



Fundy Model Forest

~Partners in Sustainability~

Report Title: Mutual Learning and Knowledge Transfer in the Fundy Model Forest

Author: Omer Chouinard and Johanne Perron.

Year of project: 2000

Principal contact information: Université de Moncton
Moncton, NB

File Name: Education_2000_Chouinard_Mutual Learning and Knowledge Transfer in the Fundy Model Forest

***The Fundy Model Forest...
...Partners in Sustainability***

“The Fundy Model Forest (FMF) is a partnership of 38 organizations that are promoting sustainable forest management practices in the Acadian Forest region.”

Atlantic Society of Fish and Wildlife Biologists
Canadian Institute of Forestry
Canadian Forest Service
City of Moncton
Conservation Council of New Brunswick
Fisheries and Oceans Canada
Indian and Northern Affairs Canada
Eel Ground First Nation
Elgin Eco Association
Elmhurst Outdoors
Environment Canada
Fawcett Lumber Company
Fundy Environmental Action Group
Fundy National Park
Greater Fundy Ecosystem Research Group
INFOR, Inc.
J.D. Irving, Limited
KC Irving Chair for Sustainable Development
Maritime College of Forest Technology
NB Department of the Environment and Local Government
NB Department of Natural Resources
NB Federation of Naturalists
New Brunswick Federation of Woodlot Owners
NB Premier's Round Table on the Environment & Economy
New Brunswick School District 2
New Brunswick School District 6
Nova Forest Alliance
Petitcodiac Sportsman's Club
Red Bank First Nation
Remsoft Inc.
Southern New Brunswick Wood Cooperative Limited
Sussex and District Chamber of Commerce
Sussex Fish and Game Association
Town of Sussex
Université de Moncton
University of NB, Fredericton - Faculty of Forestry
University of NB - Saint John Campus
Village of Petitcodiac
Washademoak Environmentalists



Mutual Learning and Knowledge Transfer
in the Fundy Model Forest

by Omer Chouinard (PhD) and Johanne Perron

November 27, 2000

TABLE OF CONTENTS

Introduction.....	1
1.0 Method	3
2.0 What do people learn in the FMF?.....	4
2.1 Learning about partners	4
2.2 Learning how to work with people	7
2.2.1 Problem solving skills.....	7
.....	7
2.2.2 Consensus building and multistakeholder approach	8
2.3 Learning about managing the forest	9
2.4 Learning about the role of knowledge	12
2.5 Those issues people don't learn about.....	12
2.6 Summary	13
3.0 From personal to organizational learning	14
3.1 Do organizations learn?	14
3.2 What do organizations learn?	14
3.3 How do organizations learn?.....	14
4.0 The factors that impact on learning.....	15
4.1 What facilitates learning in the FMF?	15
4.2 What hinders learning in the FMF?.....	18
4.2.1 At the personal level	19
4.2.2 At the organizational level.....	19
4.2.3 At the FMF level.....	20
4.2.4 The socio-political context.....	23
4.3 What could improve learning?.....	23
5.0 Does learning bring change?.....	25
5.1 From organizational learning to organizational change	26
5.2 From personal learning to personal change.....	28
5.3 Does participation lead to empowerment?.....	28
5.4 Who benefits from learning?	32
Conclusion.....	33
References	36
APPENDIX 1: Questionnaire	37
APPENDIX 2: List of represented organizations.....	42

Introduction

The forest plays an important role in New Brunswick's economy. In fact, New Brunswick is proportionally the Canadian province most dependent on industrial forestry with 40 communities depending on the forest sector for over 50% of their base employment, compared to 127 in Quebec and 7 in Nova Scotia (Beckley 1998). Like everywhere else, New Brunswick's population has multiple links with the forest. It is a source of income, health, recreation and spirituality. It plays a role in ensuring biodiversity, in the CO² and the water cycles, in the prevention of erosion, and in the protection of streams and rivers. Given the importance of the forest, sustainable forest management is essential.

The Fundy Model Forest (FMF) developed as a pilot project using a multistakeholder approach to public participation in sustainable forest management. Located in South-Eastern New Brunswick, its territory covers 420 000 hectares and represents the Acadian forest. 63% is owned by over 5000 families (private small woodlot owners), 17% by J.D. Irving, Limited (JDI) and 5% by the Fundy National Park (FNP). The remaining 15% is Crown Land. About 30 000 inhabitants live in this territory.

The use of multistakeholder processes to solve resource management issues is more frequent today. Mutual learning is an important element of such processes (Kazi 1997; Brandt *et al.* 1996). A good multistakeholder process ensures that all perspectives are expressed and that controversial issues are discussed (Lacasse et Hamel 1998; Lawrence & Daniels 1996). Recognizing the responsibility of communities and supporting local governance, democratic principles require that information be easily available and adequately disseminated in order to allow the population to make informed decisions (Kazi 1997). What do people learn in the FMF? Do they learn about each other? What factors affect their learning?

Originally, multistakeholder approaches were expected to facilitate learning at both the individual and the organizational levels. Turcotte (1997) tested this hypothesis in a case study of a project using a multistakeholder approach in solid waste management planning in Montreal. She concluded that while participants learned from the experience, they had difficulties sharing their learning with their own organizations. They often felt isolated promoters of new concepts. Do partner organizations learn from the FMF? What helps them to learn? What hinders their learning?

This project explored mutual learning and knowledge transfer as it occurs within and as a result of the FMF Partnership. It was conducted while New Brunswick was reviewing its approach to protected areas. The FMF also organized a workshop on non-timber values in March 2000, which may have influenced people's perspectives. Our research questions were:

1. Do people gain a better understanding and appreciation of each other's values, objectives and preferences through the multistakeholder approach, i.e. do they learn about each other?
2. What knowledge do people gain through their participation in the FMF?

3. Do people agree on the information and science generated by the FMF, i.e. do they “learn together”?
4. To what extent is the information gained in the FMF shared within partner organizations and with communities within the FMF, in order to stimulate public debate about the future of forests and forest-dependent communities?
5. Which factors promote learning? Which ones hinder it?
6. Has participation and learning in the FMF influenced the practices of partner organizations?
7. Do people feel a sense of empowerment through their participation and collaboration to the FMF?
8. Who benefits the most from the information shared within the FMF Partnership regarding sustainable resource management?

The research objectives were:

1. To establish whether and why partners and local groups took ownership of the information concerning the notion of multiple uses of the forest.
2. To determine whether and why partners and local groups came to a better understanding and appreciation of each other’s values, objectives and preferences.
3. To establish whether and why the information resulting from research projects has influenced the practices of partner organizations and local groups.
4. To verify the responsibility taken by partner organizations in terms of leadership in communities in order to develop and optimize collaborative management of forest resources.

The first section of this report explains the method. The following section summarizes people and organization’s learning in the FMF as well as the issues that are not being learned. Then, knowledge transfer to the organizations is looked at more carefully. Do organizations learn? What and how? The next section identifies the factors that facilitate and hinder learning and provides a list of suggestions made by the interviewees to improve learning. The last section looks at the impact of learning. Does it bring change? Does it empower people? Who benefits from learning? The main findings are summarized in the conclusion.

1.0 Method

For the purpose of this qualitative study, we used the thematic analysis method. This method aims at identifying and synthesizing the different themes found in the material (Paillé 1996). It focuses on describing and understanding situations. It keeps the nuances from the different perspectives and is grounded in the original text.

A questionnaire was developed, submitted to Group 6, pre-tested and adjusted (appendix 1). Following the qualitative approach, the questionnaire served as a framework but other questions were sometimes added in order to better understand specific perspectives. A representative from each of the 31 partner organizations was interviewed between January 19 and April 5, 2000 (see appendix 2 for a list of these organizations). Whenever possible, the official representative to the FMF was selected. The semi-directed interviews were recorded, transcribed and coded, using the software Atlas.TI. This resulted in over 600 pages, 3200 quotes and 1300 basic codes. The codes were analyzed and grouped to form general themes and thematic trees.

Quotes are used throughout this report to illustrate the various perspectives. Names, and sometimes interview numbers, are omitted in order to preserve a maximum of anonymity. In order to respect ethical standards, we also consulted the interviewees before using their quotes in the report unless these quotes were very general¹.

Table 1 Learning in the FMF

Learning	Personal learning	Organizational learning
<i>Learning about partners</i> <ul style="list-style-type: none"> • Better knowledge and understanding of other viewpoints • Better understanding of commonalities and differences 	 X X	 X X
<i>Learning about ways to work with people</i> <ul style="list-style-type: none"> • Problem solving skills • Consensus-building, multistakeholder approaches (how and why) 	 X X	 X X
<i>Learning about managing the forest</i> <ul style="list-style-type: none"> • Broader view of forest management • An appreciation for non-timber and non-economic values of the forest • A better comprehension of the tensions around uses, values • Forest management techniques and strategies • Technical language 	 X X X X X	 X X X X
<i>Learning about the role of knowledge</i> <ul style="list-style-type: none"> • The role of practical and scientific knowledge 		 X

¹As a result of this consultation, some quotes were not used in the final report, on the interviewee's demand.

• Adaptive management	X	
-----------------------	---	--

2.0 What do people learn in the FMF?

This section looks at the question: *What knowledge do people gain through their participation in the FMF?* The interviews showed that people and organizations gained new knowledge, skills and attitudes because of their participation in the FMF. They learned about four main themes: they learned about each other, about working with people, about managing the forest and about the role of knowledge in decision-making. These four main themes are listed in table 1 and detailed in the next four sub-sections. Sub-section 2.5 focuses on issues people don't learn about.

2.1 Learning about partners

This sub-section answers the question: *Do people gain a better understanding and appreciation of each others' values, objectives and preferences through the multistakeholder approach, i.e. do they "learn about each other"?* First we will look at personal learning. Then, we will see whether the representatives' learning about other partners translated into organizational learning.

Almost all of the interviewees reported that participation in the FMF increased their *own knowledge and understanding* of other partners' roles, viewpoints, objectives, values and/or needs. Some were unaware of the existence of other partners (often smaller, local groups) before their involvement in the FMF. People not only learned *about* each other, but they learned *from* each other. People have learned most about industry, environmentalists, small woodlot owners, Aboriginals and the New Brunswick Department of Natural Resources and Energy (DNRE). They have learned about the diversity within environmental groups and industry. Interestingly, no mention was made of personal learning about the Canadian Forest Service (CFS), the municipalities' or the educational (at all levels) sector. This is probably because the CFS is so present in the FMF, and municipalities and the educational sector in people's life.

You know if I didn't understand for example some of the points of view before, gradually through the years I've come to understand different points of view and as I say, come to respect all of the partners (P10; 361-365).

