

Timber Takeaway...

Japanese Over-consumption—the Forgotten Campaign

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RECOMMENDATIONS

NON GOVERNMENTAL ORGANISATIONS

International NGOs should:

- Provide financial support for Japanese NGOs, by providing grants and through fundraising on their behalf.
- Provide technical support including fundraising, lobbying, language training, and management.

International NGOs, in collaboration with Japanese NGOs should:

- Lobby for changes in Japanese NGO legislation to provide greater legal status for Japanese NGOs. The provision of tax benefits for NGO operations and donations is essential.
- Promote communication with Japanese NGOs, encouraging networking and a regular flow of information. This should include the translation of any reports of relevance to Japanese NGOs into Japanese, and Japanese reports into English.
- Establish a coordinated approach to campaigning against the massive consumption of timber in Japan.
- Incorporate the successful techniques used in previous Japanese campaigns.
- Promote the exchange of personnel between Japanese and international NGOs.
- Expose Japanese government's and Japanese industry's lack of sincerity with regard to environmental policies. At present, non-Japanese NGOs are better placed to expose this 'greenwash'; the Japanese government, in particular, values its image in the international community.
- Target Japanese industry, particularly the housing industry, and non-Japanese companies supplying the Japanese market with timber; exposing the link between their consumption of timber and forest destruction worldwide.
- Promote links between Japanese industry and foreign companies with strong environmental policies and those that produce alternatives to timber products.
- Promote greater awareness of Japan's excessive timber consumption amongst the Japanese public. The recent rise in public and media interest should be nurtured.
- Promote Forest Stewardship Council (FSC) certification and the FSC 'brand' in Japan, and sustainable forestry practices in timber producing countries. (Promoting zero timber use is unlikely to be successful because of massive industry and government promotion of timber as an environmentally friendly product and the perceived need to revitalise domestic timber production.)

THE JAPANESE GOVERNMENT

The Japanese Government should:

- Improve current NGO legislation; in particular, legislate for the provision of tax benefits for NGO operations and donations to NGOs.
- Provide funding for NGO activities.
- Work closely with NGOs to address the issue of excessive timber consumption in Japan.
- Legislate for the provision of monitoring and the enforcement of existing government environmental initiatives.
- Encourage the housing industry to produce longer-lasting houses through legislative, educative and taxation means.
- Encourage the housing industry to use less timber in housing production, through legislative and taxation means and the promotion of alternatives.
- Promote the second-hand housing market and the establishment of estate agencies.
- Insist on a reduction of the use of timber in publicly financed building projects.
- Collect accurate statistics on timber importation, consumption and wastage and allow public scrutiny.
- Encourage cooperation and the exchange of information between all government departments with an interest in timber consumption including Trade and Industry, Environment and Overseas Development.
- Impose import tariffs on the importation of logs and partially processed timber to encourage the importation of value-added products from overseas.

JAPANESE INDUSTRY

Japanese Industry should:

- Make company environmental policy public including targets and timetables for a reduction of timber consumption and an increase in the use of certified timber and alternatives to timber. This should include details of how these goals are to be achieved.

- Collect accurate statistics on timber importation, consumption and wastage and allow public scrutiny.

PREFACE

THIS REPORT was researched and taken to first draft by a Japanese NGO worker commissioned by Global Witness. She wishes to remain anonymous. Further research was carried out by Global Witness.

INTRODUCTION

"Japanese people were once very close to nature, but not any more. If we continue to treat it with disrespect, we'll pay the consequences."

-YOSHIOMI AOTO, HEAD PRIEST AT MEFU SHINTO SHRINE IN SHIMANE PREFECTURE JAPAN, THE GUARDIAN JULY 27 1999

THIS REPORT HIGHLIGHTS the role of Japanese industry in the destruction of the world's forests, through its insatiable demand for timber and the resultant need for reinvigorating and coordinating the activities of environmental NGOs directed at reducing timber consumption in Japan.

The first half of the report provides an overview of the current state of the timber trade and the consumption of wood products in Japan; the major consuming industries, the companies involved and ideas for potential future campaign targets. The second half looks at the role of Japanese environmental NGOs in the fight to reduce consumption and prevent forest destruction, against a backdrop of lack of official recognition, under-resourcing and minimal support from the international NGO community.

Reducing consumption and the demand for timber, and wood products, in Japan is key to preserving forests worldwide. But despite severe criticism in the 1980s, from both environmental NGOs within Japan and from the international community, massive and unsustainable levels of timber consumption have continued in Japan.

The mass consumption by Japan, including the exploitative activities of its companies overseas and that of non-Japanese companies producing wood products for Japan, has been well documented. Japanese opinion leaders, both commercial and governmental, have countered these claims by attributing the bulk of international forest destruction to slash-and-burn farming, forest fires and the use of firewood in developing countries. They have boasted of their financial and technical support to so-called sustainable forest management projects and rather than reform, many of the companies have set up highly efficient public relations departments to counter the allegations and deflect attention away from their activities.

Japan, with 2% of the world population, continues to import over one third of internationally traded wood products making it the greatest contributor to global deforestation. Yet in recent years the issue of massive over-consumption by Japan has been largely ignored by the international community and even Japanese NGOs have shifted their focus away from consumption at home to issues of deforestation in other countries.

If tropical, temperate and coniferous forests throughout the world are to be preserved, from North to South America from Siberia to Africa and South East Asia, it is essential that the issue of over-consumption of timber in the developed world is addressed, particularly in Japan—the world's greatest contributor to forest destruction.

THE JAPANESE TIMBER TRADE: AN OVERVIEW

JAPAN'S PRINCIPAL TIMBER exports are insignificant when compared with its timber imports and domestic production.

IMPORT TRENDS

The boom in Japanese timber imports

Japan imports 37% of all internationally traded wood products.¹ Japan's import of wood chips is an order of magnitude greater by value than, for example, the whole of the European Union (EU); even when allowing for trade between EU countries. Japan also imports double the logs and plywood, in terms₂ of value; and importation of sawn wood exceeds by 10% that of the European Union.

Wood has served as a primary natural resource in Japan for hundreds of years and is used for house building, utensils and fuel. Until the 1940s Japan was almost self-sufficient, but today Japan imports 80% of its wood requirements.³ A massive influx of timber began in the 1960s as a result of post-war economic recovery and miraculous economic growth. At the same time, timber imports from North America were liberalised and replaced Japanese species which had until then been subjected to excessive and unsustainable logging to satisfy soaring demand. Today the housing industry, Japan's largest consumer of timber, relies mainly on North American timber.

At about the same time the importation of tropical timber from South East Asia increased, providing developing countries with valuable foreign currency. However, most of these timber imports were either logs or 'wood in the rough' resulting in forests being exploited rapidly and exporters earning little compared to the potential in trading value-added wood products. In the Philippines,⁴ for example, log exports were regulated in the 1970s and finally banned in 1986. Logging operations then spread to Malaysia and Indonesia which in turn restricted exports and promoted domestic processing in the 1980s. With vast areas of forest destroyed, these countries became major exporters of value-added wood products, mainly plywood, with Japan as the main customer.

Japan, however, still imports where possible from countries trading mainly in logs and which do not impose export restrictions; countries such as Papua New Guinea (PNG), The Solomon Islands, Central Africa and countries in South East Asia.

Recent changes in the trade

A timber specialist in Japan states: "*The changes in the wood production pattern in the world in the 1990s are forcing Japan to alter its import structure.*"

The 1990s have seen adaptations in the Japanese timber trade caused mainly by forest depletion and log export restrictions in South East Asia and expanding environmental movements within North America and Europe. As a result, Japan has had to import more value-added products while log imports are decreasing. Source countries are also changing. The supply of North American timber has become insecure with declining forest resources and increasing pressure from the environmental lobby resulting in an increase in trade from the Russian Far East, New Zealand, Chile, Africa and Northern Europe.

TRENDS IN IMPORTED WOOD PRODUCTS

See Appendix Tables 1 & 2

Value-added wood products

Since 1992, imports of value-added products have risen significantly.

Plywood: imports have risen by about 80% in value since 1992. These imports, mainly from Indonesia and Malaysia are dominated by tropical broadleaf plywood, but also include coniferous and block board plywoods. Some 70% of the coniferous plywood originates in Canada.

Laminated lumber: imports of laminated lumber increased fivefold and structural laminated lumber fourteenfold between 1992 and 1997. The main exporters, in descending order, of laminated lumber are: Indonesia, China and Malaysia, and for structural laminated lumber the USA, Sweden, Germany and Canada.

Particle board: imports increased fivefold between 1992 and 1997. Canada, Indonesia, Malaysia and New Zealand are the main exporters.

Medium density fibreboard (MDF): imports increased fourteenfold in weight between 1992 and 1997 and the main exporters are New Zealand and Malaysia.

Hardboard: imports increased fourteenfold in weight between 1992 and 1997. The main exporters are South Korea and Chile.

Other wood-related products

Paper: Japan imports relatively little paper or paperboard. However, Japan is the world's leading importer of wood chips, a major importer of pulp and, in addition, consumes substantial amounts of timber from its own forests. It is now almost self-sufficient in paper production. Although this production has remained steady overall during the 1990s there has been a sharp rise in plain paper for printers and copiers, uncoated printing and communications paper, sanitary tissues and container-board. An increase in junk mail and rising sales in⁶ computer-related publications are believed to have increased paper production.

Pulp: North America supplies more than 70% of Japan's total pulp, with Brazil, Chile and New Zealand supplying the remainder.

Imports of pulp into Japan 1992-1997

Value (billion Yen or %)

Source country	1992	1993	1994	1995	1996	1997
Canada	34%	35%	43%	44%	41%	41%
USA	42%	41%	31%	32%	32%	32%
Brazil	7%	8%	9%	8%	9%	9%
Chile	5%	5%	6%	5%	5%	4%
New Zealand	4%	4%	4%	3%	5%	4%
South Africa	3%	3%	2%	2%	2%	2%
Sweden	2%	1%	2%	1%	2%	2%
The Philippines	1%	1%	1%	1%	1%	1%
Indonesia				1%	2%	1%
Finland				1%	1%	1%
Malaysia						1%
Others	1%	1%	1%	1%	1%	1%
Total (=100%)	204	163	188	262	206	215

Source: The Summary Report of Trade in Japan-Japan Tariff Association

Pulpwood and wood chips: Over 80% of pulpwood and wood chips are imported. As the domestic supply of chips has declined, imports of pulpwood deriving from hardwood, including Eucalyptus, have risen fourfold in the last 20 years. The bulk of this comes from the USA, Australia and Chile. Canada and the USA supply most pulpwood deriving from softwood.

Wooden furniture ⁹

Wooden furniture comprises the majority of furniture sales in Japan. This in turn is reflected in imports and domestic furniture production, but the size of the market changed little between 1992 and 1997. However, wooden furniture imports increased fourfold, in value terms, between 1986 and 1995; doubling between 1992 and 1997. This is largely attributable to investment by Japanese companies in processing facilities outside Japan rather than an increase in demand.

Imports will continue to rise for several reasons: marketing and manufacturing is taking place more internationally; government economic policies encourage domestic demand and promote imports; an increase in technical cooperation between Japanese and foreign manufacturers; and the shifting abroad of Japanese manufacturers.

Imports of wooden furniture from Asia are increasing. Thailand is the largest wooden furniture exporter to Japan and, following the trend in Europe and North America, many Japanese companies have moved their production and marketing bases there. In Thailand, economic growth has improved and encouraged the production of export commodities. Japanese companies are also shifting their manufacturing sites to China, Indonesia, Malaysia and Vietnam taking advantage of low raw-material and wage costs that are even lower following the recent financial crisis in Asia. China, in particular, is promoting international business partnerships as a means of increasing the influx of foreign capital.

