

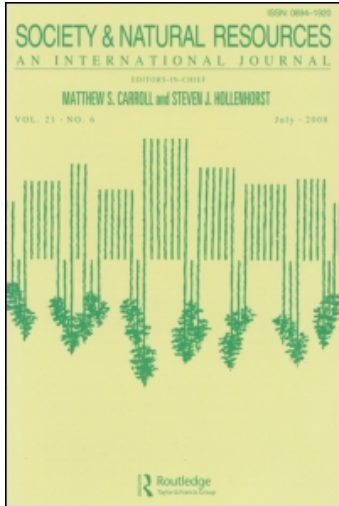
This article was downloaded by: [Larson, Brendon Michael Hilding]

On: 26 August 2010

Access details: Access Details: [subscription number 926317252]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Society & Natural Resources

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713667234>

Participation Under Time Constraints: Landowner Perceptions of Rapid Response to the Emerald Ash Borer

Bruce F. Mackenzie^a; Brendon M. H. Larson^b

^a Ontario Farmland Trust, University of Guelph, Guelph, Ontario, Canada ^b Department of Environment and Resource Studies, University of Waterloo, Waterloo, Ontario, Canada

First published on: 20 July 2010

To cite this Article Mackenzie, Bruce F. and Larson, Brendon M. H.(2010) 'Participation Under Time Constraints: Landowner Perceptions of Rapid Response to the Emerald Ash Borer', *Society & Natural Resources*, 23: 10, 1013 – 1022, First published on: 20 July 2010 (iFirst)

To link to this Article: DOI: 10.1080/08941920903339707

URL: <http://dx.doi.org/10.1080/08941920903339707>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Participation Under Time Constraints: Landowner Perceptions of Rapid Response to the Emerald Ash Borer

BRUCE F. MACKENZIE

Ontario Farmland Trust, University of Guelph, Guelph, Ontario, Canada

BRENDON M. H. LARSON

Department of Environment and Resource Studies, University of Waterloo, Waterloo, Ontario, Canada

Participatory approaches to environmental management often require lengthy periods for stakeholder involvement, but this may not always be feasible. For example, recent policy papers have emphasized the need for “rapid response” programs to eradicate newly detected invasive species before they spread. We review previous theory to demonstrate three challenges of integrating public participation in rapid response programs. We explore these in a case study of the rapid response to an invasive beetle, the emerald ash borer (EAB), in southern Ontario, Canada, in February 2003. To prevent the beetle’s spread, a government agency oversaw the cutting, often at short notice, of a 10-km-wide swath of ash trees, much of which was on private land. Our interviews with local landowners detected widespread dissatisfaction with the rapid response to EAB that reflected the challenges we predicted, so we conclude with thoughts on the need for rapid participatory methods.

Keywords environmental management, institutional trust, invasive species, public participation

The control of invasive species has become a key theme in environmental management in the early 21st century. Although it is most effective to prevent the arrival of new and potentially invasive species, the dramatic attempts to eradicate species after they have arrived more often reach the media and capture the popular imagination. Agencies and their managers have the best chance of eradicating newly detected species if they do so quickly, before they spread, which is why recent policy papers have emphasized the need for “rapid response” toward them (Environment Canada 2004; Lodge et al. 2006).

Received 9 December 2008; accepted 31 May 2009.

We appreciate funding from a UW/SSHRC Seed Grant, Rosa Bustamante for transcribing the interviews, and comments and suggestions from David Ainslie, Paul Gobster, Ken Marchant, Graham Whitelaw, three anonymous reviewers, and the editors of *Society & Natural Resources*. We also thank the interviewees for their participation.

Address correspondence to Brendon M. H. Larson, Department of Environment and Resource Studies, University of Waterloo, 200 University Avenue West, Waterloo, Ontario, N2L 3G1, Canada. E-mail: blarson@uwaterloo.ca

Here, we consider the extent to which rapid response programs may contravene accepted tenets of public participation. A diverse body of research has demonstrated the benefits of stakeholder participation in environmental decision making and identified criteria for successful participatory processes (reviewed in Wondelleck and Yaffee 2000; Chase et al. 2004). Generally speaking, citizens should be direct participants, as equals, in face-to-face discussions with decision makers throughout the process and in advance of any actions. Chase et al. (2004, 638), for example, conclude that quality processes “use scientific information, have genuine influence on outcomes, treat citizens fairly, and promote informative communication and learning.” It is not enough to merely include people through techniques such as public meetings, as it is not the technique or even the outcome that matters as much as the perceived fairness and inclusiveness of the process (Smith and McDonough 2001; Parkins and Mitchell 2005).

