FORESTRY NAME



Forest Resources

1.

Two Thirds of JAPAN IS COVERDED WITH FORESTS

CREATING A LAND OF GREENERY.



JAPAN

Japan is located at the eastern edge of the Eurasia, between longitudes of 123 and 149 degrees and latitudes of 24 and 46 degrees. It is an archipelago extending over 3,000 km from the Northeast to the Southwest and land area of about 380,000km². In general, the topography is very steep. Mountains ranging from 2,000-3,000m high form a rugged backbone through the center of the land.

Forest types range from sub-tropical forests to alpine forests.

Japan has a wet monsoon climate and experiences distinct seasonal changes among four seasons. Also, meteorological conditions vary because of the latitudinal difference, dividing the forests into six types. Moreover, since high mountains range through the center of the country, it is possible to find vertical variation in forest types even in areas at the same latitude. Thus the forests are extremely rich in forest types.



Source : Shinrin no Hyakkajiten (1996)

2. Two thirds of the land are covered with forests, of which 41% is planted forest

Japan has approximately 25 million hectares of forest cover which account for two thirds of the national land area, one of the highest rates in the world. The forest cover has remained almost the same level in the past half century while the total growing stock has nearly trippled during the same period. Planted forests account for approximately 41% of the total forest area, consisting of Japanese cedar, Japanese cypress and others all of which are indigenous species in Japan and are managed for the fulfilment of forest multi-functionality including not only timber production but soil and water protection, conservation of biological diversity among others. Majority of those planted forests have now begun to reach maturity whose ages are 45 years or higher.



Note: The area of forest is not same as one in the next graph due to the difference of definition of forest Source: Land White Paper 2015. Ministry of Land and Transportation

Forest cover in some countries

	Land Area (1,000ha)	Forest Area (1,000ha)	Forest Cover Rate (%)	Forest area per capita (ha/perach)		Land Area (1,000ha)	Forest Area (1,000ha)	Forest Cover Rate (%)	Forest area per capita (ha/person)
Africa	2,974,011	624,000	21.0	0.6	N & C America	2, 134, 979	751,000	35.2	1.3
Cameroon	47, 271	18, 816	39.8	1.1	Canada	909, 351	347, 069	38.2	10, 4
DR. Congo	226, 705	152, 578	67.3	5.1	Mexico	194, 395	66, 040	34.0	0.6
Côte d'Ivoire	31,800	10, 401	32.7	0.5	USA	916, 192	310, 095	33.8	1.0
Ethiopia	109, 631	12, 499	11.4	0.3	S America	1, 746, 292	842,000	48, 2	2.1
Mozambique	78, 638	37, 940	48.2	1.9	Brazil	835, 814	493, 538	59.0	2.6
South Africa	121, 447	9, 241	7.6	0.2	Chile	74, 353	17, 735	23.9	1.2
Tanzania	88, 580	46,060	52.0	1.0	Colombia	110, 950	58, 502	52.7	1.4
Asla	3,091,407	593,000	19.2	0.1	Oceanla	849, 094	174.000	20.5	4.5
China	942, 530	208, 321	22.1	0.2	Australia	768, 280	124, 751	16.2	5.7
India	297, 319	70, 682	23.8	0.1	New Zealand	26, 331	10, 152	38.6	2.0
Indonesia	171,857	91,010	53.0	0.4	PNG	46, 312	33, 559	72.5	4.8
Iran	184, 806	10, 692	5.8	0.1	Europe	2, 214, 726	1,015,000	45.8	1.4
Japan	36, 450	24, 979	68.5	0.2	Finland	30, 390	22, 218	73. 1	4, 1
Malaysia	32, 855	22, 195	67.6	0.8	France	54, 766	16, 989	31.0	0.3
Myanmar	65, 755	24, 958	44.2	0.6	German	34, 861	11, 419	32.8	0.1
Philippines	29, 817	8,040	27.0	0.1	Russia	1, 637, 687	814, 931	49.8	5.7
Thailand	51,089	16, 399	32.1	0.2	Sweden	41,034	28, 073	68.4	3.0
Uzbekistan	44, 066	3, 220	7.3	0.2	World	13,010,509	3, 999, 000	30.7	0.6



Source : FAO Global Forest Resource Assessment 2015

: UN Population and Vital statistics Peport 2015

THE PUBLIC FUNCTIONS OF FORESTS ARE THE PUBLI **BENEFIT OF**

BECOMING INCREASINGLYIMPORTANT.

Japan is exposed to typhoons earthquakes and tsunami. Forests perform an indispensable role in safeguarding human life, property and soil against these natural disasters.

