing trust funds and using the proceeds to support forest maintenance.

Notable methods of assisting forest maintenance under cooperation between downstream and upstream communities include: (1) subsidizing forest management costs, (2) maintaining forests through profit-sharing forest contracts, and (3) acquiring headwater forests. In addition, throughout Japan people in the fisheries sector have engaged in weeding and tree-planting efforts in recent years in upstream areas of the rivers that feed fishing grounds, in order to create and preserve favorable environments for fish and shellfish to

live and breed.

Column: Examples of upstream-downstream cooperation

Forest maintenance utilizing headwater conservation funds collected through a surcharge on water services (City of Toyota, Aichi Prefecture)

The city of Toyota gets over 70% of its water from the Yahagi River. Upstream forest maintenance is considered important for ensuring that the city's water remains safe and good-tasting in the future, so in 1994 the city began collecting a water service surcharge of ¥1 per cubic meter of water supplied and used the proceeds to establish a headwater conservation fund. Since 2000 the fund has been used, in cooperation with upstream communities, to conduct joint thinning activities in poorly managed forests, at no cost to the forest owners.

Creating a forest for breeding salmon inside a national forest (Committee for conservation of mother forests for salmon, Niigata Prefecture)

In 2000 a committee for conservation of mother forests for salmon was established by the community of Asahimura and the city of Murakami in Niigata Prefecture and the fisheries cooperative, agricultural cooperative, forest owners' cooperative and citizen's groups. The committee's objectives are to maintain forests in the upper reach of the Miomote River, which flows through both communities, to promote coastal fishing activities, such as when the salmon run upstream, as well as to reinforce local pride. The committee, in cooperation with the Murakami branch office of the Kaetsu District Forest Office, conducts volunteer activities such as weeding for young beech seedlings in natural forests located inside national forests and constructing walkways to facilitate forest management in the future.

The "green fundraising" campaign has also expanded, offering another example of a way in which people's concern for forests and greenery has been translated into concrete action. All the funds collected throughout Japan through this campaign are used to sponsor participatory tree-planting activities and awareness-raising activities, as well as for activities by NGOs and other groups promoting "green" goals in developing countries. The campaign has developed as a nation-wide initiative involving citizens since the 1950s, and it has perpetuated the now familiar basic concept of "green feather fundraising," which has helped to raise awareness of the importance of green environment. The campaign activities are now conducted on the basis of the 1995 Law to Promote Forest Maintenance through Green Fundraising.

Japan also promotes other measures and policies to facilitate forest management and conservation

through volunteer activities, the use of forests as venues for education, the promotion of citizen participation in policy making, and the provision of information on forests and forestry, in order to further encourage forest management through wide-ranging citizen participation.

Sound development of forestry as a key supporter of sustainable forest management

Forestry is an economic activity, producing wood products from materials taken from forests. It plays the role of continually supplying wood, which is a recyclable resource, and by engaging in forest management through proper production activities it contributes to sustainable fulfillment of the publicly beneficial functions of forests, such as protecting national land, conserving headwater resources, and mitigation of global warming.

The concerns and feelings of Japanese citizens toward their forests have increased and diversified in recent years, and it is becoming increasingly important to maintain diverse, healthy forests by ensuring that forestry production practices are conducted properly. To this end, Japan promotes the Forest Planning System and Protection Forest System mentioned above, in combination with economic measures, and also promotes a variety of other measures. These include popularizing the National Forest Insurance Program, a system providing indemnity for disasters such as forest fires; developing and popularizing systems that help reduce environmental impacts and utilize non-clear-cutting harvesting practices, such as thinning and selective cutting; fostering human resources through forestry extension program and implementing safety and sanitation measures for forestry workers.

Sustainable use of wood materials obtained through forestry production activities is very important from the standpoint of encouraging the investment required to maintain healthy forests and creating an economic and social condition under which environmental impacts are minimized through cyclic use of resources. For this reason, Japan strives to inform the public about the importance and advantage of using wood materials and to develop technology to fully utilize the energy from woody bio-mass.

Now that mitigating deforestation and forest degradation and preventing global warming have become major global challenges, the use of wood requires us to consider not only economic factors such as

cost and convenience, but also the sustainability and legality of logging activities at the site of production and the consumption of energy involved in transporting the timber.