THE HOUSING INDUSTRY: JAPAN'S GREATEST TIMBER CONSUMER

The housing industry is the main consumer of timber in Japan, followed by furniture and fixtures, formwork and paper. ¹⁰ The current pattern of wood consumption for housing has established itself over a few decades of rapid economic development in a culture of mass production and consumption. This period of economic and industrial development saw a rush by the construction industry to build on a huge scale tiny apartments and suburban housing of a limited lifespan, office buildings and civil infrastructure. Consideration was not given to the environmental impacts of such rapid development resulting in massive exploitation of land and limited natural resources as well as serious water and air pollution.

The build quality of these houses and apartment buildings is such that they require major repair works after 10 years and demolition, followed by reconstruction, every 20 to 30 years. The fact that modern Japanese housing does not last very long together with the growth of the urban populations guaranteed the success of the construction industry, making it the most powerful and politically influential sector of the Japanese economy. Many other industries in Japan are related to and dependent on the construction industry.

Wood-based houses currently make up between 42-46% of housing starts in Japan. A westernisation of lifestyle has seen the decline of the traditional post-and-beam design in favour of prefabricated and two-by-four construction methods. ¹¹

Housing starts

Analysis of housing starts since the 1960s clearly indicates that they reflect the state of the Japanese domestic economy with a drop in demand during recessions. Exceptions to this do occur, for example in 1996, ¹² despite a declining economy, demand shot up to beat anticipated tax increases.

Annual housing starts in Japan are almost equal to the USA's, which has double the population. Such disproportionate construction is down to the short durability of Japanese houses, half ¹³ that of the USA, and the lack of any marketing mechanism for second-hand housing.

Short durability and high cost

Houses in Japan last, on average, for only 20-30 years compared to 44 years in the USA and 75 years in the UK.

Housing stock is not expected to increase significantly¹⁴ and housing starts are expected to drop with the decrease in population¹⁵; although this is being offset to a small but increasing extent by demand from single people and from married people who separate. Significantly, over half of the new housing units are replacements for housing units that have been demolished.¹⁶

Short durability is recognised as a problem and a Long-Life Housing Research Institute was established in 1998 by the Asahi Kasei Kogyo Co to address this issue.¹⁷ However, a lack of proper legislative countermeasures has resulted in much defective housing and the effectiveness of the Law for the Standard of Construction, passed in 1998, has been questioned by many experts. Japan's construction regulations are quite strict especially with respect to imported products, seen by some as a barrier to trade, but even where material selection is good the general standard of workmanship and project management frequently falls short of required levels.

Japanese low-cost short durability housing costs 20-30% more than housing in Europe and North America. The high cost of land is an important contributor to the cost of these houses but even though home ownership is the dream of many Japanese businessmen, and the value of land is dropping with the economic decline, other negative economic factors have discouraged an increase in house buying at present.¹⁸

WASTE

Japan's consumption of timber is particularly wasteful¹⁹ and further research is necessary to identify the extent of waste in each construction sector. Such research is likely to be difficult as this information is not generally available, or, if available, contradictory.

One source estimates that 60 million tonnes of construction, wood scrap was produced in each of the first five years of this decade.²⁰ This seems high when timber imports, which account for 80% of total consumption, amounted to roughly 60 million m³ in 1997. It is also at odds with the high recycling rate of 40% for construction-wood scrap given in another source.²¹ Rather surprisingly, neither of these figures is from the Ministry of Construction; it seems that there is a diffusion of responsibility which could be a handicap for reform. However, the reduction of waste, including re-use and recycling, from construction and demolition would have a direct effect on consumption as well as employment in the construction and recycling industries.

ALTERNATIVE BUILDING MATERIALS

Formwork

The use of plywood for formwork [temporary frames] in concrete pillars and walls is perhaps the most wasteful use of tropical timber in housing construction. One third of all plywood is used in this way, of which half is from imported tropical and non-coniferous wood.²² In Japan the panels are used a few times then discarded,²³ whereas in the USA and Europe such panels are reinforced and re-used many times. The lack of standardisation of building components in Japan can explain some of this waste but essentially it is much cheaper for the companies to use imported plywood that is then disposed of, rather than storing formwork for re-use.²⁴

The most common non-wood alternative to plywood in formwork is steel, which is more expensive and less versatile although it does have a longer life than plywood and can readily be recycled. Plastics are occasionally used and are harder wearing but less versatile than wood.

In 1991 the Japan General Constructors Association announced a voluntary programme to reduce use of tropical wood by 35% in five years; possibly a response to the international rainforest protection movement. Their final report on the programme was published in 1998; progress was made²⁵ but the 35% target was not reached—instead they attained a 24.3% reduction.

Other building materials

The need for formwork can be reduced by using pre-cast concrete flooring and steel frames, which tend to be more cost effective than reinforced concrete for tall buildings, particularly for those subject to earthquakes. External walls made with reinforced concrete may be cheaper than other materials and can increase a building's rigidity but are less aesthetically pleasing. Brick is marketed as a prestige material but its use in the mass market is limited due to a combination of cost, the need to import it and earthquake considerations.

Certified timber

As of July 1999, the area of forest certified by the Forest Stewardship Council accredited bodies was 15.79 million ha., of which 18% was in the tropics.²⁶

The production of coniferous wood is increasingly meeting Japanese authorities' standards and the taste of property owners. Consequently, an increase in the share of the market for imported logs and sawn wood from coniferous wood can be expected: in 1997 it was 65% for logs and 80% for sawn wood, in value terms. This increase provides an opportunity for environment groups together with the producers of coniferous timber, seeking to increase their share in the market, to persuade house buyers of the merit of specifying wood from FSC certified forests.

THE COMPANIES INVOLVED AND THEIR MARKETS

THE SOGO SHOSHA

See Appendix Table 4

ALTHOUGH there are many specialised Japanese trading companies involved in the import of timber it is the sogo shosha, the elite and massive general trading companies, that have been the major traders since Japan started importing the bulk of its timber²⁷. The recent increase in the import of value-added processed products has reduced the role of the sogo shosha. However, their considerable log-storage facilities and extensive market networks enable them to exert significant²⁸ influence on the import, processing and distribution of logs and timber products.

THE BIG SIX²⁹

The sogo shosha are amongst the largest trading organisations, in terms of turnover, in the world.

Mitsubishi Corporation
Mitsui & Company Ltd
Itochu & Company Ltd
Sumitomo Corporation
Marubeni Corporation
Nissho Iwai Corporation

Executives of the above companies, as well as of the Tomen and Nichimen Corporations, are board members of the Japan Lumber Importers Association consisting of 127 member companies.³⁰ Member companies, including the above with their subsidiaries and affiliates, are placed high in the 1997 ranking of wood product sales.³¹

These companies are the main importers of timber and have been heavily criticised since the 1980s surge in environmental campaigns against rainforest destruction. The sogo shosha responded to this pressure by establishing environmental departments to field criticisms from both inside and outside Japan and promote a greener image. This response is widely seen as 'greenwash', covering up their continuing destructive activities. For example, rather than making more information publicly available, the sogo shosha, Japan Lumber Importers Association and the³² Japanese government no longer release timber import figures for fear of further criticism. Japanese companies have also reduced their direct logging operations abroad, many of which have been taken over by the Chinese, and instead buy from Chinese companies.

THE CONSTRUCTION INDUSTRY

See Appendix Table 5

Public works account for 7% of Japan's GDP, compared to 3% in the UK and most other industrialised countries, and have underpinned Japan's post-war growth, ensuring decades of power for the ruling Liberal³³ Democratic Party, which gets most of its funds from the construction industry.

The Japanese construction industry is massive, including 560,000 mainly small or medium-sized companies with a total of 6.7 million employees.³⁴ A handful of giants dominate the industry. Kajima, Obayashi, Shimizu, Taisei and Takenaka have the largest operations. Such companies are so vast as to support extensive architect, structural engineering, research and development teams. They are responsible for all aspects of construction—including materials specification, use and disposal—which are of major environmental concern. Many also have, by world standards, substantial civil engineering operations, closely linked to the government. Most civil engineering contracts are commissioned by the public sector.

The successful lobbying of these five companies is key to making any progress in the reduction of consumption in the construction industry and any change by these market leaders would almost certainly lead to considerable change in the market as a whole.

However, the corporate culture of these companies is such that they are unlikely to respond favourably to negative campaigning or purely environmentally based arguments. A useful first step would be to identify the most environmentally aware of the company executives [family members in the case of Takenaka company; the only one of the five to still be owned primarily by its founding family and employees] with a view to establishing a dialogue. Environmentally friendly procurement, design and disposal could put a company at a competitive advantage, the potential benefits outweighing the costs, but this message is likely to be better received if delivered by another business person. NGOs should encourage the exchange of information and experiences between executives of these five companies and executives from companies that have established environmental policies and expert representatives from companies manufacturing alternatives to timber.

These large companies tend to adopt slogans for each year or for a period of a few years. Such slogans could become a vehicle for promoting changing environmental practice within the sector.

All five of these companies use vast quantities of timber in their civil engineering and, particularly in the case of Taisei, house-building operations. However, it should be recognised that it is likely that their house building and civil engineering operations do not overlap significantly even at the level of procurement of construction materials and waste. This is because of the scale of their operations, the degree to which work is subcontracted, the extent of joint venturing with other companies, the large number of their dispersed work sites, and local circumstances. All these factors result in a diffusion of responsibility for timber procurement and disposal. A comprehensive understanding of how this is organised is essential to effective lobbying of the industry.

Obayashi is of particular interest in so far as it is affiliated to the Sanwa group, which includes the two leading timber importers, Nichimen and Nissho Iwai. Kajima is not only affiliated to the Sumitomo group (which has substantial share holdings in a greater number of large companies in each sector of the construction market than any other group) but is also Japan's largest construction company. Shimizu is of interest as it is regarded as a trendsetter.

CIVIL ENGINEERING

See Appendix Table 3

Many of the leading building construction companies have, by world standards, very substantial civil engineering operations. Their building revenues are falling while their civil engineering revenues although smaller are steady. Revenues from civil engineering are more evenly distributed between companies than revenues from building construction, making it more difficult to gain leverage from lobbying to a small number of companies in the former than the latter. The Fuyo group [to which Marubeni is affiliated] includes more of the largest civil engineering construction companies than other groups do. Links between government and large civil engineering companies are close, not least because the great majority of civil engineering contracts are commissioned by the public sector.

THE HOUSING INDUSTRY

See Appendix Tables 6 and 7

The housing industry is large with many leading companies. The greatest share of the market is dominated by Sekisui House, Daiwa House Industry, Daikyo and Sekisui Chemical.

The largest companies will have the capability to design and construct as well as manufacture structural and other components of houses. Lobbying of such firms, separately at the marketing, design, procurement and senior management levels could provide the appropriate leverage for change in the market.

The market is segmented by type of building, for example condominiums, typically made with a steel or reinforced concrete frame, and wooden housing. Companies tend to specialise in one or more segment. One of the largest, Misawa Homes, specialises in prefabricated wooden houses. The Sanwa and Sumitomo groups have interests in many of the leading house building companies. The wooden housing companies of Sumitomo and Mitsui are large and take advantage of their parents' substantial timber procurement capability. National House Industrial in particular might respond positively to NGO pressure as it is owned by the consumer electronics company Matsushita which sells to western markets.

It would therefore be most appropriate to direct lobbying initially at Misawa Homes, Mitsui Home, National House Industrial, Sekisui House and Sumitomo Forestry.

THE BUILDING MATERIALS INDUSTRY

See Appendix Table 9

Wood-based products are one component of a range of building materials. The revenues of the largest two companies listed in are indicative only since they are probably not confined to building materials.