On average, 1,700mm per annum rainfall in Japan is two times the global average. The normal rainy season occurs from June to July, while typhoon risk is greatest in September, Mountain ranges comprising the central backbone of the country occupy 70% of the land area. Downstream run-off from this rugged terrain leads to frequent floods and landslides. This condition is further exacerbated by damage from volcanoes. Japan has 110 volcanoes, accounting for 10% of all An average of 10 typhoons per year strike activevolcanoes in the world.

FORESTS



Typhoon routes

Japan. The intense rainfall from typhoons causes enormous damage to life, homes and public infrastructure

The structure of the earth's crust in Japan



The country is located where the ocean plates dive under the continental plates often resulting in violent movements of the earth's crust. In 2011, Tohoku district along the Pacific Ocean was hit by the great power of earthquake and tsunami in which approximately 20,000 people lost their lives.

Enactment of the forest law about 100 years ago strengthened the legal framework for systematic preservation and tending of forests to protect the livelihood of the people

The history of organized initiatives to conserve forests dates back to the beginning of the Edo Era (1600's) with the designation of specific forest areas for water conservation and sand stabilization. Official orders were issued placing restrictions on felling and exploitation in order to prevent forest degradation. The struggle to conserve forests was sustained through the centuries and eventually gave birth to the Forest Law enacted in 1897 establishing a nation-wide forest protection system. Seventeen (17) public interest criteria serve as the basis for establishment of protection forests.

Various protection forests are safeguarding the people's livelihood. The term "protection forests" refers to areas specifically set aside by the Mi Agriculture, Forestry and Fisheries or by prefectural governments to conserve wa and wildlife, prevent soil erosion and landslides and protect the living envirc Infringement of the rules governing protection forests, such as prohibitions ag felling, are punishable under the law which is vigorously enforced. Concurre tax exemptions compensation for loss due to restriction in forest management other incentives are provided to promote forest conservation.

Types of protection forest (17)	
Conservation of water resource	Prevention against land collapse
Prevention against tidal damage	Snow break
Fire break	Contribution to navigation
Control of erosion and sedimentatio	on Control of shifting sand
Drought control	Fog break
Conservation of fisheries resource	Windbreak

Implementation of soil conservation work has been intensified, particularly in sites where some degraded land or mountain streams have the potential for causing disaster.



activities Tree planting combined with appropriate construction measures are be carried out for ecological restoration and also to stimulate awareness and in the conservation of forests. The forests established as part of this pr managed as protection forests.

Check dams - Structures built to prevent the collapse of slopes, espe adjacent to mountain streams and where the dangers of avalanch and disastrous rocks or mud slides are prevalent.

Hillside work- Structures built to conserve soil. Thus supporting complement reforestation and helping ensure successful establishment of cover, while concurrently reducing the risk of slides and r Total : 12, 122, 000 ha

Check dams

disasters. 4. People's concern on forest increasingly diversified

According to the "Census on Forest and Life" by Cabinet Office implemented in December 2011, the highest concern on forest is shown in prevention of disaster such as land collapse and flooding, and then in mitigation of global warming which was the highest concern in the former census (four years ago).

percentage (%) Production of various forest Production of Provision of learning opportunity on forest Provision of wildlife Relaxation of mind and Purification Conservation of Water Res Mitigation of Global Prevention against Land G

2. Land has been preserved for centuries in Japan by utilizing forests effectively and properly.

Living under conditions of steep topography, high rainfall and frequent earthquakes, the people of Japan have long developed a keen appreciation of the direct role of forests in mitigating natural disaster. Protection of upstream forests receives very high priority, especially amongst farmers dependent on irrigation water and plant nutrient outflows of healthy forest ecosystems.

Realizing the crucial importance of forests, management systems have evolved that are consistent with the concept of sustained yield, striking a healthy Example of Forest Management balance between forest extraction and the capacity to regenerate both goods and services.

The concept of sustained yields



(for Fuelwood) If 20 year old trees are harvested as fuel wood only one twentieth of the forest land area would be cut in one year so the forest could be utilized with a 20 year harvest cvcle.



Community Forestry in Old Days Villagers cooperate to utilize their forests within sustainable limits.



Devastated area in the upstream of Tama river (1949)

After the recovery of the same

(Provided by Bureau of Waterworks Tokyo Metropolitan Government)

Total area of protection forest

N ationa I

forest 6,918 (57%)

area (1985)

Non-nationa

orest

, 204

Forest and Forestr White Paper 015

(43%)

Control of avalanche Contribution to scenic beauty Flood contro Prevention against falling rocks

Contribution to public health

Construction of check dams and hillside work are the principal soil conser

People's expectation for forest



SUSTAINABLE DIVERSE FOREST MANAGEMENT SYSTEMS

ARE BEING APPLIED, BASED ON SYSTEMATIC FOREST PLANNING

The Forest planning system of < 2. Various kinds of forest Japan creates a framework for forest development and management, with long-term visions.