Fair and inclusive processes nurture trust (reviewed in Davenport et al. 2007; Leahy and Anderson 2008). Trust may be defined as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of another” (Rousseau et al. 1998, 395). While there are diverse forms of trust, Parkins and Mitchell (2005, 537) capture the important distinction between interpersonal and institutional trust in natural resource management when they observe that “Actors may not trust each other, but they do (or maybe hope to) trust the procedures for engagement.” These two forms of trust together provide key elements of successful participation because they help to overcome conflicting values and thereby increase satisfaction with potentially unfavorable outcomes (Davenport et al. 2007).

Although social scientists have begun to address stakeholder perspectives related to invasive species management (e.g., Stokes et al. 2006; Norgaard 2007; Evans et al. 2008), the specific tensions arising from rapid response have not yet been examined. Previous theory suggests that there are three main challenges to integrating public participation in rapid response programs. Each of them is related to the time constraint. First, the short timeline of such programs does not allow for the development of interpersonal trust, which puts a greater onus on “faceless” institutional trust (Frentz et al. 2000; Davenport et al. 2007). Second, we often know little about a new invasive species when it first appears, so the scientific information needed for effective participation may be limited. Not only does it take time to compile this information, but even if it were available, “Decision makers . . . may need to spend considerable time discussing the support (or lack thereof) for the scientific evidence being used to ground decisions if they seek public backing of decision making” (Chase et al. 2004, 637). Third, government agencies and their managers may feel pressure to minimize stakeholder involvement because they need to act quickly and participation takes time. While they may recognize the trade-off between quick and successful public involvement (Chase et al. 2004), they may still justify quick action by arguing that any consequent private losses are outweighed by the large-scale social costs of continued spread (Perrings et al. 2002).

We illustrate each of these challenges in the following case study concerning the loss of forest trees to an invasive beetle. A recent review of the human dimensions of forest disturbance confirms the importance of participatory processes and trust, and cautions that managers “should not underestimate the time required to negotiate a management strategy with local stakeholders” (Flint et al. 2009, 1184). Our case study examines such issues in order to contribute insights that will help reduce the social impact of future rapid response programs.

Background: The Emerald Ash Borer in Southern Ontario

Our case study concerns the emerald ash borer (EAB, *Agrilus planipennis*), a beetle native to eastern Asia that was detected in Windsor, Ontario (and adjacent Michigan), in the summer of 2002. Given its ability to kill all species of ash (*Fraxinus* spp.) trees, which are a dominant and economically important element of forests in eastern North America, its potential economic impact was estimated at more than \$280 billion (Poland and McCullough 2006). In accord with international treaties, the Canadian Food Inspection Agency (CFIA) took the Canadian lead in enacting a number of measures to prevent its spread (Muirhead et al. 2006; CFIA 2009). Essex County, Ontario, was placed under “quarantine” in 2003, and healthy ash trees in the vicinity of an infestation were cut down and burned. People were prohibited from moving ash products (including firewood, logs and nursery stock) out of the regulated area. This action was appropriate because modeling has shown that EAB spread depends, to a large degree, on long-distance “jump” dispersal associated with human movement (Muirhead et al. 2006).

In addition, the CFIA implemented a 10-km-wide by 30-km-long barrier zone or “firewall,” which is the focus of our study. This ash-free zone was created during the winter of 2003–2004 by cutting all the healthy ash trees on public and private lands along the eastern boundary of the quarantined area, between Lakes Erie and St. Clair (Figure 1), followed by chipping and burning of the cut trees. The zone was endorsed by a Science and Risk Mitigation Committee comprised of scientists and regulatory experts from a number of federal and provincial agencies (Mecteau 2005). The zone was justified by its theoretical efficacy in slowing (if not stopping) the spread of an invasive species by delaying colonization of currently uninfested areas (Sharov and Liebhold 1998), and its previous successes in preventing the spread of other pests, including boll weevil, gypsy moth, and screwworm fly. The creation of a barrier zone would also provide time for managers to study the species in its native range in order to examine potential control methods.



