

# Subsidy or incentive?

**The detailed analysis of subsidies affecting the tropical forest sector requires a well-thought-out framework**

by  
**Alberto Goetzl**

Seneca Creek Associates



**Competitor:** tropical timber vies for markets with temperate timber, such as that produced in this semi-natural Douglas fir forest on the Pacific coast of North America. Subsidies could have a big impact on competitiveness. *Photo: A. Sarre*

**E**VERY GOVERNMENT uses subsidies of one kind or another to achieve policy aims. Subsidies serve to stabilize producer or consumer prices, strengthen industries important to national security, provide a stable supply of agricultural or industrial commodities, develop energy resources, promote employment, and/or encourage conservation. Governments regularly fund various research, education, and arts and humanities programs as 'public goods' deemed worthy of subsidies. In fact, subsidies are an important policy tool for meeting specific social, economic and cultural needs.

## **What is a subsidy?**

Definitions of subsidy vary depending on context. In one basic definition, subsidies are *government actions that encourage certain specified activities or improve the profitability of specific sectors in an economy*. Such a definition can be interpreted broadly or narrowly. In the broadest sense, almost all government programs might be considered subsidies. However, not all government actions affect the competitiveness of specific sectors of an economy. To the extent that government gives financial support directly or indirectly to assist a specific economic sector, such financial support can be viewed as a subsidy.

Subsidies are not always transparent and data on their value are not obtained in a consistent way. However, based on a compilation of data from different sources, the Organization for Economic Cooperation and Development

(OECD 2004) estimated that its member countries transfer US\$400 billion annually to different sectors. Other analyses peg subsidies on a global scale at over US\$1 trillion, or equivalent to as much as 4% of global gross domestic product (Knirsch et al. 2006). While subsidies in industrialized countries tend to target agriculture, transport and manufacturing industries, developing countries tend to subsidize energy, water, fisheries and, to a lesser extent, agriculture (Pearce 2003).

Subsidies become contentious when they favour one economic sector to the detriment of another, inhibit competition, have adverse environmental impacts or distort trade. Subsidies are among the most controversial of all non-tariff measures on the agenda of the World Trade Organization (WTO) and other trade negotiations because they can and often do affect trade by protecting domestically produced products from import competition or, alternatively, by promoting exports.

Some subsidies are blamed for causing environmental harm; environmental groups cite them as a principal cause of forest degradation and destruction. Subsidy issues related to timber concessions, licensing and timber access have been at the centre of bilateral trade disputes as well as debates about over-harvesting and the loss of high-conservation-value forests. Consequently, substantial international attention is being paid to trade-distorting and environmentally harmful subsidies.

The question of whether subsidies for products that compete with tropical timber in global or specific country markets affect their supply and demand is difficult to analyse. While timber products compete against non-timber products in some applications, they most often compete against each other in ways that are both market- and technology-driven. The major categories of market competition for tropical timber products are: wood panels; coniferous and temperate species from natural or semi-natural forests; non-coniferous species from fast-growing plantations; non-wood construction materials; and non-wood industrial materials. In the context of tropical timber production, consumption and trade, care must be taken in defining what constitutes a subsidy, determining which competing sector is benefiting, calculating the extent to which they may be benefiting, and observing whether or not there are unintended environmental or other effects.

In their simplest and most transparent forms, subsidies are direct payments or income transfers to a specific class of producers. Thus, grants or low-interest loans to expand capacity for manufacturing steel could be considered a subsidy. The same would be true of a tax expenditure (tax rebate or preferential tax treatment) given to a class of producers to make it more profitable. Subsidies may be designed to affect land-use, commodity extraction, agricultural or manufacturing production, means of transport, energy use, capital investment, or trade. They can be used to protect domestically produced products from import competition or, alternatively, to promote their export.

