

**“Forests and Globalization: a business perspective”**  
**Keynote Address by Stephan Schmidheiny**  
**On the occasion of the 100<sup>th</sup> Anniversary of the**  
**Yale School of Forestry and Environmental Studies**  
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In 1982, at a time when everybody who had a chance took their money out of Chile to escape a pending devaluation, I decided to take part of my own patrimony out of my Swiss bank account and to invest in a forestry venture in Chile.

I spent almost a month touring the country's back roads chasing more than a dozen investment leads. The choice was not easy; everything was for sale - cheap - except the one company that I liked best because it was small and well managed by a private entrepreneur. He would not even receive me to talk about selling, but I managed to convince him to consider a partnership, whereby I would bring in new equity in exchange for a 50% share. The company, then, owned some 10,000 acres of pine forest and a sawmill tiny by today's standards. Half of the trees harvested were exported as raw logs; the most elaborate product back then was sawn lumber.

Today, 18 years later, I own 85% of Terranova, a Chile-based company with plantation forestry operations in that country, Brazil, and Venezuela. Another of my companies has teak plantations in Panama and Guatemala. Terranova Forest Products Inc. owns 296,000 acres of forests in Chile, 20,000 acres of forests in Brazil, and 115,000 acres of forests in Venezuela. The great majority of this acreage is pine plantations, although the Chile holdings contain over 80,000 acres of native forests, which are managed for conservation. The Panama and Guatemala holdings include teak plantations and natural forests managed for conservation. Terranova produces doors, moldings, doorskins, and fiberboard, most of which is exported to the US market. Of course, we no longer sell logs, but products with high local value-added. The growth and performance of my investment in the Latin American forestry industry looks meager compared to recent dot.com paper value explosions. But it does look quite decent compared to high performers in what is today referred to as the “old economy”, of which my company forms part. So it is with a underlying feeling of achievement and pride that I share my investor's experiences in forestry.

All of our forests are recent plantations, mostly planted on degraded farmland. The Chilean company is quoted on the Santiago stock exchange, and is accredited under ISO 14,000, an accreditation I and my colleagues at the World Business Council for Sustainable Development helped to develop back in the early 1990s when we were looking for practical ways to make that somewhat *foggy* vision of sustainable development operational in business terms.

Earlier this year, we were wondering whether to seek accreditation under the Forestry Stewardship Council. In preparations for the certifications process, we ran into an unexpected challenge: the FSC requires cooperation with indigenous people, and anyone else, living in one's forests. My own 'forests' are small, scattered plantations, and almost by definition, no one lives in privately owned plantations. So FSC accreditation did not seem appropriate for us. But while we dithered, Home Depot in the United States – to whom we export – said we had to prove our forestry operations were sustainable. So we are now busy seeking FSC accreditation. The Panama plantation gained FSC certification in August.

I could almost stop this address right here. I, a Swiss-German entrepreneur, need approval by an NGO based in Oaxaca, Mexico, before I can export wood products produced by a Chilean company from plantations in Chile to the 900 stores (stretching from Canada to Chile) of an Atlanta-based multinational. I am supposed to be talking about of the reality of doing forestry business in the present global market, and this is a perfect example! Further, it is a reality that is only a few years old.

Of course I won't end my lecture at this point – no such luck. You will be here awhile longer. Blame not me but my old friend Gus Speth, who invited me to join this wonderful event today. Having shared many interesting (and some challenging) moments together ever since we met “on the road to Rio,” I could not possibly refuse his invitation.

I also had an ulterior motive. Gus is busy turning the Yale School of Forestry and Environmental Studies into a global school. It will serve the developing countries; it is recruiting faculty and students from those countries. It will build on its already solid reputation as a center for business leadership on the environment. It will champion the study of financing for environmental sustainability. It will create a functional and impressive new building on campus. Of course, to achieve all of this, Gus will have to fundraise, and he has his Centennial Campaign gearing up. And there enters my ulterior motive. Gus, my being here today means *you owe me*; I don't owe you.

Motive aside, I decided to make sure that my investment in preparing this speech would yield a decent return for me in terms of improving my own understanding of this forestry business world. What *is* going on in this ever volatile sector? I ought to know. This assignment forced me to assess my own experience and to consult others. I condensed the results into eight major trends. The news is not all good, but there is more good than bad.

In offering these trends, I do not mean to be lecturing. I mean to be starting a dialog through which we in business and you in academia can develop ways forward to make the most of some trends and resist others. What do these trends mean for the Yale School of Forestry and Environmental Studies? Think of this as we go through them.