You go to school, you all read different books. You all come out with a broad knowledge base but obviously you haven't read the same books. So when you get together at a place like the Model Forest, you know, you come with your knowledge background, that's quite interesting, I found that very interesting at the Model Forest to see that some people have read very different books. In fact I don't think I've ever seen those books at the library but anyhow if I did, I didn't spend much time at them and they come from cross, you know, cross section of information so I think one of the most valuable issue, you know, one of the valuable lessons from the [Model Forest] was to share the different books that we've read, and try to understand that there were different messages (P29; 256-271).

Sometimes, better understanding of other partners made people realize they had common concerns. It broke isolation. Other times, better knowledge of partners led to the realization that

they had divergent viewpoints they were unaware of before. It was emphasized that understanding doesn't necessarily mean agreeing. People's own values remain generally intact. However they acknowledge other people's values and they get to understand why there is disagreement. That knowledge helps to find common grounds despite the divergence of opinions. However, it is felt that some viewpoints might be irreconcilable.

It's obvious, everyone gets a better understanding of the others' point of view. A better sense of why they do the things they do. We understand too why others can't agree, what particular values they are against (P4; 449-452).

I did feel and I learned this through the Fundy Model that there are people out there who generally are concerned about the environment, are generally concerned about Mother Earth and I never felt that way when I first started (490-494).

(...) You begin to understand more where they're coming from. You may not agree with it but you certainly understand (P23; 254-260).

Through the Model Forest the opportunity to hear other people's concerns... and we find out that the diverging viewpoints, while they still may be there, they're not as divergent as we thought. There is some common ground that allows for the discussion (P7; 229-233).

(...) and once those barriers are broken down and people start expressing their concerns to you, or among themselves, among ourselves, you learn an awful lot. You learn where they're coming from, why they have such interest, vested interest, and how perhaps we can all sort of work toward the same common goal (P19; 396-403).

I think that (inaudible) even when they don't agree with what we're doing, they do understand why you're doing it and they'll give you credit that while they don't agree with what you're doing, you are doing a good job of what you said you would do (452-456).

It isn't about trying to change other people's view on what they believe, it's just sharing of cultures and I think that hasn't happened enough [historically] (259-261).

Finally, people now associate faces with organizations and have developed personal relations with others, despite their differences. This is generally seen as a positive outcome. It seems that over time, people have "depersonalized" the debates, that they have been able to focus on the issues, to argue their point while avoiding to demonize people with divergent viewpoints. There are "good people" in other groups, said a few.

We've developed personal acquaintances and working relationships and while we still may see things vastly different, we're able to sit down and we're able to talk about it and each understand better what the other person is talking about (P9; 448-452).

To what extent does a better understanding on the part of representatives result in a better understanding on the part of their organization as a whole? Seven representatives thought their organizations had not changed their perceptions about other partners' viewpoints. Another six

thought that only involved members of their organizations learned about other partners. Four didn't know whether their organizations had changed their perceptions about other partners. Finally, a total of six representatives thought their organizations had learned about at least one other group's viewpoints (environmentalists, small woodlot owners, industry, foresters, schools...)². Again, a better understanding of other partners showed where differences and similarities lie. Governmental agencies with environmental responsibilities realized that other organizations think of the environment.

A lot of similarities, we're facing a lot of the same problems, you know. You hear a lot of communities talking about capacity building and education and awareness. It's the same thing (P6; 309-312).

I think that they probably understand more fully what... what foresters do and why they think they have to do it but that doesn't mean they necessarily agree with it (P30; 666-668).

(...) when we can sort of see activities going on everywhere on behalf of the environment, it does take off some of the... some of the heat off of us so to speak. We're not the only, we're not the only stewards of the environment anymore, you know. There are other people out there who do care about the environment and who are doing their share of the protection activity (556-564).

A few representatives stressed that learning is mutual; others said they hope it is. Because mutual learning requires direct contacts, people believe that it will cease if the Partnership disappears. But given its benefits, some stressed that whatever happens, the Partnership should continue. It is felt that mutual learning reduces and prevents conflicts. Some contrasted the FMF process to "discussions" through the media. A few mentioned that direct dialogue helps to clarify and to learn about each others' positions whereas the media tends to harden positions and to obscure the facts. As mentioned earlier, better knowledge of other partners' viewpoints helps to see the common concerns they can work on as well as the limits of what can be done. One Aboriginal partner emphasized that it is the first step to respect and to inclusion.

I think the learning is two way though. I can't, I don't... I can't say that we're the only ones that are learning. I think it's a two-way learning process here (P6; 309-312).

I think that's a wonderful end product although as soon as the Fundy Model Forest ceases to exist, that product will dissipate very quickly I'm sure. It's not something that is a long-term, but I think it's a very important short-term benefit (P24; 219-229).

Initially they were wondering "well how can you be treated equally if we don't know what you're doing. If you expect us to, to welcome you's, what have you been doing?" And that was part of the first couple of workshops that we had, was just getting to know each

²Some didn't answer this question.

other. This is what we're doing, this is what the Fundy Model is doing. This is the issues that we'll be facing in the future and these are the issues that we're hoping that can be solved and these are the things that were coming out in the first couple of gatherings that we had... I remember the first meeting that we had. We had all the Fundy Model group doing a circle dance. Never experienced that before! And that's something in our culture! (239-250).

The results from this section clearly showed that representatives have learned a lot about other partners. Personal contacts make a big difference and help to focus on issues rather than on preconceived ideas about other sectors. While representatives from different organizations may still disagree, they understand the reasons better. They also have a better idea of what they can agree upon. Because mutual learning requires personal contacts, it was felt that organizations did not benefit as much from that aspect of learning in the FMF. Interestingly, some of the organizations that have gained a better understanding of other partners had occasions to get to know them outside of the FMF. For instance, they had invited other partners to give a talk to their organization.

2.2 Learning how to work with people

The interviews showed that the representatives valued their learning about problem solving skills, consensus-building and multistakeholder approaches. This section summarizes these learnings.

2.2.1 Problem solving skills

In terms of personal learning, representatives from all sectors and from nearly two thirds of the partner organizations acquired skills and tools related to group problem solving. Mentioned skills were communication skills such as diplomacy, listening skills, working with divergent viewpoints. Some gained leadership and facilitation skills to ensure that everyone's opinion is heard. Others gained an appreciation for those skills as tools for managing conflict. A few organizations gave more thought to their communications strategy as a result of the FMF. They have also learned about public participation.

I think that just listening to other opinions and realizing that they are important and that they have to impact on our decision-making is probably the most important thing (P22; 281-283).

Yes sure, I've learned to listen, I've learned that other people have good ideas, I learned that... I learned to share, I've learned to work with people that have very divergent views and I think when you put it all together you can find a common ground (P28; 222-226)

(...) one of the things that has impressed me most has been the skill of good facilitation. (...) and watching somebody make a diverse group like that work, work their way through issues without, actually get through them without offending any of these and making everybody feel involved was a very interesting thing, it made me very interested in that whole skill, that whole way of doing things and how valuable that is and how rare it is (...) (P4; 460-471).

2.2.2 Consensus building and multistakeholder approach

Experiencing consensus building and multistakeholder approaches was a major learning for many interviewees. For a few organizations (mostly governmental) involved in other multistakeholder groups, the FMF contributed to their “growing knowledge” about how multistakeholder approaches can be effective. The consensus-building and the multistakeholder approaches are usually seen as tools to share viewpoints, to find common grounds and to work towards a compromise, to find “common solutions to complex problems”. Some interviewees suggested that it might be necessary for multistakeholder approaches to be implemented on a long-term basis in order to improve mutual understanding and overcome the tensions created by conflictual situations. Another learning is that each community has to work through its own conflicts. Tools may help but partners in every multistakeholder group have to spend time getting to know each other’s position and become comfortable working together.

I had never experienced any sort of consensus, consensus building organizations before. That whole area was totally new to me and I’ve been doing a fair bit of reading since being involved there because the whole question of reaching a consensus and having facilitators and having a partnership approach to problem solving, I mean, that just is so new to me, I can’t even tell you how stunning that is in terms of learning (P3; 450:478).

I would say that it’s part of our gradual growing knowledge as far as how different stakeholders have to work together to solve problems and issues (P10; 431-434).

In more general terms though, I think I’ve learned about the importance of stakeholders in an issue meeting together on a longer term. The value, I guess, of meeting together and coming to understand one another’s positions. I can just see a real growth process over the number of years that the model forest has been in place where at the start there was a lot of... of... vested interest, some animosity, an unwillingness to listen. I think that over time, people came to appreciate the different points of view (P15; 175-185).

People also learned about the difficulties associated with the consensus approach. Even defining it can be difficult. Agreement is not always that clear. It’s also difficult to bring one’s own organization to understand how consensus was reached about some issues. While seeing the value of the consensus-building approach for learning, some questioned its efficiency as a decision-making tool because of its slow progress. Despite these shortcomings, consensus is still seen as better and fairer than the traditional majority vote. Organizations also see the need for multistakeholder forums in order to achieve their objectives, sometimes for lack of a better alternative.

(...) for the sake of learning and the sake of educating even outside the multistakeholder group (...), I think the multistakeholder process has tremendous learning value. But I think it’s very difficult to manage and to make hard decisions with a multistakeholder group as large as it is (...) using the concept of consensus (P14; 688-697).

... the importance of partnership, that we can’t do it alone. Because anytime we try to do it alone, we’re just outnumbered! (Laughter) (P6; 1067-1070).

Probably learned too that you don't get anywhere by kind of bullying your way, that this consensus building is also a good thing and to try to, try to understand different views (P20; 388-390).

2.3 Learning about managing the forest

Over one third of the representatives, regardless of their training and experience in forestry, found that participating in the FMF **broadened their perspective on forest management**. As a result they acknowledged more values than before. Some also said they now understand better the difficulties associated with conciliating various values.

I've learned about, you know, how a broad spectrum forestry is. It's not just the trees. It's everything else (P8; 248-250).

There are a lot of very valid views around the table. Everybody (...) has an opinion from their perspective on the forest or the ecosystem and forest management and (...) I think (...) it's given me a broader sense of forest management and, you know, what the forest means today to so many people and how important it is to them all (P14; 140-147).

(...) with me, it's been an overall, I mean now I can see where all the things fit and I think it's been a tremendous learning experience about forestry management and sustainability and so on (P22; 317-320).

Does the representatives' broader view of forest management translate into organizational learning? According to 5 interviewees, their organizations' view of forest management has expanded to include sustainable forest management issues and / or multiple uses. One partner realized the community's dependence on the forest. Hence, the importance of sustainability.

Basically, we've learned, I think we've gained an appreciation for how broad and how deep sustainable forest management issues are (P2; 252-257).

