Determinants of Trust and Credibility In Environmental Communication

by

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Disclaimer

This study explores the determinants of trust and credibility and grounds the data in the principles of social capital, citizen engagement and collaborative planning theory. Although prescriptive strategies to improve credibility are not offered, conclusions are drawn based on related theoretical principals that could be interpreted as recommendations.

This study has limitations regarding representative sub-samples that make it difficult to generalize broadly. Although trends and patterns are suggested by data, conclusions are based upon this limited context. Ideally, this qualitative study will add to the academic literature and offer insights regarding the primary determinants of trust and credibility.

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Project Abstract

This qualitative study explores determinants that influence perceptions of trust and credibility in relation to communication and stakeholder involvement in the environmental arena. A survey of the Regional Carnivore Management Group stakeholders reveals that the most important determinants that influence general perceptions of trust and credibility are "openness and honesty", "knowledge and expertise", and "concern and care". Other determinants become increasingly significant as perceptions of trust are lost or restored, including "public involvement/communication", "action", "group structure", "balance" and "openness/honesty". The most significant observation is that differences emerge among groups that point to important distinctions between sectors. The relationship between these determinants and the influence each has on user group perceptions are explored in this study; the data suggest that some stakeholders perceive an imbalance of process that appears to favour some stakeholders more than others. This not only has important implications for the viability of the RCMG consultative process, but for other similar processes. Conclusions are grounded by the principles of citizen engagement, social capital and the collaborative planning theory.

Key Terms: trust, credibility, risk communication, environmental communication, stakeholder consultation, collaborative planning theory, citizen engagement, environmental justice, social capital, cooperation, coordination

Introduction

Many resource managers from government and industry use consultative processes in an attempt to resolve often highly contentious land management issues. A major challenge for process architects is to instill trust and confidence in stakeholders who have become increasingly skeptical of consultative processes and resource management. Covello cites the "loss of faith and trust in government and industry officials as responsible environmental managers and as credible sources of risk information" as a major problem for officials involved in environmental management (as cited in Sheldon, 1996, p. 16). Previous research indicates this public cynicism is well established, having significant implications for those trying to maintain or establish trust and credibility, as well as work cooperatively to resolve complex environmental issues (Ruscio, 1996; Thomas, 1998; La Porte & Metlay, 1996).

A multitude of values and competing interests contribute to the "conflict complexity" of resource management issues (Daniels & Walker, 1995 as cited in Driscoll, 1996). As the complexity to manage resources intensifies, so too does the scrutiny and expectations of a myriad of interested organizations and individuals. Issues of trust and credibility are paramount as citizens look toward environmental managers to mitigate the impacts associated with multiple human use on public land as well as reconcile additional interests and issues involving social and economic values.

The constructs of trust and credibility are important considerations for those building theoretical frameworks in order to expand understanding of the trust dynamic and its influence on human relations. It is also important for environmental managers to consider the constructs of trust; stakeholders who trust the decision-making process will be motivated to participate in and then support the ensuing resource management efforts. To generate such support, a growing body of research suggests that trusting relationships increase the potential for cooperation, which leads to the exchange of knowledge and the increased ability of a system or organization to cope with complexities and diversity (Luhmann, 1979, as cited in Nahapiet & Ghoshal, 1998). It is thus critical that those who design consultative processes understand the significance of trust in building cooperative stakeholder relations from which collective wisdom and support can produce a collaborative and coordinated approach to many of the environmental challenges facing society.

This study explores the determinants (also referred to as variables) of trust and credibility in relation to environmental communication and stakeholder involvement. The factors that restore as well as diminish trust and credibility are investigated and observations related to distinct user groups are compared to determine whether trends exist among or between them. Research results will offer insights into how perceptions of trust are influenced by determinants that either motivate individuals to cooperate and collaborate, or alternatively generate skepticism and limited support. Either consequence has important implications

for communications in terms of building, maintaining and restoring trust among stakeholders.

This research study investigates three specific questions:

1. What are the determinants of trust and credibility of stakeholders in relation to communication and stakeholder involvement?
2. What determinants restore as well as diminish trust and credibility?
3. When comparing user groups are there trends that may have important implications for communications in terms of building, restoring and maintaining trust?

Environmental management and the research data from this study are discussed in the context of the Regional Carnivore Management Group (RCMG). The RCMG is a committee of land and resource managers from government (Alberta Sustainable Resource Development, Alberta Community Development, Jasper National Park) and industry (coal, forestry, oil and gas) seeking to work cooperatively with stakeholders in the Alberta Yellowhead ecosystem to conserve grizzly bear habitat. Although the RCMG has involved stakeholders through an annual stakeholder forum and one-on-one discussions, there has been criticism regarding the RCMG's group structure and the limited stakeholder representation involved at the committee level. Determinants related to this perspective are revealed in the data and investigated in this study.

This study argues that for the RCMG stakeholders, the most important determinants associated with general perceptions of trust and credibility are "openness/honesty", "knowledge/expertise", and "concern/care". The importance

and priority of these (and other) determinants vary depending on whether perceptions of trust are positively influenced (resulting in restored trust) or negatively influenced (resulting in lost trust). The primary determinants that diminish trust and credibility are "balance", "public involvement/communications", and "openness and honesty". To restore trust and credibility the determinants "action", "public involvement/communication", and "group structure" were found to influence perceptions.

Research results regarding lost and restored trust reveal trends among industry and government user groups and among ENGO and recreational user groups, suggesting variation exists between these two sets of user groups. For government and industry user groups, “balance” and “openness/honesty” were important for lost trust, and “group structure” was important for restoring trust. Of particular interest are user group perceptions regarding the determinants “group structure” and “public involvement/communications”. Data indicate that the degree of involvement and representation ("group structure") is an important determinant of lost trust for ENGO/recreational user groups. This suggests their perceptions of trust would improve if they were legitimately engaged, which is consistent with “public involvement/communication”, a primary determinant for restoring trust with ENGO/recreational user groups. The relationship between these determinants and the influence each has on user group perceptions suggests there is a perceived imbalance of process that could be construed as favouring some stakeholders.

Although this study targets a particular committee focused on environmental concerns, it is anticipated that many of the outcomes related to trust and credibility will be applicable to other organizations or committees engaging diverse stakeholders on a variety of matters. The determinants of trust and credibility are far reaching, influencing human relations and behaviour as a review of the literature will reveal.

Literature Review

Previous research has highlighted trust and credibility as important cornerstones that influence public confidence, however, it has only been recently that meaningful attention has been focused on promoting and restoring public trust in the government sector (Craig, 1998). Moreover, few studies have explored the trust relationship between citizens/stakeholders and administrative agencies/organizations, which is particularly relevant to this study (La Porte & Metlay, 1996). Studies that investigate the determinants of trust and credibility and theoretical concepts related to citizen engagement, social capital and collaborative planning theory are explored and the significance each has on the formation of trust and cooperation are discussed in the context of developing, maintaining and restoring trust. The implications for communication and the potential to create understanding and trust are explored in relation to the media richness theory.

There are many detailed definitions of trust in the literature, however, it is defined simply for the purposes of this study so that discussions and conclusions can be situated in a well-defined context related to research observations. Trust

is defined as a "firm belief in the honesty, reliability, etc. of another; faith" (Guralnik, 1984, p. 641). A key element among many of the definitions of trust is the belief that others will consider our interests and will not be motivated by self-interest or gain (Kumar & Paddison, 2000; La Porte & Metlay, 1996; Zineldin & Jonsson, 2000; Thomas, 1998). Craig (1998) conceptualizes trust in the context of "fiduciary relationships" "in which an individual places trust in another to act in his or her capacity" (p.168). A related concept, credibility, is defined as "the state of being believable, trustworthy, reliable" with a focus on how to earn the trust and confidence of those we seek to influence (Trettin & Musham, 2000, p. 18). The terms trust and credibility are intricately linked, each affecting the other as perceptions are influenced and formed. These terms are used interchangeably throughout this study and are interpreted as mutually reinforcing.

The "asymmetry principal" reflects the reality that trust is easier to destroy than to create (La Porte & Metlay, 1996). Evidence of this fragility is cited throughout the literature with frequent discussion of the decline of public trust and confidence in government, industry and other formal institutes (Ruscio, 1996; Thomas, 1998; La Porte & Metlay, 1996). Peters, Covello and McCallum (1996) indicate there has been severe erosion of public confidence over the last 30 years (p. 43). Based on the definition of trust and credibility provided earlier, when trust is lost stakeholders believe that their thoughts, interests and concerns will not be considered and that insular interests will motivate the organization involved. This perception inhibits cooperative relationships from developing and prevents coordinated approaches to resolve mutual concerns.

The perception of "collusion between the 'regulator' and the 'regulatee' is especially relevant to government and industry and inhibits the development of trust (Stefanick, 1998, p. 102). Stefanick highlights the dominant influence the resource extraction sector has had on economic development and consequently the influence it has yielded in policy making. This historical baggage may also influence perceptions regarding the RCMG, as its membership consists of resource-based industry and government representatives. To further complicate the dynamic of trust, as the pressure escalates to manage complex issues and finite resources, the accountability and expectation for effective management will magnify, placing organizations such as the RCMG (and the public sector) under greater scrutiny putting its credibility at greater risk.

Covello (as cited in Sheldon, 1996) found a number of beliefs that explain public distrust in government and industry including perceptions they are:

- insensitive to public concerns and fears about environmental risks
- unwilling to acknowledge problems
- unwilling to share information
- unwilling to allow meaningful public participation
- negligent in fulfilling their environmental responsibilities (p. 17)

This is not an exhaustive review of the decline of trust, although it points to the reality of diminished trust in formal entities such as government and industry, as well it locates other studies that identify and discuss the underlying determinants that influence trust. For example, a study conducted by Peters, Covello and McCallum (1996) investigates the determinants of trust and credibility in relation to environmental risk communication. They discovered that

perceptions of trust and credibility depend upon three factors: perceptions of openness and honesty, perceptions of knowledge and expertise, and perceptions of concern and care.

Peters et al. (1996) discovered variation regarding perceptions of trust. Using research based on random survey data, they compared the perceptions that survey participants associated with three important groups in environmental issues including government, industry and citizen groups. The determinants of trust most likely to influence perceptions differed considerably. For example, it was discovered that increasing public perceptions of concern and care leads to greater perceptions in trust for industry, whereas, increasing public perceptions of commitment leads to greater perceptions in trust for government. For citizen groups, increasing public perceptions of knowledge and expertise leads to greater perceptions of trust. Based on this data, Peters et al. (1996) posited that defying a negative stereotype is critical to restoring credibility. Identifying the leading explanatory variable for perceptions of trust and then increasing attention on that variable will help to enhance the perception of trust and credibility with that particular audience (see Table 1).

Table 1. Explanatory Variables for Perceptions of Trust and Credibility

Audience	**Leading explanatory variable for perceptions of trust**	**Determinants of trust and credibility (used to counter negative stereotype)**
Government	Perception of lack of commitment	Increase perception of commitment
Industry	Perception of lack of concern and care	Increase perception of concern and care
Citizen	Perceptions of lack of knowledge and expertise.	Increase perception of knowledge and expertise.

