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## Tuesday, September 25, 2018

## Chair

**Mr. James Maloney**

# Standing Committee on Natural Resources

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● (1125)

[*English*]

**The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)):** Good morning, everybody. Welcome back.

Thank you for joining us today for the beginning of our new study, which is an overview of forest pest management in Canada. This is the first of six meetings, I believe.

We have three sets of witnesses today. Thank you all for coming.

We have Jean-Luc St-Germain and Derek MacFarlane from the Department of Natural Resources, and Mr. William Anderson from the Canadian Food Inspection Agency. Joining us by video conference from the New Brunswick Department of Energy and Resource Development, we have Chris Ward and Chris Norfolk.

Thank you all very much for joining us. As I said, this is the first of a series of meetings on this interesting topic. You're going to lay the groundwork for the study for us.

In case some of you aren't familiar with the process, each group will be given up to 10 minutes to make a presentation. You can do so in either official language. You will be asked questions in both official languages, I anticipate. You have translation devices available to you should you need them.

Why don't I start with you, Mr. St-Germain? You can get us under way.

**Mr. Jean-Luc St-Germain (Policy Analyst, Science Policy Integration Branch, Research Coordination and Integration Division, Canadian Forest Service, Department of Natural Resources):** Thank you.

My colleague Derek MacFarlane will present opening remarks on behalf of our assistant deputy minister, Beth MacNeil.

**Mr. Derek MacFarlane (Regional Director General, Canadian Forest Service, Atlantic Forestry Centre, Department of Natural Resources):** Thank you for the opportunity to appear before you today to discuss the importance of the forest sector in Canada in general and the challenges we're facing, including that of forest pest management.

I know many of you are aware of the importance of the forest sector to Canada, given your recent study on value-added products; however, I'd like to begin by providing some context of the overall sector within which we're considering the impact of forest pests.

Canada's forest sector is economically important to Canada, responsible for 210,000 jobs, including 9,700 for indigenous peoples. It contributes $24.6 billion to Canada's GDP, representing 7% of Canada's exports. These jobs are coast to coast in over 150 rural communities, and between 70% to 80% of our indigenous communities live within a forested landscape.

Canada has 347 million hectares of forests, ranking third in the world in forest area, and over 40% of the world's sustainably managed forests are found within our borders.

I'm proud to say that Canada is considered a world leader in the management of forests, as well as in research and development, including product and market diversification and our commitment to advancing the bioeconomy.

Not only do Canada's forests contribute to the economy and the resilience of our rural communities, but they also play a significant role in reducing greenhouse gas emissions. For example, in 2015 Canada's forests removed 26 million tonnes of CO2, and the increased use of wood products will continue to support Canada's commitment to the Paris accord and advance our pan-Canadian framework on clean growth and climate change.

We are world leaders, constantly innovating to maintain our competitive edge, as evidenced in the government's work to support such initiatives as changes to building codes and standards, which have enabled the construction of the tallest wood building in the world; the creation of an eco-district in China made of 100% Canadian lumber; and support for indigenous communities to transition off diesel using forest biomass for both heat and energy, while increasing economic development.

We're a sector that supports the government's core values of economic growth, competitiveness, action on climate change and meaningful partnership with indigenous communities.

Given this context, as Canada's chief forester and head of the Canadian Forest Service, every day I think about what we can do, and need to do, to secure the competitiveness of our sector. At the core is maintaining the health and resilience of our forests.

There's a lot happening on the forested landscape, and we're paying attention to the cumulative effects from both an environmental and socio-economic perspective. For example, we've been witness to the direct impacts of a changing climate with the increase in magnitude and frequency of wildland fires and possible links between a changing climate and the spread of pests such as the mountain pine beetle. There is also a desire to increase our efforts on the recovery of species at risk. It's fair to say that both the industry and the provinces are concerned, and the federal government has a key role to play.

Pests, whether invasive alien species such as the emerald ash borer or the Asian long-horned beetle, or native pests such as the mountain pine beetle or spruce budworm, have been here for decades and will likely be here for years to come. That doesn't mean we shouldn't take action to prevent the introduction and minimize the spread of these species. In fact, with increased cumulative effects, we need to focus our efforts to mitigate the damage to our forest resources.

To provide a bit of history, NRCan's Canadian Forest Service research centres in Fredericton, Quebec City, and Sault Ste. Marie were established as a result of the spruce budworm.

The CFS is primarily a research organization, with significant programming in industry transformation, product and market diversification, and indigenous economic development. However, pest management, understanding the effects of climate change and the use of forests as carbon sinks, fire science—including modelling fire behaviour—and sustainable forest management practices are at our core.

It's important to understand that diseases and pests are a natural part of the life cycle of forests; however, with a changing climate and increased globalization and trade comes an increased risk of pest introductions. As well, for those pests that are native and always present, a changing climate could influence their dynamics, making outbreaks more severe, long-lasting and frequent. The damage caused by pests, combined with the loss of forest fibre to fire and the potential impacts on the international trade in forest products if pests are detected, is significant.

● (1130)

As you know, the management of Canada's forests rests primarily with the provinces and territories, with a small percentage under private ownership. Natural Resources Canada spends approximately $20 million annually in salary and operations across our five research centres to develop solutions to prevent and respond to pest outbreaks. Our colleagues at the Canadian Food Inspection Agency are essential partners on regulatory measures and ensuring compliance to phytosanitary standards to protect our trade in forest products.

Canadians living in urban centres like Toronto, Winnipeg, Quebec City or Halifax may have heard about pests such as the emerald ash borer, the Asian long-horned beetle and the brown spruce longhorn beetle. With the emerald ash borer, the CFS has developed a couple of approaches and products, such as TreeAzin, a biological insecticide; and parasitoid wasps, a natural enemy.

Preventing and responding to outbreaks in large-scale forests is a great challenge. We know that with the spruce budworm, it's a 30-year cycle. NRCan is working closely with the Atlantic provinces, forest industry stakeholders, academia, and private woodlot owners, and employing citizen science to implement a new approach, an early intervention strategy for which the federal government allocated $74 million over a four-year period beginning this year.

When we consider the mountain pine beetle in B.C. and Alberta, to date, the federal government has allocated $338 million to implement forest pest and fire management techniques, support the recovery and use of fibre, improve monitoring and increase risk assessment. However, the mountain pine beetle continues to spread eastward.

Our staff who work on pest issues are key to understanding the risks of pests and what can be done to minimize the impacts. In fact, a recent evaluation of our pest program confirmed, from our clients such as the provinces, territories, forest industry and other forest land managers, that we are the only national entity that can bring key players to the table to produce relevant and practical science-based results that are used by our clients to develop pest management policies and programs.

This type of collaboration is our history, and it will continue to be our strength into the future.

Thank you, Mr. Chairman.

**The Chair:** Thank you.

Mr. Anderson, the floor is yours.

**Mr. William Anderson (Executive Director, Plant Health and Biosecurity Directorate, Canadian Food Inspection Agency):** Thank you, Mr. Chairman.

I appreciate the invitation to participate in this study and the opportunity to explain CFIA's role in the context of protecting the Canadian forestry sector from the spread of forest pests.

The CFIA is a science-based regulatory agency. Our business stems from a very broad mandate that encompasses food safety, animal health, plant protection and market access. Sine 1997, the CFIA has enforced Canada's federal plant health, animal health and food safety regulations, and has upheld the country's food safety standards. The CFIA is responsible for and has a mandate to protect Canadian plant resources and the environment from invasive foreign pests that can destroy our forests and crops.

Today, the CFIA faces many challenges affecting our work, such as climate change, increased volume and pace of trade, and a very diverse range of non-native quarantine pests that threaten our forests, agricultural crops and our environment.