Well I guess a lot of the people [in our organization] aren't really involved that closely with the forest and you know the wide parameters that forestry covers (...) and I guess it's just enlightening them on all the different changes in the way that things are done in the forest, the way that regulations like the Clean Water Act and stuff (...) that sort of guide you on what you can do on your woodland, the streams are involved and stuff. Sustainable forest management, I guess (P21; 510-516).

I think they've come a long way in the beginning from not knowing anything about trees to knowing how to manage and forest management strategies and urban forestry and so on (306-309).

Interviewee: *(...) through the information that we've gleaned through the Fundy Model Forest, how dependent the Village is on the forest being here I guess.*

Question: *You find that that really made you realize the importance of that dependence...*

Interviewee *Hmm, hmm. Certainly (...) any changes that might occur could impact the Village, either positively or negatively. It depends on what is being done, what is being changed and the way, whether it's practices, the amount of harvesting that's done or whatever changes in the annual allowable cut or the type of trees, everything has an impact and who it impacts and how it impacts, I guess it's... a concern (567-584).*

Biodiversity and environment are the **non-timber values** most often mentioned by the interviewees. People also gained an awareness or appreciation for aesthetics and recreational values. Ecotourism was also mentioned.

I've had a great deal of interest in the environmental part of the, of the... of what it stands for as well as the recreation (P12; 246-248).

It's really made me appreciate that these private woodlots, even though they are private property with rights that [there are] other people who enjoy them from afar or esthetic purposes that we don't realize or that we hadn't realized. The view scape is the simplest example (P2; 141-146).

I guess a particular example is one of the Fundy National Park, some of the staff people there have given presentations kind on the, the aesthetic value of forests or the... it, it's not a value that can be quantified monetarily, it's not timber value, it's not recreation, it's not wildlife, it's just of being there and of larger trees and I think that opened my eyes to... a different way of thinking? (P15; 203-211).

I attended a meeting at the Model Forest about 3-4 years ago and it was six hours of science modelling how well the pieces we were looking at would come together into a final management and one of the NGOs got up and about 3:00 and began to talk about what the forest meant to her and her daughter. Completely different, you know, and it takes you back and you'll say well, you can look at it two ways, she's really way out in the left field or it's a different perspective and it's good. It is a different perspective because we all see the forest... (P23; 260-269).

Partners who were not involved in forestry or forestry education reported that they learned a lot about **harvesting** techniques, current harvesting practices and the impacts of harvesting on the ecosystem. For their part, partners from the forestry or the forestry education sectors, often learned more **sustainable forest management strategies and techniques**. Best management practices (BMPs), ecosystem management, ecological land classification and water quality sampling techniques are examples. Various organizations learned about and benefitted from some access to the GIS technology. Obviously, each person brings his or her particular background to the multistakeholder group. So, in order to communicate and to participate, people first had to learn each other's **technical language**, be it about forest management or about ecological concepts.

But another thing is I have a better understanding now as a result of going on some field trips and basically being exposed to just the day to day discussions that... of what

actually happens out there in the field. You know, it's been exposure for me of what happens in the forest industry and also what innovations there are (P10; 241-247)

They were taking out 1/3 of the cut and they showed us what they were doing now and then they took us and showed us like 4, 5, 6 years ago what they did and here because they had opened up the forest with the older of trees that needed to be harvested, the newer ones were blossoming out and you know, it was a very healthy forest. So it was quite a learning experience (P12; 91-99).

I know more than I ever did before about how stands of vegetation (...) are exploited by foresters and what their technical approach to exploitation is about. (...) I know the reasons for their... or much more about their reasons for their antipathy towards leaving older forests in place even though to the straightforward conservationists, it seems like a terrible thing to touch it. But it still seems like a terrible thing to touch it to me (inaudible). But I at least understand the thinking behind it (...) (P30; 376-386).

I also learned some very big words that I never knew before because we have a considerable amount of academics around and for a while it was like trying to learn French or Spanish or something. They use big words. But I use some big words too! (P14; 147-152).

As mentioned, participating in the FMF helped to find common grounds. But it also highlighted the difficulties associated with **conciliating the different uses** of the forest. Some got a better understanding of the economic pressures on the forest and of the (mostly economic) trade-offs faced by landowners interested in sustainable forest management. The difficulties involved with implementing the Greater Fundy Ecosystem Biodiversity Guidelines (GFE Guidelines) were also mentioned.

I have learned a bit about the trade-offs between forest operation, profit-making and biodiversity guidelines. And also some of the difficulties involved with implementing them, it's not as simple as you'd think following the GFE guidelines document (264-269).

I guess we certainly learned that it's going to... not be easy to protect biodiversity, that's the big challenge for us and while I think progress has been made, I don't think we're needing to be... so almost after 10 years there's been some changes on the ground in terms of what forestry, how forestry interacts with the landscape but they've been very small. And it was a huge challenge to, to protect biodiversity and just better land management is still a huge challenge, the bottom line hasn't changed, it's economic and that's contrary to protecting biodiversity (laughter!). It's that simple! (P11; 449-460).

(...) getting a better understanding of what's involved in the forest industry and how the forest industry also is impacted by the global market and outside forces (P21; 453-456).

To summarize this sub-section, the FMF helped to expand people and organizations' view of forest management to include concerns about biodiversity and the environment. It also fostered a better appreciation of values such as aesthetics and recreation. Partners that are not from the

forestry sector learned about the forest industry and harvesting. The FMF did not (and cannot) eliminate the tensions between the different uses of the forest but it improved the comprehension of these tensions. People from various organizations learned new technical language and got some access to the Geographic Information System (GIS) technology. People from the forestry sector mentioned they learned new forest management techniques.

2.4 Learning about the role of knowledge

Representatives from both the industrial and the scientific sectors mentioned scientific contributions to forest management and to forest industry. On the other hand, scientists found that their organizations benefitted from the foresters and the industry's practical knowledge. They also appreciated the opportunity to do applied research.

(...) we certainly welcomed the specific expertise. Like it's one thing for us to, to have paper knowledge, sort of desk bound knowledge of things like best management practices and so on, but there is so much practical experience out there, people who actually work in the field, work with the chainsaws and that type of thing that we have definitely benefitted from that (P10; 217-224).

... an opportunity to attempt practical implementation of research because that was the one thing that was different about any of the Model Forest projects that were conducted out, they were not supposed to stop just with a research paper or a report or whatever. It's: how can the partners actually implement these findings? (P15; 257-263).

Despite mutual learning between landowners and scientists, there is much controversy over the role of science and research in decision-making. It is a theme that came up in a number of interviews, from various partners. For all sides, research is seen as beneficial. The idea of adaptive management - to make decisions based on existing knowledge to do research, to fill the knowledge gaps and to monitor the impacts of actions, and to adjust the knowledge base - seems to be generally accepted. The debate centers mostly around the amount of research and information needed before proceeding to action on the ground. Some feel they can't put forward recommendations before research proves it's right. Others feel that action should be taken based on the "collective best conventional wisdom". Interestingly, it seems that the FMF relies heavily on science but at the same time, the scientific approach is not as respected as the scientific advice.

Maybe the questions really are "What should we do when we don't know the impacts of certain approaches? How can we ensure we don't do irreversible damage to the forest when exploiting it?" This brings us to the precautionary approach. Some argued that we need untouched, protected areas as witnesses and safety measures in case we make mistakes because our knowledge may never be sufficient.

2.5 Those issues people don't learn about...

While we asked people what they learned about, it is equally important to know what they did *not* learn about. We asked them what were important issues in the forest and whether these issues were being addressed by the FMF.

As mentioned, people gained an appreciation for non-timber and non-consumptive values through their participation in the FMF. However non-timber issues, particularly non-consumptive ones, were seen as missing elements or elements which often were set aside. It was felt that even some socio-economic aspects, such as Aboriginal treaty rights, issues faced by blueberry growers or beekeepers, value-added wood transformation were not discussed much. Consumption issues (reducing the consumption of wood) as opposed to production, are hardly being addressed in the FMF.

I think the Model Forest has focused too much, there has been an imbalance as far as the focus of the Model Forest, that biodiversity has been focussed on, quite intensely. Not that it shouldn't be but the other like the social and economic issues haven't been dealt ... I guess I come more from the perspective that social and economic issues have not received equal time (...) (P2; 185-193).

(...) there are other values, non-consumptive values and non-consumptive, I mean... they talk about non-timber but it's not necessarily non-timber, it's non-consumptive and that goes further because I want the deer to be there just because they're there, not because we want to kill them or whatever (P22; 843-858).

However, it is felt that aspects that are difficult to measure or don't "fit into the computer" tend to be left aside in the process. Recent efforts to include spiritual values were mentioned, but people still expected more. A few deplored that the "economic bottom line" was the ultimate basis for decision-making. Indicators themselves tend to be of economic nature. While not mentioned, the region's dependence on the wood industry certainly influenced the FMF focus.

They're difficult values to address but they're very, very important. And, but, we've given up too easily on them, we wrote them off as being too difficult (P2; 460-462).

I think there has been improvement and conscious effort made to consider, to begin to consider aspects that are not totally economic (inaudible word) in nature (P24; 557-559).

In summary, it was felt that some messages were not being heard in the FMF, or that the push for quantification made it difficult to learn more about them. People would like to see more attention devoted to various social and economic issues, including the reduction of consumption. They want to learn more about the non-timber and non-consumptive values.

2.6 Summary

In the FMF, people gained a better understanding of other viewpoints, their commonalities and their differences. They learned about the consensus-building and multistakeholder approaches and gained problem solving skills. The FMF experience also contributed to broaden people's view of forest management and increased their appreciation for non-timber and non-economic values of the forest. Yet, it was felt that learning about these values was stifled in the process. Reducing the region's dependence on wood production also received little attention. The FMF facilitated a reflexion on the role of practical and scientific knowledge and, to some extent, on adaptive

management. However this topic remains controversial. Finally, people learned about more sustainable harvesting and forest management techniques and strategies.

3.0 From personal to organizational learning

One of our research questions was: *To what extent is the information gained in the FMF shared within partner organizations and with communities within the FMF, in order to stimulate public debate about the future of forests and forest-dependent communities?* This is an important question because it's been observed that representatives around multistakeholder tables often feel their own organizations are not supporting them. Is it the case for the FMF, especially since it had been functioning for 7 to 8 years at the time of the interviews? To answer our research question, we will divide it into three others. First of all, *do organizations learn? What do organizations learn? And how do they learn?*

3.1 Do organizations learn?

While all representatives felt that they learned from their participation in the FMF, not all were convinced that their organization did. Some didn't know whether their organization had learned. Others considered that their organization already had a fair amount of knowledge. A few others were too new to answer. Some thought their organization hadn't learned anything. Not surprisingly, individuals generally felt they learned much more than their organization because of their direct involvement. Yet many thought that their organization at least got some new knowledge because of the FMF.