Several sogo shosha have interests in building materials companies, not least because this gives them control over outlets for the timber which they procure. Lobbying of these building materials companies would link directly into international timber procurement. These companies have perhaps most to gain from promoting products from sustainable sources in selected outlets: to differentiate themselves from independent competitors, with supplies probably controlled by the sogo shosha, and to demonstrate to critics that they are trying to be environmentally sensitive.

A number of private companies which have substantial building materials interests are not included in, for example Eidai, which has links with the Mitsubishi group.

Initial lobbying targets could include Daiken, Dantani, Mitsui, National Wood Products and Noda, all major players in this sector.

THE FITTINGS AND FURNITURE INDUSTRY

No group of furniture manufacturers has a leading share of the market but Kariya Mokuzai Kogyo, Maruni Mokko, Saihoku Seimitsu are amongst the most prominent in this sector.

France Bed is one of the few companies in this sector, which is not privately owned. It also has links with manufacturers in the USA and UK and specialises in beds for hospitals. Environmentally friendly sourcing could bring commercial advantages to both sides.

THE PAPER INDUSTRY

See Appendix Tables 8 and 10

The paper market, as a result of recent mergers, is dominated by two companies: Oji Paper—the world's third-largest general paper manufacturer and Nippon Paper Industry. Other leaders include the Nippon Paper & Pulp Co., Daishowa Paper, and Daio Paper.

Mitsubishi and Mitsui have substantial interests in the leading paper manufacturers as do, to a lesser extent, Marubeni (the largest pulp dealer in the world) and Sumitomo. Despite concern about excess capacity, substantial investments in new manufacturing facilities, particularly for coated paper, are underway. These companies maintain extensive plantations in Australia, Chile, New Zealand, PNG, South Africa, Vietnam and China.

ECONOMIC FACTORS AFFECTING THE JAPANESE TIMBER TRADE

A DECLINING JAPANESE ECONOMY

THE INTERNATIONAL TIMBER MARKET has been severely affected by the economic turmoil in Asia, which began in 1997 and spread throughout the region. At the same time, Japan faces a major economic recession with record unemployment at over 4% in May 1999 and the International Monetary Fund (IMF) forecasts a negative GDP of -1.35% for 1999. Both developed and developing countries, concerned about the effects on the world economy, are urging the Japanese government to reactivate its economy fast. The effect on the timber industry of the economic crisis is a drop in demand for houses with both domestic and international markets suffering the consequences. However, after 26 months of decline, housing starts increased in March and April 1999; in April the figure was 107,000.³⁵

Effects on the domestic timber market

The current economic recession has resulted in a decrease in housing starts and a consequent drop in the demand for timber. The fall in Japanese demand led to a halving in the price of Indonesian plywood; the overall price for imported timber, including North American, fell by around 30% in one year.

A number of timber-processing companies and wholesalers of wood products in Japan went bankrupt in 1997, doubling in number from the previous year. This trend has continued. Housing starts are expected to keep declining and the stockpile of timber purchased by companies prior to the recession is further contributing to the fall in timber prices.³⁶

Effects on the international timber market

The Asian economic crisis has hit the international timber market in a number of ways. In an attempt to cut their losses timber producers in Canada, Sarawak and Sabah, in Malaysia, have cut the prices of logs and processed timber to the Japanese³⁷ market in order to protect their market share and avoid a build-up of stock. Meanwhile in Asia, exporters have forced prices down considerably by flooding the world tropical timber market with sawn wood and plywood.³⁸

In some countries government policies have resulted in low prices for timber and timber products. In Indonesia, for example, the Indonesian Wood Panel Association, Apkindo, held a monopoly on the trade in plywood keeping prices artificially low in order to maximise sales and profit. The government has since accepted conditional financial aid from the IMF, which has resulted in the abolition of restrictions on production and trade of plywood and the end of the Apkindo monopoly. However, the lifting of export taxes, in order to increase the influx of foreign currencies, was also a condition. This, together with the lifting of the log export ban, resulted in a resumption in the trade in logs, huge numbers of which were dumped on the international market further depressing their value.

In 1998, the Philippines government provoked serious protests from environmentalists by lifting its nine-year ban on the export of logs in an attempt to earn desperately needed foreign currency. In Malaysia, the government announced a temporary reduction of export levies on most sawn-wood products to help local exporters cope with dumping and the escalating price war. In PNG some logging companies have shifted their operations to Russia, pushed out by falling prices, severe competition in the international market and despite the fact the government lifted taxes on timber exports to compete with other countries.

Between 1996 and 1997 log imports from Russia increased by 13%, surpassing North America which had the largest share in Japanese log imports since 1993.

Since the collapse of the Soviet Union, economic cooperation between Russia and Japan is increasing. Small and medium size logging companies have started up in Russia, with Japan as their target market. Improved coniferous plywood production in Japan, believed to be a result of decreasing supplies of tropical timber, has encouraged Russian timber imports. Forest destruction in the Russian Far East and Siberia is becoming a major problem, including the controversial area of Rimban Hijau in Malaysia. 50% of timber from this region is for export, 80% of which is for Japan.

Imports of timber from North America, and especially Canada, dropped by half between January and June 1998 due to the slump in demand for houses in Japan. The timber industry in British Columbia was most severely hit, resulting in the government lifting the ban on log exports.

The decline in demand for timber in Japan has had a significant effect on the international timber trade. Had it not been for the Asian economic crisis, however, the timber trade could have shifted to countries with an increasing domestic need. Such countries include South Korea and China, which has announced that it wishes to increase timber imports to supply a growing housing sector while also developing its forest conservation measures.

INTERNATIONAL TRADE LIBERALISATION

The current trends of free trade and economic liberalisation are an incentive for the timber trade, which in turn puts pressure on the domestic forestry and wood industries resulting in an influx of wood products to Japan. Proponents of free trade argue that it promotes efficient distribution of natural resources while reducing environmental impacts. Economic growth is also said to improve environmental policies in developing countries. Both these views, highlighting a positive link between free trade and environment, are not surprisingly supported by the timber exporting countries.

The World Trade Organisation (WTO) is preparing to debate what the impacts of member-state investment regulations, competition and environment policies are on the trade internationally. Discussions at the new round of trade negotiations in 2000 are expected to focus on coordination among member states of market and environment policies while promoting free trade. Such support for free trade has brought Japan under pressure from the USA to abandon its market protectionism and open its domestic market to reduce its trade surplus.

Agriculture, forestry and fisheries industries claim to have been seriously weakened throughout this period of industrialisation and trade liberalisation. Timber exporting countries, however, claim that Japan's tariffs on processed wood products, but not logs, encourage export of logs while undermining the wood processing industries.

The Japanese government is now having to face lobbying from the housing and construction industries to protect domestic industries and stand against the international pressures of free trade. Liberalisation of trade in some products crucial to Japan's domestic industries, however, is speeding up. Canada, the USA, India and Thailand, for example, are pushing for trade restrictions on fishery and forest products to be relaxed sooner. Such pressure is coming from a majority of developed countries participating in the Asia Pacific Economic Cooperation (APEC) summits and follow-up meetings where the USA is urging Japan to agree with proposals on liberalisation, claiming they will reduce the cost of housing in Japan. The USA aims to expand the APEC free trade agreement to other countries participating in the WTO.

Environmentalists from around the world are concerned about the effects of free trade in relation to the timber trade, believing that the liberalisation of the trade in wood products will accelerate the exploitation of Asia's already depleted forests.

DOMESTIC FORESTRY

Japan has the third greatest percentage forest cover in the world (67%) after Finland and Sweden. Domestic timber supply, which was over 90% of consumption in the 1950s, now accounts for 20%.

The post-war period of reconstruction followed by rapid economic growth in the 1960s are the main reasons for the mis-management of the forest industry. During this period, Japanese forests were devastated with trees being cut beyond the level of sustainable yield, resulting in a drop in domestic wood supply after 1967. Natural forests were exploited to increase timber supply while plantations were created in mountainous areas. This was part of a programme to build up forest resources by converting natural forests into highly productive plantations. Plantations now make up half of the total forest area, and this is hailed as a rare case of successful reforestation by the Forestry Agency.

The increase in demand for wood, together with the weakening domestic supply capacity, led the Japanese government to liberalise wood imports in the early 1960s. Log imports rapidly increased, with a volume exceeding 50% of domestic demand in 1969 and reaching almost 80% today. Imported wood products, with their cost advantages, lead the market while the domestic industry requires urgent rationalisation to face the stiff competition.

The unprofitability of the domestic forestry sector, with the low price of timber and high labour costs, is seen to be the result of a combination of factors including poor forest management; competition from imported wood products coupled with rapid appreciation of the yen; technological innovation; and the switch to more processed, value-added products by the construction industry. With a declining forestry sector the Forestry Agency has repeatedly announced intentions to help the industry, but has itself been suffering heavy debt, accumulated as a result of decades of mis-management.

In theory import barriers are the solution to this decline, but in order to promote free trade Japan has gradually lowered its tariff rates while taking the effects on home industries into consideration.

The increased import of mass-produced highly processed products, including laminated lumber, plywood, particle board and fibreboard, has crippled the domestic industry. Such processed products can be made from fast-growing species which would be of little value without processing, whereas Japanese species require laborious care resulting in valuable quality products. Although the Forestry Agency claims that stock is steadily increasing, 70% of trees are under 35 years old resulting in a small harvestable volume. Timber production from plantations is expected to grow substantially, but this is unlikely to result in serious recovery for the industry.

NGO OPERATIONS IN JAPAN

ALTHOUGH THERE ARE many economic reasons for the vast scale of timber imports into Japan it is the culture of mass production and consumerism, so deeply ingrained in Japanese society, that is the driving force behind the excessive use of timber in Japan. External factors are significant, but it is a serious reduction in domestic Japanese consumption that is key to saving the world's forests.

During the 1980s, at the height of international criticism of rainforest destruction, some Japanese citizens, realising Japan's pivotal role, launched a series of campaigns against the mass importation and consumption of timber in Japan. This section presents an overview of past campaigns in Japan, including the difficulties that Japanese NGOs have faced, and considers the potential for future NGO activities.

JAPANESE NGOS AND THEIR CAMPAIGNS

There are currently a number of groups or NGOs working on forest-related issues, most comprising a small number of volunteers. Most of the Japanese environmental NGOs campaigning against deforestation focus on specific areas of concern in countries other than Japan. These NGOs have led campaigns against timber consumption in Japan in the past and are fully aware of the seriousness of the current situation but in order to take on this huge task again and build on past successes they need international support and cooperation.

CURRENT ACTIVITIES OF JAPANESE GROUPS AND NGOS

JATAN

Staff: 1 full-time, 2 part-time.

Membership: approx. 700

Activities: international issues including forest policy, global warming and climate change.

SCC

Staff: 10 core workers, no full-time paid staff.

Membership: approx. 300

Activities: compilation of information on logging operations and human rights issues in Sarawak; monitoring of the timber trade and consumption in Japan.

Comments: They currently do not have their own office space and work one day a week from the offices of another environmental group.

Friends of the Earth Japan

Staff: several paid full-time and part-time and some volunteers.

Membership: approx. 150

Activities: current work includes the Siberian Forest Project.

World Wide Fund for Nature Japan

Staff: 1 person working on forests.

Membership: approx. 50,000

Activities: campaign promoting the FSC's forest certification system.

Comments: One of the largest NGOs in Japan with heads of major companies as board members.

Greenpeace Japan

Staff: 11

Membership: approx: 5,000

Activities: campaigning on issues of nuclear waste disposal and dioxin emission.

Comments: In parallel with its activities in other countries, in 1988 Greenpeace initiated a campaign on the conservation of forests in Canada. Until its recent work on nuclear waste disposal and dioxin emissions Greenpeace had been regarded as an extremist group in Japan.

Local Groups

There are several other groups working on forest issues at the local level with a limited number of volunteers and supporters.