Certification and labeling for sustainable forest management

Certification and labeling efforts have expanded internationally, and certified forests are gradually increasing in Japan as well. International standards for forest certification, however, do not reflect the characteristics of Japan's forests and the forestry, such as the relatively high percentage of planted forests, so more suitable forest certification schemes and standards are needed. Studies are therefore underway, with wide-ranging participation by forest industry groups, environmental NGOs, and scholars and experts, on the establishment of national forest-certification standards and the creation of Japan's own forest-certification system.

A group has been established to expand and promote the market of certified products, with a membership primarily made up of environmental NGOs and businesses involved in producing, distributing, and retailing wood products. This group conducts activities such as holding workshops aimed at popularizing certification, and respective members of this group endeavor to develop products made with timber from certified forests.

In terms of international efforts, Japan has studied the possibility of taking a phased approach to forest certification which was resolved at the 32nd International Tropical Timber Council held in Indonesia in May 2000, and held workshops in Asia, Africa, and South America. Japan has also funded International Tropical Timber Organization activities aimed at acquiring a better understanding of the phased approach, providing information, and promoting dialogues among officials from producing countries and consuming countries, as well as for projects in the various countries concerned.

Countermeasures against illegal logging

Based on the fundamental idea that illegally harvested timber should not be used, Japan, as a major wood importing country, has taken an active part in international discussions on the problem of illegal logging and

associated trade, such as in the G-8 Kyushu-Okinawa summit in 2000.

At the 32nd International Tropical Timber Council held in Indonesia in May 2002, Japan played a leading role in confirming that certification systems contribute to sustainable forest management, including as a countermeasure against illegal activities related to forests and associated trade, and in securing the adoption of a resolution recommending support for a project to foster human resources in tropical-timber producing nations seeking to establish certification systems. At the G-8 summit held in Canada in June 2002, the prime minister of Japan welcomed the final report of the G-8 Action Programme on Forests, which reaffirmed the commitment of G-8 countries to combat illegal logging. He stated that implementation of the conclusion of this report was also essential and called for more discussion of the problem of illegal logging. In the preparatory process preceding the World Summit on Sustainable Development (WSSD) which was held in South Africa in August and September of 2002, Japan stressed the need for efforts on the issue of illegal logging in a series of Preparatory Committee (PrepCom) meetings, leading to the adoption of the plan of implementation that emphasized the need for international efforts against illegal logging, including immediate action on domestic forest law enforcement and illegal international trade in forest products.

Launching of the Asia Forest Partnership (AFP)

As one of its contributions to the WSSD, Japan and Indonesia collaboratively proposed the Asia Forest Partnership (AFP), the aims of which are to promote sustainable forest management in Asia through such means as measures to combat illegal logging. The AFP, which was launched at WSSD, provides a venue for governments of Asian countries and donor countries, international organizations, and NGOs and other groups to cooperate through activities including measures to combat illegal logging, to prevent forest fires, and to rehabilitate degraded lands. With regard to the issue of illegal logging, it is proposed that the AFP would undertake such initiatives as the development and enhancement of log-tracking capacities and the introduction of verification systems including labeling; the promotion of effective measures in both importing and exporting countries to eliminate export and import of illegally harvested timber; and the development of regional data-sharing program on illegal logging. In November 2002 Japan hosted the First Meeting for the

Promotion of AFP, where active discussions took place including on the issue of illegal logging (the second meeting is scheduled to be held in Indonesia in 2003). In this way, the AFP will undertake concrete efforts with the broad participation of national governments, international organizations, and civil society.

Asia Forest Partnership: Overview

1. Purpose

A partnership devoted to cooperation among Asian countries (primarily the ASEAN member states), donor countries, international organizations, NGOs and other partners for the purpose of promoting sustainable forest management, through activities such as efforts to combat illegal logging, prevent forest fires, and rehabilitate degraded lands (through reforestation).

2. Activities

The partners are to cooperate in the following fields, among others.

- Provide basic information for forest management using satellite data.
- Promote research, information exchange and use of satellite data and mapping to prevent and control forest fires.
- Promote reforestation and afforestation to rehabilitate degraded lands.
- Establish and implement reduced impact logging and guidelines for controlling illegal logging.
- Develop and enhance log tracking capacity and introduce verification system such as labeling to combat illegal logging.
- Engage in information exchange, research, and awareness raising on combating illegal logging.
- Promote effective measures, in both importing and exporting countries, to eliminate export and import of illegally harvested timber.
- Promote human resources development, institutional development and capacity building to help achieve the goals of this partnership.