3.2 What do organizations learn?

As we differentiated personal from organizational learning in the previous section and in Table 1, we will simply summarize the findings here. The interviews showed that all types of knowledge were transferred to some degree to organizations. But there were much more individuals than organizations that learned about each topic. There is one exception. The role of science for application on the ground was a point brought up as an organizational learning more often than as a personal learning. It is clear that each organization learned something different, depending on its interests. Some may not realize that they have learned from the FMF.

3.3 How do organizations learn?

In order to answer this question, we asked representatives "How do you keep your organization informed of FMF activities?" In other words, what are their means of communication? Partners certainly use FMF materials and communications tools, whether it is printed material, the WEB site, the annual general meetings, videos or electronic material. While many representatives felt they could take a more active role in transferring information to their organizations, they often communicate at least bits of information from the FMF, based on their colleagues or their organizations' interest. They integrate the material provided by the FMF within their organizations' communication channels such as newsletters, email, mailings and reports, meetings and training sessions. This is easier for organizations that have good, functional distribution systems. Teachers and professors integrate their learning into their teaching. Some organizations

benefit from adapted tools of communication such as the Best Management Practices (BMPs) Manual, the school teachers' in-service or the school curriculum.

Quite a few mentioned informal channels of communication as an effective way to transfer information to interested individuals within their organizations. Finally, a few representatives admitted that they don't really share information from and about the FMF to their organizations. They simply rely on the FMF. They either are not sure about their role or they consider that the FMF material is easily available to anyone who is interested or, to the contrary, they find that the FMF material is not adapted to their organizations' needs. Some organizations are just not interested.

Transferring information to organizations is difficult. Direct involvement is key to learning and organizations don't usually participate as a whole.

It's difficult to bring a group along with you because it's such a process (...) It's hard enough to, to be... when you're actually being a part of the process to realize what brought you to this consensus to go back to a group and then try to bring them there... (P4; 809-813).

(...) They recognize that Fundy Model Forest is an important entity but all they can ever really see is what comes through on paper. They don't get the benefit of the daily experience and so on and as a result of that, they probably don't fully realize just how important it is to [the organization] (P10; 328-335).

Is information shared with the broader community? Our questionnaire didn't include that specific question but the topic was raised in a number of interviews. Communication with the broader community is rather limited. It depends on the organizations' mission. Those that, by definition, are concerned with the local community (municipalities or community oriented organizations) or with people's education (formal and non formal) tended to involve the broader community.

4.0 The factors that impact on learning

4.1 What facilitates learning in the FMF?

Which factors promote learning? This section describes the factors which play an important role in facilitating learning (see table 2). According to the interviewees, the process, the interactions, access to information and to expertise help both individual and organizational learning. Personal learning also requires a strong personal commitment. Scientists appreciate the staff support they get and their organizations do learn because of their participation in research projects. Some organizations benefit from the fact that the FMF structures the information but their learning requires a good internal communication system. Each of these factors will be detailed below.

Table 2. Factors promoting learning.

Factors	Personal learning	Organizational learning
Process	X	X
Interactions	X	X
Staff support	X	
Personal commitment	X	
Access to information	X	X
Structured information	X	X
Participation in research	X	X
Partner organization's internal communication	X	X

Interactions play a key role in both personal and organizational learning. They are facilitated by the **process** and enriched by the **variety of FMF partners**. Although relations were tense at the beginning of the FMF, now it is generally felt that the “atmosphere of consensus”, the open process, the partners’ mutual respect and willingness to teach and share their experience all facilitate personal learning. The process and the exchanges also spark new ideas, new projects within and outside the FMF.

(...) just the interactions with other people I think are at the meat of... right the center, most important part of the Model Forest (P15; 190-192).

One thing which helps the learning part is the atmosphere of consensus in the room, of which it's usually a lack of consensus. But because (...) there is an opportunity for or not for consensus, everyone's view is of equal... time. Everybody seems to feel free to speak (P14; 166-172).

Again I think it's the process, we have an open process where everyone feels they can, they can function fairly and openly and that's [inaudible] behind the whole thing and I think it's really important that that's maintained (683-686).

(...) for one idea you can turn it into ten projects (...) (P23; 369).

I think it's very important that they have the... the different views of all the various partners because the forestry is something we all are very concerned about and what it provides to this province. Not only to this province but to this country. And everybody has their own ideas. It's an opportunity to gather those ideas together and make the best of the ideas that are presented (P1; 172-179).

Since interactions are so important to both personal and organizational learning, **participation** in the process is key. Mutual learning clearly is seen as a result of face-to-face meetings and discussions. The working groups, even though their structure now tends to divide issues along the lines of criteria and indicators (C&I), are particularly appreciated as learning spaces because of the interactions and discussions they foster. *Active* people learn most. And they learn most about *active* partners and those they work closely with, in working groups or on specific projects.

Definitely participating. It can't be done by just giving a report, which often just ends up on a shelf. People have to be there in order to learn. And then maybe, hopefully, they will bring what they learned to a friend or a colleague (P31; 174-178).

I think being involved in the committees from the beginning is really the best way to learn and to meet people that are in the different, the different aspects of forestry and have those contacts. Being involved is very important (P13; 222-226).

Only by knowing more what people are doing. Because like the ones that, I guess the ones that my perceptions have really changed on are the ones that I really know what they've been up to because I've been really involved with them (...) (P20; 358-362).

People pointed out that both *formal* and *informal* interactions were important factors in their personal learning. For scientists, support from the **FMF staff** facilitates learning. For instance, people learn a lot from **informal discussions** during coffee breaks or during field trips. Moreover some people get to see each other or invite each other to meet with their organizations outside the FMF. The FMF acts as a catalyst for further exchanges among some organizations and creates **networks**.

So that's probably some of the best learning I've had (...) just off on the side, talking about something and ask... we'll ask a person "what's that really [mean]?" and they'll give you their opinion (...) (P9; 335-340).

Personal commitment plays an important role in personal learning. That means a commitment to stay despite encountered difficulties and the enormous amount of time to invest. It also means a personal willingness to learn and to make efforts to learn. For instance, some of the interviewees mentioned they went to conferences, did extra reading or consulted people about forest issues on their own time, outside the FMF framework. Carrier interest acts as another important personal motivator to learn and to be involved in the FMF. Although not mentioned in the interviews, it was observed that many representatives either owned or were responsible for a woodlot or a forest themselves. This likely strengthens personal commitment, as information and issues are that much more relevant to them.

Based on the interviews, it should be noted that personal commitment has a lot to do with organization's participation in the FMF. Many organizations actually are partners because of a single individual's strong interest for some of the issues brought up in the FMF. The opposite is also true. When no individuals have a strong interest in the FMF, organizations' participation fluctuates.

In terms of learning, representatives and organizations clearly get access to valuable **information** through the FMF. Direct access to foresters, experts and owners is very much valued. **Meetings, workshops, research projects, and conferences** are all occasions to learn. Obviously, research organizations particularly learn through participation in research. FMF's **publications** are also seen as useful tools for learning, especially at the organizational level. The FMF creates information, makes new and up-to-date information available and provides occasions to discuss that information. For some, the FMF confirmed their ideas and put them in a structured format.

Obviously the **representatives** play a key role in facilitating their organizations' learning about issues brought up by the FMF. However their ability to do so depends on the existence of a good **internal communications** system (whether formal or informal) in their organization. Because a few representatives and partner organizations are members of the Southern New Brunswick Wood Co-operative (SNB), there is a certain overlap between these organizations' memberships. That explains that a few said the SNB also contributed to its individual and organizational members' learning.

I guess the amount of information that's out there, that's gathered through the Fundy Model Forest through the research projects or data and stuff that's been collected, you know that's been published previously. It's all available, all you have to do is ask (P8; 267-271).

(...) I was sitting in a meeting one day and I looked around the room and there was 100 years of university education and none of it was mine. And I think, you know, what a privilege it is to be able to sit with people like that. I have learned so much and people have been willing to teach me so much and I think that... Oh, I mean, the benefits are just unending as far as I'm concerned (P22; 303-309).

Specifically, certainly I mean a lot of our people have been involved in doing research within the Model Forest and that's what research is about is improving our knowledge and finding new things (658-661).

Partners seemed enthusiastic about their learning and participation in the FMF. They pointed to the importance of being committed, participating and interacting. The FMF process facilitates learning because it's open and brings together a variety of partners. The consensus-building approach encourages everyone to express themselves freely. The meetings, workshops, conferences, research projects as well as the informal discussions contribute to learning. FMF publications make a whole variety of information available. This is particularly useful at the organizational and community levels, and is best used when there is a good organizational internal communication system.

4.2 What hinders learning in the FMF?

Six interviewees couldn't point out any factors affecting negatively their own learning. For the others, the factors affecting individual and organizational learnings often are the same. They can be classified in four categories (see table 4):

- 1) at the personal level: personal attacks as well as the lack of personal commitment limit participation and learning;
- ii) at the organizational level: some partner organizations' commitment to the FMF is limited due to their nature;
- iii) at the FMF level: participation requires huge amounts of resources and the results are not always tangible;
- iv) at the social level: broader socio-political issues affect people and organizations' trust.

Table 3 Factors hindering learning in the FMF

Personal level	Organizational level	FMF level	Socio-economic context
<ul style="list-style-type: none"> • Lack of personal commitment • Personal attacks 	<ul style="list-style-type: none"> • Mission • Location, territory • Organizational culture 	<ul style="list-style-type: none"> • Amount and specialization of information • Lack of reporting mechanisms • No clear message • Lack of clarity of representatives' role • Slow process • Lack of changes on the ground 	<ul style="list-style-type: none"> • Tensions between environmentalists and industrial views • Presence of a large corporation • Federal-provincial tensions • Aboriginal history • Antipathy towards the government

4.2.1 At the personal level

Personal commitment certainly plays a key role in learning. A few representatives admitted that their low participation affected their learning - but not necessarily their support for the FMF.

Personal attacks and unpleasant remarks also affect the capacity to learn at a personal level.

People generally felt respected and appreciated the working atmosphere at the FMF. Personal attacks are not an often mentioned hindering factor, yet when it happens - and it happens - it hinders learning.

(...) so I got to admit that some of my knowledge of, I know what the principle is of it and I agree with it and it's gonna work. And that's all I tell people that I talk to. That it is valid and it is our future, whether we, you know, whether we're in business 20 years down the road is gonna be based strictly on the FMF philosophy (P12; 200-206).

What hinders it? Well the opposite, you know things when research or a person's role or person's opinion is belittled by the partnership, by individuals in the Partnership. That's very frustrating and just makes you want to go away you know (P3; 979-983).