Figure 1. Location of the ash-free zone in southern Ontario, Canada.

The CFIA was initially criticized for acting too slowly in quarantining the region and creating an ash-free zone. This criticism was led by the Ash Rescue Coalition, an informal group of foresters, conservationists, woodlot owners, and activists, who pressured the provincial and federal governments to take immediate action. Eighty municipalities joined their plea to the federal government to fund efforts to stop the spread of the EAB (Holland 2003).

Once the tree cutting began, local landowners began to oppose it. The media reported that the tree cutting “encountered sustained opposition from some property owners who threatened, without success, not to allow cutters on their property” (van Brenk 2004a). Local protests were organized by the Concerned Citizens in the Ash Free Zone, a loose coalition of landowners who met to review their rights and share information. The media reported that some of the protestors “oppose the program completely, while others are furious with the damage loggers are causing to surrounding property, including farmland and non-ash trees” (van Brenk 2004b). In one media report, the CFIA’s EAB specialist was quoted as saying that “crews have been assaulted and equipment sabotaged. There have been threats as well . . . There has been a very active campaign to discredit us” (Burt 2004).

Methods

To understand the nature of landowner opposition in the context of the theoretical issues raised earlier, we first searched the Lexis-Nexis (academic) database for coverage of EAB in Ontario’s print media. The search found 159 articles relevant to our study in both major national newspapers (e.g., *Globe and Mail* and *Toronto Star*) and local ones (e.g., *Guelph Mercury*, *Stratford Beacon Herald*, *Windsor Star*, and *London Free Press*). These articles allowed us to identify local landowners’ views of the tree-cutting, which we then used to develop a semistructured interview questionnaire. The questionnaire probed respondents’ knowledge of EAB and their concerns with the response mounted by the CFIA.

After project approval from the Office of Research Ethics at the University of Waterloo, we located individuals for interviews through snowball sampling (starting with an individual mentioned in a newspaper article). We conducted face-to-face interviews that lasted approximately 1 hour with each individual, during the period from May to August 2007. We completed 17 interviews, at which point our understanding of landowners’ reasoning was saturated. Our sample contained diverse individuals who reasonably represent local woodland owners. They included farmers, business owners, former government employees, and self-employed individuals. All the landowners interviewed were directly affected by the program because they resided in either the official ash-free zone or nearby “suppression zones” where the CFIA actively removed infested trees. The interviews were tape-recorded, transcribed, and then coded for themes related to participation and trust following the procedure outlined by Auerbach and Silverstein (2003). We also informally interviewed key CFIA staff to obtain an alternative perspective on the control program.

Results

We found that the local landowners we interviewed did not agree with the course of action taken by the CFIA. Our analysis confirmed that their opposition was founded on reasons related to those predicted by the theory discussed earlier.

Lack of Institutional Trust

The landowners we interviewed expressed doubt about the CFIA's competence to carry out the program successfully. As one lamented, "It was handled in such a sloppy and unprofessional manner." Some complained about missed trees and the removal of non-ash trees by accident. A common theme in their responses was the inconsistent implementation of the ash-free zone:

They took his bush, and the one across the road they never touched. Well, that shows you how ineffective the program could be.

Some landowners were particularly upset about property damage that occurred because the trees were cut at a time when the soils were saturated. One observed:

I don't think they knew anything about cutting lumber in wet land, and the destruction that they were going to make. But it had to be done at a certain time and they ordered it cut. Which was wrong. They should have done it when it was froze up.

The landowners often commented on the inexperience of the contractors hired for the cut and on the CFIA's failure to assist them in obtaining compensation for damages caused during the cut.

The landowners we interviewed also considered the program to be ill-managed. Some would have preferred to remove their trees themselves to use for lumber and to minimize damage. They were critical of the compensation program because they felt it was poorly planned and only paid for replacement trees. Many of the interviewees felt that the CFIA was untrustworthy or even corrupt, as exemplified by the following quote:

I think some of the facts of the Ash Borer were just fabricated or picked out of the air. I don't think they really knew, but they were letting on that they knew.

Doubt About the Scientific Basis for the Ash-Free Zone

The landowners we interviewed felt that the ash-free zone was created for political rather than scientific reasons. Some thought that jurisdictions further east, such as Toronto, were pushing the government to take action. Others contended that the CFIA was simply justifying its presence and its employees' jobs by acting.

