



ENVIRONMENTAL REGULATIONS  
AND THE IMPLICATIONS FOR CANADIAN EXPORT

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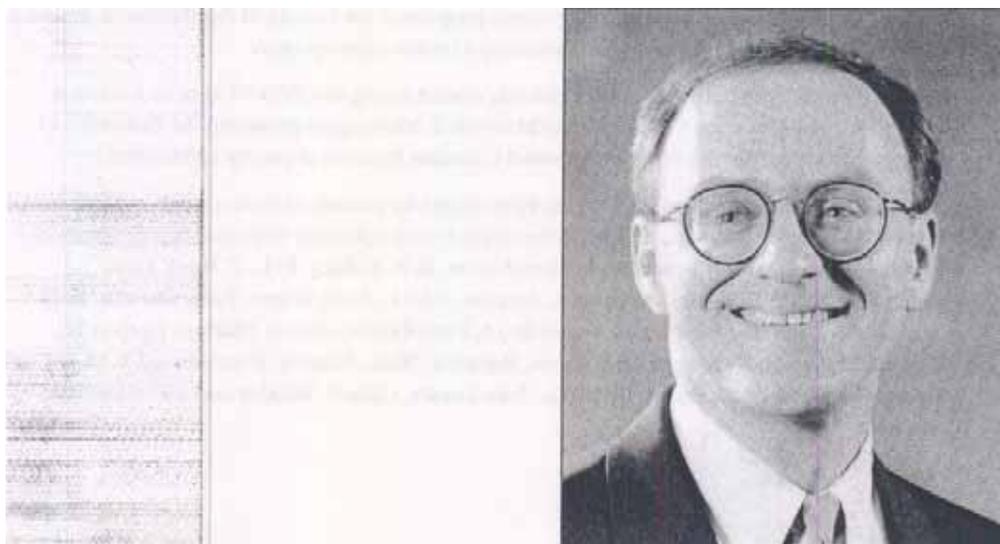
**Forest Industry Lecturer**

**Forestry Program**  
**Faculty of Agriculture and Forestry**  
**The University of Alberta**

**18 March 1992**

**FOREST INDUSTRY LECTURE SERIES NO. 28**

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Mr. Roberts is Chief of the Industry and International Trade Analysis Department with Forestry Canada in Ottawa. He is responsible for the development, management and promotion of the Department's Economics program in industry and international trade analysis. The Department plays a key role in the identification of emerging economic and environmental factors which will affect the competitiveness of the Canadian forest industry.

In the past, Mr. Roberts had been a Senior Economist and Forest Products Industries Analyst for Forestry Canada; he had been a senior Financial consultant with private industry and a self-employed consultant to industry and government. Much of his experience is directly related to trade and markets, both nationally and internationally, for forest products.

Internationally, Mr. Roberts has been leader or co-leader for studies by the United Nations that looked into forest product production and trade. He is a Canadian representative to the Forest Economics and Statistics Working Group of the United Nations' Economic Commission for Europe.

Currently, Mr. Roberts is pursuing his PhD in International Finance and Economics from the Graduate School of Business at the University of Chicago. In 1987, he received an Honours MBA in International Finance from the University of Chicago and in 1983, obtained a MS in Forestry Economics from the University of California at Berkeley. His undergraduate degree, MSc (Honours) Agriculture Economics/Quantitative Methods, is from the University of British Columbia.

## **THE FOREST INDUSTRY LECTURERS**

The forest industry in western Canada cooperates with Alberta Forestry, Lands & Wildlife to provide funds to enrich the Forestry program at the Faculty of Agriculture & Forestry at the University of Alberta through sponsorship of noteworthy speakers.

The Forest Industry Lecture Series was started during the 1976-77 term as a seminar course. The late Desmond I. Crossley and Maxwell T. MacLaggan presented the first series of lecturers. The contribution of these two noted Canadian foresters is greatly appreciated.