4.2.2 At the organizational level

At the organizational level, commitment to the FMF varies and influences the degree of learning. Reasons to participate vary among organizations. Some want to learn - and sometimes only learn! Others want to contribute a specific expertise or point of view to the FMF but they don't expect to learn - they want to teach! Others are concerned about the forest and want to influence or to be included in the decision-making process - they want change! Some want public input - they have to make decisions! Finally, some organizations are represented because one or a few individuals wanted to participate; it is not really an organizational decision. Yet the FMF benefits from these individuals' participation.

Organizations' interest and participation in the FMF is clearly related to their **mission**. Some have a broader mandate. Forestry issues may only be one of their concerns. This is the case of municipalities, for instance. Others, to the contrary, may be interested in very specific activities or aspects of the FMF, for instance the research. This is the case of universities and some non-profit organizations. On the other hand, the FMF may only be one part of the territory they're involved in. Their membership exceeds the FMF territory or they themselves are located outside the FMF territory. These organizations may, again, be interested in the results of research, but not in the actual changes on the ground. They may also be interested in changes on the ground elsewhere! Many groups are in this situation. The FMF is seen as a local group. The **sense of belonging** is an important factor influencing organizational interest and hence learning.

(...) but there are other things in the community that we have to look after also so... (538-539).

But it is difficult for a person living in Gander Newfoundland to have an appreciation of what's going on in the Fundy Model Forest (P19; 544-547).

So I guess I'm saying that over all our membership, although we're all interested in forest systems and forest management and how it's affecting our landscape, they may not be particularly interested in the daily on-goings of the Fundy Model Forest. They probably would be interested in the outcome of research studies, you know (...) (P19; 553-566).

Organizational culture also affects learning. Some organizations already have a fair amount of information and experience about multistakeholder approaches or forest issues and learning is not their major goal in the FMF. Others prefer to work by themselves, to keep control. There is a certain resistance to ideas coming from "outside". This situation should not necessarily be seen as negative. As an interviewee pointed out, communities' reluctance may help to avoid the premature adoption of unsuitable ideas.

But also the reluctance to take on as one's own other people's experience (...) And that's normal, and maybe helps not to adopt too quickly ideas that are not applicable to our own community or our own reality. But it also hinders learning (P31; 183-188).

4.2.3 At the FMF level

Other factors hindering organizational learning relate to the FMF process itself. **Information-loaded** and **time-consuming**, it exerts considerable pressures on organizations' human and financial resources. For representatives and their organizations, the amount of information produced by the FMF hinders learning. There is just too much to learn! Moreover, the committees and the Partnership sometimes deal with **very specialized information** and explore some topics in much detail. It was said that it is easy to lose sight of the broader picture. So the overload of information makes it difficult to sort out the important information and to have a comprehensive view of the FMF as a whole. Meanwhile, some FMF research results never get fed back to the Partnership. In fact, a lot of effort is put into choosing what research will be funded but **reporting mechanisms** are sometimes lacking. When the representatives can keep up with the information, they still have great difficulties transmitting it to their organizations in a condensed form and an accessible language.

I think one of the problems with it is there's just so much stuff that's coming out and just the e-mails that you get!... And before it was e-mail, it was all this paper! Boxes of paper that [a colleague] gave me and just reams and reams of paper! You have great intentions of trying to read it but you don't! So I mean you... And then if you do find an interesting paper, or aspect, it's probably too big to include in a newsletter so you say "ah, I should summarize that", but you never do! So that's partly the problem, there's almost too much information coming in (P24; 467-475).

I think probably one of the areas that are probably the weakest is when, you know, we have a lot of involvement into getting projects up and running and you know consensus as to "yeah, this is something we want to do". I think really where the... one of the big weaknesses that we have is when we actually get those things down, get final reports in, they end up going to the general manager (...) and not a lot of them get back to the people, so there's a disconnecter here between the work that you know everyone thought that we should be doing and give the information back (515-525).

As mentioned, the FMF deals with specialized knowledge and specialized **language**. When the representatives themselves wrestle with the language, they can't transmit information to their organizations, let alone fully participate in the discussions. Even when representatives have an expertise in forestry, their organization might not. That is especially problematic for the Aboriginals for whom learning the "language" means expatriating themselves to a certain extent. Adding to the difficulties of specialized knowledge and language, the whole concept of the FMF is difficult to explain "in one sentence or two". There is "no clear **message**", some feel. Moreover, the **representatives' role** is unclear to some of them.

(...) the terminology, it's scary to First Nations, it's not part of our language. You know, it's not part of our language and it's hard for First Nation people to speak that terms unless they actually go out and spend 10 years away from the community and learn that stuff (123-128).

(...) It's difficult to make sure that people understand exactly what... The concept of a Fundy Model Forest is very difficult to explain. Someone comes up to you and says

what's Fundy Model Forest, it's tough to sort of say in one sentence or two exactly what it is (P24; 141-145).

One factor hindering learning is the amount of time required. Of course, it takes time to keep up with the information. In some cases, **traveling** takes time. The **process** itself is also very slow. The variety of partners and viewpoints may be a source of learning, but **conciliating the different perspectives** requires time and can result in long, sometimes “a bit rancorous”, meetings especially without good **facilitation**. Meetings tend to drag on because too much attention is given to focused and **specialized details**. There are **too many meetings** especially when one is interested in many topics and must be on a few committees to keep up to date. Some blamed the **Criteria and Indicators** process: it requires a lot of research and divides topics. Coupled with the limited organizations' resources, the slow process sometimes results in **absenteeism**, which further slows down the process - and the learning. Finally, it is felt that the **lack of application on the ground** limits learning.

I think the number of partners is much greater than anybody ever expected and I think also that they've tried to control it reasonably well, and they've tried to allow everybody to have a role to play in that, but when they've got the numbers as great as they are, it's difficult to get it all in programming that could be completely understood and presented (P1; 157-162).

Well one thing is... because there's so many people, so many... many broad range of stakeholders that the whole process is extremely slow. It's, for me it's, some of the meetings are painful because they're so long and the progress is very very very slow. If you look back in ten years well you'll say well, we've accomplished quite a bit but there are times and through the 10 years when you wish you were somewhere else, that, that you want to get something done and the progress is so slow, it's frustrating (P9: 349-358).

(...) sometimes the same thing that was good, this kind of arguing or sharing ideas that was good for the learning, might also get to be too much and then you just start gazing in the stars or like some partners maybe, it's just too much and it gets too scientific and it just bores them and they just don't go anywhere (P20: 239-244).

Well the meetings in an effort to ensure that no one felt short-changed in their ability to express their opinions or state their case, sometimes discussions in meetings went around in circles because it wasn't, the meetings always weren't steered or chaired as strongly as I perhaps might have liked (P26; 289-294).

If there's one thing that really hinders learning for me is the fact that you don't get a consistent turn-out by real power holders in the Model Forest to the meetings (314-317).

Some organizations see multistakeholder approaches as relatively time-efficient ways to achieve their goals. Yet all have limited resources. They all have other goals to pursue along with their involvement in the FMF.

4.2.4 The socio-political context

The broader socio-political context certainly affects relationships among partner organizations. The tensions between the **environmentalist and industrial** perspectives are often mentioned as a factor influencing trust and learning. Because of its industrial perspective and its very strong economic influence in New Brunswick, the **presence of JDI** raises suspicion among various partners - not only among the environmentalist groups. On the political scene, historical **federal-provincial tensions** obviously hinder learning. Also, the **history of aboriginals** in Canada feeds suspicion towards white Canadian initiatives, which is difficult to overcome at the community level. Finally the current **“antipathy” towards government** funding and projects affects the broader community support. Many considered that these various tensions were attenuated by the FMF, but certainly not dissolved. They affect people’s trust in multistakeholder approaches. They sometimes cause internal tensions within partner organizations, which limits organizational learning and support for their representatives. These in turn lose their motivation to learn and participate.

(...) the possibility of... the possibility of it potentially being a biased process maybe, this is on the idea that the Model Forest office is located in Irving headquarters (304-308).

Well one of the things that strikes me is that I don’t know what is actually happening on the land in the FMF, people can show us all sorts of maps and statistics and whatever but I really don’t know what to believe and so when a big forestry company suddenly starts saying that now they’re doing sustainable forestry, I don’t, how can I just accept that? (P4; 528-534).

And I think that collaboration and that understanding has been established but a lot of First Nations don’t see it that way. It’s simply because of the history (340-343).

It took 500 years to get where it’s at and I’m not gonna change it by myself, in my generation type of thing, you know, but I’m hoping that, that the next level is set for the next generation that comes to continue it on (622-626).

I think, the feedback I get continually is that this is just another government make-work project that is spending a lot of “our” money for nothing (P4; 823-825).

This sub-section showed how each level is important to learning: personal, organizational, Partnership and socio-political. Personal contacts can have a negative impact. Organizational interest in learning varies greatly according to their mission, scope (territory) and culture. The FMF follows a demanding, information-loaded and time-consuming process. People don’t always see the results. Finally, the socio-political context affects people and organizations’ experience and learning in the FMF.

4.3 What could improve learning?

Interviewees were asked how personal and organizational learning could improve. As mentioned in the previous sub-section, some of the main challenges of the consensus-building and the

multistakeholder approach are to be time-efficient and to transfer relevant information. How can we find collectively acceptable solutions within reasonable time? How can we benefit from expertise while avoiding to get lost in details during meetings? This section summarizes the representatives' suggestions to improve learning and communication in the FMF.

Many representatives felt that they could and should take on a more active role in passing on information to their organization. But first they must be motivated and their role should be clarified. They need to see a clear message and results from the FMF. Many suggestions were also made to improve communication, efficiency and learning in the FMF:

- to circulate every group's minutes to everyone interested
- to increase electronic communication such as discussion groups
- to shorten meetings
- to delegate some work to smaller committees in order to shorten meetings
- to use good facilitators
- to use simpler language
- to review the FMF structure in order to combine and reduce the number of committees
- to organize a workshop between the FMF and the Nova Forest Alliance to exchange their respective experiences
- to clarify the FMF message
- to evaluate the social, economic and environmental impacts of each project
- to show the changes on the ground
- to have an evaluation of those changes by a neutral party

People would like the FMF to make information "more relevant" to their organizations - and to the general population. Each organization is interested in different bits of knowledge and integrates it differently, depending on its mission, location, clientele and culture. The teachers in-service is a good example of a positive FMF contribution in terms of adapted tools. Some interviewees mentioned they would like to see more active participation from the industry, the small woodlot owners' and the province. Again, adapted communication tools were suggested. Here are some suggestions made to improve organizational learning and participation:

- one-half page executive summaries of the projects in layman's terms
- one-page long summaries of FMF activities 3-4 times a year, for their newsletters.
- Activities designed for senior management from the different organizations, especially governmental departments.
- Technology transfer to small woodlot owners: information programmes, packages, material.
- Developing and maintaining relations with the government (elected officials).