The interviewees often argued that the CFIA lacked the knowledge needed to support its eradication program and thus its decisions were based on unproven science. As one stated,

I was angry because of the unproven science. I mean, they had no environmental assessments at all.

Some felt that there was a lack of research and planning, and considered the program an experiment in which they were the guinea pigs.

The respondents did not perceive EAB as a major threat to woodlands in the area. Several pointed to the CFIA's failure to find evidence of EAB on their properties to support this view. Some endorsed a "take no action" approach, arguing that nature would eventually take care of itself.

Similarly, the respondents did not think the program was effective in stopping or slowing the spread of EAB. They described the program as "a waste of time and money," "ineffective," and "a useless thing to do." They stated that "it made no difference," and that "[EAB's spread] would have happened anyway." One of them commented as follows:

I don't think they thought it was going to be effective as far as stopping the spread; they maybe slowed down the spread a little bit, but if an insect has in its mind that it's gonna move five thousand miles, somewhere or other, it's probably going to move five thousand miles. I don't think you're going to stop it.

Numerous interviewees felt that there was no need for the program because EAB had spread beyond the ash-free zone even before it was set up.

Concerns with the Public Consultation Process

Interviewees also disagreed with the way that the program was undertaken. Some stated that they were more upset by the way the CFIA treated them than with the loss of their trees. Even though the CFIA organized public "town hall" meetings, all the respondents complained about being excluded from the process. They felt that the CFIA did not communicate properly with them, that there was little opportunity to express their concerns, and that their insights and local knowledge were not valued. As one landowner stated:

Those people were so tunnel-visioned as to their belief that this was the absolute right decision to make. They were so focused that they weren't listening to what other people were saying. They weren't understanding what people were saying; they were just completely sold. Because this is somebody's personal plan and they had a vested interest in making sure that the plan was sold, they just ignored all the social things.

Another interviewee observed:

All of the comments at the public meetings, all of the concerns, were dismissed as being not significant. And in fact, every comment at those public meetings was proven to be true and accurate after the cut. I mean, everything that people were concerned about, the CFIA allowed to happen...I was amazed that the farmers were so articulate, so well-educated and right on point when it came to their concerns...And they were absolutely dismissed.

The power of the federal government to contravene their private property rights came as a surprise to the landowners and contributed to their sense of frustration and powerlessness. Interviewees concluded that the CFIA "didn't have to answer

to anyone” and “they could do what they want.” One respondent noted that the decision to cut was “very unilateral,” and that:

I mean, it was sort of a shock that this tiny little agency . . . had the power that they had, and the way in which they wielded it, it was like using a hammer to kill an ant. And I think that aspect was very terrifying for people to understand that private property rights really make no difference and if our government chooses to wield its power over private land ownership, they will do it.

Consequently, some of the landowners we interviewed thought the CFIA was insensitive to their concerns and to the emotional impact of the program. Several felt that the CFIA adopted an aggressive attitude with respect to implementing the program: The agency came in prepared for opposition and took a very defensive position from the outset.

The respondents felt that they had a right to be included in the decision-making process because they had a personal stake in the outcome. They mentioned a significant personal connection with their woodlands, including general appreciation of their natural values and even strong emotional attachment to their trees. As stated by one landowner:

But the first day, the guys that were doing the cutting, they were just amazed that our trees were so big . . . and they'd drop one of these huge ash and everybody'd cheer and go crazy and think it was great. Kind of upsetting . . . these trees were here when our fathers came . . . the trees and the woodlots had been here and my dad kept them because he was into hunting and fishing and he had no reason to cut the woodlot down.

The interviewees also used their woods for recreation (such as picnics, camping, and other family events), nature viewing and community activities. For others, woodlots were a source of firewood and even livelihood. They often complained about the loss of property value and the financial cost of restoring their property.

Conclusions

Our results confirm the challenges of public participation in rapid response programs by demonstrating the dissatisfaction they can cause. We do not wish to single out the CFIA, as it was forced to act quickly on incomplete knowledge (and a limited budget). Instead, we seek to review the challenges of rapid response so that they may be ameliorated in the future.