3. Partners (those underlined are leading partners)

Governments: Australia, Cambodia, China, Finland, France, Indonesia, Japan, Republic of Korea, Malaysia, Switzerland, Thailand, Britain, United States, European Community

International organizations: Asia Development Bank (ADB), Asia Productivity Organization (APO), Center for International Forestry Research (CIFOR), Food and Agriculture Organization of the United Nations (FAO), International Tropical Timber Organization (ITTO), United Nations Forum on Forests (UNFF), Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations University (UNU)

Civic society: The Nature Conservancy (TNC).

(As of February 2003)

Trade in forest products and sustainable forest management

In June 2002, at a meeting of the WTO Committee on Trade and Environment held in Geneva, Japan presented a paper entitled "Issues on Forestry Products Trade and Environment," which called for discussions aimed at

bringing about trade in forest products that contributes to sustainable forest management. The paper pointed out that, when addressing the issue of illegal logging, it is important to examine the possible international approach from a trade perspective, taking into account the discussion in international fora, as well as national governments' domestic measures. It also cited the need for further discussions on the labeling on forest products as a means of contributing to addressing the issue of illegal logging and to sustainable forest management.

In December 2002 Japan submitted a proposal named "Sustainable Development and the Trade of Forest and Fishery Products" to the WTO Negotiating Group on Market Access for Non-agricultural Products. The proposal stated that actions for the protection of the environment and the promotion of sustainable development and the multilateral trading system must be mutually supportive, realization of sound forest management is the fundamental basis for the sustainable development of trade in forest products, and that due consideration shall be given to the various public benefits of forests. The proposal also emphasized the need to retain flexibility among products when each Member determines the level of tariffs, in order to give special consideration to the forest and fishery products as exhaustible natural resources. In addition, it raised such issues as export restriction of unprocessed logs and export tax.

International Expert Meeting on Forests and Water

The International Expert Meeting on Forests and Water was held in Japan in November 2002. The meeting, co-sponsored by the Forestry Agency and Shiga Prefecture, with the endorsement of the Ministry of Foreign Affairs and the Ministry of Environment and under technical collaboration with FAO, ITTO, UNESCO, and the third World Water Forum secretariat. The meeting was participated by approximately 100 experts, including the representatives from 18 countries, both developing countries mainly in Asia and other countries in Europe and North America, representatives from 16 international/non-governmental organizations, and Japanese forest and forestry experts. At the meeting, representatives from various countries and organizations presented case studies of forest-management activities aimed at conserving water resources. Working group

discussions followed, focusing on topics such as the relationship between forest management and hydrological processes and upstream-downstream partnerships. Based on the findings of these discussions, the participants adopted the Shiga Declaration on Forests and Water, which contains recommendations to decision makers for the effective promotion of sustainable forest management and conservation of water resources, such as to appropriately assess the economic value of forests and water resources and the economic implications of different policies and management practices, to establish appropriate incentives to encourage continuation of the services forests and water provide, such as the compensation scheme in which beneficiaries pay the full cost of their resource use. The Shiga Declaration is expected to provide useful guidelines for forest policies in individual countries and to help advance international policy dialogues under various related fora.

Shiga Declaration on Forests and Water: Summary of Proposals

The meeting recommended that decision makers:

1. Enhance biophysical and socioeconomic understanding of forests and water and, based on these, promote cross-sectoral approach in the context of local conditions.
2. Appropriately assess the total economic value of forests and water resources and the economic implications of different policies and management practices.
3. Put in place appropriate incentives, such as the compensation scheme in which beneficiaries pay the full cost of their resource use.
4. Promote effective and equitable partnerships among governments, local communities, research institutions, civic society, the private sector, forest and water resource managers, and other stakeholders, for the purpose of facilitating knowledge sharing and capacity building, formulating sound forest and water resource management policies based on scientific knowledge, and achieving tangible improvements in forest and water management based on these policies.
5. Address forest and water interactions in forest resources assessments, and request that the international community provides sufficient resources in this regard.