Previous studies have demonstrated that trust is a multi-faceted dynamic that varies for different social groups, influenced by a wide range of variables and circumstance (Williams, Brown & Greenberg, 1999; Kasperson as cited in Davies, Covello & Allen, 1986). Understanding how determinants of trust influence perceptions offer important insights regarding credibility. This underscores the importance of engaging audiences and listening to their interests and concerns in order to gain understanding regarding their perceptions.

The study by Peters et al. (1996) was conducted in the context of risk communication. At first glance risk communication may not seem applicable to the RCMG, however, the approach as described by Trettin and Musham (2000) is relevant:

> The contemporary approach to risk communication goes beyond alerting or reassuring the public about potential environmental hazards. It involves stimulating interest in environmental health issues, increasing public knowledge, and involving citizens in decision-making. (p. 410)

An approach that involves knowledge creation and shared decision-making with stakeholders, will influence perceptions of trust in both crisis and non-crisis situations (Covello, as cited in Sheldon, 1996). Such an approach is facilitated through citizen engagement, an inclusive and participatory process that gives citizens the capacity to contribute and influence decision-making processes directly. Carnevale (1995) emphasizes the importance of participatory processes that involve people in decision-making and argues this approach is the most

fundamental way for organizations to build trust, learn and develop high performance.

The public perception that government's traditional consultation efforts have largely been token allowing limited participation does little to nurture trusting relations or create credibility and speaks volumes to the need for an alternate approach. Consequently, public participation is being reconsidered at all levels within government, among managers, practitioners, and interest groups, with attention shifting from "public participation" to "citizen engagement" (Abele, Graham, Ker, Maioni & Phillips, 1998). A much more provocative approach to consultation is being called for where participation is more active, inclusive and deliberative with trust viewed as fundamental to legitimate government processes and policy formation (Ruscio, 1996, Graham & Phillips, 1998).

To become more legitimate, the principles of citizen engagement need to be thought of as standard practice in how governments conduct (and advance) civic business, and that community problem-solving should be based on the ideal of participatory democracy (Abele et al., 1998; Graham et al., 1998; Binney & Mason, 1996; Trettin & Musham, 2000). Burke argues, "until we involve citizens in the decision-making process, government officials are not going to have the public level of trust we would like them to have" (as cited in Davies et al., 1986, p. 54). A first step in restoring public trust is to establish a process that involves a full partnership in decision-making between the agency and local citizens who are affected. Giving people power to be involved is a critical step in building trust and cooperation between citizens and government. This is particularly relevant to

government and industry organizations (RCMG), which are traditionally reluctant to share decision-making or frequently restricted by formal hierarchical/political structures.

To qualify as legitimate engagement, stakeholders must be involved early in the process before decisions are made. As stakeholders participate in the development of procedures and standards, increased understanding is more likely to lead to greater acceptance, ownership and commitment to decisions. This type of involvement will influence the level of trust and credibility bestowed on an organization (Oleckno, 1995; La Porte & Metlay, 1996). This approach is important to environmental management as creative resolutions can be generated from open dialogue with diverse stakeholders regarding management decisions, which can lead to shared values, commitment to decisions and acceptance of policies over the long-term (Abele et al., 1998; Zineldin & Jonsson, 2000).

The premise of "deliberative democracy" emphasizes interaction and open dialogue as the basis for participation with the intent to "discover new possibilities in which interests can be reconciled" (Prior, Stewart & Walsh, 1995, p. 76). Similarly, generative politics, championed by Giddens, "seeks to allow individuals and groups to make things happen, rather than have things happen to them in the context of overall social concerns and goals" (1996, as cited in Kumar & Paddison, 2000, p. 210). The basic premise of these concepts involves the active pursuit of trust, which involves an ongoing process of interaction, outreach and communication between stakeholders and professionals. The result

is a common understanding and decisions that have been mutually agreed upon by all those affected. In order for this to occur, however, stakeholders need to be engaged with more legitimacy, authenticity and sincerity than they have been offered in the past.

Also relevant to the discussion of citizen engagement is the concept of "environmental justice", which considers effective citizen participation as fundamental to the empowerment of communities, in particular groups who traditionally are underrepresented. This view bases its doctrine on the reality that minority groups exist on the margins and have minimal influence in the political arena and subsequently need to be incorporated more effectively into decision-making processes than they currently are (Foreman, 1998). In a study that explores environmental policy formation and multipartite participation, Stefanick (1998) also argues that decision-making processes need to incorporate a wide range of stakeholders in the discourse of public policy issues, so that processes and decisions represent diverse interests.

Kumar and Paddison (2000) expand on the principles of citizen engagement as they explore the collaborative planning theory in relation to indicators of trust. Similar to the assumptions associated with citizen engagement, they describe how the collaborative planning theory involves stakeholders in a participatory, all-inclusive manner. The focus of the collaborative planning theory is to involve all stakeholders in planning processes with the intent to achieve consensus on policy issues after considerable debate and deliberation (Kumar and Paddison, 2000, p. 206). As part of their study,

Kumar and Paddison discovered that stakeholders expect high trust to lead to better understanding among them resulting in sustained collaboration. It is only when stakeholders are able to trust that they are able to begin interaction and communication, which then results in collaboration. Not surprisingly, Kumar and Paddison discovered that trust and collaboration are mutually reinforced and as collaboration matures, it is expected that trust will develop further.

The basic assumption of social capital theory involves networks of social relationships developed over time that influence the development of human and intellectual capital based upon a foundation of trust, cooperation and collective action (Nahapiet & Ghoshal, 1998). Many studies have found that when relationships are high in trust, people are more encouraged to participate in social exchange and cooperative interaction (Naphapiet & Ghoshal, 1998; Graham & Phillips, 1998, & Adler & Kwon, 2000; Herzog, 2001; Zineldin & Jonsson, 2000). From a broad perspective, social capital constitutes the "features of social structure that facilitates action" (Adler & Kwon, 2000, p. 89). Zineldin and Jonsson (2000) support this observation and argue that a willingness to act is implied in collaborative relations. When collaborative activities and actions are positively present, commitment and outcomes that support efficiency, productivity and effectiveness are created.

When the relational element is omitted from stakeholder relations, however, the ability to establish trust is minimized as well as the potential to generate cooperative results (Ruscio, 1996). Cohen and Prusak (2001) describe a condition of "isolated individualism" when there is a complete lack of trust (p.

40). Conversely, collaboration based upon trust continues to generate more trust as people work together over time. High levels of trust created through relational exchange enable individuals to focus on long-term benefits of the relationship and motivate involvement in and commitment to the process (Doney & Cannon, 1997 as cited in Zineldin & Jonsson, 2000). A collaborative approach and being able to envision long-term benefits is paramount when it comes to resolving complex environmental issues, as impacts are often long-term and often not evident in the short-term.

Margerum (2000) relates the usefulness of interaction and public participation to integrated environmental management and acknowledges the value of involving diverse perspectives to gain broader understanding and mutual support for objectives. He argues that environmental challenges are seldom the responsibility of one agency and typically require a "collaborative effort among numerous entities to achieve collective goals" (p. 7). As such, he continues that coordinated decision-making among those involved in environmental management is fundamental. He discusses the need to go beyond cooperation and collaboration in order to resolve complex environmental issues and suggests that "coordination" is more likely to achieve positive outcomes.

Cooperation and coordination are created through interaction and evolve as social networks and trust are established. Coordination, however, relates to interdependent decision-making and is generally harder to achieve due to the added complexity of increased interdependence among many participants. It involves sharing information to establish a common understanding with a sense

of purpose and the ability to resolve conflict in order to attain goals (Ruscio, 1996; Margerum, 2000). Without meaningful social exchange and interaction, however, minimal support, acceptance, cooperation and coordination can be expected due to limited establishment of trust.

As these theoretical concepts have outlined thus far, stakeholder collaboration through effective citizen engagement and social capital is pivotal to the establishment of trust, cooperation and coordination. These concepts are particularly relevant to those managing or studying environments that depend on collaboration, as an interactive and inclusive approach increases the potential to generate and expand knowledge, discover resolutions and generate further trust through the development of relationships and understanding. The success of these outcomes is dependent upon the means by which government and other organizations communicate with and engage citizens. The principles discussed and the implications for communication need to be considered as organizations contemplate the most effective methods to communicate and engage their stakeholders.

Communication plays a significant role in trust formation. Zineldin and Jonsson (2000) argue that in addition to sharing experiences, sharing information demonstrates trust and can lead to a "higher level of commitment and a better atmosphere for subsequent transactions" (p. 247). Trust is established more readily through mutual understanding, facilitated by meaningful communication using mechanisms that enable rich, two-way dialogue and interaction. Lee and Heath (1999) refer to the media richness theory, which suggests that "richer

media enhance the ability to understand or comprehend information" (p. 78-79). This reinforces the importance of creating effective modes of communication in order for meaningful and credible information to be diffused effectively, as discussed by Lee and Heath:

> Richer media provide multiple cues and opportunities to ask and answer questions related to the information. As the media become richer, communicators become more "present" or more real to one another (O'Keefe, 1990). When information is transmitted through rich media (e.g., interpersonal communication channels), opinion change is greater because of, in part, the credibility in the information (Porter & Roberts, 1983). Natural language, which is high in variety, can be used to tailor each message to the receiver (Daft & Wiginton, 1979). Information transmitted through richer media is likely to be evaluated as more comprehensible, credible, and relevant than information conveyed through leaner media. (p. 79)

Mechanisms become "richer" as they enable participants to engage in dialogue and discussions, exchange views and form alternative solutions and options (Abele et al., 1998). The richer the media the richer the interaction and the greater likelihood for mutual understanding leading to enhanced credibility. The media richness theory would suggest that failed attempts to consult can be partially attributed to "lean" media, which offer limited opportunity to engage in meaningful and interactive dialogue with limited potential to increase awareness and understanding. This is significant as it is through understanding that trust, cooperation and coordination are established more readily and when understanding is limited so is the potential for trust.

Those mechanisms that enable participants to generate meaningful dialogue and increase awareness and understanding are predominantly associated with tools of citizen engagement (see Table 2). Traditional

consultation mechanisms range in degree of "media richness" in terms of the potential each offers for meaningful participation and two-way interaction. The distinguishing features that set the two approaches apart relate to the participatory potential of the "ordinary citizen", the depth of dialogue, interaction and deliberation, the luxury to reflect and learn over time and the potential to influence public policy decisions (Abele et al., 1998). Traditional modes of consultation can provide rich interaction if they accommodate open, inclusive and interactive dialogue and debate. For this to occur the intent to genuinely share decision-making must be aligned with the design and implementation of formal processes in order for citizens to truly influence public policy decisions.

Table 2. Tools of Consultation and Engagement

Traditional consultation	Citizen engagement
▪ Election ▪ Referendum ▪ Legislative Hearing ▪ Royal Commission ▪ Constituent Survey ▪ Opinion Poll ▪ Town Hall Meeting and Forum ▪ Focus Group ▪ Policy Conference ▪ Policy Roundtable ▪ Citizen Advisory Boards	▪ Deliberative Democracy (deliberative polling) ▪ Televoting ▪ Study Circles ▪ Citizen Jury or panels ▪ Search Conference
Source: Abele et al, 1998, p. 14 - 19; and Graham & Phillips, 1998, p. 14	

Trust is a cornerstone of our society and the role it plays in influencing perceptions is key to developing and maintaining positive and cooperative relations. Replicating elements of the study by Peters, Covello and McCallum, (1996) reinforce the significance of the primary determinants of trust (openness/honesty, knowledge/expertise, and concern/care), as the results of

this study will demonstrate. Perceptions of trust and credibility are grounded in the principles of social capital, which evolves from relational exchanges that provide the foundation from which trust develops, supported by thick social networks established through interactive and inclusive citizen engagement. As relationships and trust grow, an organization is better equipped to deal with complexities through increased understanding, cooperation and coordination that generates support and mutually reinforces collaboration and continued development of trust.