Japan Tropical Forest Action Network (JATAN): background

JATAN was established in 1987 by environmental and consumer activists alarmed at the extent of rainforest destruction in South East Asia caused by the activities of Japanese companies, Japanese Official Development Assistance (ODA) and a mass-consumption society. JATAN became a pioneering network as a direct result of an international meeting on forest issues held in Malaysia in September 1986.

JATAN made public the destructive activities of Japanese companies and Japanese ODA-funded development projects. JATAN published *Timber from the South Seas* in 1989, in both English and Japanese, in cooperation with The World Wide Fund for Nature International (WWF). The report resulted in increasing criticism, both domestically and internationally, of Japan's logging and timber import policies. The success of this publication brought international recognition to JATAN and fear to organisations related to the timber industry such as the International Tropical Timber Organisation (ITTO).

At the height of the worldwide rainforest campaigns, in the late 1980s and early 1990s, international NGOs taking part in the World Rainforest Movement (WRM) supported activities in Japan. A series of campaigns were launched in cooperation with JATAN, including Ban Japan and the Mitsubishi Boycott Campaign. The largest importer of timber, Marubeni, was awarded the First Prize for Rainforest Destruction by such campaigning groups in the wake of JATAN's report. Campaigns were also carried out against importers of tropical timber including Itochu, Nissho Iwai, and Nichimen.

Such was the impact of these campaigns that timber import figures relating to specific companies have since been made unavailable to the public.

Whereas JATAN's activities were widely reported overseas its information was ignored by forestry experts in Japan. Although many books were written on rainforest protection in Japan they rarely mentioned JATAN or the environmental impacts of Japanese companies and official development projects. Since then, rainforest issues have become almost taboo in the political arena. The Japanese government collected all articles from around the world concerning JATAN, and its statements and activities were carefully monitored. The *soga shosha*, accused of rainforest destruction, established internal environmental departments to deal with the incessant criticism. Although JATAN was invited to advise on their set up, it was business as usual with these environmental departments acting as a green front.

Until the 1990s, Japanese timber operations had been largely confined to Malaysia, Indonesia and Brazil. Subsequently they expanded to countries such as Australia, New Zealand, Chile and Canada. During the 1990s, JATAN received numerous testimonies from victims of forest destruction including: information on the local environmental impacts of the pulp industry producing paper for Japan; the logging of Mangrove forests by Marubeni in Irian Jaya, Indonesia; and the construction of a large pulp factory in the sub-arctic forests of Alberta State, Canada. JATAN increased the scope of its activities to deal with rainforest destruction on a global scale.

In the wake of the 1992 Rio Earth Summit, public interest in environmental issues increased but Japanese companies and the government shielded themselves from environmental criticisms while tactically avoiding, diverting or concealing unfavourable aspects of their overseas activities.

Sarawak Campaign Committee (SCC): Background

Despite an unfavourable climate for NGOs, small voluntary groups have emerged in Japan focusing on conservation in south east Malaysia where forests have been extensively exploited causing the displacement of indigenous people. In 1990 the SCC was established by members of JATAN as a separate group. It aimed to concentrate on the logging problem and impacts on the local people of Sarawak as well as pursuing local government campaigns within Japan.

The SCC local campaign peaked around 1992-1993 but had little impact on the timber industry.⁵¹ Volunteer groups appealed to local government, at prefectural and municipal level, distributing petitions and information concerning local policies on tropical timber consumption and conservation. This resulted in 5% of local government bodies claiming a reduction in use of tropical timber but this led to an increase in coniferous wood consumption, which in itself has environmental implications in other parts of the world. Meanwhile the Forestry Agency actively discouraged the reduction in use of tropical timber on the grounds ⁵² could be seen as commodity discrimination, which would contravene WTO agreements.

JATAN and SCC activities are now much reduced⁵³ because of a reduction in personnel who have switched their focus to monitoring rather than campaigning.

THE STATUS OF NGOS IN JAPAN

Cultural factors inhibiting the potential of NGOs

Whereas in Europe and North America NGOs have established themselves as a force to be reckoned with by industry and government, Japanese NGOs have only limited recognition and influence.

Japan's traditionally authoritarian society means that most citizens find it inconceivable to contradict their superiors, be it their boss, company or government. Ordinary people's participation in society's decision-making processes has, since the 1940s, been limited or superficial. There is little understanding or will to recognise the potential of NGOs as a third party influencing society, the economy and state policies and they are prevented from fully participating in discussions involving industry and the state.

With economic growth as the country's primary objective, citizens' movements, especially environmental ones, have been oppressed and have had confrontational relations with industry and government. It is important to the Japanese government to be respected by the rest of the world, and to do so it claims that it recognises the importance of NGO activities while constructing and implementing its policies in cooperation with citizens. But NGOs have only a token input into policy discussion and their opinion papers are disregarded. Government policies are often finalised and put in place without even the consent of the National Diet. Most laws in Japan are conceived in ministries by civil servants and agencies and are rubber stamped by the National Diet.⁵⁴

Legal status, funding and manpower

Environmental NGOs (more frequently referred to as non-profit organisations, NPOs, in Japan) have until very recently lacked official status in Japan. Most NGOs are very small, called nin-i dantai, meaning voluntary or discretionary organisation, and their lack of status has presented numerous hurdles:

- contracts for services, for example, had to be officially in the name of an individual rather than the organisation, as did bank accounts and equipment, including phone lines and vehicles. The resulting administrative burden was increased each time a member of staff moved on;
- with no legal status, organisations found it difficult to apply for funds or ask for donations from individuals and companies;
- there is still no applicable legal tax benefit for NGOs such as tax exemption for donations or activities undertaken despite recent NGO legislation.

Politicians and civil servants fearing devolution of power watered down the 1998 Law for the Promotion of Non-Profit Activities. This law does open the way for legal status for NGOs but significantly fails to provide any material benefit.

The restrictive conditions and lack of public support present major difficulties for NGOs, but lack of funding and manpower is the most serious problem. Although there are a number of grant-giving organisations, funds are tied to specific projects, not covering core administrative expenses, such as salaries of staff working on projects. Organisations such as Friends of the Earth Japan (FOE Japan) and Greenpeace Japan overcome this problem by receiving funds from their respective overseas networks, accounting for 90% of funding for FOE Japan and 50% for Greenpeace Japan.

Most NGOs are managed by volunteer staff in their spare time. Those groups that can pay a small number of staff offer very limited salaries, insufficient to cover living expenses. The result is that working for NGOs is not regarded as a good career move, even though volunteering is becoming more popular among young people.

Emerging NGO legislation

The recent increase in NGO activities, the result of a more aware Japanese public recognising the limits of its government, has brought attention to their restricted legal status. After three years of negotiations The Law for the Promotion of Non-Profit Activities, establishing legal status for NGOs, was passed in March 1998 and came into effect in December 1998.

Various aspects of the bill, first tabled in 1995, were opposed by politicians; the ruling Liberal Democratic party being particularly against groups having any political or religious aims. The original title of the bill, Law for the Promotion of Citizens' Activities, was changed to Law for the Promotion of Non-Profit Activities for fear that 'citizens' activities' sounded anti-government. Other changes included a clause reserving the provision of tax benefits which was the most crucial factor for NGOs.

Although many of the problems faced by NGOs have yet to be solved, particularly the need for tax benefits, the law has generally been accepted as a positive step generating momentum for further change.

Freedom of information

Access to government and industry information is crucial to the work of all types of NGOs. Whereas the USA passed its Freedom of Information Act over 20 years ago, the Japanese government fears such a law and has been reluctant to propose it to the National Diet. There is much distrust from the general public with citizens requesting information and the government retaining the right to refuse it, leaving legal action the only option, which is prohibitively expensive. Industry information is even harder to obtain.

An Information Disclosure Law bill has been under discussion for several years and interest in it has increased recently with mounting public distrust in the wake of numerous corruption scandals involving the government and industry. Despite much media and public interest and heated discussions within the National Diet, the bill, although passed, is not yet in force and won't be for a couple of years.

Working with western NGOs

NGOs have been operating in the west far longer than those in Japan and have experience that should be shared with groups in Japan. For example, at the Third Conference of Parties for the Framework Convention on Climate Change, held in Kyoto in December 1997, Japanese environment groups saw at first hand the intensive and effective lobbying techniques used by western NGOs.

Aside from the numerous effects of restricted status, Japanese NGOs have major obstacles to overcome in communicating with their western counterparts. Language barriers coupled with limited capacity prevent networking and a regular flow of information with western groups. This flow of information is essential for both western and Japanese NGOs but despite this little of the work of western NGOs, even when it deals directly with Japanese issues, is translated into Japanese.

Japan is very sensitive to foreign pressure so that overcoming communication barriers between Japanese and foreign NGOs, apart from providing crucial support, would provide invaluable opportunities for western NGOs to influence Japanese opinion.

Green potential in Japan

Interest in the environment is growing in Japan and the most popular issues currently include: carbon emissions; industrial waste; dioxin emissions; nuclear power; destruction of natural areas as a result of public construction work and recycling. There are many conferences and publications on the environment and an eco-friendly image has become important to business.

Green consumerism, however, is unpopular and the public's interest in the environment appears to be generally superficial. Japan remains a mass-production, mass-consumption society.

Environmental issues are now a permanent feature for the government as a whole, but industry pressure and lack of cooperation between governmental departments ensure that practical measures are rarely implemented. Ministries responsible for international trade and industry, construction and finance have far more power than the Environment Agency, and without their consent meaningful policies cannot be put in place.

THE GOVERNMENT, INDUSTRY AND FOREST CONSERVATION

The industry response to environmental campaigns

In 1989 the USA and Europe began campaigns against the major importers of tropical timber, the sogo shosha. They targeted the Mitsubishi Shojo Co. and others in its group while JATAN awarded Marubeni with the First Prize for Rainforest Destruction.

In 1990 the Mitsubishi Co. set up its own Department of Environmental Affairs, but run by public relations professionals not environmental experts. Other sogo shosha soon followed suit, carrying out extensive PR activities. Mitsubishi Shojo Co., for example, published a comic book for distribution in high schools, which attributed rainforest destruction to local slash and burn farming. The book was recalled after furious protests from environmentalists and the people of Sarawak. Sogo shosha environment departments also carried out research and initiated plantation projects, the results of which are presented at international conferences on the environment,⁵⁶ which are too limited to have any meaningful effect and serve mainly as publicity. Recognition of environmental issues by companies has not led⁵⁷ to a reduction in either timber imports or destructive projects overseas.

The government response to environmental campaigns

"Out of the world's forest production, 55% is used as fuel of which 80% is consumed as fuelwood in developing countries. Production of timber for export accounts for 7%. Thus the amount of timber traded internationally is relatively small but there are continuing discussions concerning the relationship between sustainable forest management and trade"

1996 FORESTRY WHITE PAPER.

The government attitude to environmental affairs is similar to that of industry but it remains crucial for it⁵⁸ to present an environmentally friendly image to the international community. This provides a real opportunity for NGOs outside Japan to increase pressure by exposing the 'greenwash'. The government contributes to solutions through financial and technical support projects as well as coordinating and participating in international meetings. It is particularly proud of its considerable financial support to the ITTO (Yokohama, Japan) which in turn claims Japan is⁵⁹ promoting conservation and sustainable management of its tropical forests. The ITTO also receives donations from the Japan Lumber Importers Association which has sogo shosha executives as board members.⁶⁰

The ITTO, with 80% of funds coming from within Japan, promotes sustainable international trading in tropical timber. Its Year 2000 Objective programme aims for all tropical timber products to come from sustainably managed forests by 2000. Even ITTO staff admit that the objective is idealistic and not compulsory to member countries.⁶¹ Of course, any seasoned observer of the state of the world's forests knows that the Year 2000 Objective is so wide of its mark that it represents greenwash on a massive scale.

