



# **Can Intensive Forestry Help Promote Forest Conservation?**

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Martin von Mirbach  
Director of Forest and Biodiversity Campaigns  
Sierra Club of Canada  
412-1 Nicholas Street  
Ottawa, Ontario K1N 7B7  
Tel: 613-241-4611  
Fax: 613-241-2292  
Email: [sierra@web.ca](mailto:sierra@web.ca)  
[www.sierraclub.ca/national](http://www.sierraclub.ca/national)

There is a growing interest in intensive forest management in Canada, triggered in part by the report of the Senate Sub-Committee on the Boreal Forest, which recommended that 20% of Canada's boreal forest be devoted to intensive forestry so that an additional 20% could be set aside from logging. The remaining 60% of the forest would be managed primarily for biodiversity conservation, but with forestry activities being carried out as well. In a nutshell, the report recommends that the forested landbase be divided into three zones, each zone having a different level of intensity of forestry activities carried out on it. The objectives of this zoning exercise are to:

- a) maintain the flow of fibre for industrial purposes at a rate more or less the same as current rates into the future;
- b) set a significant portion of the forested landbase aside from normal industrial forestry operations; and
- c) make up any difference or shortfall by practicing intensive forestry on a relatively small portion of the entire landbase.

Interest in intensive forestry has come from other quarters as well, and is included as a management option in the Ontario Forest Accord. The Canadian Council of Forest Ministers is currently considering a program they call "Forest 2020," which has not yet been released for public discussion, but which will likely include the key features listed above.

The Sierra Club of Canada is in favour of creating new protected areas, especially in the previously unlogged forest areas of Canada, and in reducing the overall pressures for development in the natural forest. The use of intensive forestry offers an approach to help make these goals politically acceptable and practically achievable. For this reason we are interested in exploring the concept further. In order to help conservation groups engage in this discussion and analysis we propose a series of questions to be considered when evaluating any proposals to accept the use of intensive forestry as a tradeoff to create new protected area and set-asides. Only after these questions have been adequately addressed can we offer a definitive view as to whether or under what circumstances intensive forestry might be a worthwhile endeavour.

## **1. Commitment**

*Will an increase in intensive forestry generate genuine political commitment towards the establishment of set-asides?*

There is a great deal of interest within the forest industry in exploring the productivity increases possible through intensive forestry, but this interest has not in the past been linked with an increase in protected areas, and it remains to be seen how willing the forest industry will be to make that link.

## **2. Timing**

*Will set-asides be established at the outset of any intensive forestry program, or only when the productivity increases actually materialize, some years or decades in the future?*

The industry is unlikely to accept a reduction of AAC. Yet the intensive forestry plantations intended to offset demand from natural forests will not become

available for harvest for several decades. Does this mean that the set-asides would only be made available at that future time? If so, what will be left of the natural forest in Canada?

### **3. Public lands**

*Will the zoning split that is proposed (20-60-20, in the case of the Senate Sub-Committee report) be applied to the entire forested land-base, or only to public lands?*

Private lands should be included in the calculation, with realistic predictions made as to the extent to which private landowners are likely to invest in intensive forestry. Private sector participation might be well in excess of 20%, since private landowners are generally closer to major mills and markets than areas of the frontier forest. This will have the effect of increasing the availability of public lands for set-asides as well as for ecologically-based forest management.

### **4. Location of intensive forestry plantations**

*Are lands suitable for intensive forestry located in regions where it would be practical to use them to offset the decline in supply at mills affected by set-asides?*

There's no reason to suppose that lands most suitable for intensive forestry will necessarily be close to the mills most affected by reductions to AAC due to set-asides.

### **5. Best use**

*Are lands suitable for intensive forestry being put to their highest and best use if they are turned into plantations?*

Lands most suitable for intensive forestry may also be highly productive sites better used for other objectives, whether for biodiversity conservation or, if they are close to settled areas, for agricultural production.

### **6. Location of set-asides**

*Will the set-asides be ecologically significant?*

Will set-asides actually be used to protect the most valuable remaining undisturbed forest in Canada (or 20% of the forested land base, whichever is greater)? Will set-asides help to create a representative network of protected areas, or to meet large-scale wilderness objectives such as Yellowstone-to-Yukon or Adirondacks-to-Algonquian? Or will it simply result in the forest industry giving up the scrub and unproductive sites that are of relatively little use to them in any case?

### **7. Protected areas**

*Will set-asides be genuine protected areas?*

The Senate Sub-Committee report recommended that 20% of the boreal forest would be set-aside. Preliminary suggestions floated by the Canadian Forest

Service suggest that the CCFM is only considering a lesser form of protection, with protected areas being only part of the 20% region, which would include special logging practices

**8. Production increases**

*Will increasing supply through intensive forestry simply result in increased demand through decreased prices and/or stimulate increased production capacity?*

The recommendation of the Senate Sub-Committee seems to be based on the somewhat artificial notion that as a country we can have and maintain an objective of maintaining consistent production levels. In fact, production fluctuates based on supply, demand and price, and any investment in intensive forestry risks being just another factor influencing these market forces rather than a program to improve forest conservation.