World Water Forum

Following the Earth Summit, the international community have come to higher recognition of the importance to address the management of fresh-water resources and other water-related issues. With the advocacy of the

World Water Council (WWC) established in 1996, the 1st World Water Forum was held in Marrakech, Morocco, in 1997. The Forum, which convenes every three years during a period including March 22, the World Day for Water, held its 2nd meeting in Hague, the Netherlands, in 2000. At the 3rd World Water Forum held in Japan from March 16 to 23, 2003, in an effort to foster common understandings regarding water and forests the Roundtable meeting was held with various participants including responsible ministers and other stakeholders, and the session on water and forests was also organized. In addition, an international ministerial conference was held on March 22 and 23, where ministers from various countries and the heads of international organizations discussed the importance of sustainable forest management for the solution of water-related issues.

Ministerial Declaration
--- Message from the Lake Biwa and Yodo River Basin ---
23 March 2003

(excerpt)

We, the Ministers and Heads of Delegation, assembled in Kyoto, Japan on 22-23 March 2003, on the occasion of the 3rd World Water Forum. Building upon the outcomes of the Monterrey Conference on Financing for Development, the World Summit on Sustainable Development (WSSD), and the United Nations Secretary General's Water, Energy, Health, Agriculture and Biodiversity (WEHAB) initiative as well as other water-related events, we assert our common resolve to implement the appropriate recommendations in order to achieve the internationally agreed targets and goals including the United Nations Millennium Development Goals (MDGs).

Taking note of the thematic and regional statements and recommendations from the 3rd World Water Forum, we declare the following:

[Water Pollution Prevention and Ecosystem Conservation]

24. To ensure a sustainable water supply of good quality, we should protect and use in a sustainable manner the ecosystems that naturally capture, filter, store, and release water, such as rivers, wetlands, forests, and soils.

26. In view of the rapid degradation of watersheds and forests, we will concentrate our efforts to combat deforestation, desertification and land degradation through programs to promote greening, sustainable forest management, the restoration of degraded lands and wetlands, and the conservation of biodiversity.

2. Forest Health and Productivity

Policy frameworks to maintain forest health and productivity

Maintaining and improving the health and productivity of forests is a prerequisite for the pursuit of the sustainable fulfillment of the multiple functions forests are required. It takes an extremely long time for forests to mature, and once a forest loses its health and productivity not only time but also a considerable investment of money and personnel are required to enable its recovery. For this reason, Japan's aforementioned Forest Planning System sets forth guidelines for appropriate species to be grown and silvicultural methods for planting and tending trees, in order to improve the long-term health and productivity of forests, in accordance with the specific natural and social conditions of each area. Forest owners are encouraged to manage their forests within the context of these guidelines and through various supportive measures including the economic measures discussed above.

To deal with damage to forests caused by disease, insects, and wildlife, Japan is taking steps such as implementing control measures and conducting research and development of new technologies, based on the Forest Disease and Insects Control Law, established in 1950. For many years, Japan's pine forests (primarily *Pinus densiflora* S. et Z. and *Pinus thunbergii* Parlatores) have played an important role in defending coastal areas against damage from tide and the wind and preventing soil erosion in mountainous areas. Pine forests also contribute greatly to the scenic beauty of Japan's coastal areas, encapsulated in the phrase "white sand, green pines." Starting around the middle of the twentieth century, however, the pine nematode (*Bursaphelenchus xylophilus*), carried by the pine sawyer beetle (*Monochamus alternatus*), caused widespread damage throughout Japan. The damage to pine forests caused by this pest has now subsided to approximately one-third of the level of damage at its peak in 1979, but the level of damage still remains high. Japan's forests have been damaged by this disease than any other pests. For this reason, based on the aforementioned Forest Disease and Insect Control Law, Japan promotes extermination of harmful insects to the extent necessary in order to prevent spreading to pine forests that need to be protected, and also promotes the creation of protective

forest zones such as by planting broad-leaved trees around pine forests. In addition, comprehensive measures are provided including support for preventive activities by local residents, development of varieties possessing high resistance to damage, and research and technological development, such as the development of preventive technologies utilizing biotic control.