The issue of global warming is currently topical in Japan and consequently timber is promoted as an environment friendly material, which is recyclable and consumes less energy in processing, and therefore less CO₂ emissions, than materials such as steel and plastic. Timber is also recommended in construction because of its potential as a carbon deposit⁶², and longer-lasting houses are seen as an important factor in reducing carbon emissions rather than timber consumption.

With no official recognition of Japan's excessive timber consumption and diminished environmental campaigns, the Japanese public is generally unaware of the scale of the problem.

FOCUS AREAS FOR THE INVOLVEMENT OF INTERNATIONAL NGOS

It is essential to look at the substantial success of previous campaigns run by the Japanese NGOs for ideas on how to target future campaigns. However, it has been difficult for the Japanese NGOs to sustain these campaigns over a long period of time and recently they have had to reduce the extent of their activities. Sustained campaigning within Japan could become possible with increased cooperation with, and support from, international NGOs (see *Recommendations*).

CONCLUSION

THE LAST THIRTY YEARS of the 20th century have seen unprecedented awareness of the plight of the world's forests. But only one fifth of the world's original forest remains as large tracts of ancient forest and the situation is getting worse as each year 10,000,000 ha are either degraded or destroyed.

Amongst the greatest threats to the world's forests are poverty, increasing population pressures in forested countries, and the escalating demand for timber products. This latter problem is amply serviced by a global timber industry, which, through its wealth, has brought it many powerful political friends, enabling it to operate with few or no effective controls.

Many NGOs and other bodies throughout the world are tackling the timber industry, but too few are tackling the core problem: demand. Japan consumes more timber than any other country in the world: thus Japan deserves the focused attention of not only its domestic NGOs, but of the international NGO community. Reducing timber consumption in Japan would reduce the pressure on vast areas of forest, and act as a catalyst to mount similar campaigns elsewhere.

Campaigns to reduce timber consumption meet the traditional opposition of the powerful industrial lobby of the government and, in Japan, a society that in both legal and social terms barely recognises the existence of non-governmental organisations. The Japanese NGO movement is struggling to promote change within government and industry, but the odds are stacked against them: government repression, lack of legal status (in particular, tax benefits) and a desperate need for financial and technical support prevents them from having anything near the kind of effects western NGOs have in their own countries.

This report was written both to highlight the threat Japan poses to the conservation of the world's forests and the people, economies and biodiversity that depend on them, and to illustrate that international NGOs must play a part in the campaign to counter this threat. This campaign must focus on cooperating with Japanese NGOs in Japan, and must mount a powerful and robust international lobby-exposing Japan's key role in forest destruction world-wide.

Table 1: Timber imports: principal products by source 1997 and 1992 (Source: Japan Exports and Imports)

Code number (see note 1)	Source	Equivalent volume	Value	Equivalent			
		(000 cu.m.)	(billion Yen)	code number	1997	1992	(see note 2)
Seats							
9401 61 020	Thailand	18		3	7	1	
9401 61 010	Thailand	14		8	6	4	
9401 61 010	Italy	4		1	5	2	
9401 61 010	China	12		1	4	0	
9401 61 020	USA	4		1	4	1	
9401 61 020	Malaysia	11		1	3	0	
9401 61 020	Italy	3		1	3	2	
9401 69 090	Thailand	7		9	2	3	
Other furniture							
9403 60 020	China	42		6	12	2	
9403 60 020	Taiwan	43		25	11	9	
9403 60 020	Thailand	44		26	11	6	
9403 60 020	Malaysia	43		16	8	2	
9403 60 020	Indonesia	34		9	7	2	
9403 60 020	Italy	11		4	7	5	
9403 50 000	Indonesia	38		20	6	3	
9403 90 020	Thailand	20		22	6	5	
9403 90 020	Indonesia	27		4	5	1	
9403 60 020	South Korea	11		4	5	3	
9403 60 020	USA	7		3	5	2	
9403 60 020	Vietnam	13		0	4	0	
9403 90 020	China	12		2	4	1	
9403 90 020	South Korea	7		1	3	2	
Prefabricated house units							
9406 00 010	Canada	116		18	15	3	
9406 00 010	USA	65		28	9	4	
9406 00 010	Finland	35		9	4	1	
Wood chips							
4401 22 000	USA	4,846		3,279	63	41	
4401 22 000	Australia	4,456		3,695	53	43	
4401 21 000	USA	2,074		2,984	24	38	
4401 22 000	Chile	1,856		2,434	23	30	
4401 22 000	South Africa	1,594		677	20	7	
4401 21 000	Australia	1,436		485	16	6	
4401 22 000	China	996		478	12	6	
4401 22 000	Brazil	415		5	5		
4401 21 000	Canada	358		1,064	4	14	
4401 21 000	Brazil	371		4	4		
4401 22 000	Thailand	302		132	4	2	
4401 22 000	Ecuador	253		3	3		
4401 21 000	New Zealand	259		336	3	4	
4401 22 000	Indonesia	277		450	3	5	
4401 22 000	Vietnam	232		3	3		
Charcoal							
4402 00 090	China	43			3		
Logs							
4403 20 098	USA	3,442		5,355	118	156	
4403 99 399	Papua New Guinea	1,777		1,000	37	16	
4403 20 093	Russia	2,032		1,636	26	23	
4403 41 090	Malaysia	997		3,135	25	69	
4403 20 091	Russia	1,786		834	25	13	4403 31 090
4403 20 096	USA	1,045		1,754	25	39	
4403 20 094	Russia	1,931		1,096	22	12	
4403 20 092	USA	706		712	21	18	
4403 20 091	New Zealand	1,694		1,259	20	15	
4403 49 219	Malaysia	698		1,631	19	36	4403 33 019
4403 49 190	Malaysia	647		1,975	17	45	4403 32 090
4403 99 399	Solomon Islands	396		314	8	5	
4403 20 093	USA	209		353	6	9	
4403 49 300	Gabon	200		6	6		
4403 91 000	USA	65		50	6	4	
4403 20 098	New Zealand	276		585	6	9	
4403 99 290	Malaysia	207		1,089	5	23	
4403 20 095	USA	81		148	5	8	
4403 99 399	Malaysia	217		483	4	9	
4403 49 600	Papua New Guinea	139		3	3		
4403 99 399	Russia	212		406	3	4	
4403 49 300	Equatorial Guinea	121		3	3		
4403 99 399	China	42		53	3	4	
4403 91 000	Russia	146		3	3		
4403 49 299	Malaysia	136		185	3	3	4403 33 099
4403 20 097	USA	57		96	2	3	
4403 20 096	Canada			344	9		
4403 20 093	Canada			192	5		
4403 20 092	Canada			133	4		
Sawn wood							
4407 10 110	Canada	1,626		748	62	23	
4407 10 322	Canada	1,428		1,546	56	48	4407 10 320
4407 10 323	USA	531			25		4407 10 320
4407 10 371	Canada	588		855	22	27	
4407 10 323	Canada	538			22		4407 10 320
4407 10 322	USA	452		1,367	21	48	4407 10 320
4407 10 381	Canada	385		190	17	8	
4407 10 129	Finland	492			17		
4407 99 500	Malaysia	178		243	14	14	
4407 99 500	USA	179		204	13	14	
4407 10 361	Canada	183		233	13	14	
4407 10 121	Russia	453		105	13	3	
4407 99 500	Indonesia	195		178	13	11	
4407 10 110	Austria	296			13		
4407 10 329	Canada	245			12		4407 10 320
4407 10 121	Chile	375		71	10	2	
4407 99 500	China	101		41	10	3	
4407 10 110	Sweden	538			10		
4407 29 290	Indonesia	128			10		
4407 10 129	Sweden	244			9		
4407 99 210	China	135		58	8	4	
4407 26 010	Malaysia	110			8		
4407 10 381	USA	152		227	8	11	
4407 29 110	Malaysia	84		216	6	11	4407 21 210
4407 10 379	Canada	124		118	6	5	
4407 10 349	Canada	75		102	6	6	
4407 91 000	USA	49		52	6	6	
4407 10 129	Austria	137			5		
4407 91 000	China	46		25	5	2	
4407 10 341	Canada	90		118	5	4	
4407 10 110	Chile	158		107	5	3	

4407 10 389	Canada	53	55	5	4	
4407 10 110	Indonesia	46		5		
4407 29 290	Malaysia	65		4		
4407 10 121	Canada	106	244	4	7	
4407 10 121	New Zealand	131	72	4	2	
4407 10 369	Canada	45	44	3	3	
4407 10 110	Finland	66		3		
4407 10 330	New Zealand	147	166	3	3	
4407 10 391	Canada	44	47	3	2	
4407 10 110	USA	35	64	2	3	
4407 10 371	USA	28	153	1	6	
4407 21 290	Malaysia		76		4	
4407 21 300	Indonesia		61		4	
4407 10 389	USA		38		4	
4407 10 341	USA		72		3	
4407 10 361	Taiwan		6		3	
4407 10 379	USA		80		3	
Veneer sheets						
4408 39 310	Malaysia	62		4		
4408 31 010	Malaysia	42		2	8	4408 20 010
Shaped wood						
4409 20 340	Indonesia	77	44	8	4	
4409 20 340	China	22		3		
4409 20 340	USA	31		3		
Waferboard and particle board						
4410 11 010	Canada	216	28	7	1	4410 10 010
4410 19 010	New Zealand	75		5		
Fibreboard						
4411 21 000	New Zealand	164	87	6	4	
4411 21 000	Malaysia	136		5		
Plywood						
4412 14 022	Indonesia	771	47	41	2	4412 12 022
4412 13 231	Indonesia	656	1,373	37	54	4412 11 023
4412 13 231	Malaysia	629		36		
4412 14 022	Malaysia	464		24		
4412 13 232	Indonesia	411	323	22	13	4412 11 024
4412 13 123	Indonesia	262		16		4412 11 023
4412 13 229	Indonesia	257	508	14	22	4412 11 022
4412 13 221	Indonesia	206	279	14	15	4412 11 021
4412 19 022	Canada	281	84	12	3	
4412 14 021	Malaysia	101		7		
4412 13 229	Malaysia	112		6		
4412 22 090	Indonesia	93		5		
4412 13 123	Malaysia	57	82	4	4	4412 11 023
4412 19 022	New Zealand	48		3		
4412 13 232	Malaysia	51		3		
4412 13 221	Malaysia	39		3		
4412 29 090	Indonesia	76		3		
4412 11 029	Indonesia	66		3		
4412 12 021	Indonesia	58		3		
Building components						
4418 90 222	USA	114	19	9	1	
4418 20 000	USA	14	3	6	1	
4418 90 229	Philippines	39	6			
4418 10 000	USA	8	3	5	2	
4418 90 222	Sweden	43	3			
4418 90 222	Canada	37	3			
4418 90 222	Germany	39	3			
4418 90 229	USA	13	3			
Tableware						
4419 00 010	China	145	84	14	7	
4419 00 020	China	12	6	4	3	
Artefacts						
4420 90 090	China	8		3		
4420 10 000	Taiwan	16		3		
Other articles						
4421 90 099	China	44	12	8	2	
4421 90 099	Indonesia	27	14	4	2	
4421 90 099	Taiwan	11	10	4	4	

Note 1: A new series of codes was introduced in 1996. The code number shown relates to the post-1995 series

Note 2: The code number shown relates to the pre-1996 series. Where no code number is shown, the code number for the given product is the same in both series

Note 3: Confined to selected products whose import value from given country exceeded Yen 3 billion in at least one of the two years

Note 4: Where weight but not volume data is given in source documents, weight has been multiplied by 1.5cu.m. per tonne to give an equivalent volume

Table 2: Timber products imported to Japan: composition in 1997 and 1992 (Source: Japan Exports and Imports)