From an analytical perspective, the effectiveness and consequences of subsidies can be very complicated. Subsidies can simultaneously have both positive and negative impacts on economic development and the environment. They can

## Policy options

Subsidies potentially affecting forests, forest products and competing industries

<b>DIRECT ASSISTANCE TO FOREST &amp; FOREST PRODUCTS</b>	
<b>Reforestation/afforestation payments</b>	Government support for tree-planting or to establish plantations, usually in the form of direct payments or tax credits; support for overseas plantation investments
<b>Favourable concession terms</b>	Fees or royalties at less than full economic rent; lax enforcement; foreign assistance to logging concessions
<b>Favourable stumpage fees</b>	Administratively priced timber fees at less than competitive market prices
<b>State-owned enterprises</b>	Reduced or forgiven taxes and debt; maintaining excess or idle plant capacity; funding for expansion
<b>Price supports</b>	Usually in the form of quotas on production, exports or imports
<b>Investment grants &amp; financing</b>	Government loans and loan subsidies for capacity expansion and new technology; promoting foreign investment
<b>Energy rebates/credits</b>	Examples include tax credits for specific types of fuel use or energy production equipment; typically intended to lower energy costs for producers or encourage fuel switching
<b>INDIRECT ASSISTANCE TO FOREST &amp; FOREST PRODUCTS</b>	
<b>Support for infrastructure</b>	Road-building in forest areas
<b>Marketing &amp; promotion</b>	Government funding of domestic and/or export promotion for a given class of products
<b>Conservation payments</b>	Assistance in meeting regulatory requirements or improving timber stands
<b>Management services</b>	Government-provided technical or management assistance
<b>Research &amp; development</b>	Government-financed research and development programs
<b>Purchasing preferences</b>	Government policies that influence purchasing decisions
<b>Regulatory relief</b>	Less restrictive environmental, safety or labour regulations
<b>Other</b>	Various government requirements such as phyto-sanitary rules that support one sector or another
<b>DIRECT ASSISTANCE TO COMPETING MATERIALS</b>	
<b>Price supports</b>	Usually in the form of quotas on production, exports or imports, but also government purchases or storage
<b>State-owned enterprises</b>	Reduced or forgiven taxes and debt; maintaining excess or idle plant capacity; funding for expansion
<b>Energy rebates/credits</b>	Exemption from value-added tax on energy purchases
<b>Investment grants or financing</b>	Government financing for manufacturing not available for wood products
<b>Tax credits</b>	Tax credits or other tax-related policies that are available to competing industries but not wood products
<b>INDIRECT ASSISTANCE TO COMPETING MATERIALS</b>	
<b>Marketing &amp; promotion</b>	Funding of programs that favour competing products
<b>Building infrastructure</b>	Infrastructure spending that assists competing industries
<b>Management services</b>	Services available exclusively to competitors of wood products
<b>Research &amp; development</b>	Research support geared to developing wood substitutes
<b>Purchasing preferences</b>	Government policies that discriminate against wood products
<b>Regulatory relief</b>	Less restrictive environmental, safety or labour regulations for non-wood industries
<b>Preferential building regulations</b>	Construction and product standards that favour non-wood materials and/or certain species over others

stimulate agricultural production to ensure a stable food supply while at the same time encouraging the increased use of pesticides, which could have deleterious effects on water quality and habitat. They can provide employment opportunities but also increase pollution due to industrial expansion. Direct payments for planting trees can lower fibre costs for processing wood products while also encouraging the restoration of degraded or hydrologically sensitive landscapes. Reduced-cost access to forests and timber can stimulate over-harvesting



**Making the grade?** Funds from government for the construction of logging roads can be classed as a subsidy. *Photo: A. Sarre*

or, conversely, it can reduce high fuel loads that add to the risk of wildfire. In many cases, there are few easy answers to questions regarding the benefits or harmful effects of subsidies.

### **Subsidies in a trade context**

The most commonly referenced ‘official’ definition of subsidies is used within an international trade context and is contained in the WTO Agreement on Subsidies and Countervailing Measures (SCM). The SCM specifies that a subsidy exists if “there is a financial contribution by a government or any public body within the territory” of a member government that “confers a benefit”. In general, a subsidy covered under the SCM must involve a direct transfer of funds, a fiscal incentive, or provisions of goods and services, and it must confer a benefit that causes economic harm to producers in another member country. Most SCM-defined subsidies are not prohibited automatically but they are actionable if challenged and shown to cause economic injury to producers in another country. The WTO definition and rules require specificity: if a financial incentive is not specific to an industry or sector and is widely available in an economy, then it is not likely to be actionable under WTO rules.