The most effective way to deal with growing pest threats is to focus on preventing the entry of these foreign pests. Once they are established in Canada, they're extremely difficult. It is a real challenge to stop their progression, and it is very costly to manage these pests.

Since 1990, we've only had two successful eradication attempts. We succeeded in eradicating the Asian gypsy moth in Vancouver in the early 1990s, and more recently the Asian long-horned beetle in Toronto and Vaughan.

Pests have a devastating impact on our economy, on our farmers and exporters, but there's more at stake than dollars and cents. There are potential impacts on our environment and production, as well as public and market confidence in our control systems. That's why the CFIA is focusing on a strong preventive approach.

I'm aware the committee would like to explore how to prevent the spread of native pests such as the mountain pine beetle and the spruce budworm. This is why I need to clarify that the CFIA is responsible for administering Canada's Plant Protection Act and regulations to prevent the entry, establishment and spread of quarantine plant pests.

This includes invasive alien forest pests such as the Asian gypsy moth, oak wilt disease, the Asian long-horned beetle, the brown spruce longhorn beetle and the emerald ash borer. We focus on quarantine pests that are new regulated pests and are not yet established.

● (1135)

Let me explain further. A newly identified plant pest is regulated following a pest risk assessment where it is determined that impacts are significant to natural or urban forests or production crops, such as maple trees or apple trees. A plant pest is regulated when the pest is not already established here: It is either absent from Canada or of limited occurrence in Canada and under official control, such as with the Asian long-horned beetle and the emerald ash borer.

So how do we take a preventive approach? We use our inspection skills and scientific knowledge to check potential pathways that the pests could be using to come here.

Plant pests are notorious hitchhikers. Pests are not restricted to agricultural and forest commodities. They have been found on everything from car parts to furniture and decorations. That's why the CFIA monitors and inspects regulated pathways, such as plants or plant products, which include logs, lumber, woodchips, bark, wood packaging materials, firewood and nursery stock. Some conveyances are also regulated, such as ships, railcars and shipping containers. For example, we inspect marine ships from Asia to prevent the entry of the Asian gypsy moth.

These programs are designed based on the nature of the pest incursion, the availability of management tools and the likelihood of success. The responses can range from eradication or slowing the spread to alternatives to regulation—including traditional pest control, such as using pesticides.

In addition to inspection, we have management programs in place. For example, the Asian long-horned beetle falls under a containment and eradication program, whereas the emerald ash borer falls under a "slow the spread" program. We apply a "slow the spread" management to the emerald ash borer to allow time for development of alternative long-term management tools, such as biocontrol agents or more pest-resistant trees.

Management options vary depending on the pest biology and distribution, the pathway, and the availability of detection and response tools such as survey methods, recommended pest treatments, and so forth.

I might add that these pests can be and are unpredictable. A certain pest may behave differently than expected, meaning that the response may need to vary depending on whether the pest is found in an urban setting versus a natural forest or a farm.

I mentioned the emerald ash borer. The CFIA is currently applying a “slow the spread” management strategy, which includes keeping people from moving firewood and ash logs over long distances from defined emerald ash borer regulated areas.

We also play an education role, collaborating with partners on outreach and awareness programs, such as our annual Don't Move Firewood campaign.

Mr. Chairman, you may have heard very recently that the CFIA has confirmed the presence of the emerald ash borer in Bedford, Nova Scotia. This finding was outside the current areas regulated for the emerald ash borer in Canada. Effective immediately, the movement of all ash materials such as logs, branches, woodchips, and all species of firewood from the affected site is restricted. Property owners in the affected area have been notified of these restrictions.

As mentioned by my colleagues from CFS, we cannot do this work alone. At the CFIA, we value our partners and work closely with other federal departments, the provinces, territories, municipalities, academia and industry.

We have been collaborating with CFS to develop a risk management decision framework. This model provides guidance on plant pest response approaches based on science—biology, socio-economics and environment—and risk management principles that are derived from international plant protection standards.

In addition, the CFIA has entered into formal and informal partnerships with various stakeholders, such as other federal departments, provincial governments, first nations, municipal governments, industry, non-governmental organizations and international entities to deliver on our mandate. These partnerships deal with regulated pests.

The CFIA has also entered into memoranda of understanding with several provinces—I believe British Columbia, Alberta and Ontario—to collaborate on the management of introduced invasive alien forest pests. This includes conducting surveys and working on response programs together.

With respect to the mountain pine beetle and the spruce budworm, our partners have mandates as well. The provinces have the mandate for forest health, including the management of native forest pests like the mountain pine beetle and the spruce budworm.

As I mentioned earlier, our approach focuses on the prevention of the introduction of foreign pests into Canada. On the international front, the CFIA is Canada's representative to the International Plant Protection Convention, or IPPC. We work with our partners and stakeholders to promote the development of international plant health standards and support their acceptance and implementation globally.

Adherence to these standards by our partners reduces the likelihood of introducing a foreign pest. For example, wood packaging material used in global trade of goods has been identified as a major pathway for introducing pests. Canada has been a global leader in the development of global acceptance and implementation of an international plant health standard that requires wood packaging material to be composed of heat-treated material, such as kiln dried wood.

To summarize, as the old saying goes, “An ounce of prevention is worth a pound of cure.” Once again, I appreciate the opportunity to explain CFIA's role regarding this important subject.

Thank you, Mr. Chairman.

● (1140)

**The Chair:** Thank you, Mr. Anderson.

Mr. Ward, go ahead.

**Mr. Chris Ward (Acting Assistant Deputy Minister, New Brunswick Department of Energy and Resource Development):** Thank you for the opportunity to appear before you today to discuss forest pests from a New Brunswick perspective. The protection of our forests is something we take very seriously in New Brunswick, and we are happy to share our views and experience on the subject.

I'll speak for just a moment about the New Brunswick context and then focus on the spruce budworm and the current strategy we're taking to fight that.

New Brunswick has a diverse forest, where many tree species are found in pure conifer, pure hardwood, and mixed conditions. The forest industry that is dependent on the forest is also diverse, and includes over 40 mills that depend on long-term conifer supplies of spruce-fir, pine, cedar, and several species of broadleaf trees, including maple, birches and poplars.

The forest ownership pattern is also complex. It's a mixture of Crown forests, small private woodlots, and industrial managed forests, where approximately half of the forest is privately owned. The Crown Lands and Forest Act places the responsibility of forest protection from insect, disease and fire on the Minister of Energy and Resource Development. This responsibility exists for all forest land, including that owned by private organizations and individuals.

The duties related to pest and disease are carried out by the forest planning and stewardship branch in the Department of Energy and Resource Development. Staff conduct a combination of aerial and ground surveys for all forest health issues throughout the province. The coordinated and integrated response to threats like insect and disease in a landscape of complex ownership is particularly challenging. It requires much engagement and collaboration with industry and other stakeholders and organizations.

Through our department, New Brunswick relies heavily on knowledge transfer and resources provided by the Canadian Forest Service and the Canadian Council of Forest Ministers pest working group to optimize our work and inform the minister's direction with respect to forest protection.

The spruce budworm is a significant pest across Canada. Its prolonged outbreak cycles and the extent of those cycles are well documented in scientific literature and won't be covered here. The spruce budworm is, without a doubt, the greatest pest concerning New Brunswick. Evidence dating back to at least the 1700s indicates that cyclical outbreaks have been occurring in New Brunswick every 30 to 40 years. A significant resource in the management of spruce budworm in New Brunswick has been the support of Natural Resources Canada's Canadian Forest Service. The prioritization by scientists of budworm research and technology in Atlantic Canada has led the way for the advancements in management strategies for spruce budworm since the early 1900s.