Code number	Description	Equivalent volume		Value		Equivalent volume	
		(^{'000} cu.m.)	(billion Yen)	(% of sum)	(% of sum)		
4401 21 000	Wood chips: coniferous	4,570	5,241	54	67	8%	10%
4401 22 000	Wood chips: other	15,666	11,364	194	136	26%	21%
4403 20	Logs: coniferous	13,569	14,758	282	329	23%	27%
4403 3*	Logs: tropical wood	2,939	6,992	77	155	5%	13%
4403 9*	Logs: other non-coniferous	3,140	3,525	72	69	5%	7%
4407 10	Sawn wood: coniferous	10,549	7,181	428	260	18%	13%
4407 2*	Sawn wood: tropical	432	418	32	22	1%	1%
4407 9*	Sawn wood: other non-coniferous	905	845	71	59	2%	2%
4408	Veneer sheets	125	NA	11	13		
4409	Shaped wood	231	122	23	11		
4410 & 4411	Wafer-, particle- and fibreboard	784	115	29	5	1%	2%
4412 19	Plywood: coniferous	398	84	19	3	1%	1%
4412 11	Plywood: tropical	2,713	2,659	157	112	5%	5%
4412 12	Plywood: other non-coniferous	1,362	105	75	5	2%	4%
4412 other	Laminated wood	190	76	12	3		
4418 10 & 20	Windows and doors	33	5	15	3		

4418 90 222	Structural laminated wood	249	19	19	1			1%	
4418 90 229	Carpentry	85		12				1%	
4419 00	Cooking and eating utensils	156	114	18	12			1%	1%
9401	Seats	128	54	60	29			3%	2%
9403 40,50,60	Other furniture	363	140	104	47	1%		6%	3%
9403 90	Parts of furniture	96	42	26	14			1%	1%
9406	Prefabricated housing sets	269	68	36	11			2%	1%
44**	The remainder	253	180	32	22			2%	2%
4401	Wood chips	20,236	16,604	248	203	34%	31%	13%	15%
4403	Logs	19,648	25,275	431	553	33%	47%	23%	40%
4407	Sawn wood	11,885	8,445	531	341	20%	16%	29%	25%
4412	Plywood	4,664	2,923	263	123	8%	5%	14%	9%
9401 & 9403	Furniture	587	236	190	90	1%	0%	10%	6%
	The remainder	2,185	623	195	78	4%	1%	10%	6%
Sum		59,205	54,107	1,858	1,387				

Note: confined to products imported in amounts which exceed roughly one billion Yen

Note: if volume is not given in source data, an 'equivalent volume' is computed from weight (by multiplying by 1.5), but not area

Table 3: Companies which undertake civil engineering construction—selected information pertaining to FY 1996/7 (Source: Japan Company Handbook Spring 1998)

Company name	Civil engineering in Japan		Building in Japan		Revenues Overseas works	Other revenues
	Revenues (Yen billion)	Proportion of sum	Affiliation	Revenues		
Source of revenues	(Yen billion) (% of world-wide revenues)				other	
Kajima	365	7%	Sumitomo	1,126	1%	
Kumagai Gumi	288	6%		623	0%	
Nishimatsu	277	5%	Fuyo	271	24%	
Taisei	274	5%	Fuyo	1,109	8%	
Obayashi	256	5%	Sanwa	1,136	6%	
Penta-Ocean	245	5%	Fuyo	209	27%	
Shimizu	233	5%	DKB	1,094	7%	
Maeda	211	4%	Fuyo	248	7%	
Tobishima	193	4%	Fuyo	217	6%	
Fujita Corp.	176	3%	Tokai	483	3%	
Toda	166	3%	Mitsubishi	616	0%	
Hazama	166	3%	DKB	316	14%	
Japan Development Construction (JDC)	158	3%	Mitsui	190	10%	
Mitsui Construction	153	3%	Mitsui	264	8%	
Dai Nippon Construction	152	3%		146	1%	
Okumura	142	3%	Mitsubishi	200	0%	
Sumitomo Construction	140	3%	Sumitomo	164	9%	
Sato Kogyo	137	3%	DKB	388	3%	
Toyo civil engineering	124	2%	Sanwa	92	0%	98 Marine-based
Tekken	121	2%	Fuyo	178	0%	
Aoki	114	2%		89	41%	
Zenitaka	111	2%	Sanwa	212	0%	
Fudo Construction (Fudo Kensetsu)	108	2%		127	0%	
Daiho Corp. (Daiho Kensetsu)	105	2%	Sumitomo	65	0%	
Tokyu	102	2%		391	3%	
Toa civil engineering	82	2%	Fuyo	91	15%	112 Marine-based
Remainder	530	10%		3,008		
Sum	5,126			13,056		

Note: Revenue from Japan has been computed from worldwide revenues in given sector and proportion of revenue from all sectors earned overseas

Table 4: General trading companies—selected information pertaining to FY 1996/7 (Source: Japan Company Handbook and Annual Reports)

Itochu

Relationships: DKB group; Sumitomo companies own 7% of the shares; former name:- C. Itoh

Revenues: in FY96/7 for group Yen 15.3tri, and for relevant divisions ("Construction" and "Forest Products, General Commodities and Others") Yen 0.9tri and Yen 1.2tri respectively

Lumber and housing materials suppliers in Japan: Daiken, Itochu Kenzai, Sanko Plywood, Daishin Plywood, Everson McCoy Homes

Foreign affiliates: Canada: CIPA Lumber Co. (lumber and veneer manufacture); Malaysia: Daiken Sarawak (MDF manufacture, since 1993/4)

Wood chip and paper ventures outside Japan: Australia, Brazil, Chile, China, Indonesia, Thailand, USA

Remarks:

- expanding into housing, especially which cater for new lifestyles and mixed commercial/residential in natural settings
- promoting sales of laminated wood products for use in desks and flooring and investing in potential plywood substitutes manufactured from wood scrap from rubber and other tropical trees
- expanding its home centre operations

Kanematsu

Relationships: DKB group, also affiliated to Bank of Tokyo-Mitsubishi

Revenues: in FY96/7 for group Yen 2.9tri

Marubeni

Relationships: Fuyo group; Yasuda companies own 11% of the shares

Revenues: in FY96/7 for group Yen 15.6tri and for relevant division ("Construction, Forest Products and General Merchandise") Yen 2.0tri (of which Construction c.1/3)

Offices in regions of particular interest: Dalian, Khabarovsk, Vladivostok; Phnom Penh, Vientiane, Yangon; Abidjan, Accra, Lagos; Noumea, Port Moresby

Building and housing construction in Japan: Marubeni Construction, Marubeni Real Estate, Sinsei Construction, Fuyo Sekkei

Lumber and housing materials suppliers in Japan: (Kowa Forestry), Koyo Corp, Marubeni Building Materials, Maruhon Corp, Shinkoh Lumber

Foreign affiliates: Malaysia: joint venture with Hume Industries (MDF and fibreboard)

Wood chip and paper ventures outside Japan: Brazil (AMCEL, Amapa river FY93/4), Canada

Remarks: ● the world's largest dealer in pulp, handling 1.4mi t/a, having acquired Daishowa's Canadian operations

- shifting focus of wood construction materials from raw lumber to higher value-added finished products

- reorganisation of relevant division in 04/96 seeks to derive synergy from vertical intergration (raw materials procurement through to housing sales)
- emphasises "verdure" in real estate developments

Mitsubishi Corporation

Relationships: Mitsubishi group; Mitsubishi companies own 15% of the shares

Revenues: in FY96/7 for group Yen 15.2tri; revenues in FY93/4 for relevant division ("Textiles and General Merchandise") Yen 1.2tri of which imports 25%

Offices in regions of particular interest: Dalian, Khabarovsk, Vladivostok; Phnom Penh; Lagos, Yaounde

Lumber and housing materials suppliers in Japan: Greener Houser, Mitsubishi Shoji

Building and housing construction in Japan: MC Urban Development

Foreign affiliates: Brazil: Eidai deo Brazil Madieras (manufacture of plywood and doors); Canada: Crest Brook Forest Industries, Mayo Forest Products, MC Forest Investment

Wood chip and paper ventures outside Japan: Canada, Chile; also reforestation in Brazil, Malaysia

Mitsui & Co.

Relationships: Mitsui group; Mitsui companies own 10% of the shares

Revenues: in FY96/7 for group Yen 17.6tri; revenues in FY93/4 for relevant division ("General Merchandise") Yen 0.8tri of which imports 30%

Offices in regions of particular interest: Dalian, Khabarovsk, Vladivostok; Chittagong, Phnom Penh, Vientiane, Yangon; Abidjan, Kinshasa; Port Moresby, Noumea

Lumber and housing materials suppliers in Japan: Mitsui Bussan Forestry, Mitsui Wood Systems, TMC, Top & Homex (DIY centres)

Foreign affiliates: Russia: TM Baikal (timber for export); Nigeria: MBK

Wood chip and paper ventures outside Japan: Alaska

Remarks: ● building material processing facilities in Asia for export to Japan; business opportunities in China

- business opportunities in China, has joint venture with Mori Shigyo in Dalian

Nichimen

Relationships: Sanwa Bank group; Mitsubishi companies own 10% of the shares

Revenues: in FY96/7 for group Yen 3.9tri and for relevant divisions ("Food, Lumber and General Merchandise" and "Metals and Construction") Yen 1.2tri and Yen 0.9tri respectively

Offices in regions of particular interest: Dalian, Khabarovsk; Phnom Penh, Yangon; Port Moresby

Lumber and housing materials suppliers in Japan: Kinuura Sangyo, Nichimen Kenzai, Sanyo Marine; also Nichimen Materials

Building and housing construction in Japan: Nichimen House, Nichimen Jutaku Hanbai; also Nichimen Cozy Home, Nichimen Home, Nichimen Shonan

Foreign affiliates: New Zealand: Tachikawa Forest Products (saw mills); Russia: Somon (saw mill); Thailand: Pan Asia Packing (crating material)

Wood chip and paper ventures outside Japan: imports a considerable amount from diverse sources

Remarks: ● Japan's top importer of logs and lumber products; of which logs account for 55%

- seeking to expand its building operations, which seem to be only a small part of "Metals and Construction"
- main lumber depot and materials warehouse at Nagoya harbour; materials distribution centres in Kawasaki, Kyushu, Shizuoka and Tomokomai
- close ties with China National Chemicals Import and Export Corporation (SINOCHEM), the only company in China authorised to act as an international trading company
- wooden furniture components to be made in Malaysia, Thailand and Vietnam; stairway components to be made in Indonesia

Nissho Iwai

Relationships: Sanwa Bank group, ties also with DKB

Revenues: for group in FY 96/7 Yen 8.1tri; revenues for relevant division in FY94/5 ("General Commodities" -includes wood, paper and pulp, and chemicals) Yen 1.6tri

Offices in regions of particular interest: Dalian, Khabarovsk; Phnom Penh, Vientiane, Yangon; Abidjan, Kinshasa, Lagos; Port Moresby

Lumber and housing materials suppliers in Japan: Nichiwa, Niigata Gaizai, NI Lumber, Nippon Crown House, Nisshin Lumber, Nissho Iwai Building Materials, Suzuken, Torin, Yoshimoto Ringyo

Foreign affiliates: China: Juken Nissho; Indonesia: PT Mitra Mutiara (wooden interior products); Malaysia: Samling Plywood and Samling Fibre Board (both: plywood, since 1993);

Foreign affiliates: New Zealand: Nissho Roberts (wood buying), Juken Nissho (logging and LVL/floorboard manufacture) Papua New Guinea: Stettin Bay Lumber Co (infrastructure, logging, sawing)

Wood chip and paper ventures outside Japan: Australia, Brazil, Chile, China, Vietnam as Vietnam Japan Chip Corp.