While the WTO is the main forum for multilateral negotiations regarding subsidies in agriculture and non-agricultural manufacturing, discussions about environmentally harmful subsidies have also been on the agendas of the OECD, the Food and Agriculture Organization of the United Nations, the Asia-Pacific Economic Cooperation forum (APEC) and others. Greenpeace International recently published a report arguing that the Convention on Biological Diversity is a more suitable international policy framework than the WTO for reducing subsidies (Knirsch et al. 2006).

### **Estimating the value of subsidies**

A large share of the analytical work carried out on subsidies has involved the agricultural sector. The measures most often used for assessing agricultural subsidies are the producer support estimate (PSE), consumer support estimate (CSE) and the aggregate measure of support (AMS). Each provides a specialized way of estimating the overall value that farmers and/or consumers obtain from agricultural support payments or other subsidies. The economic literature also includes numerous other indicators that can be used for measuring subsidies but, in general, there are no widely accepted indicators for measuring subsidies in forestry and forest products manufacturing.

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### **Common subsidies in the forest sector**

When compared to subsidies that have been identified and studied in agriculture, subsidies in the forest products sector are quite small. For example, the European Union and the US combined spend more than US\$150 billion annually on farm support payments alone. This contrasts with OECD (2005) estimates that subsidies in the forest sectors of its member countries are about US\$6 billion. Knirsch et al. (2006) also cites estimates of forestry subsidies that represent at most 3–4% of total subsidies worldwide.

Subsidies directed specifically at the forestry and forest products sector can take a number of direct and indirect

forms and can be motivated by environmental, social (eg employment) or economic rationales, or a combination thereof. While the literature includes a number of reports about subsidies in the forest and forest products sector, no comprehensive global compilation of these could be found. Several multi-country or regional compilations of related information have been attempted, including for twelve European countries (EFI 2004), which found that the most common types of activities funded by government were related to forest protection, planning and forest inventory, infrastructure, and afforestation and reforestation. The *table* (page 4) shows some of the direct and indirect subsidies that may be used to assist the forest sector and its competitors.

***Some argue that non-tariff barriers such as eco-labelling or verification requirements are forms of subsidies because they favour certain producers over others.***

An APEC study of its members concluded that indirect subsidies on forest products such as export bans, quotas and trade import/export licensing requirements had the most obvious impact on international trade (APEC 1999). It also found that afforestation subsidies were among the most widespread of all subsidies in the sector. Environmental NGOs are typically critical of public policies or publicly funded programs that support logging in ways that might adversely affect the environment. Subsidies to logging companies in the form of below-market concession fees, tax preferences, road construction and other kinds of grants or assistance have been characterized as perverse because they contribute to forest loss or degradation (Sizer 2000).

### **Types of subsidized activities**

#### **Afforestation/reforestation**

Incentives for afforestation or reforestation are relatively common throughout the world. In developing countries, funding for afforestation projects is often provided through foreign assistance. In most cases, support measures for afforestation and reforestation are enacted on environmental grounds, although subsidized forest planting can be controversial in areas where natural forests are being replaced by plantations or where local communities are perceived to be disadvantaged. Whether or not support for reforestation can be considered a subsidy depends on the nature of the project(s) and whether or not the intended purpose is to make wood fibre available for processing at a lower cost than would otherwise have been possible.