Forests grow very slowly and if degradation occurs, restoration is a difficult, time-consuming process. Thus, a long-term view and sustained commitment are essential. The Basic Plan of Forest Resources establishes long-term targets at the macrolevel which include both directions and technological guidelines. In addition, plans are formulated by national, prefectural and local authorities, and private forest owners.

System of forest planning Forest and Forestry Basic Plan (Government) Direction and aims of long term and overall policy for forests and forestry by the Government. Nation-wide Forest Plan. (Minister of MAFF) Direction of national policy regarding whole forests for 15 years. Revised every 5 years. Regional Forest Plan for Regional Management Plan for Non-national Forest National Forest (Governor of Prefecture)

Direction of prefectural policy regarding nor (Director of Regional Forest Office) national forests Including target of falling, 10 years plan of felling, reforestation, Construction reforestation, construction of forest road, of forest mad protection forest etc. in national protection forest, etc. for 10 years, Revised forest. Revised every 5 years Municipal Forest Improvement Plan Forest Management Plan for Non-National Forest (Private forest owner,

(Mayor of municipality) Direction of municipal policy regarding no Private forest owners may prepare 5 years forest national forests. Guideline for felling. management (including felling, reforestation, etc.) reforestation, etc. for 10years, Revised plan which is approved by the Mayor of minicipality Revised every 5 years.

Basic plan for forest and forestry

every 5 years.

every 5 years



Source : Forest and Forestry Basic Plan (2011 Revised)

management systems are being practiced consistent with forest utilization objectives.

Single storey forest

Intensive management is applied in both natural and manmade forests. The final result is a stand of trees with relatively uniform height and spacing. Harvesting is done in small clearcut patches surrounded by intact forest cover.



Distinctive forestry in several places in Japan

Advanced forestry areas such Kitayama, have been developed for their locally-unique features in the nation-wide. Because of the many uses for wood in the Japanese culture, the technical know-how on proper use of

Kitayama Forestry (Kyoto prefecture)... cedar.

Mimikawa Forestry

(Miyazaki prefecture)....cedar.

warm moist conditions result in

fast-growth and early maturity.

with the homo geneity and large

volume.Downstream linkage is

timber supply organization

provided through an integrated

to milling, distribution and sale

Planted specifically to produce decorative poles 5,000~7,000 trees are planted per hectare, with an equivalent harvesting target of 3,000 trees. Heavy pruning results in logs having almost uniform diameter from top to bottom The poles are used for columns to decorate the corners of rooms Production of these highquality decorative poles has been practiced in this area since 500 o 600 years ago





Mimikawa Forestry

Reforestation and forest maintenance have been part of the Japanese culture for over 400 years, and in some areas for 600 years. Multistorey forest management places emphasis on a low-impact harvest system which helps ensure that mountainsides are not denuded. Rational management of natural forests, combined with diverse systems, provide environmental benefits.

Intensively managed forest

Multi-storey forest Forests are selectively harvested and result in the development of mixed stands of trees having different heights and more than one species, consistent with the "Intensive Management System for Multistorey Forests"



wood has been flourished. Some of the quality timbers with special features.

Hokkaido's natural forest

areas have become reputed for their high- Careful selecting cutting has developed vigorous, healthy mixed species forests containing both broad lest trees and conifers such as spruce, fir, oak, ash, etc. Methods are models of the boreal forests management of "Shelterwood System"





Yoshino Forestry



Kitayama Forestry



Yoshino Forestry (Nara prefecture)...cedar, cypress.

A density spacing with as many as 10,000 trees planted per hectare and repeated thinning are distinctive. This forest producing high quality timber with narrow age rings.





The Forest and Forestry Basic Law&The Forest Law Among various laws which have been enacted in relation to forestry up to the present time, the most important are "The Forest and Forestry Basic Law", which clarified the fundamental policy objectives in relation to the development of forestry, and "The Forest Law" which is the law constituting the core of forestry legislation. The forest planning system is based on these laws.

Natural forest

The Natural Forest Management System aims at preserving the inherent vitality and bio-diversity of indigenous species, primarily to achieve environmental objective. For instance, felling is controlled for protecting land surface, natural environment and species composition (Natural Forest Management System maintains and supplements existing conifers such as pine and fir, in addition to numerous hardwood species such as beech and oak.)





Aomori Thuiopsis (Hiba) Forest

Mufti-storey forests have been developed through application of a selective cutting system for Thujopsis which is one of the most durable conifers origination in Japan. Sustainable management dates back to early times. The area is famous for the natural beauty of its "Femelwald" forest



Aomori Thujopsis (Hiba) Forest



Imasu Forestry (Gifu prefecture) cedar, cypress.

