Forest genetics and certification: global and local issues facing tree breeders, policy-makers, and forest managers in B. C.

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Minutes recorded and compiled by Andreas Hamann

Talks

Major points of talk by Graeme Auld (UBC)

Refer to separate summary.

Major points of talk by John Cathro (Forest Stewardship Council)

The relevant rules in the certification process regarding gene conservations are:
Principle 6: Protect biological diversity and ecosystem functioning

This principle covers genetic diversity through a coarse filter approach. Through conservation at the landscape level we automatically cover finer levels including genetic diversity

Principle 6.8: No use of GMOs allowed, with GMOs defined carefully and rather comprehensively.

The "Precautionary Principle" is applied when using GMOs for reforestation.

Similarly the "Precautionary Principle" is used when we encourage natural regeneration, partial cutting, staying as close to natural processes as possible.

When we use plantation forestry and improved seed the tree breeder must ensure that genetic diversity is guaranteed in production populations,

We need indicators for genetic diversity and appropriate genetic resource management practices that can be used by certification auditors.

Major points of talk by Ronnie Drever (Suzuki Foundation)

The David Suzuki Foundation endorses FSC because it has a strong focus on monitoring the participants to check if they live up to the principles of the certification program.

Similarly to the FSC, the Foundation also promotes use of natural regeneration and other silvicultural methods that are close to natural processes.

In addition to a coarse filter approach to conservation, medium and fine filter (at stand level) conservation activities are necessary to ensure sustainability and protection of biodiversity.

Major points of talk by Alvin Yanchuk (Ministry of Forests)

Indicators for genetic diversity and appropriate genetic resource management are actually in use in MoF breeding programs (e. g. Origin of seed, minimum allowable Ne of seedlots).

A coarse filter (landscape level) management approach exists through seed zones, seed transfer rules, zoning for plantation vs. natural forestry

Trying to imitate "natural processes" in silvicultural prescription or harvesting methods does not ensure appropriate management of genetic resources. In fact it can backfire badly regarding gene conservation.

Regarding GMOs, there is a movement towards evaluating their use on a case-by-case basis. Usually, the product is the problem (GMO or not), rather than the process of how it was produced. For example, exotics (though not GMOs) can display properties of what is feared from GMOs.

The negative public perception of GMOs may not be based on the technology itself but rather on the fact that a few large companies control the availability and price of supply in agriculture.

Major points of talk by John Barker (Industry)

Industry in BC has a long history of commitment to conservation of genetic resources, partly out of self-interest in the long run. When it comes to forestry, industry has always planned in the long term rather than emphasizing short-term exploitation.

The "Precautionary Principle" may not be applied quite as easily. Doing things the "natural way" may not work if climatic conditions change.

The "Precautionary Principle" (if defined too narrowly) may preclude other options that are actually the right thing to do. We don't really know what is "precautionary".

Instead it would be more appropriate to try out different management strategies, and "push the envelope" somewhat to find out what works and what not, rather than being overly "precautionary".

Rather than searching for the elusive indicator for "integrity of the ecosystem" evaluation of industry should focus on (1) whether they participate in research programs, (2) whether they monitor how well their forestry systems work, (3) whether they identify which practices are risky or not, (4) whether they keep a variety of management systems going

Panel discussion

Topic 1: convergence of certification programs

Don: Will different certification systems converge?

Justin: Unlikely that they will agree on one global scheme. Good to keep several, as they compete and improve standards that way.

Brian: That competition may lead them to include standards for genetic conservation

Justin: Unlikely that they will come up with usable criteria. That will be left to academia. However, competition probably leads to "greener and greener" standards.

Cheng: Perhaps that's where they eventually converge?

Graeme: Power of stakeholders is probably more relevant than technical criteria when it comes to deciding which guidelines to follow. This is also one reason why programs evolve individually and do not converge.

Sally: Convergence is also not necessarily desirable because it comes at the expense of vagueness of rules.

John B.: Also disagree on usefulness of convergence. They may have the same objectives but there are different ways to get there.

Justin: We observe convergence though. Started with many initiatives, but through mutual recognition and other agreements a few programs are beginning to dominate.

Topic 2: Finding criteria and indicators

Alvin: Criteria and indicators are necessary to evaluate appropriate genetic resource management for certification. We may have criteria, but certainly we lack appropriate indicators. Any comments?

Justin: There are no indicators that are universally accepted. It is futile to search for them, especially indicators that get agreement internationally (see Rio disaster). Better to find indicators that can be used locally.

Graeme: Trying to achieve inter-governmental agreement unlikely. At Rio they were unable to get anywhere because they were busy blaming each other. Certification programs should go ahead locally with finding indicators. Certain environmental groups endorse certification programs because they provide local control over industry.

John B.: As I said earlier, there is a danger of using ecologically based criteria to infer protection of genetic resources. For example in Hemlock this lead to setting up seed zones where there was no necessity. For example partial cutting actually degrades genetic resource. We actually need genetic information. What is the most efficient way to get it?

Sally: Yes, biological diversity and genetic diversity can react very independently. You may even make the case to turn the argument around: that by protecting genetic diversity you actually protect biological diversity as well. However that is unlikely to completely work either.

Topic 3. Cooperation of MoF and certification initiatives

Leslie: Can we integrate genetic diversity measures into certification based on landscape unit planning (e. g., special reserves for gene conservation?)

Gary: MoF "Criteria and Indicator" work is actually very similar to certification initiatives. The government actually does the same thing for renewing tenure etc. BC government really has some key information to offer to certification programs.

Leslie: Agree that integration of these frameworks would be very useful.

Jack: Appropriate management of genetic diversity requires (1) understanding structure and patterns of genetic diversity, (2) setting up management systems that take these patterns into account, or even take advantage of them, (3) setting up standards e.g., for use and quality of seedlots. All this is right now in place. Certification initiatives may wash away this system that is the result of long term commitment of a large number of people.