#### **Harvesting rights, licences and concession policies**

Another common—and often controversial—form of direct government intervention in the forest sector is through concessions or the granting of harvesting rights. Concessions might be considered subsidized if the costs, licensee fees or royalties are below a comparable resource rent that would reflect the full commercial value of logging rights. Thus, the

price of timber as charged through the concession fees may be less than a comparable market-transacted price and/or less than the long-term cost of sustainable management. Forest concessions are granted for a variety of reasons, but subsidized resource rents are typically justified as a way of creating employment or promoting development in rural or remote areas (Contreras-Hermosilla 2000). In many of the world's tropical timber-producing countries, forests are owned by the state and exploited through concession systems. This immediately raises the issue of whether the fees charged for concessions or licences reflect any kind of market price or the costs (internal and external) of managing the resource on a sustainable basis. In some cases, concessionaires may benefit additionally from state-constructed infrastructure such as access roads they otherwise would have had to construct themselves if they owned the forest.

#### **Export/import duties & restrictions**

Subsidies in the form of export taxes, quantitative restrictions or bans on logs that benefit domestic processing have been enacted in some countries. Restrictions on the export of unprocessed raw material have the effect of lowering log costs for domestic manufacturers and thus increasing their competitiveness in domestic and global markets. Similarly, import tariffs and non-tariff import restrictions give price support to domestic producers. Tariff escalation, where raw material is allowed to enter a country duty-free or with low tariffs while more processed products have higher duties, also provides a form of price support and serves to protect domestic processors from import competition. Some argue that non-tariff barriers such as eco-labelling or verification requirements are forms of subsidies because they favour certain producers over others.

#### **Grants/financing for infrastructure or increased capacity**

Government programs that finance new capacity or promote the sale or use of particular products domestically or for export are also often cited as subsidies. Some governments provide budgetary transfers (direct payments or tax expenditures) to enterprises for building processing capacity specifically in forest areas or they underwrite road construction that provides access to an area of forest for harvesting.

#### **Tax policies**

Preferential tax programs for income related to the production and sale of forest products are also a significant form of government assistance to the forestry sector. Tax policies that encourage investment in new capacity, decrease property tax rates for forest use, provide tax preferences for reforestation and forest management expenses, or lower taxes on timber-related income are all forms of tax expenditures that are cited in the literature as subsidies. EFI (2004) found that half of the total value of government

assistance to forestry in the (European) countries studied was in the form of tax concessions. However, taxes that affect any one sector must be understood within the context of a country's overall tax system.

### **Frameworks for analysis**

For future research on the issue of subsidies affecting tropical timber, it may be useful to organize subsidy information by one or more of the following categories, as described by Steenblik (2003):

- the intended target of the subsidy: consumers or producers, outputs, inputs and value-adding factors (individual and collective);
- the instrument used for the subsidy: eg budgetary expenditure, tax expenditure, assumption of contingent liabilities, market transfers, and under-pricing of a publicly owned or managed asset;
- how the subsidy is provided: ie the pathway of benefit—direct, indirect, explicit or implicit; and
- the subsidy's purpose: eg regional development or energy conservation.

Among the most common purposes cited for subsidies related to the forest and forest products sector are to promote conservation, increase exports, offset import competition, expand manufacturing and stimulate rural development.

### **Subsidies for competing sectors**

Numerous factors affect the demand for timber products globally and tropical timber products specifically. Trends in tropical timber demand are affected by competition from non-tropical species (including those from fast-growing plantations), composite wood panels, and non-wood products, some or all of which might benefit from subsidies.

#### **Coniferous and temperate species (natural forests)**

Apart from grants or tax incentives for afforestation or reforestation, the most common subsidies that support the production of softwood or temperate species products are associated with regional development. For example, substantial funding has been provided for the modernization and expansion of timber-using enterprises in Eastern Europe and Germany. The governments of Canada, Korea and China, among others, provide support for new factories in the wood-using industries, most of which utilize non-tropical timber species.

#### **Fast-growing plantation species**

Wood from fast-growing plantations is competing with and substituting for tropical timber in an increasing variety of industrial applications, including furniture and plywood and composite panel products. During most of the 1980s and 1990s, plantation establishment in many countries was promoted through direct government payments, tax expenditures, or technical assistance.



**Clear-cut case?** Afforestation and reforestation incentives are regarded by many as subsidies that could adversely affect competing products, such as timber grown in natural tropical forests.