First, despite present chaos and controversy, I think we are moving towards standardization of international environmental/management norms. At present, there are many different standards and certification schemes – way too many. Environmental groups hate this, as it results in confusion for the customer and threatens the value of all standards. But it is even more annoying – not to mention expensive - for business. We must look far into the future and make long-term management decisions based on expected market demands. Yet with many standards and rapidly shifting market expectations, it is very difficult to plan over the long term. For this reason, I think that in 5-10 years, it is probable that there will be one or a few generally accepted standards that will characterize good management.

We currently see steps in this direction. For example, the FSC is developing regional standards that will meet local requirements, but will all fall within a framework of “global principles”. Also, there are efforts toward a pan-European framework for mutual recognition of national certification schemes within Europe, and perhaps even other regions.

We who grow trees in developing countries will have to meet those standards to sell in industrial countries. So we should also be involved in deriving them. And indeed, the World Business Council has a task force of forestry companies defining their own concept of sustainable forestry, and promoting the need for mutual recognition and standardization of forestry certification systems.

Second trend: we are going to see much more labeling, backing up consumers' rights to choose. We have already seen the development of a significant market for forest products coming from well-managed forests. Labeling and chain-of-custody procedures allow customers to identify such products. Proof that forest products come from well-managed forests is likely to become the cost of entry to most or all developed country markets; this is already the case in much of Europe, increasingly so in North America. Having borne that cost, I am a bit disappointed that proof of state-of-the-art management is not reflected in a significant price premium for such products. Consumers do not feel that they should pay more for such a product. I hope they will at least buy it in preference to uncertified products.

Speaking of labeling, one big unknown now is the market acceptance of forest products from genetically-modified trees. It is likely, based on experience in Europe with agricultural products, that consumers will demand GMO labels. But this is impossible to predict. Will consumers accept genetically modified forest products because – unlike GMO potatoes – they do not eat trees? Or will they be impressed with the possibility of producing trees with less lignin, so less energy and chemicals are required to extract the cellulose – a great environmental benefit? Or will they be horrified that GMO trees stay in the environment for many more years than do GMO soybeans? No one knows.

Labeling does offer some opportunities to us business people. We can differentiate our products on the market. There are also dangers: if a forestry company invested heavily in GM trees, for example, and there is little market acceptance down the road, its products could be identified and avoided.

A third trend - one to which my own company is a typical example - is a general forest business shift to the tropics and the southern hemisphere. Growing conditions are better there, and labor, land and materials tend to be cheaper. These last considerations are important for me, as I am trying to add value – turn trees into doors, for example – in the countries where we grow the trees. (I am not in the pulp business.) However, there are business challenges to operating in developing countries, such as political and economic instability, high risk premiums on the cost of capital, corruption, and logistical difficulties. Also, since some types of forestry are relatively new, the silvicultural techniques may not be well known in the tropics. These risks have diminished in much of Latin America over the past decade – but not disappeared. These challenges are particularly important because of the long time frame inherent in forestry investments. Nevertheless, these problems can be overcome, and we will see an increasing plantation forest estate in the tropics. High international environmental standards and market expectations encourage companies operating in and exporting from the tropics to employ the latest in global technology and management practices. Some of the most modern and professional forestry companies are located in tropical developing countries. Being involved in plantations rather than natural forests also cuts risks in that intensive plantation forestry requires a much smaller land base, which can be privately owned, thus reducing a company's exposure to the risk that a government will change the terms of a forestry concession.

This leads to my fourth trend: a general move away from logging in primary forests, and perhaps even native forests altogether. The public in industrial countries is gradually concluding that the logging of primary forests, tropical or temperate, is not a legitimate use for these forests. They feel that these forests have been diminished to such an extent that most should be conserved. Right now there are large protests in the Elaho Valley of British Columbia, and there are numerous municipal boycotts in Europe and the US, where communities have banned the use of tropical woods over the past decade.

This is not to say that there are not opportunities for an investor to manage native forests for timber, but any such efforts will be held to extremely high standards. Indeed, it was concern over tropical deforestation that originally led to the creation of the Forest Stewardship Council. Even investing in an FSC-certified forestry company operating in primary forests seems pretty risky to me. There is a strong feeling among many of the NGOs that there are forests that are so endangered that there should be no forest management permitted at all, even if it is of the highest standard.