Methodology

This research study is a qualitative enquiry supported by the interpretive paradigm, which holds *understanding* as its underlying principle. Interpretive research is concerned with attaching meaning to an enquiry and understanding reality within a social context, based on the subjective perceptions of individuals (Lindlof, 1995). This is a critical consideration when exploring the perceptions of multi-stakeholders who have diverse ideas and interests, as it can lead to collaborative resolutions based on understanding diverse interests and perspectives.

Grounded theory provides the theoretical context to help form a conceptual understanding regarding determinants of trust and credibility. Glaser and Strauss (1967) posit that grounded theory develops theories inductively. Theory will emerge as data are collected and analysed, rather than basing initial concepts on a preconceived theoretical framework. Data are built up from the lived experience of the stakeholders and conclusions are then drawn based on a

series of categories that will be revealed through a constant comparative method involving content analysis. These inductive categories are grounded in the data collected (Dey, 1999; Erlandson, Kippler & Allen, 1993).

Sample

My employment with Alberta Environment (AENV) and Alberta Sustainable Resource Development (ASRD) has offered a unique opportunity to provide communication support to the RCMG. In support of this study, the RCMG has enabled access to the following stakeholders, which are divided into the following user groups (sectors) including:

1) Recreational Users
2) Environmental Non-government Organizations (ENGO)
3) Government
4) Industry
5) Aboriginal

Stakeholders are considered those with a vested interest in land and resource management within this geographical area whose activity may be affected by management decisions. The data obtained relate to four of the five user groups noted previously, as no responses were received from the aboriginal community. This lack of response is of particular interest and warrants full attention in a separate exploration of trust. An additional user group was created for those participants who self-identified as "other".

It should also be noted that there is greater representation of both industry and government stakeholders than the other user groups (recreational and environmental organizations); consequently survey responses are predominantly

from industry and government. Having a larger sub-sample for minority user groups would offer a more reflective and accurate representation of perceptions, providing greater comparability while strengthening the validity of this investigation. Data from these sub-samples, however, provide trends and patterns for consideration and comparison.

A non-probability approach using a purposive stratified sample was used to ensure different user groups were represented in the sample. Purposely segmenting the population was intended to uncover themes and attitudes about issues of trust and credibility specific to user group affiliation. An established RCMG stakeholder distribution list was used and 258 surveys were distributed to identified subjects. Fifty-four surveys were completed and returned and nine surveys were returned unopened and incomplete, as contact information was no longer valid. Subsequently, the total number of surveys distributed has been adjusted to 249 with a 22% response rate. Access to the distribution list was advantageous in order to access an established sample, however, the challenge of ensuring up-to-date contact information reduces the assurance of a representative sample.

Broad-based representation is an additional limitation of this study as user groups were not uniformly represented. Fewer recreational (4 completed surveys) and environmental responses (8 completed surveys) were received as compared to industry (20 completed surveys) and government responses (17 completed surveys).[1] This is partly due to an extensive number of disposition

[1] Five completed surveys were collected from participants who self-identified as "other" category.

holders from the resource sector operating within the study area and identified on the distribution list. The data from smaller sub-samples offer indications of perceptions only, and conclusions in this study are based upon this limited context. It is challenging to ensure other relevant stakeholders are included, as there are limited mechanisms to identify them other than their affiliation with an official association or their personal expression of interest and involvement.

Some overlap of perceptions was anticipated, however, considering the varied interests associated with these stakeholder groups, some variance was also expected. A stratified sample helped to explore this variance in greater depth. Once themes emerged and an understanding evolved regarding specific user group perceptions, a more detailed comparison that examined perceptions across the broad stakeholder sample enabled a range of determinants to be investigated more fully.

Data Collection Instrument

A self-administered mail survey was the primary data collection instrument distributed to RCMG stakeholders (see Appendix A). Surveys are an effective tool to obtain an overview of a particular issue and are "often used by policy makers and those who wish to inform policy makers" (Birley & Moreland, 1998, p. 34). Survey development occurred in the summer of 2002 and survey distribution was completed the week of January 6, 2003.

An introductory letter was sent in advance of the survey (Dec. 30/02) to explain the research objective, process and to advise that a survey would be arriving in the near future (see Appendix B). If individuals did not wish to

participate they were asked to contact the researcher to be taken off the distribution list or just simply not respond to the survey. A letter of endorsement from the RCMG supporting the research study was included with the introductory letter to legitimize the study (see Appendix C).[2] A Participant Consent Form was attached to the survey, which outlined the purpose of the study and how the data would be used (see Appendix D).[3] Once returned to the researcher with the attached survey, the consent form was separated from the survey form and filed in a secure location to ensure anonymity.

Participants remained anonymous throughout the study with information summarized in relation to stakeholder affiliation. The Participant Consent Form served as a disclaimer signed by the participant and the researcher, indicating that the research process had been explained and was understood. It also offered assurance to the respondent that participation was voluntary and withdrawal from the program was acceptable at any time.

An RCMG stakeholder forum held on January 25, 2003 provided an opportunity to distribute survey information with the stakeholder forum invitation. This also established a survey collection point at the forum, however, the majority of surveys were returned by mail with only four surveys collected at the forum.

[2] Although difficult to measure, using a letter of introduction and an established stakeholder list is reported to increase the response rate. Saykaly (1985) reports that survey response rates rise 40% - 60% when distribution lists are available and when a letter of introduction is included (p. 21).

[3] Ten Participant Consent Forms were not received, however, the survey form was completed and returned therefore responses were incorporated as data. Despite the fact that their identity would have remained anonymous 50% of the individuals who did not complete a Participant Consent form indicated on the survey they were affiliated with the government user group.

Alberta Sustainable Resource Development provided in-kind support and assisted with the cost of mailing survey related information. Self-addressed, stamped envelopes were enclosed to encourage participants to return their survey responses.

Survey Structure

A cross-sectional survey posed questions directly related to the research objectives, as well as general questions that ascertained awareness regarding the Regional Carnivore Management Group. Scaled questions using multiple rating to measure priority and to rank importance were also asked in order to better understand participants' perceptions about related determinants of trust and credibility. Open-ended questions were used to elicit rich, qualitative data and reveal patterns and trends. The questions focused on uncovering factors that influence perceptions regarding trust and credibility of an organization, helping to clarify determinants of trust and credibility as they relate to different stakeholder groups. The closed (yes/no) questions were used to identify user group affiliation and basic demographic information.

A design flaw is noted related to questions (#3, #4) regarding priority and ranking. It was apparent that there was confusion regarding ranking priorities and importance of determinants as questions were answered inconsistently. Some responded to only one request, while others reversed the ranking of importance (3-1 vs. 1-3). This was problematic when it came to coding the data, however, this problem could generally be rectified by cross-referencing responses to related questions (#4-#6) and noting consistent reporting of determinants.

Although this generally allowed assumptions to be made, a more concise question and clearer design would have increased understanding of the question, resulting in more definitive data from which to draw conclusions.

A study by Peters, Covello and McCallum (1996) was referred to in this survey to provide context regarding previous research data. Peters et al. found that perceptions of trust/credibility were most dependent upon three factors: perceptions of knowledge and expertise, openness and honesty, and concern and care. In an effort to test the observations of Peters et al., participants were asked to consider the same three sets of determinants and rank them based on the importance and influence each had on their perception regarding trust/credibility.[4] Referring to the three paired determinants discovered by Peters et al. presents an additional concern with the survey design. Although used in this study as a benchmark for comparison, more spontaneous responses may have been gathered if no reference had been made to these determinants. There may also have been subtle distinctions related to perceptions of a given paired determinant (e.g. openness and honesty), however the combination did not allow participants to discern distinct meaning. This is not significant, however, as the coding criteria was clearly defined and consistently applied to the data (see Appendix E).

[4] A survey question asked participants to rank and prioritize the determinants (openness and honesty, knowledge and expertise, concern and care) with respect to how they trust an organization and how they perceive an organization's credibility. These determinants were revealed in a previous study conducted by Peters et al. (1996). (See Appendix A, question #3.)

Data Analysis Techniques

To facilitate the organization and analysis of data, a constant comparative method was utilized involving content analysis of qualitative data. The first step was to distinguish the data by structurally coding respondents based on stakeholder affiliation. Once the stakeholder responses were categorized into defined user groups, data was reviewed, assessed and organized into categories, which were determined inductively grounding the data to categories as patterns emerged.

Deductive analysis was also used in relation to determinants previously established by Peters et al. (1996). Referring to this previous study may be perceived as leading the participants in their responses. Glaser (as cited in Dey, 1999) cautioned that "playing existing theory against the data risks forcing the data to fit the theory", a point to consider when analysing data. Glaser and Strauss (1967), as well as Berg (1989), however, suggest that both inductive and deductive approaches may provide useful insights, although greater reliance should be placed on the inductive approach to reflect perceptions revealed through the data. This study focuses primarily on inductive analysis, consistent with the premise of grounded theory.

Eleven repetitive themes evolved as this coding system extracted common phrases, concepts, ideas and responses, and grouped words into conceptual clusters that constituted a category.[5] A twelfth category was created

[5] Eleven categories include: O: Openness/Honesty; K: Knowledge/Expertise; C: Concern/Care; GS: Group Structure; P: Public Involvement/Communications; A: Action; R: Reputation; B: Balance/Bias; E: Economics; P: Politics; ENV: Environment; M: Miscellaneous.

to capture anomalies (miscellaneous). All sections were re-read to further reveal additional patterns and themes, which were coded accordingly. Themes were categorized in relation to the overall sample, as well as summarized by user groups to correlate findings. Results were displayed in charts and/or tables to aid in the comparison and analysis.

Relevant criteria were assigned to each category and consistently applied to data throughout the coding process for both positive and negative perceptions (see Appendix E). A limitation with the coding technique is the potential for similar meaning to be associated with different criteria, making it difficult to consistently and accurately code data into categories. To deal with this coding challenge, literal abstractions of terminology derived from the data were identified and used at every opportunity.

Manifest content analysis was primarily used to identify and count specific words and concepts expressed. Reporting the percentage in which terms and concepts appeared in the data revealed patterns and emphasized certain determinants as they related to trust and credibility, as well as specific user groups.[6] A tally of responses provided a numerical comparison of data suggesting importance, regularities and/or irregularities from which to draw conclusions regarding perceptions. Responses that identified priorities were

[6] Percentage was typically used when dealing with manifest content analysis, as the meaning/category was generally easy to interpret and could be categorized succinctly and readily assigned a numerical value.

assigned value points from one (lowest priority) to three (highest priority).[7] These values were totaled and incorporated into the data to aid in the analysis process.