Remarks: ● imports plywood, fibreboard, laminated materials and housing materials from Africa, Canada, Chile, China, Indonesia, Malaysia, New Zealand, Northern Europe, Russia, and the USA;

- has top market share for world-wide imports of wooden building materials such as logs, sawn lumber, plywood and fibreboard; focuses on China, South Korea and Thailand;
- constructs condominiums and 3-storey housing, taking advantage of its imports of timber

Sumitomo

Relationships: Sumitomo group; Sumitomo companies own 19% of the shares

Revenues in FY96/7: "Construction, Real Estate & General Products" Yen 1.2tri

Offices in regions of particular interest: Dalian, Khabarovsk, Nakhodka, Vladivostok; Chittagong, Phnom Penh; Abidjan, Luanda; Port Moresby

Lumber and housing materials suppliers in Japan: Sumisho Building Materials, Sumisho Lumber Trading; imports Ethan Allen furniture from USA

Building and housing construction in Japan: company names include either Sumisho or SC

Foreign affiliates: Chile: Fibranova (MDF and wood chips) Indonesia: PT Unggal Summit (particle- and fibreboard)

Wood chip and paper ventures outside Japan: Australia, Brazil, Chile, South Africa, USA

Remarks: ● paper recycling, especially through Summit (USA)

● interested in laminated wood products from Asia, and has started importing 2*4 prefabricated wooden housing elements

● interested in large scale urban development projects (supplied much of the construction material for the Tokyo Municipal Government building)

Tomen

Relationships: Tokai Bank group; former name:- Toyo Menka Kaisha

Revenues: in FY96/7 for group Yen 5.2trn; revenues in FY96/7 for relevant division ("Construction, Lumber & General Merchandise") Yen 0.4trn

Offices in regions of particular interest: Dalian, Khabarovsk, Vladivostok; Phnom Penh, Vientiane, Yangon; Abidjan

Building and housing construction in Japan: Tomen Housing, Tomen Real Estate

Remarks: ● interested in engineered wood products and imported housing

● seeking to develop and expand its sourcing of timber and wood products

● interested in mixed residential/ commercial developments

Note: 'Trillion' refers to 000,000,000,000

Table 5: Companies which undertake building construction—selected information pertaining to FY 1996/7 (Source: Japan Company Handbook Spring 1998)

Company name	Revenues from building (Yen million)	Proportion of sum	Affiliation	Remarks
Takenaka	1,262,768	10%		Privately owned by the Takenaka family.
Obayashi	1,135,993	9%	Sanwa	Ohbayashi family owns 9%; expanding into Tokyo area from its base in Kansai; promoting home remodelling; a major civil engineering contractor
Kajima	1,126,151	9%	Sumitomo	Sumitomo companies own 10%; management control by Kajima family; a major civil engineering contractor
Taisei	1,109,170	8%	Fuyo	No longer managed by the Taisei family; a major civil engineering contractor
Shimizu	1,094,366	8%	DKB	Member of "Sankinkai" association of Dai-Ichi Kangyo Bank group; Shimizu companies own 14%
Kumagai Gumi	623,311	5%		Tochi Kogyo owns 18%; Kumagai family retains an interest; being restructured with assistance from Sumitomo Bank; a major civil engineering contractor
Toda	615,730	5%	Mitsubishi	Closely associated with the Mitsubishi group; the Toda family retains an influence and owns 14%; Dai-ichi Shokusan owns 10%
Fujita Corp.	482,931	4%	Tokai	Specialises in urban redevelopment in Tokyo area
Tokyu	391,096	3%		Tokyu companies own 21%
Sato Kogyo	388,410	3%	DKB	The Sato family retains an interest but no longer has management control
Hazama	316,488	2%	DKB	Asahi companies own 7%; a major civil engineering contractor
Nishimatsu	271,083	2%	Fuyo	Sumitomo companies own 6%; a major civil engineering contractor
Mitsui Construction	264,184	2%	Mitsui	Member of "Nimokukai" association of the Mitsui group; Mitsui companies own 33%
Maeda	247,844	2%	Fuyo	Close relations with Sumitomo group; Hikarigoka Corp. and Sumitomo companies own 13% and 9% respectively; a major civil engineering contractor
Asanuma	243,698	2%	Sumitomo	Based in Osaka
Ando	239,408	2%	DKB	Dai Ichi Kangyo Bank owns 5%
Tobishima	216,780	2%	Fuyo	Being reconstructed after business failure, with help from Fuji Bank; unproved management
Zenitaka	212,219	2%	Sanwa	Izumi Co. owns 34%
Penta-Ocean	209,264	2%	Fuyo	Yasuda companies own 12%
Okumura	200,479	2%	Mitsubishi	Sumitomo companies own 10%; controlled by Okumura family
Matsumura-Gumi Construction Japan Development	200,118	2%	Sumitomo	Showa Tochi owns 16%; Kansai base
Construction (JDC)	190,195	1%	Mitsui	
Tekken	177,809	1%	Fuyo	Interested in redevelopment around railway stations
Sumitomo Construction	164,370	1%	Sumitomo	Member of Hakusuikai association of Sumitomo group; Sumitomo companies own 12% and account for 10% of the company's orders
Dai Nippon Construction	146,370	1%		Kinki Railway owns 34%; a leading resort contractor
Nissan Construction	145,951	1%		Part of Mycal group, whose companies own 50%; works closely with Hitachi Zosen and Nissan Motor
Daisue Construction	134,618	1%	Sanwa	Based in the Kansai area
Fudo Construction (Fudo Kensetsu)	126,842	1%		Nippon Steel Corp. and Mitsubishi companies own 15% and 10% respectively
Ichiken	106,463	1%		Part of the Daiei department store group, whose companies own 16%
Toyo	92,041	1%	Sanwa	Member of "Sanuikai" association of Sanwa group
Toa	91,096	1%	Fuyo	Yasuda companies own 12%
Aoki	89,198	1%		

Nakano Corporation	84,551	1%	Mitsubishi	1991 data; Oshima family and companies own 19%, Mitsubishi companies own 11%
Magara Construction	81,110	1%		Expanding into Kanto and Kansai areas from its base in the Hokuriku region
Matsui Construction	77,251	1%	Fuyo	Specialises in temple and shrine construction
Odakyu Construction	68,823	1%		Odakyu Electric Railway owns 44%; diversifying into prefabricated housing and real estate; Odakyu group accounts for 20% of sales
Daiho Corp. (Daiho Kensetsu)	64,625	0%	Sumitomo	Sumitomo companies own 15%
Yahagi Construction	57,141	0%		Part of the Nagoya Railroad group, whose companies own 20%
Iwatani	49,833	0%		Iwatani family owns 11%
Wakachiku	48,701	0%		Part of Ishibashi group; Ishibashi companies own 20%
Taihei Kogyo	46,821	0%		Nippon Steel Corp. owns 40% and accounts for 30% of the orders
Totetsu Kogyo	37,211	0%	Fuyo	
Fujiko	34,809	0%	Mitsui	Specially designated public orders account for nearly 50% of total construction
Katsumura Construction	34,360	0%	Mitsubishi	Close relations with Mitsubishi group, which whose companies own 10%
Nitto Construction	26,645	0%		Associated with Tokyo Nissan Auto Sales, which owns 7%
Oriental Construction	17,116	0%		Chichibu Onoda Cement owns 24%
Azel	11,015	0%		General contractor originally engaged in steel frame processing and construction.
Sum	13,056,454			

Note: Revenue from Japan has been computed from worldwide revenues in given sector and proportion of revenue from all sectors earned overseas

Sumitomo companies own (or have significant relationships with) a substantial proportion of the shares in several of the companies with largest revenues from building - Kajima, Kumagai Gumi, Nishimatsu, Maeda, and Daiho

Mitsubishi companies own (or have significant relationships with) a substantial proportion of the shares in several of the companies with largest revenues from building - Toda, Fudo, Nakano, and Katsumura

Dai Ichi Kangyo Bank owns a substantial proportion of the shares in a few of the companies which have the largest shares of building market: Shimizu and Ando

Table 6: Companies which undertake housing construction—selected information pertaining to FY 1996/7
(Source: Japan Company Handbook Spring 1998)

Description of activity	Company name	Revenues from given activity (Yen million)	Proportion of sum	Affiliation	Remarks	
Housing construction	Sekisui House	1,200,097	19%	Sanwa	Part of Sekisui Chemical group whose companies own 22%, but relations not close—rivals in overlapping sectors	
Building construction subcontracting	Daiwa House Industry	958,643	15%	Tokai	Sumitomo companies own 9%	
Condominiums	Daikyo	488,143	8%	Sanwa	The leading builder of condominiums; sales increasing to 13600 units	
Housing	Sekisui Chemical	482,434	8%	Sanwa		
Building materials and housing	Asahi Chemical Industry	366,743	6%		Sumitomo companies own 8%; parent of Asahi Woodtech	
Houses	Sumitomo Forestry	361,401	6%	Sumitomo	Sumitomo group owns 24%	
Building	Haseko	320,695	5%		One of the leaders in condominium construction	
Housing materials	Misawa Homes	262,609	4%	Tokai	Misawa Homes owns 10%; major builder of wooden prefabricated houses, main factory in Matsumoto	
Systematised housing materials & construction	National House Industrial	233,751	4%		Matsushita companies own 53%; fourth largest builder of prefabricated houses	
Construction contracts	Mitsui Home	226,159	4%	Mitsui	Largest 2x4 construction method house builder	
Housing business	Dia Kensetsu	195,161	3%		Hironori Shimotsu and Goko Kanri Co. each own 18%; Goko Shoji Co. owns 17%; a leading builder of condominiums	
Housing and other construction	fibrebord	Daiken	152,058	2%		DKB (Itochu) Itochu companies own 16% and Sumitomo companies own 15%; top manufacturer of wooden and mineral fibrebord
Real estate sales	Towa Real Estate Development	147,754	2%	Tokai	Real estate developer affiliated with Fujita Corp.; major general contractor	
Order-built houses	Higashi Nihon House	128,514	2%		Isao Nakamura and Shinhigashi Co. each own 13%; national sales; mainly conventional built-to-order wooden structures	
Order-built houses	SxL	124,746	2%	Fuyo	Custom-built and prefabricated wooden housing; expanding from Kansai area into Kanto area	
Building	Arai Gumi	116,904	2%		Specialises in condominiums; expanding from Hyogo (in Kansai area) into Tokyo area	
Building	Shokusan Jutaku Kogyo	91,007	1%	Sanwa	Leading builder of custom-built houses, stores, apartment houses and office buildings	
Building	Ohki	75,810	1%	Fuyo	Specialises in collective housing	
Private construction	Taisei Prefab Construction	62,089	1%	Fuyo	Taisei Corp. owns 50%	
Housing	Mitsui Wood Systems	51,636	1%	Mitsui	Originally the lumber division of the current Mitsui & Co, whose companies own 53%	
Condominiums	Azel	49,243	1%		Expanded into construction of condominiums in 1976 from its main business region, the Keihin area	
Housing	Fuso Lexel	44,428	1%	Sanwa	Daikyo companies own 36% of the shares; Nippon Kokan Koji owns 13%	
Housing construction (subcontracting)	National House Industrial	37,702	1%		Matsushita companies own 53%	
Houses with residential lots and order-built houses	Nisseki House Industry	37,257	1%	DKB	Ono group (ex-DKB group); three shareholders own 30% (sum); steel-frame prefab. apartments (<4-storeys) and family houses	
Real estate	Meiwa Estate	27,506	0%		Hanabusa Kohatsu owns 35%; the Harada family own 29%	
Housing construction	Sekisui Jushi	15,493	0%	Sanwa	Resin processor for Sekisui Chemical group, whose companies own 23%	
	Sum	6,257,983				

Note: Revenue from Japan has been computed from worldwide revenues in given sector and proportion of revenue from all sectors earned overseas