Following are some of the quotes that support this section.

I think sometimes things could be... conducted simpler. I think sometimes (...) at the end of the discussion or at the end of the morning when I finally did understand what was being said, (...) it was simpler than it first appeared (P14; 195-200).

But that should probably be my job [laughter] (...) I guess that those were big things, that was discussed at the Partnership meeting how the information is not really getting through and everybody was kind of pointing at Maureen and all of a sudden at the end of the Partnership meeting, everybody said “well gees, we should be, you know, it should be us that take the information! Maureen gives us the tools and then we take this information back to our group.” and that's probably something that I thought was good at the end, kind of thinking "Yeah because these other group should do that". I think I should probably do that too! (P20; 445-456).

(...) people are always looking for articles, they don't want a 30 page article and they don't want it at a level that people wouldn't be able to figure out why this article was in there. It has to be made to a general readership (P24; 489-492).

(...) every project should be evaluated in combination, particularly environmental projects, biodiversity, whatever, from a economic as well as an environmental perspective as if there two wings of everything we do. Particularly when it comes to forest practices, what is the environmental impact of this, the biodiversity impact, and what is the economic impact? (P2; 444-451)

To start looking for similarities between the various committees and to start reducing the number and bring the committees together so you're looking at various aspects (P23; 242-245).

(...) it's a harder thing for private woodlot owners because it's so difficult for them to get everyone up to speed at the same time and also to, well, it comes back to a matter of ownership and what they think their needs are and so on. And so there's a big job to do there and it's not necessarily SNB's job, I mean it's all our job and that's... So if there's a, you know, I feel there is a failure there but we need to be working together on it and that's the whole purpose of the Model Forest (P22; 438-446).

5.0 Does learning bring change?

This section first deals with the question: *Has participation and learning in the FMF influenced the practices of partner organizations?* Getting to actual change, to results, is a recurring theme in the interviews. The FMF and its Partnership seem to focus mostly on changes on the ground, i.e. incorporating biodiversity objectives into actual harvesting practices. However this research looked at changes occurring in all partner organizations. Did partners change their own objectives and activities? The second part of this section looks at personal change. The results from the interviews indicated that this was an important element. The third part looks at empowerment. Do participation and learning lead to empowerment? The final part looks at the question: *Who benefits the most from the information shared within the FMF Partnership regarding sustainable resource management?*

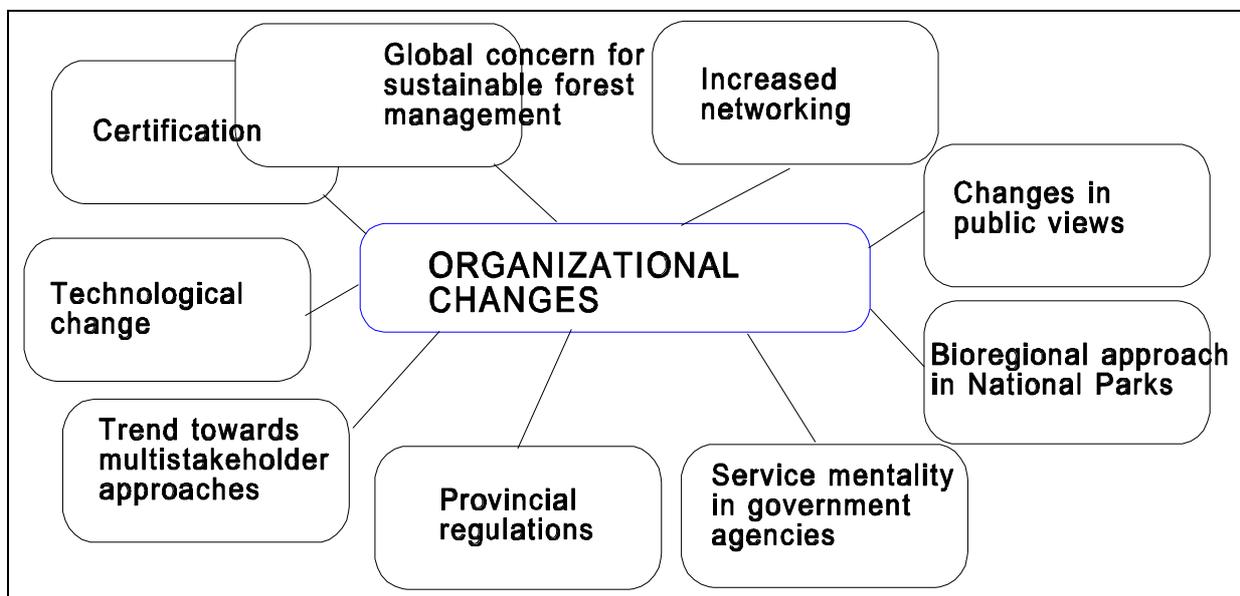
5.1 From organizational learning to organizational change

People were asked whether they felt their organizations had changed their objectives, actions and attitudes as a result of participation in the FMF. Many interviewees first clarified that changes in their organizations and in forest management should be attributed to the FMF *in conjunction with* other influences such as changes in the public views and the current trends toward certification and the multistakeholder approaches (see figure 1: changes affecting forest management). It seems that the debates and the focus of the FMF itself as well as the partners attitudes also changed over time.

I think we all have [changed] from the very beginning, we all sort of came in with our own idea of what we wanted sort of the Fundy Model Forest to be and I think that we've all evolved. The whole model forest focus has changed and I think all the partners have changed into what they... you know (P13; 254-259).

(...) I know we've mellowed in a way but I don't think it's a giving in, I think it's a different understanding of the process and what it is that we're trying to accomplish (P22; 330-332).

I do believe that the attitude of most of the foresters is much more liberally inclined towards conservation than it was 4-5 years ago and I think equally that conservationists realize that they have got to appreciate that other people are earning their living and see their right to do that within this kind of structuring (...) (P30; 501-508).



Answers show that organizations' learnings and the changes they undertake are usually related to their overall goals. Landowners learn about and change their land management goals and

practices. Researchers change the way they make research. Teachers and professors change their class content. Non profit organizations learn new ways to pursue their goals.

Representatives from the landowners (including municipalities) and the SNB have changed their planning objectives to include, in some cases, biodiversity, and in other cases, multiple uses. Their style of management has changed and is moving towards ecoregion and landscape level planning. To reach their planning objectives, they have adopted new tools: best management practices (BMPs), scientific input, GIS technology, partnerships.

I think that's what we try to do and that's what we've learned through the Fundy Model Forest is that you can incorporate a lot of values into your forest management planning (P13; 293-296).

I think we've, we've learned that we probably need to have some of these researchers that are working things on the ground, we need to have some of them helping us steer the right course, scientifically (589-593).

Representatives from educational institutions have changed their teaching. A new curriculum was added to participating school districts. In professional schools and universities, courses on forest management planning changed their focus to include biodiversity and ecosystem considerations. Through participation and research in the FMF, some university students were exposed to consensus-building and multistakeholder approaches. They learned about problem solving and the importance of communication. It was emphasized however that, given their nature, universities as a whole have not changed.

Seeing the practical application of research, research organizations learned to adjust their research to the needs and practices of landowners.

(...) once you understand how large companies will cut a piece of land, you begin to realize that I can do my research which complements their management plans. Like they set management plans up to 20 years then they'll cut a certain area based on certain parameters. And so what we're trying to do now is instead of saying "no we want you to forget that management plan and follow our research plan", we now say look at our research plan, we'll work with your management plan. So both groups are benefiting. And another thing is that we are actually I think doing a research on actual forestry, not set-up experimental designs (P23; 408-421).

Generally speaking, the FMF also contributed to increase consultation and partnership approaches among a variety of partners - landowners, government agencies and non profit organizations - even though it was mentioned that the FMF is not the only partnership governments are involved in. Some organizations may not have changed their perspective, but they have changed their activities. Sometimes access to information sparked new ideas among partners.

5.2 From personal learning to personal change

Some interviewees mentioned that participation in the FMF led to personal growth. Personal evolution is associated with changes in perspectives resulting from the debating of values throughout the process. Tolerance for and a better appreciation of other values were brought up by a number of interviewees. Personal growth also is the result of an increased ability to speak up, to actively participate and to work with such a varied group of people.

It's because just personally, as a non-professional woman injected into this group, that I've been able to come to a place where I can speak what's in my mind or my heart and yeah, that's been a real sort of self-growth thing for me (1080-1084).

(...) Quite an evolution, for me (270).

(...) it stepped me outside my profession (...), it made me aware of how other groups work and what their agendas were and how diversified the Partnership is so it's led to personal growth as well as professional growth I think. Yes. No question (P25; 160-165).

I'm more tolerant of their views (P5; 221).

(...) being a little more open minded perhaps than I did before starting it (P26; 315-316).

Other interviewees' experience in the FMF might not have changed them as much as it confirmed their ideas or intuitions.

These values were there, but they weren't prominent, we didn't recognize those values to be as significant as they were. Like to find out... when we found out what biodiversity was, yeah, that's important to us now that we know what it means. It has been. Sustainability? My gosh, sustainability, from the time that the settlers were settled here... sustainability and integrated management... Things like multiple use? That was subsistence! (P2; 338-347)

Well, probably some of the, some of the ecosystem work that we've done. Much of it I, I'd say much of it I had a feel for from being in the woods all my life. I had a feel for it that it wasn't structured into a format. Obviously we hadn't made our management plans with that as a criteria like we're trying to do now. So... (296-299).

(...) a lot of it has confirmed... the matters that were instilled in me as a child from my own land, you know, that it is there to... it is there to be protected (P12; 721-726).

5.3 Does participation lead to empowerment?

Do people feel a sense of empowerment through their participation and collaboration to the FMF? Answers ranged from a clear “no” to an enthusiastic “yes”. But most got at least some sense of empowerment. Some made a distinction between their influence on the FMF and their influence on landowners.

Certainly empowerment with the Model Forest and marginally empowerment with the landowners. As I said they don't, I don't have much power over what Irving and SNB does. (...) But in terms of what the Model Forest does (...) I do, I do feel a sense of empowerment (774-779).

People explained how they felt empowered. The FMF, they said, provided them with a venue where to get involved, to speak up, to share their perspective, to get direct access to owners and/or to get up-to-date information about owners, the process and techniques. It sometimes helped them to work more effectively. Some organizations were empowered because they realized that they could contribute to change or that they had something to offer. For some, the Criteria and Indicator process facilitated the implementation of projects outside the mainstream. Others felt empowered because of their committee involvement. One person found empowerment from the fact that the FMF is part of a whole movement towards community involvement. It was emphasized that empowerment is the result of personal efforts. In order to have influence, one needs to participate actively.