The Green River project, which was conducted from 1944 to 1973, is still considered one of the most influential studies ever conducted on forest entomology. This research resulted in over 80 peer-reviewed publications and untold knowledge exchange. It has greatly enhanced our understanding of the factors influencing the spruce budworm. This research has continued as a priority of the CFS since the last collapse of the spruce budworm. Scientists in Quebec, Ontario and New Brunswick have dedicated their careers to understanding the ecology of the spruce budworm. This ongoing dedication has ensured that we are well positioned to address this new outbreak with well-educated and well-experienced professionals.

In 2012, leadership in the CFS, universities, the forest industry and the New Brunswick Department of Energy and Resource Development recognized the looming threat of spruce budworm in New Brunswick. At that time, they developed an initiative, the first of its kind, to take actions to suppress the outbreak of spruce budworm before it occurred.

This concept was supported federally through the Atlantic Canada Opportunities Agency, and the resulting program, named Early Intervention Strategies to Suppress a Spruce Budworm Outbreak, was initiated. This unique collaboration between federal and provincial departments, universities and the forest industry was given the name “Healthy Forest Partnership”. The effort is to focus on the research and management of spruce budworm rather than the management of the damage from spruce budworm. In other words, the focus is on controlling and managing the insect, not the injury.

In detail, the early intervention strategy uses innovative tools and techniques to detect locations with increasing budworm population and treats them with registered insecticides before populations reach epidemic levels.

● (1145)

We greatly appreciate the support of the federal government in this endeavour. It announced support of around $74 million over five years, based on a sixty-forty federal to provincial and industry cost-sharing basis.

Some of the recent advances made by the early intervention strategy that have had immediate practical application to budworm management in Atlantic Canada include the following. First is a greater understanding of the population dynamics of emerging outbreaks, because we've never had the chance to study the onset of an outbreak and understand how an outbreak grows and spreads.

We are getting a refined understanding of treatment timing and application that provides safer product choices, lower volumes and more targeted applications in an economically and environmentally responsible approach. An early intervention strategy allows us the opportunity to understand if treating low-density populations is effective at keeping them low. We are also able to use smarter aircraft technologies to be more precise in application rates, location and timing. We are also seeing improvement in the radar tracking of migratory events that allows the early detection and planning of population shifts. Researchers at the CFS in Quebec and Ontario have been working on identifying not only when large dispersal events occur, but also what might trigger these events.

We have also strengthened communications with the public and media through communication strategies such as the award-winning budworm tracker citizen science project. The communications teams have had tremendous success in reaching the public, explaining the nature and goals of the research, and answering questions as they arise. The budworm tracker now reaches almost 500 homes annually from Thunder Bay, Ontario to St. John's, Newfoundland, with more than 300 traps in New Brunswick alone. This puts some of the outreach into the hands of the concerned public and empowers them to do something to help.

The collaborative nature of the EIS program is a model for how management of large-scale disturbance can be successfully implemented. It demonstrates that multiple agencies with differing interests and goals can work effectively toward a common objective of preserving forest values from the destructive nature of the spruce budworm. The results of the early intervention strategy have been a measurable success. Less than 1,000 hectares of defoliation were identified in New Brunswick in 2018, which is less than that identified in 2017. This result is despite continuous severe defoliation in the lower St. Lawrence area of Quebec, which exceeds two million hectares and is taking place within 50 kilometres of the New Brunswick border as of 2016.

Also, there were lower than projected treatment needs toward the treatment program this year. Based on work from leading population growth models by Dr. David MacLean at the University of New Brunswick, treated areas in New Brunswick were almost one third less than originally projected. There is very high acceptance by members of the public and by private landowners to date as well. In fact, less than five per cent of the woodlot owners we contact about treatment choose to opt out of the treatment program.

Spruce budworm outbreaks can last decades. This is the first proactive approach to manage an outbreak, and we believe that it is a $300-million approach to a $15-billion problem. With the ongoing support of our federal partners, we may be able to reduce the impacts not only on the New Brunswick economy, but also on our Atlantic neighbours. If this strategy proves successful, it will become the new standard across Canada for future outbreaks of spruce budworm and have major economic and ecological savings.

Thank you very much for your time and for the opportunity.

● (1150)

**The Chair:** Thank you very much.

Mr. Hehr, you're going to start us off.

**Hon. Kent Hehr (Calgary Centre, Lib.):** Thank you, Mr. Chair.

Our government understands that climate change is real and that it's having substantial impacts both around the world and here at home, from rising sea levels to warmer winters and hotter summers. The issue of forest pest management clearly demonstrates that protecting the environment and helping the economy go hand in hand.

One way we are addressing this issue is by putting a price on pollution. What is the potential impact of climate change on future forest pest outbreaks?

**The Chair:** Anybody can jump in.

**Mr. Derek MacFarlane:** I can start.

Certainly there's evidence of climate change impacts on pests like the mountain pine beetle. The biggest single control agent for the mountain pine beetle is cold temperatures. The fact that cold temperatures have not occurred in B.C. and Alberta, to a large extent, over the last number of years has contributed to the expansion of the mountain pine beetle.

The other factor is that when you have dead and dying trees, those trees turn from carbon sinks into carbon sources, so they contribute to the CO2 in the atmosphere. That's another negative impact in terms of pest outbreaks.

**The Chair:** Anyone else?

**Mr. Chris Norfolk (Manager, Forest Development, New Brunswick Department of Energy and Resource Development):** Thank you, Mr. Chair.

I'm Chris Norfolk from New Brunswick. I would add to the comments of my colleague from the Canadian Forest Service that the concerns of forest managers across the country are that forests may be in a stressed position when new and invasive alien pests come to our borders through various pathways. When they get here, the forests are already in a stressed position. We've seen it this year in New Brunswick, in relation to forest health issues that we believe may be influenced by weather patterns.

It's this resulting cumulative impact, not only of the direct environmental condition created by climate change through either extreme weather events or warmer weather, but also of the emergence of new pest pathways, that certainly will create challenges for integrated pest management in the future.

**Hon. Kent Hehr:** We heard of a New Brunswick case where you are implementing a new, direct strategy to try to deal with the budworm. I'm wondering if there are any other strategies we have developed that have a direct application to dealing with the pine beetle and other invasive species that we see emerging. Have we learned anything new from the business of trying to mitigate the pest problem?

● (1155)

**Mr. Jean-Luc St-Germain:** The case of the mountain pine beetle is a little different from that of the forest spruce budworm. The mountain pine beetle is a bark beetle, so it goes under the bark of trees. You cannot necessarily treat mountain pine beetle by spraying insecticide in the air, as you would for the spruce budworm, which is basically a larva feeding on tree needles.

We do make some advances in terms of better understanding of how the beetle behaves, and we can improve the effectiveness of more traditional control options for this insect. This greatly helps focus efforts to help slow the spread eastward in Alberta.

Another example where we are making some advances is with the emerald ash borer. The Canadian Forest Service has developed a systemic insecticide, TreeAzin, which is used to treat high-value trees in urban areas. It protects these trees from the emerald ash borer. That's an option that tree owners or municipalities have in order to protect their trees from the borer, but it's there to stay.

We are also exploring other options to manage insects over the long term, and the CFS is leading the deployment of a biological control program in Quebec and Ontario. We are basically releasing parasitic wasps coming from China that we know are natural enemies of the emerald ash borer. We hope to lower populations and mitigate the impact that these pests can have. It's a field of study that is never-ending. We are always trying to improve the way these pests are managed.

Thank you.

**The Chair:** You have about a minute and a half left. Do you want to share your time with somebody?

**Hon. Kent Hehr:** Yes, that would be great.

**Mr. Nick Whalen (St. John's East, Lib.):** Thanks, Kent. Let me pick it up there.

Mr. St-Germain, you just said something about the emerald ash borer and bringing in wasps from Asia to fight the problem with a new invasive species. Couldn't there be downstream harm to doing that with respect to existing honey bee populations and other things that wasps might prey on?