There is another important aspect to this trend. Based on past rates of plantation establishment, there may be an abundance of plantation wood on the world market by as early as 2010. This will make it very difficult for operations in tropical native forests to compete, particularly in basic products such as construction timber, woodchips for pulp, or plywood. If steps are not taken now to develop new markets and management systems that can produce higher value products in these forests, then operations in native forests in the tropics are likely to face severe price pressure. This will make it much more difficult to manage these forests responsibly. Thus sheer economics are likely to reinforce the growing public sentiment that natural forests should not be managed for timber.

A fifth trend is the growing specialization of forests for different products and services. For forests and plantations that produce timber, we see a reduction in the number of species planted, and a reduction of the within-species genetic diversity of the trees that are planted. Furthermore, genetic engineering now raises possibilities of tailoring the genetic codes of trees to produce specific products. For example, there are lines of *radiata* pine with reduced lignin content for pulp, and different lines of trees with reduced branching for industrial timber. There is even talk of developing carbon forests – plantations of trees that have been bred to absorb the most carbon dioxide possible.

This trend for increasing specialization is a natural outcome of companies focusing on specific markets and competing to reduce the costs of their production. However, it contrasts strongly with the scientific and NGO view that forest managers should manage for all of the wide range of goods and services that forests produce; management must not be limited to a narrow band. There is also less tolerance for logging or other extractive uses in conservation forests. So it is fair to say that conservationists are also demanding their own specialty forests.

How do we resolve the two trends – the increasing demand that forests be managed for multiple goods and services, and the increasing specialization at the stand level? I think it is by increasing the scale at which we consider forestry issues. We need good regional or landscape level planning that designates forests dedicated to conservation and designates areas of intensive production. However, such planning is missing from much of the world, particularly in the tropics. In the absence of such a plan, forestry investors will find that they will be expected to provide the full range of goods and services from their managed forests - an expectation that plantation foresters will find quite a challenge to meet!

In my own forests, in the absence of regional land-use planning, we try to adopt a systemic approach, but on a smaller scale. Rather than try to manage a large area of native vegetation for many different purposes, and risk not achieving any of them, we have areas of forest of intensive production, areas for watershed protection, and areas for conservation.

Based on my own experience, I think that the industry should take the lead in pushing for regional forest plans, and for the establishment of protected areas. This is in our own self-interest, as it will reduce the public expectations about what we should accomplish on our own lands.

My sixth trend is toward an increasing scale of operations and more use of economy of scale. Many forestry companies, both in developed and developing countries, are relatively small - too small to be listed on stock exchanges. So they do not have access to international capital markets. Nor can they afford the best genetic material, nor top-notch technical staff and knowledge. Their unit costs are also considerably higher than for a larger forestry company. These conditions have led to a trend towards globalization of forestry companies. As companies increase in size through mergers and acquisitions, they can meet listing criteria for stock exchanges and thus gain access to capital markets. They also achieve economies of scale and become more competitive.

Nevertheless, small forestry companies will always play an important role in many countries and markets. We need to find ways to support the needs of small-scale producers. One way that financing problems of small individual companies can be overcome is to group small companies within a larger forestry fund. These funds take on ownership of many smaller forestry companies, and become themselves large enough to secure state-of-the-art professional management, to gain access to capital markets, and to offer investors the chance to invest.

In central America, we are experimenting with ways of overcoming other disadvantages that small scale producers face. My foundation, AVINA, is funding, and my companies are actively participating in, an initiative called Teak 2000. The goal of Teak 2000 is to group small-scale producers together so that they can gain access to technical knowledge, market knowledge, and genetic material. We are at the beginning of the experiment; we do not know if this will work. The major question is whether business people will be willing and able to cooperate together for their own mutual benefit.

Also in experimental mode, we are trying to develop new partnerships with the academic community. Our companies in Panama and Guatemala are too small to support their own research and development programs. Yet, because there is little experience managing teak in a professional manner in the region, there is a great need for new knowledge. We have thus established a mechanism for cooperation between the public research institutes and the private sector. We have a scientific steering committee that meets twice a year and identifies the most pressing problems relating to the sustainability of the plantation operations. Then we host graduate students to work on these issues; two Masters students from Yale were working on our lands this year. As far as we can see, this is a win-win situation for all concerned. We get access to top researchers. Latin American students have the opportunity to conduct research on real problems facing the forestry industry. And the research institutes have the opportunity to demonstrate that they are working and contributing to problems facing their region.