Subsequent speakers in the series have visited for periods of up to a week, with all visits highlighted by a major public address. It has indeed been a pleasure to host such individuals as C. Ross Silversides, W. Gerald Buch, Gustaf Siren, K. F. S. King, F. L. C. Reed, Gene Namkoong, Roger Simmons, Kenneth A. Armson, John J. (Jack) Munro, Peder Braathe, K. N. Johnson, V. I. Nordin, I. Piiivanen, Collor Boyd, Peter Rennie, John A. Marlow, Gordon W. Gullion, Hugo Von Sydow, Mary Jo Lavin, Harold R. Walt, Adam H. Zimmerman, T. M. (Mike) Apsey, Bjorn Hagglund, Jerry F. Franklin, John Zasada, Clark S. Binkley and I. P. (Hamish) Kimmins.

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## INTRODUCTION

The objective of this paper is to identify and assess the most salient trends in inter-national trade and legislation which have implications for the Canadian pulp and paper industry. Specific attention is given to the formation of regional trading blocks, the emergence of trade related environmental measures and green consumerism, the status and implications of inter-national pollution and recycling regulations, and the aftermath of the Earth Summit in Rio.

### TRENDS IN INTERNATIONAL TRADE AND LEGISLATION: IMPLICATIONS FOR THE CANADIAN PULP AND PAPER INDUSTRY

#### FORMATION OF REGIONAL TRADING BLOCKS

The 1990's has seen, and will continue to see, a rapid formation of regional trading blocks. This is particularly true in the Western Hemisphere. The proposed North American Free Trade Agreement (NAFTA) is only one of a number of trade agreements being developed in the hemisphere. Other free trade agreements include the following:

Mexico/Chile FTA (1992);  
Mexico/Columbia/Venezuela FTA (1995);  
Mexico/Guatemala/Honduras/El Salvador/Nicaragua/Costa Rica FTA (1996); and,  
Brazil/Argentina/Paraguay/Uruguay FTA (1995).

To a large extent these agreements are in response to President Bush's Enterprise of the Americas Initiative which calls for free trade from Alaska to Tierra del Fuego. The Latin American countries are forming their own blocks not only to benefit from trade among them-selves, but also to ease their eventual entry into a FTA with the United States (and Canada).

In the short-term, the NAFTA and other trade agreements are unlikely to have a large impact on the Canadian pulp and paper industry. While there will be improved access to the various Latin American markets due to decreases in tariff and non-tariff barriers, the absolute increase in exports will be quite small.

Hemispheric free trade may have significant implications for the Canadian industry in the long-term. On the one hand, free trade can be expected to lead to increased incomes and consumption of forest products throughout the hemisphere. On the other hand, integrating South American countries into the North American economy will provide an anchor of stability for

their monetary, fiscal, and industrial policies. This is important because economic instability has historically been a significant deterrent to attracting long-term capital to South America. Given their inherent comparative advantage in growing trees, increased stability will allow the pulp and paper industries in Brazil, Chile, Argentina, and Venezuela to expand even faster than they are at present.

On balance, it is expected that hemispheric free trade will eventually result in a decrease in Canada's share of international pulp and paper markets. Having said this, the Canadian pulp and paper industry is likely better off with Canada inside a NAFTA (or hemispheric free trade agreement), than outside. The reason is that the global economy will continue to coalesce into regional trading blocks, with or without Canada. By having the Government of Canada act as an active signatory to any trade agreement, the pulp and paper industry at least increases its chances of influencing the "rules of the game".

## THE EMERGENCE OF "TREATS" AND GREEN CONSUMERISM

Over the past several years trade related environmental measures (TREM's) have become increasingly prevalent. TREM's may be defined as tariff or non-tariff barriers to trade which are ostensibly designed to meet environmental objectives.

The trade-flows most vulnerable to TREM's are those which involve raw or semi-processed materials. The reason for this is that they tend to be those products most closely associated with the "disturbance" of the natural environment. Countries like Canada with a comparative advantage in producing natural resources should be particularly concerned with the use of TREM's.

Recent examples of trade disputes involving TREM's are:

- the Canada versus U.S. dispute regarding size restrictions on U.S. imports of Canadian lobsters;
- the U.S. versus Canada dispute regarding the landing requirements for fish caught in Canadian waters;
- the Mexico versus U.S. dispute regarding Mexico's fishing techniques for tuna/dolphins; and,
- the Swedish and Swiss bans on imports of chickens raised in cages.

Interestingly, the United States has been disproportionately involved in trade disputes involving TREM's.'