**Mr. Jean-Luc St-Germain:** There is a very stringent process to allow for the intentional introduction of a species from other countries. This process has been followed for these wasps. The United States is also using the same parasitic wasps in forests. There has been a very stringent assessment made to make sure that there will not be side effects coming with the introduction of these wasps to Canada.

**Mr. Nick Whalen:** That's great. It's good to hear.

When the United States decided to import their wasps from Asia to help treat the problem, did they consult with Canada or was there an international consortium that discussed how our shared ecology was going to be managed? Do you meet regularly with your U.S. counterparts on these types of issues?

**Mr. Jean-Luc St-Germain:** There is close collaboration with the U.S.

**Mr. Derek MacFarlane:** Yes.

**Mr. Jean-Luc St-Germain:** Actually, the U.S. provided the first batches of wasps that were released in Canada. They have a very effective production facility for these pests. We're now producing our own wasps here in Canada through our Great Lakes Forestry Centre. We have facilities there that are used for that purpose, but yes, there is ongoing collaboration with the U.S.

**Mr. Nick Whalen:** Is the reproductive process of the wasps controlled, so they can't reproduce in the wild?

**Mr. Jean-Luc St-Germain:** We're still assessing the impact they have on the emerald ash borer and also how well they are doing in our natural environment. It's going to take a few more years to be able to say whether they are effective and how well they are doing in our forests.

**Mr. Nick Whalen:** Thanks, Mr. St-Germain.

**The Chair:** Go ahead, Mr. Falk.

**Mr. Ted Falk (Provencher, CPC):** Thank you, Mr. Chairman.

Thank you to all of our witnesses, both by video conference and here in person.

Mr. MacFarlane, I would like to begin with you. What is the Canadian Forest Service's jurisdiction?

**Mr. Derek MacFarlane:** Our jurisdiction is national in focus, but we do have five regional labs across the country. We're basically a science policy organization. As we mentioned, the provinces and territories are responsible for forest management under their jurisdictions.

We would provide science-based results for forest land managers to develop policies and programs around pest management, but we don't have the mandate to implement those policies and programs within provinces.

**Mr. Ted Falk:** Would you work with your provincial counterparts on that?

● (1200)

**Mr. Derek MacFarlane:** Absolutely. Our colleagues have mentioned the Canadian Council of Forest Ministers. There's a forest pest working group, which has representatives from all provinces and territories, as well as our colleagues from CFIA. We collaborate on that front as well.

**Mr. Ted Falk:** In regard to the mountain pine beetle and the spruce budworm, can you let the committee know the injury or damage that these two pests can inflict?

**Mr. Derek MacFarlane:** My colleague is my numbers man here, but in B.C. the impact has been significant. The mountain pine beetle has destroyed over 50% of the loggable pine in B.C., which has a huge impact on wood supply. In Alberta, it's having an impact on the foothills of the Rockies. It is on the eastern side of Alberta right now. Obviously, the mountain pine beetle impacts the quality and the supply of timber in those two provinces significantly.

The same holds for the spruce budworm. In Quebec, it's significant. Over 25 million hectares are affected right now, so there are impacts on wood supply. As my colleagues from the Province of New Brunswick just mentioned, the whole vision of this new approach for early spruce budworm intervention is to prevent an outbreak, which is significantly different.

**Mr. Ted Falk:** Ultimately, the damage that is incurred is death to the tree and the forest. Does it render the wood or the product completely unusable?

**Mr. Derek MacFarlane:** It depends. Sorry for being vague, but it depends on the environment they are in. The mountain pine beetle can last two, three, four years and even longer in drier conditions. Obviously, the quality deteriorates. The mountain pine beetle also has a fungus that stains the wood, so the quality of the lumber deteriorates as well.

**Mr. Ted Falk:** It's not as though it adds value.

**Mr. Derek MacFarlane:** For certain niche markets, it might add value, but for the traditional lumber quality markets, it's not good.

**Mr. Ted Falk:** We've heard lots about the forest fires in British Columbia this past summer. What impact does that have on infestation?

**Mr. Derek MacFarlane:** In terms of dead and dying trees, I would say that infestations would increase the risk of wildfires. There has been a fair amount of effort made over the past number of years to reduce the risk around communities, including indigenous communities.

**Mr. Ted Falk:** I wasn't quite clear on the answer, so I'll just get back to the damage they cause. Is the wood completely useless once it has been infected by the mountain pine beetle? Can it still be used? Does it need to be harvested quickly then?

**Mr. Derek MacFarlane:** That's correct. There is a time element for sure, but again it depends on the environment the trees are in. After four or five years of continual defoliation, the trees deteriorate and the spruce budworm kills them. A wood supply issue surrounds that.

**Mr. Ted Falk:** Mr. Anderson, would you like to elaborate on any of that?

**Mr. William Anderson:** The CFIA has not been directly involved in the two species you just mentioned. They are considered non-regulated plant pests, so we have not been engaged at this point.

**Mr. Ted Falk:** You carry a bigger stick when it comes to enforcement, I believe.

**Mr. William Anderson:** We do. We're a regulatory agency. We certainly have the ability to use tools. Whether those tools will be effective depends very much on the situation, the biology and the extent of distribution because they relate to movement restrictions—the ability to move in and out of regulatory-identified areas. If the distribution is large, it is not practical to implement these tools.

**Mr. Ted Falk:** You talked about the ability some of these foreign pests have to be hitchhikers. What's your role there? You talked a little about it. You inspect some of the ships coming from Asian ports. How aggressive and active are you in that management?

**Mr. William Anderson:** We are increasingly focusing on preventing these invasive pests from coming to Canada. We recognize that they will not usually arrive within an agricultural commodity, although they can.

We are developing systems approaches and certification programs. We work with trading partners, and ideally we are engaging with trading partners who take a responsibility themselves to ensure they are not transporting pests that we know are of concern where they are from. For example, in shipments coming from Asia, we have discussions and get commitments in advance from ships leaving the harbour so that shippers have met the requirements and have done testing to ensure the pests we're concerned about have been identified and removed. For example, with respect to the Asian gypsy moth, ships are kept off site, two kilometres from the harbour, and we send people to inspect them there to ensure that certification is robust enough and working.

● (1205)

**Mr. Ted Falk:** You talked about the two methods of dealing with invasive species. Can you elaborate on both of them? What's involved in those processes?

**Mr. William Anderson:** Do you mean the eradication program or the “slow the spread” program we have in place?

**Mr. Ted Falk:** I meant both. Those are the two methods.

**Mr. William Anderson:** Again, that will depend on what we know about the biology of the species and how quickly it moves naturally versus human-assisted movement. It would depend on how established a particular pest is.

A risk assessment would be done to determine the likelihood of success if we wanted to go the eradication route, as we did early on with the Asian gypsy moth in Vancouver and Toronto. That would involve regulating the site. In the case of Toronto, we cut down many of the host trees so that the Asian long-horned beetle would not have a source of food. Then we do monitoring and surveillance for five years, and we follow international standards and commitments to be able to declare that we've successfully eradicated that pest.

In other cases, as with the brown spruce longhorn beetle, we have a strongly established pest that we're not in a position to eradicate because of the associated costs. We understand and appreciate that the pest itself moves at a certain rate that is greatly accelerated by human-assisted movement, whether it's from logs moving between sites to a pest-free site or from firewood, so we put restrictions on those sites to slow the spread because we know the natural biology of the pest means it will move slowly. We buy time by not accelerating that movement with human intervention.

**The Chair:** Thank you.

Mr. Cannings, go ahead.

**Mr. Richard Cannings (South Okanagan—West Kootenay, NDP):** Thank you all for being here before us today.

I have a lot of questions, but I'll try to get through things quickly.

I'm from British Columbia, and the mountain pine beetle is a big deal for us there. Before I got this job, I was an ecologist and I worked a fair bit with the forestry industry.