**9. Mill creep**

*How will this program address the issue of “mill creep,” the need for mills to steadily raise their production efficiency and output in order to remain competitive?*

As mentioned above, there is no inherent trend towards stable output at the national level, and the same is true at the mill level. For mills to remain competitive there is a general tendency to steadily increase efficiency. This results in an increase in fibre demand for each mill, typically at a rate of about one percent per year increase. Will this phenomenon (known as “mill creep”) be based into assumptions about the amount of set-asides available based on a particular investment in intensive forestry?

**10. Allowable cut effect**

*How will the forestry industry be persuaded to reverse its current view that an increase in silvicultural investments can be accompanied by an increase in logging rate in the natural forest, rather than a decrease?*

For some time now the forest industry has argued that an investment in future productivity increases can be used to justify an immediate increase in logging volumes. Without debating the merits of this argument (dubbed by many as “voodoo forestry”) it is clear that this goes completely against the direction being proposed in using intensive forestry to *decrease* pressure on natural forests. What will it take to dislodge the forest industry from this deeply-held conviction?

**11. Overcut**

*Will the problem of regional overcuts get sidetracked in the discussion of tradeoffs between intensive forestry and set-asides?*

In some regions of the country current logging levels are well in excess of what good forestry would deem to be sustained yield. The pressing challenge in these areas is to reduce cutting levels, and any program seeking to maintain cutting levels is working against this urgent objective.

**12. The precautionary principle**

*Will a program designed to generate a stable flow of fibre be consistent with the precautionary principle?*

There is already considerable evidence that the forest industry is cutting too close to the line in most regions of the country where it is not already over the line. A program to use intensive forestry to compensate for set-asides tempts managers to cut things more and more finely, increasing the risk of making mistakes with environmentally disastrous consequences.

**13. Quality**

*Will an increasing focus in fast-growing fibre increase the reliance of the Canadian forest industry on high-volume, low value product?*

The Canadian forest industry seems to be trapped in the mindset of producing high volumes of relatively unprocessed and/or low-value forest products (such as pulp, newsprint and small-dimension lumber), relying on Canada's extensive forested lands and cheap electricity for its competitive advantage. A focus on intensive forestry threatens to exacerbate this tendency rather than reverse it, since species grown specifically because of their fast-rotation growth characteristics are rarely suitable for high-value or value-added production.

**14. Acceptable practices**

*What practices will be considered acceptable in intensive plantations? Short-rotation forestry? A focus on fast-growing species? Monocultures? Exotic species? Introduced species? Genetically modified and/or engineered species? Increased fertilizer inputs? Herbicides? Chemical insecticides? Logging in riparian or other sensitive areas?*

It's clear that some of these practices would be part of the management tools available to the plantation manager. Conservation interests need to inquire very specifically about which ones are included and which would not be used. In particular, it would be very important to determine if the forestry industry will seek some relaxation of existing laws, policies in order to maximize their return on investment in intensive forestry plantations.

**15. Innovation**

*Will intensive forestry result in genuine commitment towards truly innovative high-yield forestry practices?*

There are in many cases innovative ways to increase forest productivity without compromising environmental values. One example is the use of frequent low-intensity commercial thinnings in place of clearcut logging. One study suggests that in second-growth Douglas fir stands the increase can be as much as 100% over conventional clearcut practices. This practice has the additional benefit of removing relatively little (30% or so) of the trees in any particular thinning cycle. This provides for continual forest cover and delays the culmination of Mean Annual Increment, thereby increasing the ability of the stand to support biodiversity values associated with mature forests. So far, however, there have been few positive signals from either government or industry that they are

seriously committed to investing in these practices rather than short-rotation tree farming.

**16. Certification**

***What will the impact of intensive forestry be on forest certification programs and the ability of companies investing in plantation forestry to become certified?***

The Forest Stewardship Council allows for certification of plantations under certain conditions, but has issued a ruling that certification is not possible on plantations established since 1994 in natural forests. The intent is obviously to prevent the further conversion of natural forests into plantations. Will Canadian companies be able to invest in intensive forestry (presumably on previously degraded lands) without disqualifying them from FSC certification? And what plantation management practices in Canada are consistent with FSC Principles, Criteria and regional standards?

**17. Subsidies**

***Will intensive forestry programs be paid for by the industry, or is there an expectation of government subsidies?***

Although the federal government is signaling that there would be no new federal funds to support a program like Forest 2020, this does not seem to be the understanding of several provincial government and industry interests supporting the program. Some presumably see a new federal program as a renewal of the Forest Resource Development Agreements. The FRDA program subsidized silviculture, and was used to pay the industry to do what it should be doing in any case. A new federal program could conceivably be even worse; paying the industry to do what it should *not* be doing.

**18. Carbon credits**

***Will intensive forestry for set-asides get confused with afforestation programs designed as carbon offsets?***

There is a great deal of interest in Canada in the use of afforestation for carbon credits under the Kyoto Protocol. The problem is that an afforestation program for long-term carbon storage is very different from an afforestation program to offset AAC reductions due to set-asides. Long-term carbon storage, for instance, is usually best done in slow-growing, long-lived stands, especially in areas such as shelterbelts and urban forests that are meant to remain in forest cover indefinitely. Logging inevitably results in significant reductions of on-site carbon, and the pressure to increase fibre flow will mean that short-rotation forest crops will store less carbon over the long term than might otherwise be the case.