Why are we seeing an increase in the use of TREM's? To date, the following two reasons can be identified.

'Closely related to the TREM's are trade issues like the U.S. versus EC dispute regarding the EC's restrictions on the use of animal hormones.

- (1) Concern about the implications of environmental regulations for firms' competitiveness.
- (2) Attempts to assert jurisdiction over the environmental priorities of other countries.

Ironically, the first reason for the increased use of TREM's is likely related to the effectiveness of the General Agreement on Tariffs and Trade (GATT) - the international institution charged with the mandate to promote the liberalization of international trade. The GATT has resulted in a significant increase in trade and the general globalization of markets. Few industries are now immune from the threat of foreign competition in their traditional markets.

If the current Uruguay Round of the GATT negotiations succeeds, TREM's will be one of the few barriers to trade left in the protectionists' arsenal. This means that even when environmental issues are inherently domestic in nature (e.g., the creation of reserves for endangered species), they are likely to become increasingly internationalized. Given the subjectivity of "fairness", the call for TREM's will frequently be supported by calls for a "level playing field".

Given the size of its domestic market, the U.S. is in a particularly strong position to unilaterally impose TREM's - a point not lost on American legislators. In the last U.S. Congress, more than 30 prospective bills contained provisions that would have placed environmentally related trade restrictions on other countries' exports to the U.S.

Any discipline on the application of TREM's will depend on the integrity of the dispute settlement mechanism in the trade agreement to which the relevant countries belong. It should be noted that the current GATT rules cannot effectively handle a wide range of TREM's. In fact, leading environmental groups like the World Wide Fund for Nature (WWF), are calling for a renegotiation of the proposed Multilateral Trade Organization (MTO) that would implement the results of the current round of global trade talks. Environmental groups, particularly in the U.S., are angry that the MTO makes virtually no reference to the environment and its relationship with trade.

The Director-General of the GATT has indicated that international rules linking trade and environmental standards should be the next task for the GATT. In the event that the current GATT negotiations do not succeed, the use of TREM's will likely be even greater because existing trade rules will appear discredited in the eyes of many.

## **"THE SEED OF A TREM"**

On the eve of the Rio Earth Summit, the Bush Administration announced its new policy for the management of national forests; the US Forest Service (USFS) will reduce the clear-cutting on the national forests and will move toward "ecosystem management" on all national

<sup>7</sup>Clearcutting can still be used in the following circumstances: to enhance wildlife habitat, increase water yields, improve recreation, facilitate salvage sales, regenerate shade-intolerant species and poorly stocked stands and to meet research needs. Cost is not supposed to be a factor in determining these instances.

forest lands. In a letter to all regional foresters, the Chief of the USFS wrote: "clearcutting is to be used only where it is essential to meet specific forest plan objectives."

Despite its impact on U.S. supply, the new USFS policy is unlikely to be positive for Canadian producers in the longer term. The policy could lead to calls for a "level playing field" and thus either a ban on clear-cutting in Canada or an import duty. Given our more rugged terrain, the banning of clearcutting would have a more negative impact on costs in the major Canadian lumber regions (i.e. B.C.) than in the major U.S. regions (i.e. the U.S. South). In the long-term, the main beneficiary of the new policy is likely to be firms like Georgia Pacific (GP). (GP is said to have been a supporter of a clause in the controversial "Big Green" initiative in California which called for a ban on clear-cutting in that state.)

It is reported that in the early spring a bill was discussed in one of the U.S. Senate Trade sub-committees which called for a duty on imports of Canadian lumber because of clear-cutting (and thus lower costs) in Canada. While the bill quickly died at that time, the USFS's ban will provide the "moral high-ground" for similar bills in the future.

## HICCS - HIGHER INNER CONSCIOUS CONSUMERS

In examining the link between trade and the environment it is useful to distinguish between TREM's and consumer preferences which are based on "green consumerism" - even if they are supported by consumer boycotts organized by environmentalists.

Higher inner-conscious consumers (HICCS) appear to be becoming an increasingly potent force in the affluent markets of Europe and North America. These consumers are purchasing not only on the basis of the price and traditional quality of the product, but also on its "environmental friendliness". As a result, even if the abuses of TREM's can be curbed, producers of industrial raw materials will have to increasingly view environmental measures not only as costs, but also as marketing attributes.