Latent content analysis was also employed to compliment data analysis. This approach involved interpreting meaning within the context of the data and assisted in coding responses with multiple comments.[8] The literature cites concern regarding both the latent and manifest approaches (Mayan, 2001; Berg, 1989; Dey, 1999). Mayan describes how validity is low in manifest content analysis because the context of meaning is not offered in the analysis as it is in the latent approach. Dey (1999), however, defends the utility of manifest content analysis and argues that in order to discern distributional patterns in data a numerical dimension is required to recognize regularities or repetitions.

Berg (1989) supports using both approaches and suggests giving the same attention to both methods, ensuring reasonably valid and reliable coding procedures. He cautions, however, "not to take or claim magnitudes as findings in themselves. The magnitude for certain observations is presented to demonstrate more fully the overall analysis" (p. 108). This study used a blended approach, integrating the manifest content analysis to better understand distribution and emphasis related to priorities, regularities and irregularities, augmented by latent content analysis to get at the richer context regarding determinants of trust and credibility.

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[7] Values are the total points assigned to a determinant, based on the frequency that participants chose it as a first, second or third priority (1st choice = 3pts; 2nd choice = 2 pts; 3rd choice = 1 pt).

[8] Frequency was generally used to tally open-ended questions, which often involved latent content analysis and interpretation of meaning. Often more than one concept was conveyed in a response, making it difficult to ascertain total number and percentage of thoughts and comments.

Ethical Treatment of Subjects

In order to ensure fair treatment of subjects and an ethical approach to this study, details pertaining to the research objective and process were clearly outlined to potential participants. The Letter of Introduction and Participant Consent Form outlined the research objectives, process, data collection instrument, as well as relevant information regarding privacy, anonymity, confidentiality and withdrawal from the study. Appropriate University Research Ethics Approval Form(s) were completed and reviewed by the research project supervisor and submitted to the Research Ethics Board to ensure the ethical treatment of subjects.

As I am employed by the Alberta Government and support the RCMG committee, it is important to project objectivity and take steps to ensure bias does not enter the research design. Association with the RCMG and its stakeholder process may have influenced perceptions regarding the objectivity of this study, therefore, a full and transparent explanation of this affiliation was acknowledged in the introductory correspondence to potential participants, as well as at the RCMG Forum.

RCMG Committee members were briefed on the study and were supportive throughout. There may be insights brought to light through the research findings, however, that do not reflect the RCMG (or the government) in a favourable light. To eliminate the perception of a conflict of interest, a Letter of Intent was provided to my employer and the RCMG committee members, to

establish a written record of understanding prior to undertaking the research study (see Appendix F).

Research Results and Discussion

Perceptions of trust and credibility are influenced by a host of factors. All determinants revealed in this study play an important role in molding perceptions, as clusters of variables interact and mutually reinforce perceptions positively and negatively. Although some appear to have more significance than others, the context of the situation and the interests of the stakeholder will influence the relevance and importance of each variable.

Fifty-four surveys were received from a total of 249 circulated (22% response rate). Of those who responded, 68.5% reside, and/or conduct business in the area (Hinton, Edson, Jasper, Grande Cache). Certain segments of the sample were underrepresented, such as the recreational user group with the lowest representation (7%) followed by the ENGO user group (15%). The greatest representation was from industry (37%) with government not far behind (31.5%). The aboriginal community was canvassed in this survey, however, no responses were received. One last category was established to capture those responses that self-identified as "other" (9%).[9] The study is careful not to make broad conclusions based on the limited data derived from underrepresented user

[9] The "other" user group participants self-identified as: University transfer student from YREC (Hinton), member of the informed public, environmental interest/organization and recreation user, and not-for-profit research group. One "Fish and Game" participant who self-identified as "other" was moved to recreational user group and one that indicated "oil and gas" affiliation was moved to the industry user group.

groups; indications regarding trends and patterns are noted, compared and discussed in this context.

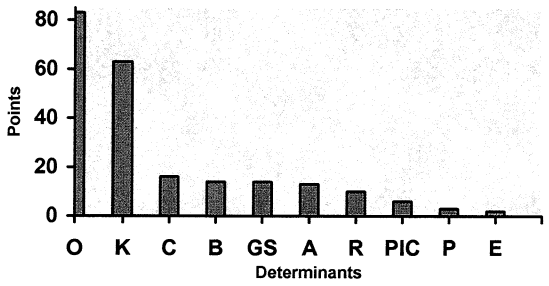
Determinants of Trust and Credibility

Stakeholders' perceptions of trust were influenced by a number of variables. Participants from this study's overall sample were asked to rank the importance and priority of three specific determinants of trust and credibility, which were discovered as primary determinants of trust in a study conducted by Peters, Covello and McCallum (1996). Survey participants ranked these determinants in the following order of importance and priority: "openness/honesty", "knowledge/expertise", and "concern and care".[10] Following the lead of Peters, Covello and McCallum (1996) and their investigation of the determinants of trust participants were then asked in an open-ended question to consider *all* factors that influence their trust in an organization then rank and prioritize them. Ten categories emerged from the data with the three primary determinants coded as "openness and honesty", "knowledge and expertise", and "concern and care". The remaining determinants of trust included "balance/bias", "group structure", "action", "reputation", "public involvement and communication", "politics" and "economics" (see Appendix E). For this particular question, the findings were consistent with the previous response suggesting that the three primary determinants that influence perceptions of trust and credibility were

[10] "Primary determinants" are the top three determinants (unless otherwise indicated) that have the most influence on perceptions of trust/credibility.

"openness and honesty", "knowledge and expertise", and "concern and care" (see Figure 1).

Figure 1. Primary Determinants of Trust and Credibility



Coding Categories
O: Openness/Honesty
K: Knowledge/Expertise
C Concern/Care
B: Balance/Bias
GS: Group Structure
A: Action
R: Reputation
PIC: Public Involvement & Communication
P: Politics
E: Economics

There was marginal distinction between the user groups when comparing the two most important determinants. Of all ten categories that emerged, "openness and honesty" was the most important determinant for four of the five user groups; similarly, "knowledge and expertise" was the second most important determinant for the same four user groups (see Table 3). The recreational user group is the only segment of the sample that indicated "group structure" as its first priority, with "openness and honesty" a very close second.

Table 3. Primary Determinants of Trust and Credibility (User Group Summary)

Recreational (11 comments)	**ENGO** (18 comments)	**Government** (37 comments)	**Industry** (38 comments)	**Other** (9 comments)
Group Structure (8 pts) Openness/Honesty (7 pts) Knowledge/Expertise (6 pts) Care/Concern (1 pt) Public Involvement and ɔmmunication (1 pt)	1) Openness/Honesty (14 pts) 2) Knowledge/Expertise (7 pts) 3) Action/Application (7 pts) 4) Care/Concern (3 pts) 5) Public Involvement and Communication (3 pts) 6) Balance (2 pts)	1) Openness/Honesty (25 pts) 2) Knowledge/Expertise 20 pts 3) Reputation (7 pts) 4) Action/Application (6 pts) 5) Care/Concern (4 pts) 6) Group Structure (3 pts) 7) Politics (3 pts) 8) Economics (2 pts) 9) Balance (1 pt) 10) Public Involve/Coms (1 pt)	1) Openness/Honesty (29 pts) 2) Knowledge/Expertise: 25 pts 3) Balance (11 pts) 4) Care/Concern (4 pts) 5) Reputation (3 pts) 6) Group Structure (2 pts) 7) Public Involve/Coms (1 pt)	1) Openness/Honesty (8 p 2) Knowledge/Expertise- 3) Care/Concern (4 pts) 4) Group Structure (1 pt)

The greatest deviation among user group responses occurred between the second (knowledge and expertise=63 points) and third (concern and care=16 points) determinants when comparing the priority of each determinant (and cumulative points assigned) (see Table 4 and Figure 1). While "concern/care" appeared as the third most important determinant of trust in the overall sample, it was only chosen by one user group (other) as its third priority determinant. These data suggest that once general perceptions regarding trust and credibility have been satisfied in relation to "openness/honesty" and "knowledge/expertise", a variety of other factors come into play.

Table 4. Primary Determinants of Trust and Credibility (Overall Sample)

O	K	C	B	GS	A	R	PIC	P	E
83 pts	**63 pts**	16 pts	14 pts	14 pts	13 pts	10 pts	6 pts	3 pts	2 pts

Coding Categories: O: Openness/Honesty; K: Knowledge/Expertise; C: Concern/Care; B: Balance/Bias; GS: Group Structure A: Action; R: Reputation; PIC: Public Involvement/Communication; P: Politics; E: Economics

It is notable that the determinants "group structure" and "balance" are very closely linked and many responses could have been coded in either category or alternatively combined into one category. Had they been combined, the results would have reflected "group structure/ balance" as the third most important determinant of trust and credibility (28 points). Although “balance” and “group structure” determinants are mutually reinforcing, they were coded in two distinct

categories for the analysis, as comments did not always relate one to the other.[11] The data suggest however, that perceptions are strongly linked.

Although the primary determinants of "openness and honesty", "knowledge and expertise", and "concern and care" are significant factors that influence general perceptions of trust, a host of other variables play a central role in diminishing and restoring perceptions of trust. These three determinants, however, appear to provide the general framework from which perceptions of trust and credibility evolve. The evolution of trust and its relationship to other determinants is explored in the following section.

Determinants that Diminish Trust and Credibility

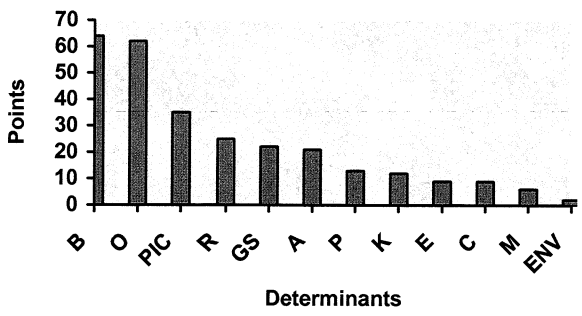
Other determinants began to emerge with increasing significance when participants were asked to consider variables that negatively influenced their perceptions of trust and credibility. This slight change in context revealed interesting fluctuations in the data.[12] One might assume a direct correlation between those primary determinants considered important to trust and credibility and those that lead to loss of trust and credibility (see Figures 1 and 2). Although this was the case in some instances, there was some variation.

Of the three primary determinants established as most influential to overall perceptions, only "openness/honesty" ranked in the top three (see Table 5).

[11] For example, responses regarding group structure did not necessarily imply balance/bias every time and not all comments regarding balance/bias regularly implied relevance to group structure.

[12] The same criteria and categories were used for coding data relative to diminished trust and credibility, with two additional categories created, "environmental" and "miscellaneous" (see Appendix E).

Figure 2. Determinants of Low Trust and Credibility



Coding Categories:
B: Balance
O: Openness & Honesty
PIC: Public Involvement & Communication
R: Reputation
GS: Group Structure
A: Action
P: Politics
K: Knowledge/Expertise
E: Economics
C: Concern/& Care
M: Miscellaneous
ENV: Environment

Table 5. Determinants of Low Trust and Credibility (Overall Sample)

B	O	PIC	R	GS	A	P	K	E	C	M	ENV
64 pts	**62 pts**	35 pts	25 pts	22 pts	21 pts	13 pts	**12 pts**	9 pts	**9 pts**	6 pts	2 pts

Coding Categories: B: Balance/Bias; O: Openness/Honesty; PIC: Public Involvement/Communication; R: Reputation; GS: Group Structure; A: Action; P: Politics; K: Knowledge/Expertise; E: Economics; C: Concern/Care; M: Miscellaneous; ENV: Environment

The other two determinants ranked considerably lower, with "knowledge and expertise" in eighth place, and "concern/care" tied with "economics" for ninth place. In the context of lost trust, "balance" and "public involvement and communication" become two of the three primary determinants, replacing "knowledge/expertise" and "concern/care" (see Figure 2). Thus only "openness and honesty" was consistently ranked as a primary determinant for both influencing perceptions of trust and diminishing perceptions of trust.