Harvesting is done when girth attains a prescribed size followed immediately by replanting There is no clear-cutting. The resulting stand contains trees ranging from 1 to 100 years. Good quality timber has been produced since 200 years ago.

IN JAPAN THE EFFICENT AND CAREFUL USE OF WOOD IS IMPORTANT CULTURAL HERITAGE.

strength and beauty of wood.

Horyuji temple the world's oldest wooden building is still in existence.



Horyuji temple, built approximately 1,300 years ago

4. The Culture

OF WOOD AND THE

UTILIZATION OF

TIMBER

During the Asuka and Nara period (607-793) when the foundations of the Japanese nation were first consolidated, the development of techniques for the efficient use of wood flourished. Many large wooden buildingswere constructed one after another, with timber from trees estimated to be 1,000years old. Furthemore, no nails or iron fittings were used in construction.

It can be said that traditional Japanese wooden houses are built by a traditional construction method called the "pole and beam system". These methods use wood to build the skeleton structure of pillars, beams, girders, bracing and so on. 1,000 small pieces are used just to assemble the frame, and the most suitable quality timber is chosen for each part. Numerous openings are incorporated in the design to accommodate the high humidity of the Japanese climate.

Structure of traditional wooden house

2. The construction of traditional Japanese wooden houses

utilizes techniques which combine the best use of the



Timber demand and timber supply

The annual timber demand in Japan is now the trend of recovery after 2009, amounted to approximately 73 million cubic meters. Japan is heavily dependent on the imported timber supply for various reasons such as the cost of production of timber but the ratio of domestic timber supply is recently increasing and showed 28.6 % in 2013.

Trend of timber demand



Trend of timber supply and selfsufficiency ratio



Raised awareness of global environmental issues and health concerns is encouraging a further interest to the merits of wood.

Timber utilization definitely contribute to the mitigation of global warming, sustainable multiple functions of forest and vitalization of local economy. Due to ability of the insulation and sterilization, of adjusting the change of humidity and other merits of wood, construction of buildings making use of wood are increasing now. Recently, the activity of "Mokuiku", which is an activity of education for not only children but also adult for deepening the understanding of wood and wood culture by touching wood and wood products, is spreading in Japan.



Buildings of elementary schools which were mostly constructed of concrete, are now increasingly being built of timber.







Wood used for ceilings Timber whose texture and color match is beautiful, includes cedar, cypress, Paulownia, cherry, Zelkova, etc. Wood used for joinery fir, cedar, cypress, Thujopsis, spruce, cherry, cak, etc. Wood used for ioist Timber which doesn't perish easily, includes cypress, thujopsis, Sciadopitys, chestnut Wood used for pillar Timber which is strong and has a fine wood texture. includes cypress, cedar, spruce, thujopsis, hemlock



The pool of wooden eggs to develop the sensitivity of children (Provided by Tokyo Toy Museum)

5.

NATIONAL

FORESTS

MANAGEMENT OF THE NATIONAL FOREST RESPONDS TO THE

PUBLIC DEMANDS, INTENSIFIED AND DIVERSIFIED.

Distribution of national forest

National forests are widely distributed in the backbone of mountain, and the catchment basin. But the ratio of national forest to land area is different in region by region. They have vital roles in providing various materials such as timber and water for local people's life, and also protecting people's life from natural disasters such as land erosion, flooding, and tsunami.



2. Classification of national forest by functions

The National forests are managed within the context of a fundamental policy for the people based on the classification of important functions through the sustainable forest management and a sound watershed management. Classification of national forests is intended to clearly define and prioritized functional objectives in five categories

Summary of classi fication of national	forest by functions (Unit:10,000 ha)
Classification by functions	Basic policy of forest management
Land disaster prevention (145)	Maintenance of forest with developed land vegetation and conserved root and surface soil
Nature conservation (166)	Maintenance of forest with healthy nature ad environment and suitable for the growth of rare species of plants animals
Multiple use of forest (54)	Maintenance of forest with diversified functions for health, culture and education
Formation of good environment (0.1)	Maintenance of forest with the composition of tree species having the high ability of absorption of pollutants, and of resistance against various damages
Water conservation (393)	To promote the fostered multi-storied forests by thinning of manmade forests, extending harvesting age and introducing the broad-leaf trees, and then to consider the effective use of forest resources

Source : Forest and Forestry White Paper 2015

Preserved forest

Preserved forests are set aside in national forests to maintain primeval natural environment.

Number of preserved forest (April 2014)

Classification Protected areas for forest ecosystems Forests for the conservation of ge netic resources. Forest for the preservation of the genetic resources of tree species.

Forests for the protection of plant colonies

Forests for the protection of specified creature habitats

Forests for the protection of specified geographical features etc.