This view is consistent with actions reported in a recent issue of the NFPA's International Trade Report.

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.... three of the U.K.'s largest do-it-yourself chains - B & Q, Texas, and Sainsbury Homebase - have pledged to phase out sales of timber by 1995 which contributes to the destruction of natural forests. Twelve other U.K. companies that import, consume, or sell timber, including Scotland's largest timber importer, M & N Norman, are involved in the program announced by the World Wildlife Fund (WWF) as part of their global campaign to save tropical rain forests.'

'Participants in the program will put a common label on their wood, guaranteeing it has come from a sustainable source - a forest harvested according to a plan which does not allow wood to be removed faster than it grows back. An international Forest Stewardship Council, small-scale timber importers and environmental organizations, will investigate the sustainability claims (NFPA, 1992)

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Given that other WWF programs focus on old growth forests in North America, Canadian and American exporters must pay particular attention to these trends. Such concerns are not limited to the U.K. Market. The American and Canadian embassies in Bonn have been repeatedly contacted by the German Importers Association seeking information and assurances about forest management and logging policies in North America.

The actions of HICCs are potentially a greater threat to Canadian exports than officially sanctioned TREM's. The reason is that HICCs' actions are often motivated by "unofficial" boycotts which generally appeal to emotions. Unofficial boycotts cannot be scrutinized by GATT tribunals, and emotion is often unresponsive to facts and figures.

## CHLORINE BLEACHING

One of the most contentious environmental issues facing the international pulp and paper industry is the use of chlorine in the bleaching process, and HICCs in Europe are particularly concerned.

As summarized in Table 1, there are either existing or proposed limits on chlorinated organic discharges in many parts of the world. However, with the exception of British Columbia, no jurisdiction has suggested that there be a complete ban on the use of chlorine.

Recent market research in Europe indicates that paper producers are strongly resisting price premiums for total chlorine-free (TCF) pulp. Only in Germany will pulp purchasers pay even a minor premium (and this does not compensate most TCF kraft producers for their additional cost).

In 1991, approximately 130,000 tonnes of TCF pulp were supplied to European companies. A recent report by NLK consultants indicates that by 1995 European demand for TCF kraft pulp will be around 2 million tonnes, but that global TCF pulp capacity will be well in excess of 5 million tonnes. (Thus far, consumers in the United States and Far East have shown little interest in TCF pulp per se).

If British Columbia (and possibly Ontario) proceed with the conversion of their pulp production to TCF, they will add a considerable volume of TCF to the world market. (By 1994, B.C.'s market pulp capacity will be roughly 5.1 million tonnes, while that in Ontario will be around 1.2 million tonnes). It is clear that this production will not command a premium in the market due to its TCF status.

It remains unclear as to whether TCF status will be required in the future to order to be a player in the European market. Our best guess is that "low AOX pulp" (i.e. less than 0.3 AOX/ADMT) will continue to be very competitive in Europe, particularly if it can be sold at a reduced price due to lower costs.

**TABLE 1. Proposed and Regulated Limits on Chlorinated Organic Discharges (as of August 1992).**

COUNTRY	AOX KG/TONNE	TARGET DATE
British Columbia	2.5'	1991-94
British Columbia	1.5	1996
British Columbia	0	2002
Ontario'	2.5	1992
Japan	1.5 <sup>6</sup>	199.3
Washington State	1.5'	
Alberta	1.5'	1992
Norway	2.0	1995
Finland	1.4	1995
Sweden	1.95'	1992
Sweden	1.0	1995
Sweden	0.5	2000
Germany	L0	1990

Source: British Columbia Council of Forest Industries.

## IMPLICATIONS OF INCREASED WASTEPAPER RECYCLING United States

As of August 1992, twelve U.S. states have imposed mandatory recycling programs and ten others have signed voluntary agreements with their publishers. Six out of the twenty-two

'Based on monthly average of composite samples.

'The Province of Ontario will announce new AOX regulations in the Fall of 1992. 'Voluntary standard imposed by the Japan Paper Association.