What I saw with the mountain pine beetle locally was that we had research areas where they threw everything at mountain pine beetles in the Cascades. They were using very high-intensity, expensive treatment methods, such as pheromone trapping and local burning, and the issue just got bigger and bigger. It didn't matter what we did. To me, that was the lesson we learned, especially from the last big outbreak.

I'm looking at the maps here of its spreading across Alberta. Is there anything we can do to stop the spread there? Friends of mine are employed in this and making good money trying. What is the real strategy there, or are we just stuck with something and should hope to get some early cold winters and cool, wet summers?

**Mr. Derek MacFarlane:** I can start, and maybe Jean-Luc can pick it up.

Yes, absolutely. The normal cycle for the mountain pine beetle is eight to 10 years. It certainly lasted longer in B.C. and the last outbreak was definitely more severe. The traditional method is to cut, pile, burn, and get rid of the single trees, and amend the harvesting regimes to focus on beetle-infected wood, if you can. But at this point there really aren't a lot of new types of control methods that we can use. TreeAzin has been applied, but that's hundreds of dollars per tree. It's not practical in the forest. It might be in higher-valued types of trees.

Jean-Luc, do you want to comment?

**Mr. Jean-Luc St-Germain:** In some parts of Alberta, the mountain pine beetle is becoming endemic to these forests. It's been there for a couple of years and it's expected that it's there to stay. In areas where populations are pretty high and doing damage, traditional control approaches are applied to manage beetle populations and their impact, so trees are cut and burned.

In eastern Alberta, it's a bit different. There are more opportunities to contain the beetle by applying the same types of approaches, supported by intensive monitoring of the beetle population, to significantly slow the spread eastward into the boreal forest. There are opportunities, because in this area the pine forests are more sparse. They are not as continuous as you would see in B.C., for example, and the climate is a little less suitable. There are some factors that make the mountain pine beetle less successful, but there is still a risk that the mountain pine beetle will spread into the boreal forest.

● (1210)

**Mr. Richard Cannings:** Right.

I just wanted to ask you, Mr. MacFarlane, about your comment about how there's this belief that the mountain pine beetle kills swaths of forest and then those forests become more prone to fire. As an ecologist, I've never seen any scientific evidence for this. It seems to me that when they're red and there are needles on they're susceptible, but once they drop their needles I think fire would have a harder time going through there than through a live green forest. But I keep hearing this being repeated, and I just wonder if you know of any science on that. I've looked in the literature and haven't found anything to support that.

**Mr. Derek MacFarlane:** No, I think you're absolutely right in your comments. In terms of greener foliage and foliage on the lodgepole pine, for example, it's more prone, I should say, if it's dying.

**Mr. Richard Cannings:** Yes.

I'll move to Mr. Anderson.

You mentioned some of the tree pests that are coming into Canada. One of the worst examples we saw in B.C. was back in the 1920s. I guess we didn't know any better then, but we imported all these white pines from Europe that had white pine blister rust, which basically destroyed the white pines of western North America and still is a big problem.

I assume we don't bring in any forest trees now for our nurseries, and most of that is done in-house. I have nurseries in my riding that do a lot of business with the United States. They bring in small plants from the United States, grow them up, and then export them back to the United States. I'm just wondering about the Fortress North America strategy. Do we co-operate with the United States on those issues? What are the differences, say, between a shipload of stuff coming from Asia versus a truck coming across the border in southern British Columbia?

**Mr. William Anderson:** I will say there is the ability to trade with Canadian goods or wood products or logs, but there would have to be a risk assessment that would go with it and strict criteria that would have to be followed by the exporting country in order to meet our requirements before that can happen.

With respect to how we work with the U.S., we work very closely. I think we take a North American perimeter approach with respect to how we see the ability for pests to come in through Asia or other countries. We collaborate very much. I mentioned the certification program that we're looking at for the Asian gypsy moth, for example. That is in coordination and using the same criteria and help between our two countries to ensure that we're keeping that pest out, doing the same things, and actually working together with those countries that export to us to ensure that they're following the rules and understand what's expected of them.

**Mr. Richard Cannings:** Okay, good.

I have a very quick question for the New Brunswick folks. I understand you're getting in early on the cycle. Is there any evidence from the past experience in New Brunswick that trying to attack it at the peak of the cycle may just extend the cycle, dampen down the peak but keep it going longer? Is that a risk?

**Mr. Chris Ward:** Do you want to take that?

**Mr. Chris Norfolk:** I'm not aware of any evidence that shows that we prolonged the outbreak cycle through our efforts as the outbreak progressed through the late 1970s and 1980s. It could be that there were some indirect effects, but I'm not aware of them myself. I can speak more comfortably about the results we've seen from the most recent outbreak, which started in the New Brunswick area around 2013, and the positive aspects we've seen in this early intervention at the beginning of the cycle.

We do have a fairly extensive scientific record of the progression of outbreak cycles and populations as they move through Atlantic forests. In particular, I'm thinking of the large-scale control, if you will, that was effectively Cape Breton Island and Nova Scotia during the last outbreak cycle. We do have effective controls that we look at to try to understand population dynamics and impacts.

Specific to your question, I'm not aware of anything conclusive.

● (1215)

**Mr. Richard Cannings:** Thank you.

**The Chair:** Thank you.

Mr. Whalen, we'll go to you.

**Mr. Nick Whalen:** Thanks, Mr. Chair.

Thank you all for coming. It's good to know that we have the right people at the table for our first meeting on this important topic.

With this conversation, I'm thinking back to when I was in high school. I had an opportunity to go to a national debating seminar in British Columbia. We were talking about sustainable development. That was our theme. We were talking about a forest pest. It must have been.... Was there another beetle that was on the go back in the 1980s, the Douglas something, maybe a Douglas fir beetle?

**Mr. Derek MacFarlane:** Was it the spruce beetle?

**Mr. Nick Whalen:** It could have been.

It was a different thing we were talking about, but it's the same issue over and over, where with climate change we're going to see a migration of pests and we need to manage it. How bad is this problem in the western U.S.? How are they managing their forests better than we do ours, since we don't continually read in the papers about the mountain pine beetle in American timber stands?

**Mr. Jean-Luc St-Germain:** In the U.S., the mountain pine beetle has been a very severe problem over the last decade or even more, and they are facing the same problems we are, with the addition that many of the areas that are affected are recreational areas—national parks, for example—so they also have to deal a bit more with safety issues for visitors in these areas. They are applying similar approaches to manage the mountain pine beetle and other pests. There's a lot of collaboration between Canada and the U.S., a lot of exchanges of scientific knowledge and technology. I would say our approaches to managing forest pests are fairly similar.

**Mr. Nick Whalen:** When we look at the overhead shots of these forests after they've been infested, it's pretty clear to the naked eye which trees are sick and which ones aren't, so presumably there are technological measures that could be used at a certain stage in the life cycle of the beetle to establish where they are. Why haven't the tactics that are being used in New Brunswick been used in British Columbia, and now Alberta, to target areas of infestation? Shouldn't we just be harvesting all these trees regardless, so they don't become fuel for the massive forest fires we've seen?

**Mr. Derek MacFarlane:** The “slow the spread” strategy in the eastern part of Alberta, which was developed through the Canadian Council of Forest Ministers' forest pest working group, is in a sense a similar approach that is being applied in New Brunswick.

**Mr. Nick Whalen:** Okay.

**Mr. Derek MacFarlane:** One output from the early intervention strategy in New Brunswick will be how we can apply this to other pests across the country and elsewhere. It is an experiment. If it works, hopefully it's going to be applied to other pests. It was too late for B.C. It wasn't even thought of in B.C. when the B.C. outbreak started.

**Mr. Nick Whalen:** Okay. I find it hard that to micro-target pests wasn't thought of, but maybe the ability to do it was not there. To think that it wasn't thought of.... Even in my debating in the 1990s I'm sure we talked about it.