Forests for the local culture

Total

Source : Forest and Forestry White Paper 2015

4. The systematic and sustainable supply of forest products

Measures to ensure the systematic and sustainable supply of forest products go hand-in-hand with longterm planning reflecting market demand and in response to needs of consumers.

- · Examples of ways to reconcile timber supply with market-driven demand based on consumer needs · Developing timber extraction way that can respond to market trends · Promoting systems which ensure stable supply of timber
- · Examples of initiatives of effective promotion of various forest products
 - ·Holding "Forest Festivals", offering to publc at reduced cost such peculiar products as sa waste, roots, stumps etc.
- ·Offering soft drink from sap of cherry trees and eye drop from maple trees Examples of effort to expand market
 - · Establishment of satellite marketing outlets for "Properly Dried Logs" Promoting the use of timber for construction of public buildings and interior use of house.

5 Contribution to the empowerment of rural communities

National forests offer employment opportunities in forest related public work projects; supplying timber products for local people and renting of national forest land for schools, dams and other public uses

Land	use	of	national	forest	for	the public	(March 2013)

Туре	Number (100's)	Area (1000ha)	Promotion in total National forest (%)
Forest land rented	333	76	1.0
Profit sharing plantation	214	127	1.7
Communal use forest	-11	1, 321	17. 2
Total	558	1, 524	19, 8

Note: rented land is for agriculture, pasture, roads, facilities of electricity and communication etc







Cvpripedium marcanthum Orchid (Hokkaido



Mechanized operating system of timber varding (Source: Forest and Forestry White Paper 2015)

Source: Statistics of National Forest (FY 2015)



Planting by profit sharing system (Source: Forestry Agency)

OVERVIEW AND CHALLENGES OF THE FORESTRY SECTOR.

Japan's forests ownership is classified into national forests and non-national forests.

The present system of forest ownership was established during the Meiji period (more than 100 years ago). Forests were classified into national ownership and non-national ownership. The national government is responsible for management of national forests. On the other hand, nonnational forests are managed by local government authorities, private citizens, companies and other non-governmental organizations.

6.

Forest Ownership and the Management Situation

Forest resources by ownership	(March 2002)	(10,000m ³)
	Area (10, 000ha)	Growing stock
National Forest	767	115, 182
(Forest Agency Other Agencies)	761 6	114, 620 562
Public Forest	292	55, 769
(Prefecture City, Town, Village, etc.)	121 171	21, 853 33, 916
Private Forest	1.443	318, 420
Total	2, 508	490, 051





2. Small-scale individual forest owners comprise the majority of non-national forest proprietors

Source : Forest and Forestry White Paper 2015

There are approximately 0.9 million individual forest owners, among which forest owners with less than 10 ha account for almost 90 %. However their forests occupy only 42% of total individual forest owner's forest area. Small-scale forest owners are widely dispersed throughout Japan and typically manage small-scale operations covering less than 5 ha. Natural factors such as slopes and topography make it difficult for these owners to achieve high productivity and rational use of their forests. Furthermore, compared with other industries, income from forestry is relatively low and not sufficient to provide basic financial needs. Thus large number of individual forest owners must seek outside employment to supplement income from forest and only devote part of their time to forest management.



Source : World Census of Agriculture and Forestry 2010

3. Situation of forest labor and forest owners' cooperative



Depopulation and economic stagnation in upstream villages are giving negative impact on the maintenance and management of forests. Various factors pose serious disincentives to efficient forest management. Higher wages in urban areas lure away young workers in the highly-productive age group who are urgently needed for plantation maintenance and timber extraction. Those left behind are primarily older-aged workers no longer in their prime. Depressed prices of timber and changes in the timber demand structure are additional problems. Consequently forest production activities have stagnated, thus further reducing economic vitality at the village level. Forest owners are responding through measures that promote collaboration and seek economy-of-scale opportunities. Now there are about 660 "Forest Owners Cooperative" organizations which now manage more than 65% of all non-national forests. Approximately 1.6 million small-scale owners are members of these cooperatives. The Forest Owners Cooperatives provide training facilities, recruitment of workers and giving incentive for appropriate mechanization to reduce costs and improve financial viability.

Situation of forest and forestry management

Mainly due to declining prices of timber and increased costs of reforestation and tending practices caused by higher wages of forestry workers, domestic timber producers find it difficult to maintain profitability. Forest products from other countries now also account for most of the timber used in Japan. These factors have pushed down prices of domestic timber and discouraged investment in forestry activities.

Log prices delivered to mill site (Unit: yen/m *)



5. New utilization of timber

In Japan, wood materials have been used mainly in the traditional houses constructions. They have not been used much in apartment houses and public buildings. Non-house sector also do not have high use of wood materials. To cope with this situation, new engineered materials, such as CLT (Cross Laminated Timber), have been developed and introduced to construction of wooden commercial buildings. New fire-proof lumber has also been developed and introduced to commercial buildings.