Comparing the perceptions of user groups and exploring whether trends emerge among the four sectors offer important insights regarding the relationship between perceptions and human behavior. Each user group had a distinct set and priority of primary determinants, suggesting that a variety of factors influence

perspectives and are dependent on circumstances and the context in which they are operating. Equally important are the trends that emerged among user groups. Data indicate trends among recreational and ENGO user groups (primary determinant "group structure") as well as among industry and government user groups (primary determinants "balance" and "openness/honesty") (see Table 6).

Table 6. Determinants of Low Trust and Credibility (User Group Summary)

Recreational	ENGO	Government	Industry	Other
O = 8 pts	**PIC = 8 pts**	**B = 22 pts**	**B = 34 pts**	**O = 8 pts**
GS = 3 pts	GS = 8 pts	O = 16 pts	O = 28 pts	PIC = 6 pts
R = 3 pts	B = 7 pts	A = 12 pts	R = 13 pts	GS = 5 pts
P = 3 pts	O = 2 pts	P = 9 pts	PIC = 12 pts	K = 4 pts
K= 2 pts	R = 2 pts	PIC = 7 pts	C = 6 pts	R = 3 pts
A = 2 pts	K = 1 pt	GS = 5 pts	A = 6 pts	P = 1 pt
PIC = 2 pts	A = 1 pt	E = 5 pts	K = 5 pts	
B = 1 pt		R = 4 pts	E = 4 pts	
		C = 3 pts	M = 3 pts	
		M = 3 pts	GS = 1 pt	
		ENV = 2 pts		

Coding Categories: B: Balance/Bias; O: Openness/Honesty; PIC: Public Involvement/Communication; R: Reputation; GS: Group Structure; A: Action; P: Politics; K: Knowledge/Expertise; E: Economics; C: Concern/Care; M: Miscellaneous; ENV: Environment

The distinction between the ENGO/recreational sub-sample and the industry/government sub-sample is significant and warrants further discussion.[13] While "group structure" is an important determinant of lost trust for recreational and ENGO user groups, it is less significant for Industry and government user groups. As both industry and government are represented on the RCMG

[13] When comparing trends among the ENGO/recreational and industry/government user groups, each set of user groups are referred to as a sub-sample to clarify the data being considered.

Committee (and are typically involved in resource management issues), "group structure" was likely not perceived as problematic for industry/government user groups and subsequently, had minimal influence on their perceptions of trust.[14]

For those survey participants with no representation on the RCMG Committee (e.g., recreational/ENGO groups), however, the issues of representation and group membership influence perceptions of lost trust and credibility. The discrepancy between the two sub-samples is suggestive of an incongruent approach or process that may be perceived as favouring some stakeholders (industry and government). This assumption and the determinants pertaining to lost trust also relate to the RCMG credibility and are explored in the following section.

Perceptions Regarding the Regional Carnivore Management Group

The data found that 72% of the overall sample perceived the RCMG as credible, 67% believed the RCMG was credible, while 15% did not.[15] Additional comments regarding the credibility of the RCMG were compiled, coded and segregated into "credible" and "not credible" categories. Findings based on this qualitative data indicate 72% of the overall sample perceived the RCMG as

[14] Although "group structure" was not a primary determinant that influenced perceptions of lost trust for government and industry user groups, it did present as a primary determinant (third priority) for additional factors that influenced perceptions (survey question #4). This was not referenced in the discussion, however, as more complete data were available regarding overall determinants of trust/credibility (survey question #5), The "group structure" determinant, however, was revealed as the second most important determinant for both industry and government in restoring trust and credibility (see Table 9).

[15] When asked whether participants considered the RCMG credible, 18% of the overall sample did not respond to the question.

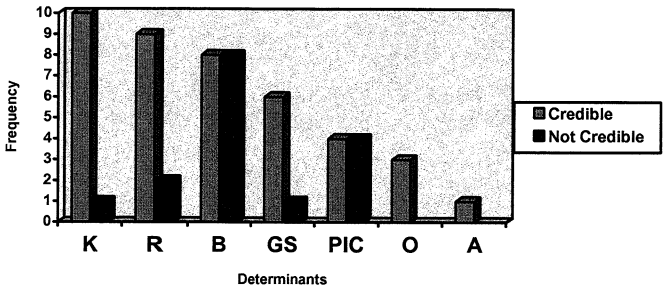
credible, while 28% did not. The subsequent mean of both sets of data suggest that 69.5% perceived the RCMG as credible, while 21.5% did not (see Table 7).

Table 7. Perceptions Regarding Credibility of Regional Carnivore Management Group

RCMG credibility (quantitative)	Perceived RCMG as credible: 67% (35/52) of total sample	Perceived RCMG not credible: 15% (8/52) of total sample
Summary comments (qualitative) *Refer to Coding Categories at bottom of table	Results are based on a summary of comments provided by survey participants: * Numbers refer to number of comments received; code letters refer to determinan that influenced RCMG credibility (e.g., 10K =10 comments received re knowledge/expertise). • 72% of participants perceive RCMG as "credible" *Comments re: RCMG as "credible": **10K; 9R; 8B**; 6GS; 4PIC; 3O; 1A • 28% of participants perceive RCMG as "not credible" *Comments re: RCMG "not credible": **8B; 4PIC; 2R**; 1K; 1GS • Overall Totals: **16B; 11K; 11R**; 8PIC; 7GS; 3O; 1A	
Mean perceptions RCMG Credibility	**Perceived RCMG as "credible": 69.5% of total sample** (mean)	**Perceived RCMG as "not credible": 21.5% of total sample** (mean)
*Coding Categories: B: Balance/Bias; K: Knowledge/Expertise; R: Reputation/History; PIC: Public Involvement/Communication; GS: Group Structure/Membership; O: Openness/Honesty; A: Action		

The primary determinants that influenced credible perceptions of the RCMG, were "knowledge/expertise", "reputation", and "balance" (see Figure 3). As the RCMG contends with important and complex resource management issues and practices, it is not surprising that "knowledge/expertise" is a key determinant influencing stakeholders' perceptions. A direct link to the Foothills Model Forest Grizzly Bear Research Project provides science-based information from which the RCMG can ground its recommendations.

Figure 3. Comparison of Perceptions Related to RCMG Credibility



Coding Categories:

K: Knowledge/Expertise
R Reputation
B: Balance
GS: Group Structure
PIC: Public Involvement & Communication
O: Openness/Honesty
A: Action

The importance of knowledge is established in previous research, which describes expertise and competence as important variables that influence credibility (Peters et al., 1996). Data from this research study revealed that "knowledge/expertise" is one of the primary determinants that influences perceptions of trust/credibility for each user group. Based on this data, those involved with environmental management stand to gain extensive credibility by basing management decisions and practices on sound science that is peer reviewed.[16] Not surprisingly, this in turn can promote a positive "reputation", the second determinant cited as important in reference to RCMG credibility. The third determinant "balance" is also enhanced by objective peer review.[17] Credibility can be improved when organizations like the RCMG, demonstrate through a transparent process that intelligent decisions are made and actions are implemented responsibly. The intricate relationship among these elements can

[16] When participants were asked whether the RCMG's direct link to the Foothills Model Forest Grizzly Bear Research findings influenced the RCMG's credibility, 67% overall responded that it did influence their perceptions. Those user groups influenced the most by this direct link included recreational users (100%) and industry (80%). The ENGO user group was marginally influenced (37.5%); Government (59%); and Other (60%).

[17] It is important to note that the determinants of "balance" and "reputation" are also closely linked and are mutually reinforcing (similar to "group structure" and "balance").

foster positive perceptions of trust and credibility that are mutually reinforcing, enhancing the reputation of, and confidence in an organization.

The most significant determinant associated with poor credibility of the RCMG was "balance", followed closely by "public involvement/communication" then "reputation" (see Figure 3). The determinants "balance" and "public involvement/communication" are consistent with earlier observations regarding the factors that negatively influence perceptions of trust and credibility (see Figure 2). This recurring theme emphasizes the importance of these two particular determinants in relation to perceptions of lost trust/credibility.

The perceptions related to the RCMG credibility offer important data to compare and contrast (see Figure 3). It is notable the determinants "balance" and "public involvement/communication" were cited with equal frequency as important determinants that influenced both “credible” and “not credible” perceptions of the RCMG. This is significant due to the high degree of variation between those who perceived the RCMG as either “credible” or “not credible”. Such polarized perceptions of the RCMG’s credibility, coupled with stakeholders pointing to the same determinants as the cause of their particular perception, suggests that a particular organizational structure or participatory process may disproportionately distribute benefits among stakeholders.

Those stakeholders who perceived the RCMG as credible were predominantly from the industry (85%) and government (75%) user groups (see Table 8). Favourable perceptions are influenced by the determinant "knowledge/expertise" for both industry and government participants. Data also

indicate that "balance" and "reputation" are important determinants for industry and government in terms of RCMG credibility (see Table 8).

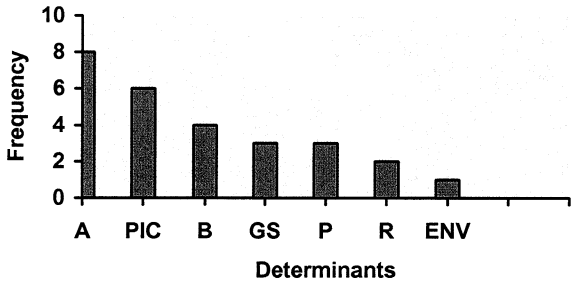
Table 8. User Group Perceptions of the Regional Carnivore Management Group

The following is a summary of user group perceptions regarding the RCMG based on ***comments*** provided by survey participants. Number of comments refer to the number of comments received; code letters refer to the determinants that influenced perceptions (e.g., 10K = 10 comments regarding knowledge/expertise determinant). *See Coding Categories.	
Recreational	• **25%** (1/4) of recreational participants perceive RCMG as **"credible."** • 25% (1/4) of recreational participants perceive RCMG as "reasonably credible." Number of comments re: determinant: 1R; 1B; 1GS; 1K
	• **25%** (1/4) of recreational participants perceive the RCMG as **"not credible."** • 25% (1/4) of recreational participants implied "not credible" in comments. Number of comments re: determinant: 1B; 1 PIC
ENGO	• **43%** (3/7) of ENGO participants perceive RCMG as **"credible."** Number of comments re: determinant: 2K; 1B; 1GS; 1R
	• **43%** (3/7) of ENGO participants perceive the RCMG as **"not credible."** Number of comments re: determinant: 2B; 2PIC; 2R; 1K; 1GS
Government	• **75%** (12/16) of government participants perceive the RCMG as **"credible."** Number of comments re: determinant: 3K; 3PIC; 2B; 1GS; 1A; 1R
	• **6%** (1/16) of government participants perceive the RCMG as **"not credible."** Number of comments re: determinant: 1B
Industry	• **85%** (17/20) of industry participants perceive the RCMG as **"credible."** Number of comments re: determinant: 4K; 4R; 3B; 3GS; 2O; 1PIC
	• **5%** (1/20) of industry participants perceive the RCMG as **"not credible."** Number of comments re: determinant: 1PIC; 1B
Other	• **40%** (2/5) of other participants perceive the RCMG as **"credible."** Number of comments re: determinant: 2R; 1O; 1B
	• **40%** (2/5) of other participants perceive the RCMG as **"not credible."** Number of comments re: determinant: 2B
*Coding Categories: B: Balance/Bias; K: Knowledge/Expertise; R: Reputation/History; PIC: Public Involvement/Communication; GS: Group Structure/Membership; O: Openness/Honesty; A: Action	

Those user groups who did not find the RCMG credible offer important insights. When comparing survey results, data reflect limited support of the RCMG from the recreational and ENGO stakeholders in comparison to industry

and government stakeholders. Of the recreational user group, 25% perceived the RCMG as "credible", while 43% of the ENGO user group perceived the RCMG as "credible". The primary determinants that influenced poor RCMG credibility for both ENGO and recreational user groups were "balance" and "public involvement/communication" (see Table 8). These data further reinforce other research results that found perceptions of trust/credibility diminished by "balance" and "public involvement/communication" (see Figures 2 & 3).[18] Similarly, when participants were asked in a separate question to identify other factors that influenced their perceptions regarding the RCMG credibility, two of the three primary determinants were also "public involvement and communication" and "balance", further reinforcing their significance (see Figure 4).