John C.: Yes, certification is new. We have to avoid re-inventing a system that is already working well. How do we avoid this politically? We need a very open process that includes expert knowledge. We need financial support to facilitate this communication. We have no interest in changing the system, but rather in evaluating it.

Pat: Graeme, this is an important point. This should be added to your report.

Cheng: Yes, and you should also include some information about the MoF genetic resource management program that is already in place.

Alvin: Unfortunately, this institutional memory is not written down. Certification people have no means to access it and don't even know enough about the topic to ask experts the right questions.

Sally: We have to take the initiative and put forward our thoughts to the certification programs.

Topic 4: Questions on how the certificate program works

Cheng: John, do you think that your certification program works? Have you ever done a cost-benefit analysis?

John C.: I've never done such an analysis and I doubt that I have the tools to do so. It makes intuitive sense and I trust that it improves forest management practices rather than adding another layer of administration. At the least, the certification program brings former enemies together, lets them work out differences and find common ground. There are not very many opportunities for this otherwise.

Brian: Auditors control whether companies live up to the provincial standards. This is useful by itself.

Pat: Actually, auditors come and consult industry on how criteria and indicators work in practice. Usually, up to 25% of criteria and indicators are modified or changed every year based on this.

Graeme: It would be interesting to see if criteria and indicators from public consulting are the same as criteria and indicators developed by experts.

Alvin: Certificate initiatives want to make consumers happy. How much input actually comes from retailers regarding criteria and indicators?

Bull: Retailers don't care about the details. They basically just want one label.

Graeme: the pressure for criteria and indicators initially really comes from boycott campaigns. It is important to understand who really demands certification. It's a kind of a circular mechanism.

Alvin: Yes, it's important to understand because we need to target our communication and writing to the right group of people. We don't necessarily have easy to understand information for everyone.

Brian: You should make detailed information available to the certification programs, and let them take care of taking the information back to the public.

Graeme: Yes, and similarly this information flow could go the other way to let the tree improvement community know what is demanded by the public.

Jack: in a certification program, regional differences must be taken into account when developing standards.

Graeme: This can be done by one organization working out local conditions. This is probably difficult to negotiate.

John C.: This is already happening. By having a global system, it becomes very obvious that the local standards are enormously different. Our standards in BC are very high. In terms of costs that we spend on certification we are at the top of the heap.

John B.: In terms of cost maybe, but they may be expended for no reason at all. However, one good thing is the collection of records. Quantitative data on forest management systems is collected at a high cost but may eventually be useful

Brian: When it comes to setting certification standards for plantation forestry versus natural systems: What do you encourage in BC, John?

John C.: We have certification rules for both.

Brian: Do you think the genetic aspects are sufficiently covered by those rules?

John: Yes, in my opinion. I'm not officially making these judgements, though.

Alvin: Who makes them, then? Some chap in, what, Amsterdam?

John C.: No, the decisions are made by members in BC. They are then approved nationally in Toronto, and internationally in Amsterdam. The local recommendations are generally always approved.

Jack: What is the local process then? Who gets to the table in BC?

John C.: It started out with volunteers, later more interest groups got involved. Now we have all stakeholders well represented. FSC members elect a steering committee that represents these interest groups.

Jack: Who can be a member, then?

John C.: Everybody and every organization, except governments.

Summary

Sally: As a wrap-up of the panel discussion, let us summarize (1) the most important aspects that need to be revised or added Graeme's report, and (2) the next steps that the forest genetics community should take to contribute to the certification programs.

Cheng: What is the exact mandate of the report? How much can it be extended?

Sally: This project ends March 31. We can do changes feasible within this time constraint. The mandate is to review the inclusion of genetic resource management in certification programs globally, and determine what the situation in BC is in comparison.

Cheng: Where is the problem in BC? I don't think there is a problem.

Brian: Yes, but this needs to be verified. What are the appropriate indicators? 100% certified seed? Probably not.

Alvin: We are trying to develop a sound scientific basis for genetic resource management that can be communicated in general terms.

Cheng: Yes we need to document this properly to have a good defense.

Alvin: Not a defense, rather a contribution.

Brian: A recommendation actually. Your research should be made available as a recommendation to the certifiers.

Sally: Well, to come back to the report: we do not actually have the mandate to make recommendations. This work is rather meant as an impartial review. What aspects are important?

John C.: What we really need are criteria and indicators in order to provide for appropriate genetic resource management.

Andreas: I think criteria and indicators may be only part of what you need. Equally important are results of province wide planning. For example, if there are rare outlying populations that need protection, criteria and indicators won't tell you this but rather results from government research.

Brian: Is it sufficient for certifiers to rely on government rules?

Annette: I think that criteria and indicators for appropriate genetic resource management are too difficult or expensive for industry to implement on a continuing basis. Rather, processes that provide for appropriate genetic resource management should be determined. These can then be verified by auditors.

Cheng: One thing that should be revised in the report is better coverage of how the ministry is handling genetic issues. There should be some level of technical information included in the review, but maybe it should not be too technical. This may not be appropriate for an outside review. We get stuck in technical details. An outside reviewer should not.

Jack: I think it would be pretty hard for an outside reviewer to quantify the state of the system. That requires major technical insight. Maybe they could find out if we move in the right direction.

Sally: In summary then: (1) We need to deal with "lack of criteria and indicators" in the report, (2) there should be some more detail about the state of the genetic resource management system as practiced by the MoF; (3) there need to be a section that deals with outreach to the certifiers by the forest genetics community.

Gary: And (4) There needs to be a section on how to make institutional information more accessible to certifiers and others.

List of Participants

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