12





Potential of number of logging laborer by

Cross Laminated Timber (CLT) (Provided by Japan Cross Laminated Timber Association)

JAPAN IS COOPERATING IN VARIOUS WAYS TO HELP NTERNATIONAL **CONSERVE AND DEVELOP THE WORLD FORESTS.** COOPERATION

For more than forty years, Japan hes been coo perating with partner countries for Sustainable Forest Management.

Recent Japan's Cooperation with Partner Countries in Forestry Sector

Type:	1 2	Technical Cooperation Project Demonstration Research Project	34	Development Study Grant Aid	5 0DA Lo ● 0n—Goin	pan ng	
Argentina	1	Sustainable Use of Forest Resources in the We	st	of the Province of Formosa / Pro	ject of En-	7	
Bolivia	Δ	hancement for Application of Afforestation a	nd	Refforestation of CDM		Seria .	Maria -
Botswana	1	Project for Forest Conservation and Sustainab	le	Management of Forest Resources in	n Southern Africa		N76 22
	3	The Project for Enhancing National Forest Mon	ita	ring System for the Promotion of	Sustainable		5. 2 A. A. A
Irazil	1	Sustainable Use of Forest Resourcesin Estuar Images to Support Protection of the Brazilia forestation /Project for Biodiversity conserv Museum" / more 2 projects	y 1 n A vat	idal Floodplains in Amapa / Utli mazon Forest and Combat against on in Amazon based on a new conc	zation of ALOS Illegal De- ept of "Field		
	2	Carbon Dynamics of Amazonian Forests	L'ens	/T		Grafling of Avocado	o fruit tree.
urkina Faso	4	Project of Support for Seedling Production Sec Projet de Renforcement des Capacités d'Ensei	gne	/lechnical Advisor on Kural Fores ment et de Formation de l'Ecole	try/more 2 projects Nationale des Faux	(Rwanda)	
	-	et Forêts /	Bitt		hattonato doo Eaux		
ambodia	1	Adviser on Forestry Policy and Administration	1/	Project for Facilitating the Imple	mentation of REDD+	A NEW COMP	112、1.18日
	4	The Forest Preservation Programme				A CALLER	
ameroon	1	Advisor on Sustainable Forest Management and	CI	mate Change in Congo Basin / Pro	ject for		AND NOT
		Countries / more 2 projects	B	odiversity and climate change is:	sues in comifag		
	4	The Forest Preservation Programme					
hile	1	International Training course on Environmenta	al	Restoration for sustainable manage	gement of Degraded		
		Republic of Chile /Adaptive Watershed Manager	men	t with Emphasis in Envi-ronmenta	al services and		145 F
bine	1	climate Change	+	n Western Design of China / Drai	ant on forcat	Training of Forest	t Inventory
hina	1	restoration after the earthquake in Sichuan P	ro	ince / Dissemination of New Fore	station Technology	(Laos)	
	•	in Loess Plateau / more 3 projects					
	3	Afforestation technology popularization train	Pro	gram for Sand Storm Prevention a	round the Capital B	eijing	
	5	Jilin Afforestation Project / Qinghai Ecologi	ca	Environmental Improvement Project	ct / more 2 project	S	
olombia	1	Natural forest management and Sustainable Use	1	Deforestation and Biomass Monitor	ing Using Remote Se	ensing	
osta Rica	4	The Forest Preservation Programme					
ôte d'Ivoire	4	the Project for Rehabilitation and Restoratio	n d	f Forests with the Involvement o	f Local Communities	AN AN	A CON
ominica P R	1	The Forest Preservation Programme The Sustainable Watershed Management Project	in	the Upper Area of the Sabana Yea	a Dam in the	· Male of	12 25
unititiou i.i.		Dominican Republic		the opport mod of the output regi			
R. Congo	1	The Project for Strengthening National Forest	Re	sources Monitoring System for Pro	omoting	ALV TO	A. B. A.
	4	The Forest Preservation Programme					a state of the second s
ast Timor	1	Community-based integrated watershed manageme	nt	in Laclo and Comoro river basins	/ Project for		
		Community-pased Sustainable Naturai Resource Management					
	3	Community-based integrated watershed manageme	nt	in Laclo and Comoro river basins		Workshop for the I	mprovement of
quadar	4	The Forest Preservation Programme	for	actation Plan		living conditions.	(Iran)
thiopia	1	Participatory Forest Management Project in Be	let	e-Gera Regional Forest Priority /	Area Phase 2/Proje	ct for Sustainable Na	tural Resource
		Management through FFS in the Rift Valley Are	a	f Oromia Region / Certified Fores	t Coffee Production	n and Promotion Proje	ct
	4	The Forest Preservation Programme					
abon	i	Project for enhancing national forest resource	es	inventory system contributing to	sustainable forest	management	
	2	Conservation of Biodiversity in Tropical Fore	st	through Sustainable Coexistance I	between Human and W	ild Animals	
	4	The Forest Preservation Programme		in the Terreitianal Zere			
bilbi	4	The Forest Preservation Programme	eci	III LINE ITANSILIONAI ZONE			
onduras	1	Project for strengthening of sustainable wate	rst	ed management with community par	ticipation in the f	orest protected area	of El Cajon dam
ndia	1	Project for Capacity Building of State Forest	T	aining Institutions and Central A	Academy for State F	orest Service (CASFOS)
	5	Conservation and Forest Management Project / I	Nes	g project / Rajasthan Forestry an t bengal biodiversity conservatio	nd blodiversity Pro	ject(II) / Sikkim Biod ect / Sikkim Biodiv	liversity
	14	Conservation and Forest Management Project /	mor	e 7 projects	and Breening biol	DINKIII DIOUIV	unarry
ndonesia	1	Project for the Promotion of Mass Propagation	Te	chnique of Native Tree Species fo	or Refor-estation /	Project for Facilita	ting Developmen
		opment of Internationally Standardized Microb	ia	Resources Center to Promote Life	e Science Research	and Biotechnology / Ir	ndones i a-
		Japan Project for Development of REDD+ Imple-	men	tation Mechanism (IJ-REDD+) / mo	re 13 projects		