Figure 4. Determinants that Influence RCMG Credibility



Coding Categories:
A: Action
PIC: Public Involvement & Communication
B: Balance/Bias
GS: Group Structure
P: Politics
R: Reputation
ENV: Environment

Considering the reality that neither the recreational or ENGO user groups are represented on the RCMG committee, it is questionable how much involvement or influence these stakeholders have on decisions and/or land

[18] The determinants "openness/honesty" and "reputation" are also key determinants appearing in the top three responses related to diminished trust/credibility, however, there is not repeated reference between responses as there is with the "balance" and "public involvement and communication" determinants.

management practices. Industry and government representatives on the other hand are involved exclusively on the RCMG committee and have comparatively more opportunity to be involved, share information and influence directions (or recommendations) regarding resource management. Consequently, it is more likely that government/industry will have a higher degree of trust. Those less closely associated with formal networks often have less influence on decisions, as they are not embedded in processes to the same degree or in the same manner. The significance of the determinants "balance" and "public involvement/communiction" suggest there is a direct link between the level of involvement and influence afforded to these stakeholders and the degree of trust and credibility bestowed on the RCMG in return.

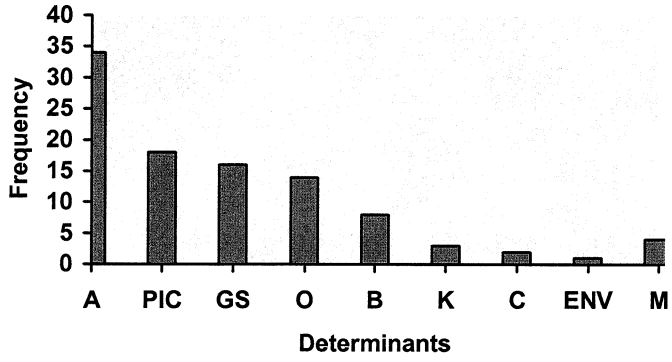
Based on research by Peters et al. (1996) it is argued that the RCMG credibility could be enhanced by positively reinforcing the variables "balance" and "public involvement/communication". Peters et al. posit that using an approach that defies a negative perception by focusing positive attention on the same determinant is an effective strategy to improve credibility. Further evidence describing the significance of these determinants in restoring credibility are discussed in the following section.

Restoring Trust and Credibility

Two survey questions focused on exploring determinants related to restoring trust and credibility. One question targeted perceptions specific to the RCMG, while the other focused on restoring trust and credibility in general. Participants were initially asked to consider an organization that had lost

credibility and then comment on what it would have to do regain their trust and confidence. For the overall sample, the three primary determinants necessary to restore trust and credibility in a general context were "action", "public involvement and communication", and "group structure" (see Figure 5).

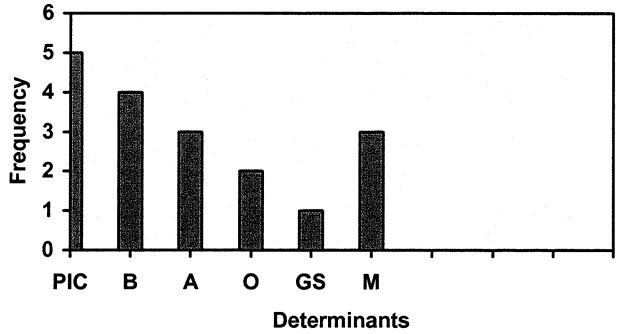
Figure 5. Determinants Important to Restore Trust/Credibility



Coding Categories:
A: Action
PIC: Public Involvement & Communication
GS: Group Structure
O: Openness & Honesty
B: Balance
K: Knowledge/Expertise
C: Concern/& Care
ENV: Environment
M: Miscellaneous

The primary determinants that were found to restore RCMG credibility were "public involvement and communication", "balance", and "action" (see Figure 6). The repeated reference to the determinants "public involvement and communication", "action", and "balance" emphasize the important influence each has on both positive and negative perceptions of trust (see Figures 2-6).

Figure 6. Determinants Important to Restore RCMG Credibility



Coding Categories:
PIC: Public Involvement & Communication
B: Balance
A: Action
O: Openness & Honesty
GS: Group Structure
M: Miscellaneous

Data become more discerning when user group perceptions are compared. For industry and government user groups the data suggest that to restore trust and credibility efforts should focus on "action" oriented endeavours that demonstrate commitment and movement toward original objective(s) that rectify past grievances. Zineldin and Jonsson (2000) and Adler and Kwon (2000), argue that a "willingness to act" is critical to collaborative relations, commitment and trust. This approach should be supported by efforts that positively influence "group structure" and demonstrate "honesty" in a way that will reinforce positive perceptions that improve credibility (see Table 9).

Table 9. Determinants Important to Restore Credibility (User Group Summary)

Recreational	ENGO	Government	Industry	Other
PIC = 6	**PIC = 5**	**A = 11**	**A = 14**	**A = 3**
B = 2	B = 4	GS = 5	GS = 7	O = 3
A = 2	A = 4	O = 3	O = 6	GS = 2
O = 1	O = 1	PIC = 2	PIC = 3	PIC = 2
GS = 1	GS = 1	C = 2	K = 1	S = 1
S = 1	K = 1	B = 1	B = 1	
	ENV = 1	K =1	M = 3	
	S = 1	M = 1	S = 1	
		S = 2		
Total = 13	Total = 18	Total = 28	Total = 36	Total = 11

Coding Categories: B: Balance/Bias; O: Openness/Honesty; PIC: Public Involvement/Communication; R: Reputation; GS: Group Structure; A: Action; P: Politics; K: Knowledge/Expertise; E: Economics; C: Concern/Care; M: Miscellaneous; ENV: Environment (*Numbers represent frequency of times comment referred to in survey results.)

The second and third determinants that restore trust for government and industry user groups included "group structure" and "openness/honesty" (see Table 9). The determinant "openness/honesty" is not surprising in this context, as it has been established earlier as a key determinant for all user groups. The

"group structure" variable is interesting as previous data implied this determinant was less significant to industry and government user groups. Both these user groups, however, recognize the relevance of "group structure" and consider it an important variable in the context of regaining trust/credibility.

The data for recreational and ENGO user groups suggest that "public involvement/communication" is the primary determinant important to restoring credibility, followed by "balance" and then "action" (see Table 9). These data reinforce earlier survey results that suggest "public involvement/communication" as well as "balance" diminished RCMG credibility for both the ENGO and recreational user groups (see Table 8). The significance of these two determinants can also be observed in research results that reflect the overall sample (see Figures 2-5). The determinant "public involvement/communication" has emerged as a primary determinant central to the restoration of trust and credibility. As such, its significance warrants further investigation, which is the focus of the following section.

Implications for Communications

In this study data repeatedly present "public involvement/communication" as a primary determinant of trust and credibility, fluctuating between first and third priority for all user groups. This clearly suggests that communication and public involvement play a fundamental role in influencing perceptions, especially in relation to the decline and/or restoration of trust and credibility.

Further analysis of the data regarding RCMG credibility reveal insights that are relevant to communication. Of the participants who responded to the

survey, 90.5% were aware of the RCMG, 60% were familiar with the RCMG mandate and only 36% were familiar with the recommendations. This compares to 67% of the overall sample that perceived the RCMG as credible. One might question whether an increased understanding of the RCMG recommendations would influence the credibility of the RCMG. Bellavita (1986) stresses the importance of communicating the value of an organization's activities both within and outside their organization(s). This is key to becoming more performance oriented, which in turn helps to sustain credibility. This suggests there is potential for the RCMG to improve performance and credibility through enhanced communication, education and understanding of its value, its mandate and recommendations.

Creating greater awareness among targeted audiences (including skeptical or unaware stakeholders) may generate increased understanding of the RCMG mandate, which may lead to acceptance of recommendations and potential management decisions. Conversely, increasing awareness about the RCMG's mandate and its recommendations may cause concern among certain stakeholders. This may generate resistance, yet has the potential for positive outcomes. Awareness based on an understanding of the complexities and the multiple dimensions of a problem can lead to creative solutions and trusting relations. This point is repeatedly made in previous research studies in the context of citizen engagement, and its capacity to build trust and empower citizens through legitimate means of involvement with meaningful dialogue and deliberation. To gain insights regarding legitimate means of involvement, survey

participants were asked what they believed were the most effective and credible method(s) for engaging diverse stakeholders in a meaningful way. Survey results present an array of mechanisms and tools that are comparable to some of the mechanisms highlighted by Abele et al. (1998) (see Tables 1 and 10).