When we look to New Brunswick, you guys have neighbours with more severe problems than yours: Quebec. When you talk about this $300-million solution to a $15-billion problem, are we talking about it for the region as a whole or just for the scope of the problem within New Brunswick? Over what time period are you looking to expend these funds?

**Mr. Chris Norfolk:** We quantify those costs, as well as the solution costs, over the scope of the entire outbreak cycle. We're looking at a 30-year period, which is what we use to simulate the impact and quantify the cost. Those figures are relevant to all Atlantic provinces. That's the scale of the proposal that the Healthy Forest Partnership put forward. It would be outside the province of Quebec, but inclusive of the Atlantic provinces.

● (1220)

**Mr. Nick Whalen:** I know that in areas like La Baie-Des-Chaleurs, to a large extent you're managing infestation as it crosses the border. If we were going to take an approach that transitioned the Atlantic Canadian defence into Quebec and into Maine, what dollar figure are we looking at to manage it ecosystem-wide rather than on a province boundary-wide basis?

**Mr. Chris Norfolk:** Mr. Chair, certainly the State of Maine is very interested in the research that is being conducted in Atlantic Canada right now. The State of Maine regularly participates in the Healthy Forest Partnership in a variety of aspects, both on the research side and the communications side. We also share data regularly with our American colleagues. Thus far, they have not seen escalations to the same degree that we've seen in northern New Brunswick. It seems to be simply that the direction in which the outbreak is spreading hasn't reached the state of Maine yet.

I believe they are interested in leveraging some of the benefits of the research that's been conducted on the Canadian side. They are very carefully watching for our rate of success, so it would not surprise me to see the Americans considering an early intervention approach when significant populations of budworm are detected there.

As for the Quebec region—and perhaps I'd defer to some of my federal colleagues—I simply don't believe that this alternative was available within the Quebec region at the time the outbreak was starting in earnest, north of the St. Lawrence River. That goes back to the very early 2000s. Much of the research actually produced and generated in Quebec simply came at a time after their outbreak had started.

**Mr. Nick Whalen:** Thank you very much.

I will turn back to Mr. MacFarlane. If we're going to have these large stands of dead trees in Quebec, I don't want to be in a situation 10 years from now when future parliamentarians are discussing the fact that there are massive wildfires in Quebec but nothing could have been done to prevent them because we're saying, “It's all climate change.” There's a certain point in time when you can blame whom you want to blame, but we have a foreseeable event in the future based on what's happening in B.C., where there will be large stands of dead trees that will burn. We're asking what we can do as a government to facilitate the mitigation of that future disaster.

**Mr. Derek MacFarlane:** I can't speak for Quebec as to what they would do, but salvaging dead and dying trees is certainly an option to any jurisdiction during an outbreak. To pick up on what my colleagues from the province were saying, they are very interested in this early intervention strategy. They've told us that. In theory, it could be applied to the western front, if it's spreading west in a similar situation to what is happening in northern New Brunswick, just starting into the area. They could apply that. It's up to the province, basically, to use that.

**Mr. Nick Whalen:** In a place like British Columbia, where 50% of the forest didn't burn this year but a lot of it did, and a whole lot burned last year, we're very likely to be facing another year next year when mountain pine beetle-infested forest is going to burn. What can and should we be doing now, and how can the federal government help manage this before the fire starts?

Should we be cutting swaths around the edge of the dead timber so we already have a buffer for the firefighters? What types of techniques can and should we be sponsoring to mitigate against what really is an inevitable disaster before the forest is burned?

**The Chair:** You're going to have to answer that question in about 30 seconds.

**Mr. Derek MacFarlane:** Since 2002, we've spent a lot of money on risk mitigation, reducing the fire hazard in the surrounding communities and indigenous communities. Those are the types of things the federal government has gotten involved in. Whether we get involved in that in the future is to be determined, I guess.

**Mr. Nick Whalen:** To stop being involved with the mitigation—

**The Chair:** Mr. Whalen, I have to stop you.

Mr. Schmale, you have five minutes.

**Mr. Jamie Schmale (Haliburton—Kawartha Lakes—Brock, CPC):** Thank you very much, Chair.

To my friends from New Brunswick, can you run through the jurisdictional timeline and boundaries for each one? When an outbreak is discovered, I'm guessing it's both local and provincial. Is there a local step first, or does this strictly rely on the province to start the initial steps forward?

● (1225)

**Mr. Chris Norfolk:** In our case, the province has the mandate to detect and monitor for all forest health issues. In the case of the spruce budworm, the genesis of this outbreak was detected through the province, I think, and then simultaneously as well through some of our research partners. There wouldn't be a local-level jurisdiction that would have been on the leading edge of this.

**Mr. Jamie Schmale:** Okay. Just to clarify, when the province discovers this and starts moving forward, at what point does the federal government get involved? Or are you in constant communication every step of the way?

**Mr. Chris Norfolk:** For the spruce budworm in particular, I'd characterize our relationship with the federal government as being very close, particularly given that the Canadian Forest Service has been actively involved in spruce budworm research for many decades. At the time of the outbreak discovery, we would have been in touch with our federal partners for advice and support almost immediately.

**Mr. Jamie Schmale:** In terms of on-the-ground work, is that mainly the job of provincial authorities?

**Mr. Chris Norfolk:** Yes.

**Mr. Jamie Schmale:** Advice would come from the federal agencies to the provincial authority. The on-the-ground work is done mainly by the provincial authorities.

**Mr. Chris Ward:** Yes. The monitoring of the populations is done both by the province and by the industry in New Brunswick. The industry contributes to the monitoring. It's a commitment that needs to be supported every year. The monitoring of the populations is key to the management, so it's something that we're committed to and that we do annually.

**Mr. Chris Norfolk:** In the case of treatment, it's the provincial minister who has the legislative authority to authorize treatment.

**Mr. Jamie Schmale:** Okay. Just so I understand correctly, when the monitoring is going on, is it the provincial coffers that are funding all of this, or do the feds have a funding module that you can kick into to help with this?

**Mr. Chris Norfolk:** For the most recent experience with spruce budworm—again, our experience really began in earnest around 2013—we managed to partner extensively with our forest industry in helping with on-the-ground monitoring, simply because they have the staff and they're actively managing the forest. They also have a vested interest in the results of the monitoring, so they've been eager to participate in the effort.

As an example, this past year we put in roughly 2,000 points across the province. Although I don't have the numbers directly in front of me, my estimate would be that around 35% to 40% of those points were put in by the forest industry. The remainder would have been primarily through the province, through our own staff.

**Mr. Jamie Schmale:** Is there anything else you would recommend that the federal government help more with on the provincial level in terms of monitoring, treatment or whatnot? Is there anything you see that we can be more effective in?

**Mr. Chris Ward:** As I tried to echo in my 10-minute opening, I think the federal government, through NRCan and CFS, has been highly valuable in the management of the spruce budworm. There have been many decades of collaboration and huge contributions to the science.

I think it's the provincial government's responsibility to monitor pests and to combat their influence and protect the forests. CFS is a huge contributor to the science and the background, and I think they should continue to be that.

**The Chair:** Thank you.

Mr. Harvey, go ahead.

**Mr. T.J. Harvey (Tobique—Mactaquac, Lib.):** Thank you, Mr. Chair.

I thank all the guests for coming today.

I want to start with Chris and Chris. It's good to see you guys. I'm glad to have your input on this issue. It's certainly an issue that we as a province have struggled with, arguably for the last 60 years, commercially.

I want to touch on something as we start. In an earlier comment, my colleague referenced his work as an ecologist and said that maybe with regard to some of these pests we've done enough research. It seemed as though he was indicating that maybe we should take the approach of just allowing the cycle to run its course.