I think as much as, to the degree to which one gives input, yes, for sure. (P16; 768-789)

(...) I'm constantly sort of surprised at some of the projects that are coming through the Model Forest. And maybe this is just because I've been lucky and that some of my ideas have been listened to. I mean personally I do feel that I do affect some of the decisions there (727-732).

Yeah I do, certainly more so than before. Contributing and having my say and people are listening somewhat, so I guess that's empowerment, isn't it? (P5; 517-519).

I think we've learned that yes we can be helpful to some people who are trying to do some good things (P30; 554-555).

Yes. But again, I can see that you might get a variety of answers to that question depending upon the degree of involvement of individuals and organizations. It's really at the, it's through active involvement in the working group that that sense of empowerment might come into play and if there isn't that active involvement, then you might get a different answer (P15; 448-455).

Sure. I do. I do and I think the Model Forest certainly allows people to be empowered. Now you're only empowered as much as you want to do your homework and... but I think yes the Model Forest has certainly a lot of opportunity for empowerment. Good ideas find their way through the debate (P29; 581-586).

How much empowerment did people feel with the landowners? Many mentioned that the FMF was not a decision-making body. It is first and foremost a discussion group. It is a place to learn, to exchange perspectives and information, to demonstrate new approaches. It also allows public input to influence the owners. Its main decisions concern the orientation of research.

Because (...) it's a place for discussion, for some action and projects, and bringing about ideas and sort of airing concerns and issues (P11; 1024-1028).

But there's no real decisions, I mean, (...) and most of the groups appear to be analyzing and assessing and reporting but there aren't really any decisions necessarily being made (P11; 557-762)

(...) the Fundy Model Forest has no management authority. It can only use persuasion (...) (P28; 507-509).

Did partners consider that landowners were changing their approach? As mentioned earlier, partners thought that changes were occurring on the ground and that these could be attributed partly to the FMF, partly to broader trends. Answers varied considerably when it came to the scope of these changes. Partners recognized that each landowner faced different challenges and therefore, approaches sustainable forest management differently.

It was generally felt that JDI changed its practices. The corporation, people thought, controlled a large part of the land and had the resources to implement changes more easily. Some felt it really wanted and did make meaningful changes, even though “the bottom line remains economic”. Others felt it only made small changes, contributed to focus the FMF on issues within the current model and stifled more important changes.

He's leaving dead trees, he's leaving sections of the forest to grow old, he is changing and he's not only doing that himself but he's promoting it by the fact that he'll willingly take anyone on a tour around there and tell them his views. And he's not after trying to wring the last dollar out of every inch of that property. And so, so far as biodiversity and all these other features, he's making a big difference and the reason, certainly part of the reason is because of the Fundy Model Forest influence which I think is quite an incredible accomplishment. (...) I think it's a pretty neat success story (P24; 613-620).

We're looking at how we can continue to take as much or more but still have something left that we can call biodiversity, we can still... Yeah we even spend a lot of dollars and time looking at plantations and seeing how far they can go to being called a forest. And looking at clearcuts and saying, trying to see what's left after a clearcut, what dies and what comes back and stuff like this, so we have spent enormous amounts of money trying to prove that we can continue doing things the way we are with some minor changes and it will be all right (743-752).

SNB changed and was seen as more advanced than the other marketing boards. However, their impact is limited as they have no management authority and don't represent all the small woodlot owners. As a result there was a lot of concern about over cutting on small woodlots. Absentee ownership, black market, contractors "cleaning" whole areas, high prices putting pressure on the resource, the lack of reporting systems on the volumes cut on private woodlots, resistance to government intervention, all contribute to the situation. The values around private ownership rights exacerbate it.

People certainly showed an appreciation for the constraints faced by small woodlot owners. They understood the economic trade-offs associated with practices such as riparian buffer zones. They realized the difficulties of competing on an unfair market, created by low stoppage fees on Crown lands and the small control over the market compared to large corporations. They also knew that for many owners, woodlots represented their pension plan.

It was felt that changes would require education and time. Government intervention to protect both the forest and the small woodlot owners might be necessary. More communication among owners about their respective plans and increased awareness of their collective impact is necessary. It was felt that the FMF could address these issues better, that it shouldn't be solely SNB's responsibility.

(...) (...) if you look at SNB in comparison to the other market boards across the province, I think the Model Forest can stand up and certainly say "we're the big, one of the big influences on what has happened there" (...) (1648-1653).

The Southern New Brunswick Woodlot Owners Coop may decide to support a decision, the implementation of something but that may only go as far as them encouraging their individual members to implement. They clearly have done, have done some of that. So there's a, who has the management authority and decision-making authority, well, for the private wood lots, it's the individual woodlot owner and not the... (P15; 409-417)

And so there's a big job to do there and it's not necessarily SNB's job, I mean it's all our job and that's... So if there's a, you know, I feel there is a failure there but we need to be working together on it and that's the whole purpose of the Model Forest (P22; 443-446).

You can't expect a private landowner to look at a recommendation on biodiversity, go home and apply it. It might mean that he shuts his wood lot down because deer travel through and going through the next... you know, so you couldn't expect a person to do that (P28; 521-525).

What about the Partnership's influence on DNRE? People mentioned that DNRE doesn't manage the land directly but that it "can set prescriptive directives". Some saw it as "innovative" and understood some of its constraints (time lines, for instance). However, there was a fair amount of frustration with DNRE. While it may address many of the same issues as the FMF, it is very reluctant to any input from outside the department. It was felt that DNRE should use the FMF as a "sounding board for public opinion" but that it wasn't open at all to the Partnership's participation. Certainly provincial-federal tensions don't help but many really felt the attitude within the department was a more important factor. People sometimes made a distinction between the "local guys" and people from Fredericton.

When talking about changes on the ground, people often admitted that they had difficulty evaluating what happens on the ground, at the landscape level. The fact that committees deal with isolated parts of the situation made people feel they didn't have a broader view of what is happening. Lack of technical training is another difficulty. There was also an issue of trust. Some would have liked to see an evaluation by independent, neutral experts.

What's the perspective of those who didn't feel empowered? Some were actually part of organizations that have some power such as government departments and landowners. Some doubted their influence given the broader context - overpopulation and economic pressures for instance. But they felt strongly about participating and acting according to their convictions. Some considered that they *shouldn't* have too much personal influence since everyone should have an equal voice. Others agreed that consensus treats everyone more or less equally but they felt the process doesn't lead to action and therefore limits empowerment.

(...) we're the ones who set regulations! (719).

I think empowerment might not be the right word. I don't think I have any more power but I think I have gained more courage to speak up (P4; 1087-1089).

Not so much empowerment, slightly but (...) it's a more personal release. (...) if you complain about something, get upset about something, and you don't do anything about it, you get very very [worked] up. (...) I will join something if I think that I can personally contribute because that releases the pressure off me [half-laughter]. It's that simple. (P30; 1027-1035).

I never felt stifled in speaking my peace or my mind or comments on a given issue, OK, and that's all the levels of empowerment that an individual in the Partnership committee had or should have. OK? So... (P26; 577-682).

I think that the views of, of most people don't get acted upon because no matter who has a view, someone (...) ha[s] an opposing view so you talk about it back and forth and back and forth and at the end of 5 minutes or 10 minutes or 3 hours or whatever, people haven't really changed their views, all they've done is they've learned more about the other person's view. But you haven't decided (...) (P14; 751-758).

In summary, people generally felt they had some influence on the landowners, but they felt more empowered with the FMF than with the landowners. The FMF gives the possibility to bring forward one's perspective, to access information as well as to influence the projects undertaken and, to a lesser extent, the decision-makers. People's sense of empowerment depended in part on their influence outside the FMF, on the extent of their involvement, and on their perspective on what needs to be done and what is being accomplished.

5.4 Who benefits from learning?

Who benefits the most from the information shared within the FMF Partnership regarding sustainable resource management? This question was not asked directly to the interviewees, but some comments gave some indications as to who benefits from the FMF.

Most partners benefitted to a certain degree from participation in the FMF. They were able to learn and, sometimes, improve their activities and capability to pursue their objectives. A few less active partners may not have found knowledge or interests that would be useful either at the personal or the organizational levels. JDI is seen as better able to benefit from the FMF. It has one

voice, it owns a lot of land and it gets economies of scale. It can more easily implement the FMF recommendations and, therefore, influence the Partnership's course of action. Through participation in the FMF, the industry is learning, testing the public opinion, improving its corporate image and positioning itself on the world market.

This has important positive implications if industrial practices are to be changed. Industrial buy-in is necessary. The bias in favour of industrial needs also has some negative implications. The small private woodlot owners control a fair amount of the forest in the FMF and in New Brunswick. It is felt that they play an important role in the forest health and deserve more attention from the FMF. However, their voice is not as unified as JDI and issues they are facing may not be researched or acted upon as much. Another negative implication is the lack of attention given to multiple uses, non-timber and non-consumptive values of the forest, Aboriginal issues, and economic diversification. Wood production remains central and there is little work done on reducing consumption of wood products.

They [Irving] make some wise decisions and it's a wise decision to be involved with sustainable forestry. It helps them look good, it helps them learn, it helps them become more knowledgeable as well. It's a wise choice. I mean, I'm not saying it's a good choice, I'm saying it's a wise choice (P25; 545-549).

They [Irving] are there in order to ensure that they can get a crack at the public before things come out. It's their testing field (...) They'll throw something out on the table and see what the group feels about it (1583-1588).

I think for example, the woodlot cooperative is a really interesting group that has a lot of interests that are worth considering but to me they don't have as unified a voice and so when you have a very large partner that has a very unified voice, essentially one voice and everybody says the same thing, that tends to have a much bigger impact (P3; 1154-1161).

Conclusion

This study focused on mutual learning and knowledge transfer among FMF partners. It was based on semi-directed interviews conducted with representatives from the 31 FMF partner organizations. These interviews were coded and analyzed using Atlas.TI, a software developed for qualitative analysis. We used a thematic analysis in order to describe the various aspects of learning in the FMF. The variety of viewpoints certainly was a challenge. We found that this method allowed us to process a huge amount of data and to get a well-rounded perspective on the topic at hand. It also allowed unforeseen themes to emerge. However, it is a time-consuming method, particularly given the variety of perspectives present in the FMF.

The analysis showed that the FMF greatly facilitated learning about i) the other stakeholders viewpoints, ii) forest management, iii) problem solving skills and iv) the role of knowledge in sustainable forest management. Representatives and, to a lesser extent their organizations, gained a much better understanding of the various stakeholders' perspectives. They learned about their commonalities and their differences. They still may not agree, but they got a better idea of what

can be achieved. The FMF also helped the participants to develop skills and knowledge in problem solving, facilitation, consensus building and multistakeholder approaches. Some organizations even created new partnerships outside the FMF.