Table 10. Summary of Methods for Consultation and Communication

<table>
<tr><th>Forums (F): 33</th><th>Direct Contact (DC): 14</th><th>Working Group (WG): 12
(includes Round Table)</th><th>Balance (B): 4</th></tr>
<tr><td>Public/open/stakeholder: 22
Town halls: 2
Open house: 9</td><td>Face-face, personal contact, field visits, individual stakeholder meetings</td><td>Round table and small group discussion: 4
Workshops: 4
Focus group: 1
Advisory group: 2
Stakeholder committee: 1</td><td>▪ Make sure objectivity is maintained
▪ No hidden agendas
▪ Balanced participation
▪ People living in metro are allow emotions to influen decision.</td></tr>
<tr><td colspan="2">Public Involvement/Communication (PIC): 12
▪ Involve stakeholders from beginning; listen to stakeholders (x1)
▪ Recognize the real list of stakeholders (local stakeholders) (x1)
▪ Effective 2-way communication (x1)
▪ Ongoing discussion (x1)
▪ Request input from diverse range or organization (x2)
▪ Use effective spokesperson and/or disciplined mediator/chairperson (x3)
▪ Provide lots of opportunity - not just one add in the paper [to provide input] (x1)
▪ Seek information and support from people living in heavy carnivore populated areas (x1)</td><td>Comms. Tools (CT): 26
▪ Survey: 10
▪ Web: 2
▪ Advertising: 3
▪ Media, Publications, Mail outs: 5
▪ Mail in/written input: 5
▪ Phone: 1</td><td>Openness/Honesty (O): 1
▪ tell the truth regardless
Knowledge/Expertise (K):
▪ Include knowledge and expertise</td></tr>
<tr><td colspan="4">Miscellaneous: 10 (12 including skepticism comments)
▪ Determine Direction through consensus/Find common ground and build on topics where agreement is met (x2)
▪ Identify objectives of all parties and establish process to achieve objectives (x2)
▪ Methods must be tailor-made. Dependent on objectives, dynamics, subject material, audience, knowledge, time frame (x3)
▪ Various methods depending on complexities (x1)
▪ Pre-work before input so stakeholders can plan ahead and bring valuable info (x1)
▪ Make sure organization's recommendations are followed (x1)
▪ Skepticism (x2)</td></tr>
</table>

The data suggest a combination of approaches involving a variety of opportunities and methods, depending on the objectives, needs of audience, dynamics and complexities of the situation. The forum was most frequently identified as an effective means to reach a wide range of audiences (F=33).[19] This was followed by the use of communication tools (F=26), ranging from surveys to mail in/written for direct, face-to-face contact (including personal contact, field visits, individual stakeholder meetings) were also cited as meaningful methods to engage stakeholders (F=14). Closely related to these strategies was the application of working groups (F=12), which included round table and small group discussions, workshops, focus group, advisory group and a stakeholder committee. Although the data did not reflect any of the "citizen engagement" terminology referred to by Abele et al. (1998), similar concepts were buried in familiar language and the mention of combining approaches is in line with the integrated approach of democratic consultation (see Table 2).

The assumptions of the media richness theory suggest that information conveyed through a rich medium is more likely to generate increased understanding, trust and credibility. The data range in degree of richness; those most interactive will facilitate opportunities for meaningful engagement, immediate feedback, and greater potential to increase understanding as well as improve trust and credibility.

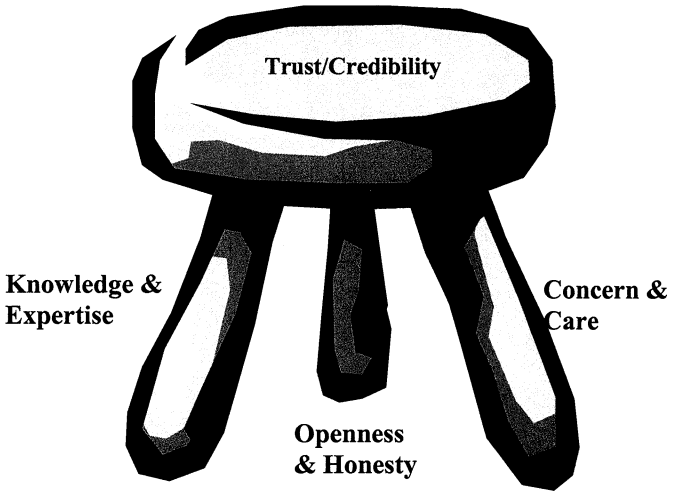
[19] "Forum" is defined as "an assembly, program, etc, for the discussion of public matters (Webster's New World Dictionary, 1984). For the purposes of this study, forum refers to a public/open/stakeholder forum, town hall and open house.

Conclusion

This research study set out to discover the determinants of trust and credibility among RCMG stakeholders, as well as identify determinants that diminish and restore trust and credibility. This enquiry also addressed the question of whether trends occurred among user groups.

When considering general perceptions of trust and credibility, the primary determinants that influence participants' perceptions are "openness/honesty, followed by "knowledge/expertise" and "concern/care". These variables support the foundation on which trust and credibility rest (see Figure 7a). This data replicates findings discovered by Peters, Covello and McCallum (1996) who found the same three determinants to be important variables of trust/credibility.

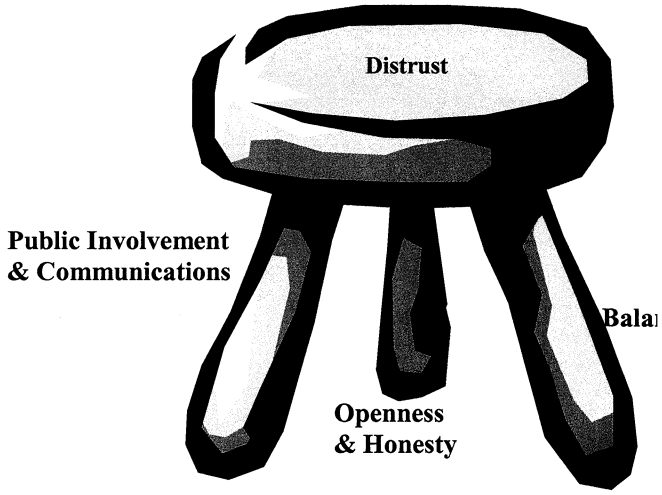
Figure 7a. Primary Determinants that Influence Trust and Credibility



Data suggest that "openness/honesty" and "knowledge/expertise" are the most significant of the three determinants. Once people are satisfied these two variables are present in a particular situation, a variety of factors come into play with comparable significance. Although all user groups identified "concern/care" as an important determinant of trust, the priority of importance diminished as participants considered a multitude of variables that improved or diminished their perceptions of trust.

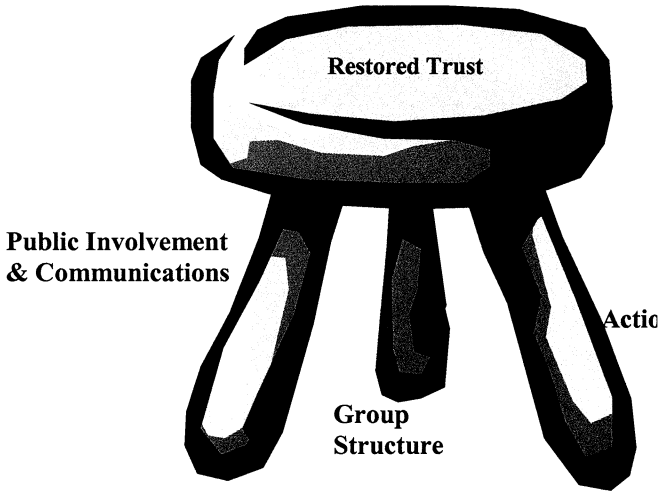
Other variables become increasingly significant in relation to losing/restoring trust and credibility. The primary determinants that diminish trust and credibility are "balance", "public involvement/communication", and "openness and honesty" (see Figure 7b). These results coincide with determinants that influenced poor RCMG credibility ("balance" and "public involvement and communications") and reinforce their significance as determinants of lost trust.

Figure 7b. Primary Determinants of Low Trust and Credibility



To restore trust and credibility, the primary determinants become "action", "public involvement and communication", and "group structure" (see Figure 7c). Similar themes again appear regarding the RCMG credibility, which also found "public involvement and communication" and "action" to be primary determinants for restoring their credibility, as well as the determinant "balance". The RCMG credibility was also positively influenced by the determinant "knowledge", substantiating previous observations in this study and the study by Peters et al. (1996).

Figure 7c. Primary Determinants that Restore Trust and Credibility



When perceptions of user groups are compared, distinguishing patterns are observed. Trends emerged among recreational/ENGO user groups and among industry/government user groups, resulting in variation between these two sets of user groups. For recreational/ENGO user groups, "group structure" influenced perceptions of lost trust, while for industry/government user groups, "balance" and "openness/honesty" were important determinants of lost trust. Although "group structure" was not an important determinant of lost trust for industry or government user groups, it did emerge as important for restoring trust. Additional determinants that influenced restored trust for industry and government user groups were "action" and "openness". Notable trends of restored trust and credibility among recreational and ENGO user groups involved the determinants "public involvement and communication", "balance", and "action".

This study has uncovered a number of interconnected variables that influence the perceptions of lost/restored trust (PIC/A/GS/B/O).[20] Most relevant in the context of environmental communication is the recurring significance of "public involvement/communication" and "group structure", and the influence each has on stakeholder perceptions, in particular recreational and ENGO user groups. Trust and credibility are diminished when perceptions regarding group structure, membership and affiliation of an organization are negatively influenced. Perceptions of trust and credibility, however, can be improved among

[20] Determinants of lost/restored trust: PIC: public involvement/communication; A: action; GS: group structure; B: balance; and O: openness/honesty.

recreational and ENGO user groups through effective communication, information, and inclusive public and stakeholder involvement.

As resource managers from government and industry are traditionally involved in discussions and/or decision-making processes regarding environmental matters, inclusiveness and communication are generally more readily accessible (and perhaps taken for granted) than is the case for recreational and ENGO user groups. Typically, there is more opportunity for government/industry representatives to be involved, express concerns and be heard than other user groups. As such, there remains a greater potential for government/industry stakeholders to not only influence management and policy decisions but also to support policy and management practices, as they have often been involved in related discussions or decision-making processes at various levels.

For those who are not as connected to formal structures, there is less opportunity to engage in discussions as well as influence decisions. The distinction between these two sets of user groups (ENGO/recreational and government/industry) suggests there is an imbalance of structure or process that generates a perception of inequity between them. This assumption is grounded in the data, which suggest perspectives are influenced differently and/or inconsistently across a broad spectrum of stakeholders, resulting in a perception of greater benefits to some than others. It is significant that the research results support theoretical concepts such as citizen engagement, social capital and the

collaborative planning theory, all of which are grounded by the premise that inclusive, rich interaction builds relationships, collaboration and ultimately, trust.

Although no standard formula exists that will guarantee an organization's success in regaining and/or maintaining trust, an awareness of the determinants of trust/credibility can inform efforts to support collaborative relationships built upon trust. A foundation based upon mutual trust and grounded by the principles of citizen engagement and social capital enable understanding, collaboration, respect and trust to develop (Abele et al., 1998; Graham et al., 1998; Trettin & Musham, 2000; Kumar & Paddison, 2000; Naphapiet & Ghoshal, 1998; Herzog, 2001; Adler & Kwon, 2000). This dynamic is becoming increasingly important as many organizations, including the RCMG, seek support and opportunities to collaborate in order to gain cooperation and acceptance, and most importantly produce effective results.

Communication and public involvement are fundamental elements needed to build positive stakeholder relations. Efforts to engage and communicate with citizens need to be supported by a variety of inclusive opportunities and tools that facilitate rich and meaningful interaction. Consistent with the media richness theory, data suggest that the most effective methods to involve stakeholders are those that facilitate rich interaction with open dialogue in a variety of fora, supported by a range of communication tools such as publications, surveys, written input and media, that appeal to a wide audience (Lee & Heath, 1999).

This study revealed an obvious lack of representation from the aboriginal communities located within the Alberta Yellowhead Ecosystem. Future research

that explores the cultural dimension of trust and credibility and investigates ways to build trust through meaningful engagement and consideration of cultural values would be useful. This will become increasingly important as governments consult aboriginal/first nations people regarding natural resource management decisions or activities that infringe on their ability to hunt, fish and trap.