I was wondering if you would like to delve into that a bit, Chris, and just elaborate on the past economic pressure the spruce budworm has put on Atlantic Canada—not only in New Brunswick, but with New Brunswick being the most liable province because of our proximity to Quebec—and on how invasive this species is for a province that's as small as ours when we have such a huge problem right next to us.

● (1230)

**Mr. Chris Ward:** There's a lot of history here. It's well documented. About 50% of the forest in New Brunswick is in stands of pure conifer. Our wood supply and our consumption are in line so that most of the wood supply being consumed currently and in the future, given the industrial capacity that is built, very much matches the supply. Impacts to the supply impact jobs and the ability to keep mills running. This approach has been very important, then, to keep jobs and to keep the wood supply to the mills.

Based on past experience, reductions in wood supply could be up to 20%. A 20% reduction in wood supply would have a major impact on the employment in the province.

**Mr. T.J. Harvey:** I'll just build on that a bit. Being from New Brunswick and recognizing, on an ever-increasing basis, the role that maple production has played in the province's economy in recent years, and the close proximity between small private woodlot owners, the provincial holdings, and the large industrial players and the way they're interacting together, can you speak, from a total fibre management standpoint, to some of the indirect negative consequences of this? We talk a lot of times about the fibre we harvest, but we don't necessarily talk about the fibre we need to see stand. Also, our forest is very much mixed vegetation in a small province. How is that important with regard to the maple industry in New Brunswick?

**Mr. Chris Ward:** I started off with the fact that our forest is mixed in many conditions, and the fate of softwood certainly impacts the fate of other species in the stand and the other industries. Reduced harvesting capacity in the future, if the forest were impacted, would affect other hardwood users. The ability to produce timber on some land bases allows us not to produce timber on other land bases and to do things like maple. Certainly the forest is connected, and all species are important to manage.

**Mr. T.J. Harvey:** Perfect.

Go ahead, Chris.

**Mr. Chris Norfolk:** If I could add to the response there, we also understand that old forests are particularly important in New Brunswick in an area where, as my colleague said, 50% of our forests are balsam fir and spruce species, and we understand that many elements of our biodiversity depend on old forests. The spruce budworm doesn't recognize boundaries between forests managed primarily for timber production and forests managed for conservation. That can also place indirect pressures on the industry being able to compensate for losses in other areas.

**Mr. T.J. Harvey:** Perfect. Thank you, Chris.

Mr. Anderson, you touched earlier on the gypsy moth. Of course, in Atlantic Canada we have a very strong Christmas tree industry. That sector is trying to grow and diversify. One thing I have noticed —and I've had conversations with a large group of Christmas tree producers—is that they're always looking to value-add to their industry in Atlantic Canada.

One thing they have struggled with is phytosanitary requirements for gypsy moth. Of course, you manage the entire woodlot and you approve or disapprove a woodlot, but when it comes time to ship a Christmas tree, if you ship one single Christmas tree, that takes a phytosanitary certificate, which has a cost attached to it. That's far more significant than shipping a whole load of Christmas trees. I'm wondering if there is anything that can be done to recognize the lost revenue to the Atlantic Canadian provinces that this causes, and possibly whether there's a way we could streamline that process to make it more commercially viable for our producers.

● (1235)

**Mr. William Anderson:** I certainly think there are opportunities. We're working with our U.S. counterparts and other countries to which we'd be exporting, to see what they're open to. We hope to take a more systemic approach, as I mentioned earlier, not single phytosanitaries for single trees. It's not the most practical approach.

**Mr. T.J. Harvey:** Right.

**Mr. William Anderson:** We are in discussions. We have regular meetings through our North American Plant Protection Organization. We set an agenda, and we put in priorities. We have talked about these issues in the past. I think there's a willingness to discuss these issues and new approaches. I don't have anything definitive to share with you right now, though. This is something we do talk about with respect to facilitating trade.

**Mr. T.J. Harvey:** Thank you very much.

**The Chair:** Thanks, Mr. Harvey.

Mr. Schmale, it's back to you.

**Mr. Jamie Schmale:** Thank you very much.

I'm not sure who mentioned it earlier; I think it was Mr. MacFarlane. We were talking about what happens when an infestation is discovered. If I remember correctly, it's roughly about five years before it spreads and the trees are completely destroyed. Am I recalling this correctly?

**Mr. Derek MacFarlane:** Are you talking about the spruce budworm in particular?

**Mr. Jamie Schmale:** Yes.

**Mr. Derek MacFarlane:** It varies by insect, but if you're talking about the spruce budworm, four to five years of continuous defoliation would definitely kill trees.

**Mr. Jamie Schmale:** Okay. If an infestation is discovered, you have about five years. Would there be a role somewhere for a private sector partner to say, "Okay, there's an infestation. We have about five years. Let's get in there quickly, get what we need, and help control it that way"?

**Mr. Derek MacFarlane:** Yes, and my provincial colleagues are probably better placed to answer that. Certainly, changes in terms of harvest scheduling and that type of thing would be an option.

**Mr. Jamie Schmale:** Okay, maybe I'll ask our friends from New Brunswick.

**Mr. Chris Ward:** Yes, as I said earlier, the industrial capacity we have in terms of the mills in the province and the value chain they've built are quite closely tied to the wood supply, in terms of the species or products that are harvested and consumed. Adjusting your harvest schedule is certainly possible, as long as it still matches the industrial consumption. If not, then there has to be some adjustment on one or both of those ends.

**Mr. Jamie Schmale:** Right. I know it's from New Brunswick only, and it's hard to comment on other provinces, but do you know how many agreements there are, or whether there are partnerships growing at this point?

**Mr. Chris Ward:** You might hand that to our federal colleagues.

**Mr. Jamie Schmale:** Mr. MacFarlane, it's hard for them to comment outside of New Brunswick, but are there any other provinces you are aware of where there are partnerships within provincial entities working with the private sector to start clearing areas that have been infested?

**Mr. Derek MacFarlane:** Oh, for sure. Jean-Luc is from Quebec, and he could speak to that. I know that in Alberta they have changed their harvesting regime to try to capture as much of the timber infected by the alpine beetle as they can.

**Mr. Jamie Schmale:** Right. You would probably rate that as one of the tools in your tool box to combat such an infestation.

**Mr. Derek MacFarlane:** Absolutely, yes.

**Mr. Jamie Schmale:** I'm hoping someone might be able to provide direction in terms of national parks. If an infestation happens in a national park, there isn't the opportunity to have a private sector company come in and start harvesting that lumber. Is that correct?

**Mr. Derek MacFarlane:** You'd have to ask Parks Canada. We help monitor pests and pest infestations in parks, but they would develop their own strategies in terms of how they manage the forested lands in those parks.

**Mr. Jamie Schmale:** Would they look to you for advice, given that you are probably best suited to make those recommendations?

**Mr. Derek MacFarlane:** Sure.

**Mr. Jean-Luc St-Germain:** As an example, we are conducting aerial surveys for forest health risks in the mountain national parks. We're working closely with Parks Canada on that, and we're providing advice on management options for the mountain pine beetle. Of course, these are conservation areas, so the objectives may be a bit different than in commercial forests.

**Mr. Jamie Schmale:** Right, but would a partnership with the private sector be something you might consider, based on the fact that we obviously don't want this to spread any further? This is one in a series of options that could help, and it probably would also reduce the burden on the taxpayer.

● (1240)

**Mr. Jean-Luc St-Germain:** In the case of national parks, we would defer the question to Parks Canada.

**Mr. Jamie Schmale:** Would this be something you would recommend?

**Mr. Jean-Luc St-Germain:** It always depends on the objective and the outcomes that are expected. Is there a role for the private sector in that? It really depends on the objective. If it's mitigating fire risks, maybe not.