Regardless of their profession and training, partners expanded their views of forest management. They gained a better appreciation of non-timber and non-consumptive values, as well as tensions between the various forest uses. While the FMF provided some space to discuss non-timber values, these tended to be set aside. They are difficult to measure, the indicators process favours quantifiable information, and economic values are prominent given the region's dependence on wood production and the presence of a large logging company in the Partnership. As a result, the FMF is mostly perceived as an industrial model. Integrating the GFE Guidelines into management planning is the FMF major focus for learning and action but in this region, management planning remains centered on wood production.

People learned from each other and appreciated having access to both practical and scientific knowledge. Yet there is some controversy over the role of scientific knowledge. How much is needed before action is taken? What are the safeguards against potential damages if the actions taken based on limited knowledge fail?

Not surprisingly, most individuals felt that they learned more than their organizations. Interactions with other partners are a major factor in individual learning. Listening to information is not enough; discussing it is essential. Organizations' learning depended on their mission, their membership, their location. In some cases, broader political issues affected trust and participation in the process. Some organizations couldn't afford the amount of resources required to participate in the time-consuming, information-loaded process. Yet the amount of information and knowledge gained through the FMF, both at the individual and the organizational levels, seemed to be an important motivator for participation. Few representatives reported sharing information with the broader community.

Learning could be facilitated by measures that would increase the meetings and committees' efficiency. Clear messages, simpler language would help. People need to see changes on the ground. Partner organizations have varied interests in the forest and need adapted materials and activities. Representatives role as links between their organization and the FMF should be clarified.

Did learning bring change? Many representatives considered their organizations had changed as a result of the FMF in combination with other social, economic and organizational trends. It seems that organizations' learning and change depended largely on their role in the forest. Those with land managing responsibilities learned new skills and techniques and they incorporated biodiversity objectives and/or multiple uses in their management planning. Participating teachers and professors incorporated some knowledge gained from the FMF in their teaching. Schools have a curriculum and regular in-service to bring up forest issues in the class room. Research organizations learned to adapt their research to industrial activities and to make it more relevant to actual forestry activities. The FMF also brought personal changes. For some representatives, it was a self-growth experience as they learned to respect other perspectives and to express their own. For others, learning was a reaffirming experience as it confirmed their own intuitions.

Learning is associated with empowerment to some extent. Representatives generally felt they had much more influence on the FMF than on the landowners. They understood that each landowner faced different constraints and opportunities and therefore could implement different sustainable forest management measures. It was felt that JDI was more receptive than DNRE and more capable than SNB to implement FMF recommendations. Many felt some urgency to work more closely with small woodlot owners.

In conclusion, the FMF allowed the stakeholders to share and learn about each other's perspectives on forest management. Personal contacts made a big difference and helped to focus on issues rather than on preconceived ideas about other sectors. The exchange and mutual learning strengthened the social links in the community and contributed to increase the social cohesion. This doesn't mean that conflictual viewpoints don't exist anymore. The FMF allowed people to define common goals, especially in terms of research needs, while organizations still continued to pursue their own.

References

- Beckley, T. (1998). *Community input into forest policy and planning*. Presentation to the “Empowering the Public” Panel at the National Forest Congress, 1 May 1998, Ottawa.
- Brandt, D. G., Bouman, O.T., Bouthillier, L., Kessler, W., & Lapierre, L. (1996). The Model Forest Concept: A Model for Future Forest Management? *Environmental Reviews*, 4(1):65-90.
- Chouinard, O. & Perron, J. (1998). Public Participation: A Key Issue for the FMF. Prepared for the FMF. Sussex.
- Chouinard, O. & Perron, J. (1998). Public Participation: Review of Literature and Selected Annotated Bibliography. Prepared for the FMF. Sussex.
- Duinker, P. N. (1997). *Public Participation in Forest Decision-Making in Canada: A Discussion Paper*. Prepared for the Industry, Economics and Programs Branch of the Canadian Forest Service. Second Draft of May 1997. Thunder Bay: Lakehead University.
- Kazi, J. (1997). *Les enjeux de la participation du public en gestion forestière par la cartographie cognitive: le cas de Charlevoix*. Mémoire de maîtrise. Sainte-Foy: Université Laval.
- Lacasse, O. & Hamel, P. (1998). Représentation sociale et planification du territoire. *Espaces en mutation*. QRIDEQ/GRIR. 21-35.
- Lawrence, R. L., & Daniels, S. E. (1996). *Public involvement in Natural Resource Decision Making: Goals, Methodology, and Evaluation*. Corvallis: Oregon State University.
- Paillé, P. (1996). De l’analyse qualitative en général et de l’analyse thématique en particulier. Dans Archambault, J. et Paillé, P. (Eds). *La recherche qualitative dans la santé, Recherches qualitatives*, 15:181-194.

APPENDIX 1

Questionnaire

Mutual learning and public participation in the FMF

Summary

This interview is part of a study on mutual learning and public participation in the FMF. Through this study, we want to find out the degree to which the FMF model contributes to learning and change among its partners. Some questions were added in order to understand better the decision-making process. A representative from each of the FMF partners will be interviewed. We want to emphasize that there are no right or wrong answers. We want to get a picture of what is going on, not to give a test!

Ethical preamble

This project is financed by and conducted on behalf of the FMF in collaboration with the Université de Moncton. We may ask questions not included in the questionnaire in order to get a clearer picture. Our conversations will be taped, then typed in order to be analyzed. The gathered information will be kept confidential and individual interviews will only be accessible to the research team. Except for your identification, the gathered information will be reported to the FMF. It is subject to publication and may be used in the completion of a thesis for my Masters degree in Environmental Studies. Your participation is voluntary. You can refuse to answer any of the questions, and if you choose to do so, you don't need to provide any explanation. You may also ask to turn off the tape recorder at any time during the interview.

Thank you for your collaboration.

YOUR ORGANIZATION

1. a) What is your organization's mission?
b) How many members does your organization represent?
c) Which sector are you from? (Government, private, non-profit)

YOUR ORGANIZATION'S INVOLVEMENT IN THE FMF

2. When did your organization join the FMF?
3. Why does your organization choose to participate (or not to participate) in the FMF?
4. How many representatives from your organization are presently involved in the FMF?
5. Why did your organization choose to send this many representatives?
6. At what level(s) are your representatives involved?
 - a) Partnership meetings
 - b) Working groups meetings
 - c) Other
7. How many representatives have there been for your organization since the beginning of the FMF?
8. How did your organization choose its representatives?

INFORMATION EXCHANGE

9. How do you keep your organization informed of FMF activities?
10. a) What message from your organization have you brought to the table in the "teacher's role"?
b) How was that message received?
11. What message from others has been of most interest to you?

PERSONAL LEARNING

12.
 - a) Have you **personally** learned something as a result of your involvement with the FMF?
 - b) IF SO, what?
 - c) What helps your learning in the FMF?
 - d) What hinders your learning in the FMF?
 - e) Could this be improved? How?
13.
 - a) Has your personal perception of other FMF partners' values and objectives changed?
 - b) IF SO, in what way?
14.
 - a) Has your level of trust towards other FMF *partners* increased or decreased since your involvement with the FMF?
 - b) Could this be improved?
 - c) How?
15. How would you define "sustainable forest management"?

ORGANIZATIONAL LEARNING

16.
 - a) Has your organization learned something as a result of its involvement with the FMF?
 - b) IF SO, what?
 - c) What helps your organization's learning in the FMF?
 - d) What hinders your organization's learning in the FMF?
 - e) Could this be improved? How?
17.
 - a) Has your organization members' perception of other FMF partners' values and objectives changed?
 - b) IF SO, in what way?
18.
 - a) As a result of its involvement with the FMF, has your organization changed its values?
its attitude?
 - b) IF SO, what or in what way?
19.
 - a) Has your organization changed its objectives, practices and/or activities as a result of its involvement with the FMF?
 - b) Why (or why not)?
 - c) IF SO, can you give us some examples?

DECISION MAKING PROCESS IN THE FMF

20. In your opinion, who determines the FMF agenda?
21. According to your organization, what are the three most important issues concerning the forest in the region and in New Brunswick?
 - a) Are these issues being addressed by the FMF?
 - b) IF SO: Which decisions were taken about these issues? Did you agree? Did you have any influence about these decisions?
 - c) IF NOT: Why not?
22. What important decisions have been made at the FMF till now?
23. How much influence do you feel you had on each of these decisions, on a scale of 1 to 5, where 1 represents “not at all” and 5 represents “very much”?
24. Have these decisions been put into practice by landowners? By each and all of the partners? Any exceptions?
 - a) Has your level of trust towards the FMF *process* (as a collaborative multistakeholder process) increased or decreased since your involvement with the FMF?
 - b) Could this be improved?
 - c) How?
25. Overall, do you get a sense of empowerment through your participation and collaboration to the FMF?

GENERAL

26. Are there any groups or segments of the population that are not represented at the FMF and should be?
27. What comes to mind if you think of innovations to forest management in the FMF?
28. Beckley (1998) has developed a typology of the different types of forest management in Canada: industrial, co-managed, community and small private forests. In your opinion, where does the FMF fit?
29. Do you think the FMF model helps to bring a more equitable distribution of power and resources?
30. Do you think the FMF model is transferable?
31. Do you think it would be desirable?

Definitions:

Community forest:

“(a) community forest is community development based on multiple resources in forested ecosystems; (b) community forestry exists when the community is driving land use decisions; and (c) community forestry exists when a community is satisfied with its involvement in and benefits from management of the surrounding forest land.” (Duinker in Beckley, 1998)

Co-managed forest:

Co-management is “the sharing of power and responsibility between the government and local resource users” (Berkes *et al* in Beckley, 1998). Co-management can also take place between industrial owners and local resource users.

APPENDIX 2

List of represented organizations

Atlantic Society of Fish and Wildlife Biologists
Canadian Institute of Forestry, Maritime section
Canadian Forest Service
City of Moncton
Conservation Council of New Brunswick
Department of Indian Affairs and Northern Development
Eel Ground Community Development Centre
Environment Canada
Fawcett Lumber Company
Fundy National Park
Fundy Environmental Action Group
Greater Fundy Ecosystem Research Group
J.D. Irving, Limited
Maritime Forest Ranger School
New Brunswick School District 6
New Brunswick Federation of Naturalists
New Brunswick Department of the Environment
New Brunswick School District 4
New Brunswick Premier's Round Table on the Environment and Economy
New Brunswick Department of Natural Resources
Nova Forest Alliance
Petitcodiac Sportman's club
Southern New Brunswick Wood Co-operative Limited
Sussex Chamber of Commerce
Sussex Fish and Game Association
Town of Sussex
Université de Moncton
University of New Brunswick, Faculty of forestry
University of New Brunswick, St John Campus
Village of Petitcodiac
Washademoak Environmentalists