'The 1.5 kg/tonne standard was written into some new Washington State permits. However, a recent court challenge overturned this requirement.

'Standard based on average of individual mill permits. It is believed unlikely that any new permit would be granted in excess of 0.3 kg/tonne.

5Sweden has now adopted the AOX test method rather than the TOCL method. Standards reflect an average of individual mill permits ranging from 1.0 to 1.8 kg/tonne TOCL. Compliance is based on a yearly average of composite lampler.

have a goal of 40% recycled fibre requirements by the year 2000. Connecticut has 50% and all others have less than 40% (generally 20%).<sup>10</sup>

Working with data on Canadian newsprint shipments to the various states, it is possible to estimate the quantity of recycled fibre which will eventually be required by Canadian producers if they wish to maintain their current level of exports. Consider the hypothetical situation in which: (1) U.S. publishers have to comply with the recycled fibre requirements to the year 2000 which are currently specified; and, (2) Canadian newsprint manufacturers maintain their 1990 level of shipments to the U.S. What would be the impact on the demand for both recycled and virgin fibre in Canada?

Table 2 summarizes the change in recycled and virgin-fibre requirements in this hypothetical situation. Eastern Canada would have to increase its use on ONP/OMG by roughly 1.16 million tonnes over its estimated 1990 level." This is an increase of more than 770%. The required increase in ONP/OMG in Western Canada would be almost .30 million tonnes.

TABLE 2. Changing Fibre Requirements for Newsprint Production.

<b>SUPPLY REGION</b>	<b>CHANGE IN ONP &amp; OMG CONSUMPTION (million tonnes)</b>	<b>CHANGE IN VIRGIN-FIBRE CONSUMPTION (million rn<sup>3</sup>)</b>
Eastern Canada	1.16	(2.2 - 3.2)
Western Canada	0.29	(0.5 - 0.7)
Canada	1.45	(2.7 - 3.9)

Depending on the type of virgin-based newsprint technology which is assumed to be displaced, there is an estimated decrease in Canadian virgin fibre requirements of between 2.7 and 3.9 million cubic met'es. The decrease in Eastern Canada ranges from 2.1 to 3.2 million cubic meters, and is equivalent to roughly 2 percent of the region's 1990 AAC. Given the significant use of sawmill residue as a source of virgin fibre, the percentage decrease in round-wood consumption is even smaller. The bottom line is that the newsprint recycling regulations currently specified at the state level in the United States are unlikely to have a significant impact on either the consumption or price of virgin fibre in Canada.

"To calculate the amount of recycled fibre input by the recycling programs, the minimum recycled newsprint that has to be used by the publisher and the minimum recycled fibre content in recycled newsprint are multiplied. For example, by the year 2000, at least 50% of the newsprint used by publishers in California will have to be recycled newsprint. The Californian law defines recycled newsprint as having a minimum content of 40% recycled fibre. The result of the legislation is that 20% of the fibre used will have to be recycled.

"Each tonne of recycled-based newsprint is assumed to require 0.98 tonnes of ONP and 0.45 tonnes of OMG, and is produced using a flotation, deinking technology.

In addition to the various state level regulations, the U.S. Congress is also considering national recycling regulations to be embodied in the reauthorized Resource Conservation and Recovery Act (RCRA) bill. As it stands, the House version of the RCRA bill will require major newspapers to have an average recycled content of 35%/yr by 1995 and 50%/yr by 2002. Failure to comply with these levels would result in a financial penalty (\$25/tonne for each non-compliance) and the requirement to print a statement on the front page of the newspaper saying it does not. The legislation would apply to newspapers with an average circulation of 200,000/day. So far, only six major newspapers have the recycled content being proposed for 1995 and only one the level proposed for 2002.

The Senate version of the RCRA bill sets industry-wide recovery and reutilization rates of 40 percent for a number of paper and paperboard products, including newsprint. Should the target not be met, large companies are required individually, through a variety of methods, to meet the target. Penalties for non-compliance are a fine of a maximum \$50/ton for each ton below the annual utilized requirement, and a prominent label on the violator's products declaring that the company failed to meet federal recycling requirements.