	a set a	and a start of the			a factor a contraction of a sector as	 1
4	The	Forest	Preservat	ion	Programme	

1 Participatory Forest and Rangeland Management Project in Chaharmahal-va-Bakhtiari Province

afling of Avocado fruit tree.





Kenya	1	Intensified Social Forestry Project in Semi-arid Areas of K Climate Change in Drylands of Kenya
	4	The Forest Preservation Programme
Kirghiz Laos	1	Support for Joint Forest Management in the Kyrgyz Republic Capacity Development Project for Establishing National Fores: Forest Management and REDD+ / Sustainable Forest Management more 6 projects
	4	Programme for Forest Information Management / The Forest Prese
Macedonia	1	Project on Development of Integrated System for Prevention and
Madagascar	i.	Project of Integrated Approach Development in order to Promote
add galoout	3	Development in Morarano Chrome The Study on Rural Development and Watershed Management in the
Malawî	1	Forest Management and Conservation Advisor /Project for Comm in the Middle ShiréProject for Promoting Catchment Management
	3	Pilot Study on Community Vitalization and Afforestation in Mid
Malausia	4	Development of Interneted Utilization System of Oil Delm
mataysta	1	Development of Integrated of 112ation system of off Palm Development for Biodiversity and Ecosystems Conservation in Sa Project on Promotion of Groop Economy with Balm Oil Industry f
Mali	2	The study on the conservation of Central Niger Delta through
ma i i	0	prefecture
Morocco	4	Watershed Management Project
Mozambique	1	The Project for the Establishment of Sustainable Forest Resour
mozambriquo		of Forest Management in Mozambique
	4	The Forest Preservation Programme
Myanmar	1	Community Forestry Training and Extension Project in Dry Zone Management through Community Participation in the Ayeyawady De
	4	the Project for Mangrove Rehabilitation Plan for Enhancement of
Nepal	1	Community Development and Forest / Watershed Conservation Proj Governance Project
M.*	4	The Forest Preservation Programme
Nicaragua	1	Project on Participatory Forest Management
0	3	Ine Master Plan Study on Forest Management for Disaster Preven
Dopomo	1	Project for Participatory Community Development and Integrated
Fallalla	3	Study and Valuation to Promote Biodiversity Conservation in Azuero
Paraguay	1	Project for Strengthening Integrated Management of Yguazu Lake
1 01 0800)	4	The Forest Preservation Programme
Peru	1	Assessing social, institutional and cultural conditions for the among forest-society communities in the Peruvian Amazon Fr Forest Conservation and REDD+ Mechanisms
	4	The Forest Preservation Programme
Philippines	1	Project for Enhancement of Community-based Forest Management P
PNG	1	Capacity Development on Forest Resource Monitoring for Address Guinea / Capacity Development Project for Operationalization Management System for Addressing Climate Change / The Project through Implementation of the PNG Policy on Protected Areas
	4	The Forest Preservation Programme
Samoa	4	The Forest Preservation Programme
Saudi Arabia	1	Management Plan for Conservation of Juniper Woodlands
Senegal	1	The Project Aimed at the Enhancement of Sustainability in the Project of Capacity Building for the Restoration and the Promo
	3	The Study on Sustainable Management of the Mangrove in the Pet
	4	Project de reboisement de la zone du littoral
Tadzhikistan	2	Reforestation and forestation in aim of reduction of generatio
Thailand	4	The Forest Preservation Programme
lunisia	5	Integrated Reforestation Project (II)
Пигкеу	1	Integrated watershed Kenabilitation and Management Iraining Pr
Vietnam	1	Advisor to Forestry Program / Forest Fire Rehabilitation Proj
	3	Capacity Building for Preparing Feasibility Studies and Implemen / Development Study on Capacity Development for AR-CDM Promoti
	4	the Project for Afforestation on the Coastal Sandy Area in Community Damaged by Forest Fire in Ca Mau Province /The Fores
	5	Advisor to Forestry Program / Dien Bien REDD+ Pilot Project
Multilateral	1 1	Project for Transboundary Biodiversity Conservation of Mekong the Project for Capacity Building for Sustainable Management Countries Comments Africa Derivice Derivice Derivers
		ountries vameroon, ventral Africa Republic, D.K. Gongo & R.