One bit of bad news – my seventh trend – is that no serious market for environmental forest services seems about to emerge, despite a lot of talk about the high values of these services. There are still no significant markets for biodiversity, watershed protection, or carbon sequestration. Until markets emerge for these services, there is no financial incentive for forestry owners to manage for them. But there are public expectations that they do so, and investors are being asked to manage for these services. This would add to the costs of timber production but bring in no additional revenue. This must change. The need to provide

incentives and compensation to forestry companies is increasingly recognized. For example, the new, Washington-based forestry NGO Forest Trends has chosen this theme to be one of its major campaigns. I want to end on a trend of particular interest to this school and others like it: governments are playing a decreasing role in forestry management. This is something I called for in my 1992 book, *Changing Course*, noting that over the past few decades some three-quarters of the world's forests had been brought into government ownership. I also noted that this government stewardship had not been a great success. Today, the major forest dialogues are between industry and the NGO community. They are bypassing government. Government is still in the business of leasing out the forests, but has less influence on what happens in them. So there must be more effective partnerships among business, academic and research institutes, and NGOs. Most recent developments in forestry concerning themes such as standards, emerging markets for green products, demand for consumer labeling, shift of responsible forestry companies away from logging of primary forests: all have taken place without the significant involvement of government.

NGOs are working to offer the public more and better information on forestry issues. Thus we business people must expect that information on our operations and forests will be posted on websites hosted by such organizations as Global Forests Watch, World Conservation Monitoring Center, and Forests Monitor. This information will greatly increase the ability of civil society and consumers to engage the forestry sector in dialogue. So it is in business' interests to form direct dialogues with NGOs, consumer groups, and other citizen groups interested in constructive dialogue, as these are stakeholders that will determine market access and demand for forest products. These market trends are happening outside the sphere of government regulation.

There are several ways that the forestry industry can accelerate the multi-stakeholder dialogue that is now beginning to take place. Business must be more willing to discuss - and be more honest about - the impact of the forestry sector as a whole. The leading companies need to 'name and shame' the poor performers in their industry, who bring the entire sector into disrepute. The industry also needs to be more honest about the impact that poor and irresponsible logging practices have on forests around the world, and work on ways this can be mitigated. We should put our full support behind the establishment and maintenance of protected areas throughout the world's forests. Finally, the forestry sector also needs to be more willing to enter the public debate. Responsible forestry companies employing best practices are some of the best stewards of the land. They have a right, and a responsibility, to become involved in the evolving dialogue over the fate of the world's forests.

For their part, NGOs and academics must study up on and understand the realities of the forestry business, so that they can play a helpful role in moves towards solutions. They must recognize that demanding too much of forestry companies will put them out of business, unable to compete against much less benign uses of land such as agriculture.

These steps taken by those interested and involved in the forestry industry would greatly facilitate the dialogues that must take place in order for the world community to arrive at a plan for the world's forests that meets everyone's needs. One of these discussions is actually called "The Forest Dialog" – co-chaired by the World Business Council for Sustainable Development Forestry Working Group and the World Resources Institute. It is a small panel of 15 members, drawn from the private sector, private land owners, and the NGO community, that will spawn the creation of working groups on key forestry issues, such as certification, illegal logging, sequestration, and GMOs. There is a lot of goodwill among members of this group, as there is not a lot that separates progressive industry from moderate NGOs. The challenge is reforming the poor performers in industry, and in keeping fringe NGOs from counterproductive actions. It looks as if the Yale School of Forestry and Environmental Studies may act as secretariat for this Forest Dialog.

What do the eight trends I mentioned mean to you, a world-class academic institution that has been known for generations to set trends and establish benchmarks for forestry management? I do not know. That is up to you to decide. You have heard of challenges and opportunities. There is only one certainty as to the future of our mutual sector: we shall see change at a much faster pace and with far more dramatic

consequences than this industry has seen in the past. Even though trees are a symbol of steadfastness and forestry is a kind of epitome of the “old economy”, this sector will see sweeping changes.

This school was established 100 years ago to combat the swift destruction of US forests. It now faces the challenge of the rapid degradation of forests globally. Your new, global school hopes to train new leaders and develop a new science of sustainability and new techniques to implement that science.

We in the forestry business need your help to change in ways that sustain the world’s forests and their myriad services – and in ways that sustain our businesses. Let us in business and academia join forces to see to it that we move as far as possible towards that illusive goal that ought to inform all of our activities: sustainability.

Thank you.