The current draft states that these regulations apply to products manufactured in the US. or in the case of a product imported into the U.S., any person in the U.S. by whom a product is first imported. Given the contentious nature of this bill and the fact this is an election year, it is unlikely the RCRA will be passed this year. If this is the case, there is a distinct possibility that the next congress (and Vice-President Gore?) will pass a tougher version.

## **Germany**

With widespread political support, Germany's federal government has put into place the most severe waste packaging law in the world. From December 1, 1991, companies must take back and recycle "transport packaging", used for the shipment of goods (i.e. crates, large card-board boxes); starting April 1, 1992, "secondary packaging" will be collected, and all remaining packaging will fall under the regime after January 1, 1993. By July 1, 1995, 80% of paper must be recycled. In the words of the Financial Times of London, the ferocity of the new obligations is extraordinary.

The German Waste Packaging Law is a global first. It imposes a nominal deposit-return obligation on retailers and manufacturers but waives this if they set up their own recycling program and meet a specified quota. Such a system has been established by a consortium of 400 retailers, packagers and manufacturers and is known as "Duales System Deutschland", or DSD. Failure to meet the quota will result in the obligation of DSD's sponsors to take back packaging directly.

Packaging companies will pay DSD to have a green dot symbol attached to their product to signify that they can be returned and reused. While revenues from the green dot royalty are supposed to pay for the system, green dot products are already reaching store shelves with higher prices. The expense of starting up DSD has been extremely high and the program will have very significant annual operating costs.

It is expected that the new requirements will reduce the sale of new Canadian packaging, (particularly transport packaging such as crating, containerboard, and cardboard), as demand falls due to the high availability of recycled alternatives.

Furthermore, should the law be eventually amended to require a particular recycled content in new packaging, production near the supply sources (i.e. inside Germany) would have an economic advantage since shipment to Canada of used material for recycling and return would not be economical. The most immediate impact of the new German regulations is that it has caused a glut of cheap recycled cardboard boxes which has undercut wastepaper prices throughout Europe.

As expected, companies outside of Germany are complaining that the German regulations discriminate against them. Roughly sixty major international firms have joined together in a formal complaint to the European Commission. The complaint charges that the new German law restricts the free movement of goods into Germany, and that it is also ecologically unsound. The latter charge stems from the fact that the law does not consider the amount of energy expended in the collection and recycling of materials.

Germany is also examining a range of environmental regulations related to newsprint and office paper. While an internal government discussion paper originally proposed minimum recycled content for newspapers, this had been changed to deal only with the percentage of paper collected. Once crafted into legislation, the regulations will come into effect on January 1, 1993. In its preamble, the latest draft refers to the desirability of recycling printed paper and manufacturing new paper without chlorine bleach. These appear to be suggestions and are not required by the operative sections of the draft.

The EC is attempting to harmonize national proposals throughout Europe by offering an example of its own. However, a more likely scenario is that countries like France, the Netherlands and Austria will harmonize their systems with Germany's.

## FOLLOW-UP TO RIO

The United Nations Earth Summit in Rio this summer created momentum toward developing an internationally accepted code of forestry practices. However, it did not leave us with any tangible results. Over the coming months we will see a range of conferences by various groups which will attempt to follow-up.

The first meeting entitled, "An International Scientific and NGO Conference on the Boreal Forest" is to be held at the end of September in Sweden. The conference is sponsored by ten NGO's which constitute the Taiga Rescue Network. While the focus of the meeting will be on forest management in the boreal forest, initial indications are that the participants will be particularly critical of forest management in Sweden.

At the inter-governmental level, two specific conferences which will address the issue of forestry principles/practices in 1993 are the Commonwealth Forestry Conference in Malaysia and the meeting of the Council for Security and Co-operation in Montreal. The latter meeting is the forum in which Canada will attempt to respond to the "European image problem".

Despite the above meetings, it is fair to say that the international forestry scene continues to be in disarray after Rio. However, it is clearly in Canada's interest to continue to play a leading role in international forestry discussions in order to influence the "rules of the game" which may arise from any future international forestry convention.

## CONCLUSION

It is evident from the above discussion that the Canadian pulp and paper industry will be subject to a number of international "shocks" over the coming years. However, it is also clear that the Canadian industry can take concrete action to minimize the downside and maximize the upside of these changes.

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