Various reports include the following as leading builders of prefabricated houses: Sekisui House, Daiwa House, Misawa Home, Sekisui Chemical, National House Industry, Mitsui Home, and SxL

Table 7: House builders in selected sectors (Source: Market Share 1996)

Units: Number of units sold in FY1995

Condominiums	
Daikyo	10,888
Dia Kensetsu	6,058
Mitsui Real Estate Development	5,789
Towa Real Estate Development	5,122
Marubeni	4,530
Recruit Cosmos	4,212
Nomura Real Estate Development	3,253
Sumitomo Realty and Development	2,746
Tokyu Land	2,285
C.Itoh & Co.	2,281
Anabuki Construction	2,048
Mitsubishi Estate	2,026
Daiwa Danchi	1,964
Haseko Real Estate Development	1,857
Meiwa Jisho	1,752
Remainder	121,519
Total	178,330
Prefabricated houses	
Sekisui House	72,059
Daiwa House Industry	45,050
Misawa Homes	41,000
Sekisui Chemical	32,000
National House Industry	27,000
Asahi Chemical Industry	15,600
Nisseki House Industry	8,930
SxL	8,610
Taisei Prefab Construction	5,100
Kubota Homes	3,900
Remainder	39,498
Total	298,747
2*4 houses	
Mitsui Home	12,000
Sekisui Chemical	7,000
Taihei Jutaku Chemical	2,160
Kinoshita Komuten	2,000
Sanwa Home	1,900
Remainder	48,929
Total	73,989
Wooden houses	
Sumitomo Forestry	10,540
Higashi Nihon House	4,908
Shokusan Jutaku	3,923
Taihei Jutaku	2,490
Remainder	644,263
Total	666,124

Table 8: International ventures of pulp and paper companies (Source: Japan Paper Association-Pulp and Paper Statistics 1997)

Oji Paper

Raw materials

Australia: Albany Plantation (with Itochu and Sensyukai);
 Indonesia; PT Chip DECO (with Nippon Paper Industries, wood chips)
 New Zealand: Southland Plantation (with Itochu) and Hawkes Bay (with Nippon Paper Industries, wood supply);
 Papua New Guinea: Jant (wood chips);
 Vietnam: Quynhon Plantation (with Nissho Iwai and Dai Nippon Printing)

Pulp, Paper and Paperboard

Canada: Crestbrook Forest Industries (with Mitsubishi), Alberta Pacific (with Mitsubishi and Kokuetsu Paper Mills), Howe Sound Pulp & Paper, Avenor Maritimes (with Mitsui & Co.)
New Zealand: Pan Pacific Forest Industries (with Nippon Paper Industries)

Nippon Paper Industries

Raw materials

Australia: Bunbury Tree Farm (with Mitsui & Co., also wood chips), Green Triangle Plantation (with Daio Paper and Nissho Iwai) and Green Triangle Tree Farm (with Mitsui & Co.);
Chile: Volterra Plantation (with Sumitomo)
Indonesia: PT Chip DECO (with Oji Paper, wood chips);
New Zealand: Hawkes Bay (with Oji Paper, wood supply);
South Africa: Forest Resources (with Sumitomo)

Pulp, Paper and Paperboard

Indonesia: PT Tanjung Enim Lestari Pulp & Paper (with Marubeni, 450,000t/a hardwood pulp);
New Zealand: Pan Pacific Forest Industries (with Oji Paper);
USA: North Pacific Paper

Daishowa Paper Manufacturing

Raw materials

Australia: Harris Daishowa (with Itochu, wood chips)

Pulp, Paper and Paperboard

Canada: Daishowa-Marubeni International; Quesnel River Pulp; Cariboo Pulp & Paper (with Marubeni); Daishowa Inc.;
China: Shanghai Daishowa International Paper Co. (with Yaohan Japan);
USA: Daishowa America Co.

Daio Paper Corp.

Raw materials

Australia: Green Triangle Plantation (with Nippon Paper Industries);
Chile: Forestal Anchile (with Itochu, plantation and wood chips);
USA: California Wood Fibre Corp. (with Marubeni) and Oregon Chip Terminal

Mitsubishi Paper Mills

Raw materials

Australia: Tas Forest Holdings (with Mitsubishi);
Chile: Forestal Tierra Chilena (with Mitsui & Co., plantation)

Rengo Co.

Pulp, Paper and Paperboard

China: Zhongshan Rengo (containerboard)

Japan Brazil Paper and Pulp Resources Development

Pulp, Paper and Paperboard

Brazil: Cellulose Nippon-Brasiliiera (joint business of 16 companies and Itochu, 400,000t/a hardwood pulp)

Table 9: Building materials suppliers—selected information pertaining to FY 1996/7 (Source: Japan Company Handbook Spring 1998)

Description of activity	Company name	Revenues from given activity (Yen million)	Proportion of sum	Affiliation	Remarks
Building Products Group	Matsushita Electrical Works	377,100	29%		Owns National Wood Products; wood flooring, stairway units, wall panels, joinery materials, doors, bathroom and kitchen fixtures, furniture
Lumber and housing materials	Yuasa Trading	194,622	15%	Yuasa	Sumitomo companies and Yuasa companies each own 11%
Building materials	Noda	80,951	6%		Noda family owns 16%; national sales network, a major company in its sector; comprehensive product range
Building equipment and materials	Kubota House	78,122	6%		Fuyo Consolidated subsidiary of Kubota, suffering from reduced house starts
Housing materials	Sekisui Chemical	74,860	6%	Sanwa	
See "Remarks" column	Dantani	72,990	6%		Dantani family owns 13%; comprehensive range of housing equipment, housing and building materials, fibreboard and plywood boards
Laminated lumber and special plywood	Juken Sangyo	65,320	5%		Controlled by Nakamoto family, which owns 14%; a leading supplier of laminated veneer lumber and flooring and stairway fixtures
Building materials, lumber and others	Nippon Paper Industries	82,773	6%		Japan's second largest paper manufacturer; has extensive holdings of forests in Japan
Housing equipment, building materials & boards	Aica Kogyo	40,282	3%	Tokai	Manufacturer of melamine boards and aims to become all-round maker of housing-related materials
Building materials and fibreboard	Mitsui Wood Systems	39,431	3%		Mitsui Originally the lumber division of the current Mitsui & Co., whose companies own 53%
Functional building materials	Meiwa Trading	36,705	3%	Mitsubishi	Mitsubishi companies own 50%

Building materials and others	SxL	35,401	3%	Fuyo	Custom-built and prefabricated wooden housing; expanding from Kansai area into Kanto area
Building materials	Okura Industrial	28,527	2%		Sumitomo companies own 11%; some house building business to take advantage of the building materials it manufactures
Lumber and lumber products	Daiken Kogyo	26,445	2%	DKB (Itochu)	Itochu companies and Sumitomo companies own 16% and 15% respectively; top manufacturer of wooden and mineral fibreboard
Lumber, housing construction	Kanematsu NKK	13,500	1%	DKB (Kanematsu)	Kanematsu companies own 28% and Nissan companies own 8%; ties with Hokushin in selling furniture and housing materials
Fibreboard	Hokushin	11,807	1%	DKB (Kanematsu)	Kanematsu companies own 27% and control sales; top manufacturer of MDF with 60% share
Building materials	Ibiden	11,455	1%		Mitsui companies own 15%
Building materials	Nihon Kentetsu	9,433	1%		Mitsubishi companies, Shaaman Co., and Asahi Glass own 43%, 11% and 11% respectively
Building materials	Howa Machinery	8,085	1%		
Fibreboard	Nichiha	6,052	0%	Sumitomo	Sumitomo companies, Otemachi Tatemono, and Ataka Kenzai, own 15%, 11% and 8% respectively; a leader in fibreboard
	Sum	1,293,861			

Note: Revenue from Japan has been computed from worldwide revenues in given sector and proportion of revenue from all sectors earned overseas

Note: Several other companies have substantial building material supply operations. However, their details have not been found in the source material. One of the largest, Eidai, is affiliated to Mitsubishi

Table 10: Pulp and paper companies (Source: Japan Paper Association—Pulp and Paper Statistics 1997)

Company name	Number of mills in Japan	Pulp Production (No) ('000 tonne)	Paper Production (%)	Paperboard Sales (%)	Total assets (Yen billion)	Number of Affiliation (Yen billion)	Remarks employees
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Oji Paper	17	8,741	33%	49%	19%	5,973	8,451	8,991	Mitsui	Forest holdings: largest in Japan, also in Canada and New Zealand
Nippon Paper Industries	11	5,186	41%	59%		7,020	8,969	7,882		Forest holdings: 85,000ha in Japan; comprises Jujo Paperboard and Sanyo-Kokusaku Pulp (Fuyo group) 04/1993
Honshu Paper						3,759	4,629	5,520	(Mitsui)	Merged with Oji Paper 10/1996
Daishowa Paper Manufacturing	5	3,868	31%	52%	17%	3,232	6,405	3,678		Marubeni Corp. and Asahi companies own 10% and 8% respectively; control of Saito family waning
Daio Paper Corporation	2	2,840	40%	52%	8%	3,103	4,450	2,943		Influenced by Daio family; Daio Shokko owns 8%
Jujo Paperboard	2	704			100%				(Mitsui)	(With Sankyo Kokusaku Pulp) part of Nippon Paper Industries since 04/93; became Japan Paperboard Industries in 10/97
Settsu Corporation	3	1,110			100%	676	2,011	984	Sumitomo	Sumitomo companies own 12%
Mitsubishi Paper Mills	5	1,480	42%	55%	3%	1,806	2,849	3,670	Mitsubishi	Mitsubishi companies own 13%
Hokuetsu Paper Mills	4	1,292	34%	45%	22%	1,089	1,629	1,096	DKB	Close relations with Oji paper; Japan is the source of much of its wood-chip supplies
Chuetsu Pulp & Paper	3	1,458	46%	52%	2%	1,043	1,456	1,255	Oji	Oji Paper owns 30%
Rengo	3	772			100%	2,310	2,250	3,782	Sumitomo	Sumitomo companies and Toyo Seikan own 21% and 12% respectively
Sanko Paper Manufacturing	2	617		1%	99%	373	429	607	Mitsui	
Tokai Pulp	1	808	27%	19%	54%	526	687	610		Okura Enterprise and Mitsubishi companies own 22% and 10% respectively; forest holdings 26,000ha
Marusumi Paper Manufacturing	2	874	38%	62%						
Tohoku Paper Manufacturing	1	794	36%	19%	45%					
Chuo Paperboard	2	489			100%	241	528	428		Influenced by the Saito family, which owns 15%
The Japan Paper Industry	4	610	21%	14%	65%	528	548	948	Fuyo	Merged with Jujo Paper Board in 10/1997 to form Japan Paperboard Industries, 1.5mit/a capacity (12% market share)
Koa Kogyo	1	464			100%					
Nippon Kakoh Seishi	2	453	24%	76%		580	804	927	Mitsui	
Takasaki Paper Manufacturing	2	331			100%	292	446	398	Mitsui	Mitsui companies own 25%; relations with Rengo
Kishu Paper	2	503	38%	62%		511	552	1,238		Holds forestation subsidiary for wood-chip production and the lumber trade
Nagoya Pulp	1	651	53%	47%					Tokai	
Marusan Paper Manufacturing	1	271			100%					
Tomoe-gawa Paper						402	445	947		
Tokushu Paper Manufacturing						256	457	621		
Mishima Paper						154	192	583	Fuyo	
Crecia Corporation	4	234			100%					
Sum	80	34,550	31%	44%	25%	33,874	48,187	47,108		

Note 1: Sale, asset and employee data are given only for "listed" companies

Note 2: At end of 1996, Japanese wood chip carriers numbered 83 and totaled 3.7 million tons in dead weight

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