Efforts to monitor acid rain

In order to strengthen monitoring and thereby enable early detection of forest deterioration due to acid rain, as well as to elucidate the causes of deterioration and forecast trends in forest deterioration, in fiscal 1990 Forestry Agency began executing a program of countermeasures against forest deterioration due to acid rain and other causes. These include a program for monitoring forest deterioration, for which approximately 1,000 survey locations have been set up to monitor forests throughout the country. The program also includes efforts to analyze soil acidity and study forest deterioration. The Ministry of the Environment has been carrying out acid deposition monitoring for soil and vegetation since fiscal 1983 in addition to air pollution. At 11 sites located all over Japan (based on the fourth survey, from 1998 to 2000), analyses and studies have been carried out on soil acidification and forest deterioration.

At present, factors that would affirm the existence of forest deterioration due to acid rain have not been isolated, and a causal relationship between acid rain and forest deterioration cannot be confirmed. We will continue to study the effects of acid rain on forest in the future and work to find the causes of deterioration in areas where forests are deteriorating for unknown reasons, in order to create technological guidelines for the recovery and preservation of the forests.

3. Maintaining forest cover to fulfill present and future needs

Policy frameworks to ensure optimal use and sustainable management of land resources including forests

In Japan, where a large population inhabits a relatively small and mountainous land amid a profusion of sophisticated economic and cultural pursuits, it is essential to strive for sustainable land use based on a long-term perspective, while coordinating the various needs pertaining to both the use and the conservation of the land. As parts of a comprehensive and basic national plan for the planning and management of land resources, Japan has been successively establishing the Comprehensive National Development Plan, which determines the use of land, water and other natural resources and the proper locations for industry, and the National Land Use Plan, which determines the basic concepts for national land use and scale targets of categories corresponding to the purpose of national land use. Optimal use and sustainable management of land resources are enhanced through formulation of these plans as well as through use and management based on these plans.

The purpose of the Comprehensive National Development Plan is the comprehensive use, development and conservation of the national land, from a wide perspective of economic, social and cultural facilities, while giving due consideration to the natural conditions of the national land. Japan has been establishing five comprehensive National Development Plans thus far.

The National Land Use Plan exists for the purpose of ensuring the well-balanced use of the national land over a long period of time, while conserving the natural environment, giving precedence to public welfare. Intending to secure policy guidance regarding national land use, Japan has established three National Land Use Plans so far.

The Land Use Master Plans, which are based upon the National Land Use Plan, are established by prefectural governors, and cover matters dealing with the designation of five areas (city areas, agricultural areas, forest areas, natural park areas and nature conservation areas), and the coordination of competitive land uses. These plans function as a comprehensive intra-administration coordination means, which take precedence over other plans and are drawn up in accordance with such laws as the Urban Planning Law, the Forest Law, and the Natural Park Law. They also function as standards of direct regulation for land transactions, and of indirect regulation through individual laws, for developmental action. Japan will continue to promote proper

and rational land use in accordance with these plans.

For forest areas, efforts are made to ensure that the guidelines for the conservation and maintenance of forests are appropriately set forth in forest plans based on the aforementioned Forest Law, with ensuring compatibility with Land Use Master Plans. For protection forests, tree cutting is restricted and tree planting is required subsequent to the cutting, and measures are provided to restrict conversion of land into other land uses. For forests other than protection forests as well, approval must be granted for development of forests beyond a certain size of the area, and notification shall be submitted prior to tree cutting in order to assure that the logging and subsequent reforestation will be done properly. By these means, necessary forests are protected and maintained, in order to ensure that diverse forest-related needs are appropriately addressed.

Long-term targets for maintaining forests

In order to be able to appropriately address present and future forest-related needs, it is necessary to accurately understand and evaluate the current state of our forest resources and set clear, future-oriented goals for maintaining them. It is also necessary to properly promote the measures needed to fulfill these goals. Furthermore, it is necessary to try to generate consensus among the citizens, who have a variety of needs and interests concerning forests, to promote better understanding of the value of forests, and to foster a common understanding that forest maintenance helps shape the basis of the society as a whole.

The Basic Plan on Forest and Forestry, formulated in October 2001, sets forth guidelines for maintaining forest resources that extend from 50 to 60 years or more into the future (envisioning the desirable state of forests for fulfilling the multiple functions forests are expected to perform). The plan sets targets for forest conditions 10 years and 20 years in the future, as part of the process of achieving its long-term goals, and it articulates the tasks to be addressed by a wide range of stakeholders in pursuit of these targets. This is expected to help encourage greater understanding and consensus among citizens in general, beyond those who have direct interests in forest and forestry such as forest owners.