Because it had to act quickly, the CFIA had little time to develop the relationships with local landowners that would have nurtured interpersonal trust. It was thus unsurprising that the landowners lacked trust and doubted the agency's “technical competency” (Leahy and Anderson 2008, 104). While it is always challenging to develop trust in community–agency relationships, Leahy and Anderson (2008) review multiple ways to develop it, including hosting community events to build interpersonal links between agency staff and local individuals, publicizing efforts to improve technical skills, communicating the benefits of management, and evaluating the fairness of participatory processes. Such activities are crucial, and must be

included to whatever extent possible, even in rapid response programs. Without foundational trust, local stakeholders will have limited confidence in an agency's presentation of scientific information and in its participatory processes.

As predicted by theory, a particular challenge arose from the fact that we typically have very little knowledge of the biology of newly introduced species. This creates temporal challenges for recommendations to include scientific information in participatory processes (Chase et al. 2004). A number of landowners expressed anger that their trees were cut without any knowledge of whether this would curtail the spread of EAB.¹ The CFIA could have gained landowners' trust in this context by communicating its uncertainties more clearly and consistently, as well as the benefits and costs of the proposed plan and alternatives. In particular, early communications claimed that the ash-free zone would "stop EAB," whereas later ones claimed it would only "slow its spread." Landowners felt this was duplicitous because the latter was a much weaker justification for the loss of their trees. With our case and others in mind, agencies charged with rapid response programs can begin to develop templates to enhance local communication about scientific uncertainties and management alternatives for novel invasive species.

The landowners we interviewed also expressed dissatisfaction with the public consultation process. Not only did they lack interpersonal trust, but they also lacked institutional trust in the process, both of which would impede a desire to participate. We uncovered evidence that the landowners were unwilling to take part in town hall meetings organized by the CFIA. In contrast to the recommended qualities reviewed earlier, the landowners felt that the process was unfair and non-inclusive because the "scientific" decision had already been made. They thus felt that the CFIA underestimated the extent to which they valued their trees. Their request to remove their own trees was also rejected. In the terminology of Parkins and Mitchell (2005, 534), they may have encountered "internal exclusion" whereby actors are nominally included, but actually excluded. Consequently, there was little chance that they would accept the loss of their trees, further increasing opposition. It thus became unsafe for CFIA employees to attend public meetings, which only worsened opportunities for mutual understanding. If the CFIA had listened to local citizens' concerns and values and included them throughout the process, they might have nurtured greater trust. Even given time and knowledge limitations, agencies could more clearly articulate their reasoning for rapid response programs in terms of long-term, widespread public losses from continued spread of invasive species beyond the immediate area.

The time constraint posed by rapid response programs presents unavoidable trade-offs, but our results suggest some elements of rapid participatory processes. These can be planned in parallel with biological response to novel invasive species. We recommend that agencies consider the full gamut of innovative participatory processes (e.g., Konisky and Beierle 2001). Given likely challenges to developing trust, we encourage agencies to review recommendations for improving it, with an emphasis on open information exchange, fairness, and relationship building (e.g., Davenport et al. 2007; Leahy and Anderson 2008). While some recommendations for increasing interpersonal trust may require larger budgets, others "can be met by just a change in attitude and demeanor" (Smith and McDonough 2001, 247). Management agencies may need to review whether their organizational culture supports rapid participatory processes, with a focus on the process rather than the outcome.

Note

1. Time has vindicated these landowners since the EAB has continued to spread and now occurs much further north (in Sault Ste. Marie) and east (in Toronto and Ottawa) in Ontario. But this merely demonstrates the benefits of hindsight—it is also likely that EAB would have killed their trees by now.