Note : Activities started or completed between April 2006 and Oct 2015 are listed Source : JICA Annual Report, Forestry Agency and JICS 2015



Iran



1 Intensified Social Forestry Project in Semi-arid Areas of KenyParo/ject on Development of Drought Tolerant Trees for Adaptation to

st Information System for Sustainabl and REDD+ Sup-port Project /

ervation Programme Early Warning of Forest Fires te Environment Restoration and Rura

South-West Region of Alaotra munity Vitalization and Afforestation Activities in Middle Shire ddle Shire in Malawi

Biomass / Project on Sustainable abah for Biodiversity Conservation wise use of Natural resources in Mopti



Measuring of trunk weight for carbon stock (VietNam)

rces Information Platform for Monitoring REDD+ / Advisor for Strengthening

in the Union of Myanmar/Integrated Mangrove Rehabilitation and elta of Disaster Prevention in Ayeyawady Delta ject Phase II in Nepal/Participatory Watershed Management and Local

ntion in the Northern Pacific Region in the Republic of Nicaragua nent d Management of the Alhajuela Lake Subwatershed Forest Reserves in the Peninsula of

Watershed

he implementation of REDD+ projects roject on Capacity Development for

rogram sing Climate Change in Papua New of PNG Forest Resource Information ect for Biodiversity Conservation



Land Preparetion in degraded area (China)

Mangrove Forest Management of Saloum Delta in the Republic of Senegal/ ption of Effective Use of Degraded Soil in the Areas of Soil Degradation tite Cote and Saloum Delta in the Republic of Senegal

on of greenhouse gases and lessening of global warming

roject tation and Reforestation CDM ject/Project for Sustainable Forest Management in the Northwest Watershed

ntation Plans for Afforestation Projects in the Socialist Republic of Viet Nam ion in Vietnam

n Southern Central Viet Nam (phaseII)/Project for Empowerment to the st Preservation Programme

Protected Forest Area <Cambodia & Thailand>

of Tropical Rainforests and Biodiversity Conservation in the Congo Basin Congo>



Japanese name 1. SUGI (E) 2. HINOKI (E) KOHYAMAKI (E) 3. 4. HIBA (E) 5. AKAMATSU (E) KUROMATSU (E) 6. 7. HAIMATSU (E) 8. EZOMATSU (E) 9. TODOMATSU (E) 10. KARAMATSU (D) 11. TSUGA (E) 12. MOMI (E) 13. TOHHI (E) 14. SAKURA group (D) 15. BUNANOKI (D) 16. KAMBA group (D) 17. KURI (D) 18. NARA group (D) 19. KASHI group (DE) 20. TOCHINOKI (D) 21. KEYAKI (D) 22. KAEDE group (D) 23. KIRI (D) 24. HANNOKI (D) 25. KUSUNOKI (E) 26. ICHO (D) (D):deciduous tree, (E) evergreen tree

Scientific name Cryptomeria japonica Chamaecyparis obtusa Sciadopitys verticillata Thujopsis dolabrata Pinus densiflora Pinus thunbergii Pinus pumila Picea jezoensis Abies sachalinensis Larix leptolepis Tsuga sieboldii Abies firma Picea jezoensis var. hondoensis spruce Prunus group Fagus crenata Betula spp. Castanea crenata Quercus spp. Quercus spp. Aesculus turbinata Zelkova serrata Acer spp. Paulownia tomentosa Alnus japonica Cinnamomum camphora Ginkgo biloba

Tree Species in Japan

English name

Japanese cedar Japanese cypress umbrella-pine False arborvitae Japanese red pine Japanese black pine siberian dwarf pine yezo spruce white fir Japanese larch Japanese hemlock momi fir cherry group Japanese beech birch group Japanese chestnut white oak live oak horse chestnut Japanese zelkova Japanese maple group paulownia Japanese alder camphor tree ginkgo

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