**Mr. Jamie Schmale:** Okay, but—

**Mr. Jean-Luc St-Germain:** This has been the main driver for management of the pine beetle in national parks—the safety issues. Harvesting trees may not be—

**Mr. Jamie Schmale:** For sure, but the outcome is the same. We want the spread to stop.

**Mr. Jean-Luc St-Germain:** Right, but removing trees from the forest may have a different impact than leaving them on site and burning them, for example.

**Mr. Jamie Schmale:** In most cases, how long until it gets replanted?

**Mr. Jean-Luc St-Germain:** I'm sorry?

**Mr. Jamie Schmale:** How long until the trees get replanted, in most cases? Obviously, when they remove trees for whatever they use the wood for, most logging companies replant—

**Mr. Derek MacFarlane:** It's three for one.

**Mr. Jamie Schmale:** Obviously you're not Parks, but if you recommend a private sector partnership, could we use this as a tool to help spread and reduce the cost on the taxpayer? And the fact that they are replanted afterwards.... Would that, on the surface, be something that might be considered or could be recommended by your agency to Parks?

**Mr. Jean-Luc St-Germain:** My colleague can correct me, but I don't think operational recommendations are usually provided by our department to Parks Canada. It's more a strategic perspective.

**The Chair:** Thank you. We're going to have to stop there.

Mr. Serré, it's over to you for five minutes.

[*Translation*]

**Mr. Marc Serré (Nickel Belt, Lib.):** Thank you, Mr. Chair.

My thanks to the witnesses for their presentations.

I would like to come back to the provincial jurisdiction over forestry and the recommendations that you could make to our committee.

The first recommendations require more money, but I don't really want to talk about money.

With a Canada-wide approach in mind, what can the federal government do to support the provinces, so that they don't reinvent the wheel every time? Can you make specific recommendations to the committee to support the provinces with that?

[*English*]

**Mr. Chris Ward:** I'll say one more time how positive our experience has been with the research focus of CFS. We're at a huge advantage that they're right in Fredericton, New Brunswick with us. It's been a huge advantage to our management of the spruce budworm.

I think the number one thing the federal government can do for provinces is to keep supporting research. Research is the one thing that's outside of our mandate.

**Mr. Derek MacFarlane:** I can add to that.

I'll reference again the national forest pest strategy. It's really a collaboration with all provinces and territories and with CFIA, and we take into consideration industry issues. That's a forum for us to share best management practices from one jurisdiction to another. The provinces and territories have just recently verified that this approach is very valid and important for pest management in Canada.

[*Translation*]

**Mr. Marc Serré:** I am pleased that budget 2018 commits $75 million to innovation and research.

Mr. Anderson, in terms of innovation and research, does Canada work with the United States in particular on long-term research? As mentioned, this comes up every 8, 10 or 50 years. Could there be closer co-operation with the United States on research and innovation?

[*English*]

**Mr. William Anderson:** When it comes to research with respect to forests, the forest sector is like the provinces with regard to the dependence on our research arm. We almost look at it as NRCan there. Our direct involvement in research collaboration with CFIA and our counterparts is not there right now, but I assume NRCan is working very closely in that regard.

● (1245)

**Mr. Derek MacFarlane:** I can add a bit to that. We have many examples of collaboration between our researchers and researchers in the U.S. on a number of fronts. We recently held a Canada-U.S. forest health summit, back in February. Among other things, pest management is an area where we have recognized that we have a long history of collaboration and we are going to enhance it and continue to do that into the future.

[*Translation*]

**Mr. Marc Serré:** I'm not sure whether Mr. MacFarlane or Mr. Anderson talked about raising public awareness to mobilize Canadians in their presentation. At any rate, what recommendations could the committee make to promote Canadians' commitment to protecting forests?

[*English*]

**Mr. William Anderson:** I would say that any increased awareness we can have in the population about how actions taken through certain activities can have a negative impact on the spread of pests would be highly supported by the agency. In addition to the regulatory oversight, having Canadians appreciate and understand that simple things, like moving firewood from an area that's infested to an area that's not, are going to spread that pest.... The more word gets out that these simple actions to which people may not give a second thought actually have a very big impact on the spread of these pests, the better.

**Mr. Marc Serré:** Mr. MacFarlane, are there any recommendations the association has made in the past to ensure that we have better language in international trade agreements?

**Mr. Derek MacFarlane:** That's better directed toward my colleague.

**Mr. Marc Serré:** Okay.

**Mr. William Anderson:** We do have the International Plant Protection Convention, where we work very closely with other countries. It's a treaty. We work on standards collectively. The countries that belong to it are working to minimize the impact of pests going around the globe. There's regularization in meetings and there are priorities set up with the committees that meet in this area to talk about where we can develop new standards or provide more clarity. I made a reference to the phytosanitary measure around wood packing, and what an impact that's had with respect to reducing the spread of pests. That was a major vector for wood packing in all shipments of materials coming and going around the world.

Now all countries that are party to the IPPC are ensuring that the wood used in that is treated. It will have a stamp on it to say it is treated. It will be inspected to ensure that anything moving across countries is using only that wood, or it would be non-compliant, not allowed into our country and treated accordingly.

I think there's a lot of attention right now on where we can have standards of co-operation so that we can have very effective outcomes like that. We're building and looking for other areas around other commodities, potentially, where we could apply it as well.

**Mr. Marc Serré:** Thank you.

**The Chair:** Thank you, Mr. Serré.

Mr. Cannings, you have three minutes, and this will be the last segment.

**Mr. Richard Cannings:** Thank you.

I think I'll turn to the New Brunswick team here, to get a bit more detail on that and clear up something. Mr. Harvey said that it sounded as if I was saying, “Let it all go.” What I was trying to say was that it's good that you're trying to get in early on this one. I think that's the way to go. Once it becomes large, it's very difficult and there may be other consequences.

That was the gist of that question. Mr. Harvey said I was just throwing all the forest industry under the bus.

**Mr. T.J. Harvey:** No, I said what you said.

**Mr. Richard Cannings:** I was talking about the pine beetle as well.

Anyway, I wonder if you could comment on that. I know you're from New Brunswick, but what's going on in Quebec next door that you have to deal with? That's where the pressure of the infestation is coming from. At what stage is that infestation, and what actions are being taken there versus what you're doing?

**Mr. Chris Ward:** Do you want to go ahead?

**Mr. Chris Norfolk:** We share information regularly with our Quebec colleagues. Our understanding is that the outbreak of spruce budworm is intensifying in the area of Gaspé and below the St. Lawrence. That creates a population centre, if you will, that provides new individuals by the billions into the New Brunswick system each year. We wouldn't want to comment on the policies and management approaches of the Quebec government, but any activity they undertake in the region that is bordering Atlantic Canada would have a positive effect on our own problem with spruce budworm, simply by reducing the population levels adjacent to us.

● (1250)

**Mr. Richard Cannings:** I have one more question for Mr. Anderson.

In your comments, you mentioned oak wilt. I just learned about oak wilt last week for the first time. It seems to be a little different. It seems to be native to North America, but it's marching north toward our border. Are there any different strategies you have for those kinds of pests that may cross of their own volition rather than with people carrying firewood across?

**Mr. William Anderson:** I believe we have some active monitoring that's taking place right now. Accessing logs from certain areas would be restricted, for certain mills, knowing they're in an area where oak wilt would be. I don't have the specifics of all the programs that are in place with respect to oak wilt, but there would be monitoring involved and restriction on sourcing for Canadian mills out of areas that would have oak wilt in the States.

**Mr. Richard Cannings:** Thank you.

**The Chair:** Thank you, Mr. Cannings.

Gentlemen, thank you all for joining us today. Unfortunately, we're out of time for this meeting. We do appreciate your taking the time to join us. That was a valuable contribution to an interesting study.

The meeting is adjourned.