References

- Auerbach, C. F., and L. B. Silverstein. 2003. *Qualitative data: An introduction to coding and analysis*. New York: New York University Press.
- Burt, B. 2004. Tree-killer bug hitting Ontario. *Guelph Mercury*, April 5.
- Canadian Food Inspection Agency. 2009. Emerald ash borer. <http://www.inspection.gc.ca/english/plaveg/pestrava/agrpla/agrplae.shtml> (accessed 23 August 2009).
- Chase, L. C., D. J. Decker, and T. B. Lauber. 2004. Public participation in wildlife management: What do stakeholders want? *Society Nat. Resources* 17:629–639.
- Davenport, M. A., J. E. Leahy, D. H. Anderson, and P. J. Jakes. 2007. Building trust in natural resource management within local communities: A case study of the Midewin National Tallgrass Prairie. *Environ. Manage.* 39:353–368.
- Environment Canada. 2004. An invasive alien species strategy for Canada. <http://www.ec.gc.ca/eee-ias> (accessed 23 August 2009).
- Evans, J. M., A. C. Wilkie, and J. Burkhardt. 2008. Adaptive management of nonnative species: Moving beyond the “either-or” through experimental pluralism. *J. Agric. Environ. Ethics* 21:521–539.
- Flint, C. G., B. McFarlane, and M. Müller. 2009. Human dimensions of forest disturbance by insects: An international synthesis. *Environ. Manage.* 43:1174–1186.
- Frentz, I. C., D. E. Voth, S. Burns, and C. W. Sperry. 2000. Forest Service–community relationship building: Recommendations. *Society Nat. Resources* 13:549–566.
- Holland, R. 2003. Ottawa indifferent to ash tree threat. *London Free Press*, March 7.
- Konisky, D. M., and T. C. Beierle. 2001. Innovations in public participation and environmental decision making: Examples from the Great Lakes region. *Society Nat. Resources* 14:815–826.
- Leahy, J. E., and D. H. Anderson. 2008. Trust factors in community–water resource management agency relationships. *Landscape Urban Plan.* 87:100–107.
- Lodge, D. M., S. Williams, H. J. MacIsaac, K. R. Hayes, B. Leung, S. Reichard, R. N. Mack, P. B. Moyle, M. Smith, D. A. Andow, J. T. Carlton, and A. McMichael. 2006. Biological invasions: Recommendations for US policy and management. *Ecol. Appl.* 16:2035–2054.
- Mecteau, M. 2005. Emerald ash borer Canadian program update. *Proceedings, XV USDA Interagency Research Forum on Gypsy Moth and Other Invasive Species*. <http://www.treesearch.fs.fed.us/pubs/20716> (accessed 23 August 2009).
- Muirhead, J., B. Leung, C. van Overdijk, D. Kelly, K. Nandakumar, K. Marchant, and H. MacIsaac. 2006. Modelling local and long-distance dispersal of invasive emerald ash borer *Agrilus planipennis* (Coleoptera) in North America. *Divers. Distrib.* 12:71–79.
- Norgaard, K. M. 2007. The politics of invasive weed management: Gender, race, and risk perception in rural California. *Rural Sociol.* 72:450–477.
- Parkins, J. R., and R. E. Mitchell. 2005. Public participation as public debate: A deliberative turn in national resource management. *Society Nat. Resources* 18:529–540.
- Perrings, C., M. Williamson, E. B. Barbier, D. Delfino, S. Dalmazzone, J. Shogren, P. Simmons, and A. Watkinson. 2002. Biological invasion risks and the public good: An economic perspective. *Conserv. Ecol.* 6. <http://www.ecologyandsociety.org/vol6/iss1/art1> (accessed 23 August 2009).
- Poland, T., and D. McCullough. 2006. Emerald ash borer: Invasion of the urban forest and the threat to North America’s ash resource. *J. For.* 104:118–124.

- Rousseau, D. M., S. B. Sitkin, R. S. Burt, and C. Camerer. 1998. Not so different after all: A cross-discipline view of trust. *Acad. Manage. Rev.* 23:393–404.
- Sharov, A. A., and A. M. Liebhold. 1998. Bioeconomics of managing the spread of exotic pest species with barrier zones. *Ecol. Appl.* 8:833–845.
- Smith, P. D., and M. H. McDonough. 2001. Beyond public participation: Fairness in natural resource decision making. *Society Nat. Resources* 14:239–249.
- Stokes, K. E., K. P. O'Neill, W. I. Montgomery, J. T. A. Dick, C. A. Maggs, and R. A. McDonald. 2006. The importance of stakeholder engagement in invasive species management: A cross-jurisdictional perspective in Ireland. *Biodiv. Conserv.* 15:2829–2852.
- van Brenk, D. 2004a. Ash-cutting project finished, officials say. *London Free Press*, April 1.
- van Brenk, D. 2004b. Protesters step up opposition. *London Free Press*, February 19.
- Wondelleck, J. M., and S. L. Yaffee. 2000. *Making collaboration work: Lessons from innovation in natural resource management*. Washington, DC: Island Press.