*Photo: A. Sarre*

#### **Wood panels**

Increasingly, wood panels such as oriented strand board, medium density fibreboard and particleboard are substituting for solid sawn lumber in construction and industrial applications. The increase in the production and consumption of composite wood panels is, in some countries, supported by subsidies to establish fast-growing industrial plantations and/or for new or expanded capacities in manufacturing.

#### **Non-wood construction materials**

Requirements to assure the legality and sustainability of timber sourcing is likely having the effect of shifting demand from tropical to temperate timber and may also be shifting consumption away from wood products altogether towards competing materials such as steel and concrete. Government support for the steel and/or masonry industries may have a negative impact on the use of wood products.

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#### **Non-wood industrial materials**

In the industrial market, polyvinyl chloride, better known as PVC, and metals such as aluminium used for window and door frames, exit doors, shutters, mouldings and similar products are pervasive competitors of timber products and of tropical timber products in particular. Wood veneer also faces stiff competition from plastics and paper. In fact, the fastest-growing use of plastics and paper as a substitute for wood (principally veneer) is as an overlay for the composite panels used in furniture or architectural woodwork. In this case, the choice of material is probably less linked to subsidies as it is to price and performance. Nevertheless, this is a market for tropical timber products that could be

affected by government policy or intervention that favours capital-intensive manufacturing.

### **Subsidies for competing products**

Of subsidies to the manufacturing sector, those available to steel, plastics or competing wood products are of particular interest to the tropical timber trade. No specific compilation of subsidies that foster competing materials is available. In general, it would be difficult to identify subsidies to these manufacturing sectors that bear directly on timber markets and tropical timber markets in particular.

In a number of countries, the steel industry has benefited from government intervention, mostly in response to foreign competition but also to construct new capacity. Steel has been viewed historically as a strategically important material for national security and to underpin other manufacturing (cars, trucks, machinery, etc), although direct aid to the steel sectors in many developed countries has declined over the last decade.

Policies that affect consumer purchases are sometimes justified on environmental grounds, whether or not they achieve their stated objectives or have unintended consequences. Thus, recycled-content requirements will spur purchases of recycled products but may defer investment in improving forest management. Recently, China imposed a 5% tax on disposable wooden chopsticks to reduce demand pressure on forests. Wooden chopsticks in China are typically made from fast-growing planted species such as poplar and bamboo, so the tax will have little or no impact on natural forests. Chopsticks are a low-value item and it is unclear whether the new tax will have a significant impact on consumption.

Finally, there is a nexus between the forestry sector and agricultural subsidies that has implications for land-use. To the extent that agriculture may be subsidized in some countries, an agricultural land-use might be favoured over forest. That, in turn, could stimulate the conversion of forests to agriculture.

### **Conclusions and next steps**

Subsidies have both positive and negative economic and environmental effects and therefore are often highly contentious. Moreover, they are not always obvious or transparent, and the difference between an incentive and a subsidy is often a matter of perspective. The following suggestions may assist further work to explore the impacts of subsidies and develop effective policies:

- (1) clear objectives should precede any analysis of subsidies. Is the intent to examine trade distortions? Environmental effects? Product competition? An inquiry into the nature of subsidies that may be available to competing products would require one kind of analysis. An examination of the environmental effects of subsidies involved in timber production would dictate another;

- (2) determine a classification system or framework for categorizing and examining the subsidies used in forestry and the manufacturing of forest and/or competing products, perhaps based on purpose, target, type, or the nature of received benefit;
- (3) once objectives for further analysis are identified, and a system for organizing subsidy information is developed, design a systematic approach to the collection of comparative information. This could be through surveys or other forms of data collection; and
- (4) develop suitable economic and analytical tool(s) for assessing and comparing the value of subsidy programs.

*The report that this article summarizes was commissioned by ITTO in December 2005 and presented to the ITTO Committee on Economic Information and Market Intelligence at the 40th session of the International Tropical Timber Council in June 2006. It was intended as a primer on the subject of subsidies as they may affect tropical timber production, consumption and trade and is based entirely on a review of literature and other available resources. The full report is available on request from the ITTO Secretariat. The Committee is currently considering possible follow-up work to the report.*

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