Over the last decade, the environmental community, (and specifically the environmental non-government organizations) has largely disengaged from a number of government processes related to important environmental issues. Further research could investigate factors that have lead to their limited participation with a focus on variables that contribute to the decline of trust in a political climate. Understanding how relationships are influenced within political processes and environments might serve policy and decision-makers in their efforts to engage this stakeholder group in decision-making processes.

It is recognized that this case study has limitations regarding a representative sample in a localized context, which limits the ability to generalize findings. Its major limitation, that of very small sub-samples (recreational and ENGO user groups), serves to underline one of the fundamental issues pointed out in this study, which is limited representation and involvement of multiple stakeholders.

Although this study does not offer prescriptive solutions to improve trust and credibility, data and conclusions offer food for thought. Replicating elements of the study by Peters et al. (1996) substantiates the data related to the primary determinants that influence general perceptions of trust/credibility. Ideally,

research results will add to the academic literature and offer insights regarding the fundamental determinants related to trust and credibility. Further replications of this study that test whether similar observations hold true for different stakeholders in different settings, would add to the literature on trust. As our understanding grows regarding the relationship between perceptions of trust and behaviour, we will be better positioned to build positive relations across all sectors and achieve desired outcomes based on mutual trust and understanding.

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APPENDIX A
Survey Questions: Determinants of Trust and Credibility

Data obtained from this survey will be used for a University of Alberta, graduate research project. The survey will gather data relevant to the determinants of trust and credibility in relation to environmental communication and stakeholder involvement. The Regional Carnivore Management Group (RCMG) has agreed to be referenced as part of this survey, as it is interested in learning more about stakeholders' perceptions regarding credibility.

Further details regarding this survey are outlined in the Participant Consent Form. The source of the data gathered through the survey will be anonymous, with only the organization the respondent is affiliated with being recorded. This survey will take approximately 15-20 minutes to complete.

General Background

1. In your affiliation with the Regional Carnivore Management Group do you represent a particular stakeholder group? Please indicate which group.

   In order to protect the anonymity of respondents, please do not provide any identifying information, other than your group affiliation.

   ☐ Aboriginal and First Nations Community
   Environmental Interest/Organization
   Government Sector
   Industry Sector
   Recreational User
   Other _____
   (ie: Organized Community Group (other than environmental or recreational)

2. Do you reside or conduct business in Edson, Hinton, Jasper or Grande Cache?

   Yes No Comment:_____

Attitudes and Perceptions Regarding Trust and Credibility

For the purposes of this survey, the following definitions apply:[21]

- **Credible**: can be believed; reliable
- **Trust**: firm belief in the honesty, reliability, etc of another; faith

[21] Source: Webster's New World Dictionary, 1984

A study conducted by Peters et el (1996), found that perceptions of trust and credibility in relation to environmental risk communication, are dependant on three factors:
1. Perceptions of knowledge and expertise
2. Perceptions of openness and honesty
3. Perceptions of concern and care

3. How important to you are each of the following factors with respect to how you trust an organization and how you perceive that organization's credibility?
   a) Please circle the number of your rating for each factor.
   b) Please rank your highest to lowest priority (1-3)

Factor	Not Important	Somewhat Important	Very Important	Rank
Knowledge & Expertise	1	2	3	
Openness & Honesty	1	2	3	
Concern & Care	1	2	3	

4. Are there additional factors that are important to you which influence your perception? Please specify and rate their importance to you in the table below.

   Not applicable - Go to #6 if no additional factors to report.

Factor	Not Important	Somewhat Important	Very Important
	1	2	3
	1	2	3
	1	2	3

5. Of the factors listed in #3 and #4 above, rank the three most important factors that influence how much you trust an organization and how you perceive that organization's credibility. Please list in order of priority.
   1. _____
   2. _____
   3. _____

6. Consider the factors that negatively influence your perception of a credible and trusting organization? What factors diminish your trust in an organization and negatively influence an organization's credibility? (Please list factors in order of importance)
   1. _____
   2. _____
   3. _____

7. Do your perceptions regarding the determinants of trust and credibility vary depending on the organization you are considering? If yes, please explain below.

   Yes No No Comment

8. When an organization seeks public input, what do you believe is the most effective and credible method(s) for engaging diverse stakeholders in a meaningful way?

9. If an organization has lost credibility, what would that organization have to do to regain your trust and confidence?

Regional Carnivore Management Group

10. Have you heard of the Regional Carnivore Management Group?

    Yes No

11. Are you familiar with the mandate of the Regional Carnivore Management Group?

    Yes No Somewhat

12. Are you familiar with the recommendations the Regional Carnivore Management Group has developed to date?

    Yes No Somewhat

13. Have you (or another representative from your organization) attended any stakeholder meetings hosted by the RCMG?

    Yes No

14. Do you perceive the RCMG as a credible committee? If yes why? If no why not?

Yes

_____

_____

No

_____

_____

No Comment

15. If you answered no to #14, how would you improve the credibility of the RCMG?

_____

_____

_____

16. Does the fact that the work of the RCMG is linked directly to the Foothills Model Forest Grizzly Bear Research findings influence its credibility?

Yes No No Comment

Comments:

_____

_____

_____

17. Are there other factors that influence the credibility of the RCMG? If so, please identify below.

Yes No No Comment

_____

_____

_____

18. Do you think the perceptions of trust and credibility that you've indicated in this survey are representative of those within the organization you're affiliated with? If no, how do the perceptions of others within your organization differ from yours?

Yes No No Comment

_____

_____

_____

Thank you for filling out this survey. Please be sure to sign your Participant Consent Form upon completion of this survey and return both in the attached self-addressed and stamped envelope to the attention of Patsy Vik (address noted below). You can also bring the survey and Participant Consent Form to the RCMG Stakeholder meeting where they will also be collected in the early new year.

Patsy Vik, PO Box 1720, Rocky Mountain House, Alberta T4T 1B3

This study has been reviewed and approved by the Research Ethics Board of the Faculties of Education and Extension, at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the Research Ethics Board at (780) 492-3751.

APPENDIX B
Introductory Letter

Patsy Vik
#107-111-54 Street
Edson, Alberta T7E 1T2

DATE

{INSERT STAKEHOLDER CONTACT INFORMATON}

Dear _____;

My name is Patsy Vik and I am writing to introduce myself, as well as a research project that I hope you will consider participating in. I am a graduate student at the University of Alberta, in the Master of Arts, Communication and Technology program. I am also employed with Alberta Environment based in Edson and provide communication support to the Regional Carnivore Management Group (RCMG).

As you are likely aware, the RCMG is a committee of land and resource managers who are developing recommendations to address grizzly bear conservation within the Alberta Yellowhead ecosystem. My particular research interest regards exploring the determinants of trust and credibility as it relates to organizations, in particular, the RCMG. The study will focus on factors that influence perceptions related to trust and credibility in relation to communication and stakeholder involvement. Ideally, findings will offer insights that will help to nurture successful relationships among stakeholders.

The Regional Carnivore Management Group is aware of and supports this study. Research findings will be shared with the RCMG, as they strive to ensure a credible process that involves communication and stakeholder involvement. The RCMG has made their distribution list available, as research findings will offer benchmark information from which to measure their own credibility. Your name/organization is identified on this list.

The instrument used to collect data will be a self-administered survey, distributed likely in the fall of 2002. Your input is a vital component of this research study and I hope you will consider participating. It is an anonymous survey, however, if you are associated with a particular stakeholder group it will request you identify your affiliation. More details will be provided in the Participant Consent Form that will be attached with the survey. If you do not wish to participate, please advise me and I will delete your name from the survey distribution list.

Please call me if you have questions or would like to discuss this further. You can reach me at 780-723-8537 or email patsy.vik@gov.ab.ca. I look forward to your involvement as this study unfolds.

Sincerely,

Patsy Vik
cc: Russ Stahko (Eldon Bruins) RCMG Chair
RCMG Committee Members: R. Bonar, B. Schleppe, G. Stenhouse, K. VanTighem, A. Watson, P. Zimmerman
Lorna Stefanick, Research Supervisor

APPENDIX C
RCMG Letter of Endorsement

Regional Carnivore Management Group

November 4, 2002

To Whom It May Concern:

Re: Patsy Vik Research Project

Please consider this as an endorsement of the project that Patsy has undertaken in regards to trust and credibility in relation to environmental communication and stakeholder involvement. My fellow members of the Regional Carnivore Management Group (RCMG) and I have agreed that this type of research will assist us in the future, specifically in the area of conservation, but in other areas and issues that seem to be abundant in the landscape.

Patsy has worked closely with the RCMG and has an excellent opportunity to further her research in that we are planning to conduct a stakeholder consultation process in the very near future. We await the results of her research – with hope that we may improve our communication process in the long run.

Regards,

Russell Stashko
Chair – Regional Carnivore Management Group
Suite 107 –11154 St.
Edson, Alberta – T7E 1T2

APPENDIX D
Participant Consent Form

TRUST AND CREDIBILITY: Exploring the determinants of trust and credibility as it relates to environmental communication and stakeholder involvement.

Investigator:
Patsy Vik (Phone #: 780-723-8537) Patsy.Vik@gov.ab.ca

Purpose of Study:
The focus of this research project is to explore the determinants of trust and credibility in relation to communication and stakeholder involvement. Factors that nurture, as well as diminish trust and credibility will be explored. Additionally, by comparing the findings of distinct stakeholder groups, I hope to discover whether differences or similarities exist between the user groups, which may have important implications for communications.

The Regional Carnivore Management Group (RCMG), a committee of land and resource managers developing recommendations to address grizzly bear habitat conservation, will provide a foundation for this study. Understanding what the RCMG stakeholders consider as important determinants of trust and credibility, will help in defining meaningful engagement as it relates to stakeholders.

Methodology:
A qualitative approach will be used in gathering and analyzing data. As research findings will be of particular interest to the RCMG, and will offer benchmark information from which to measure their own credibility, the RCMG has made their distribution list available in order to canvass their stakeholders.

Over 200 names and addresses of various stakeholders are identified including recreational users, industry, environmentalists, government, first nations/aboriginal community representation.

There will one primary data collection instruments:

1. Self-administered Survey: (mail): Purposive Stratified Sample

2. One-on-one interviews, may be used as an alternate data collection, in the event insufficient data is collected through the survey technique.

Confidentiality
Data gathered through the survey will be anonymous, with only the affiliation of the respondent noted. Findings will be reported only in relation to the noted affiliation. No personal reference is required; respondents will be reminded to not record any identifying information on the survey form. Any communication with the researcher relative to the study will be kept in confidence at the participant's request. Any reporting of such discussions will occur only with the consent of the participant. If additional data are necessary through an alternate data collection technique, one-on-one interviews will be conducted. Participants will be asked to record contact information on the Participant Request Form, if they are interested in volunteering for potential interview opportunities.

Time Commitment
The time required to fill out the survey is expected to be 20-30 minutes.

Questions?
If you have any questions, please call Patsy Vik at 780-723-8537 or email patsy.vik@gov.ab.ca.
The research supervisor can be reached at 780-XXX-XXXX, or the RCMG Chair at 780-XXX-XXXX.

Withdrawal from Study:
You are free to withdraw from any stage of the research at any time. There will be no consequence of leaving and no explanation will be required.

Additional Involvement:
In the event insufficient data is obtained through the survey technique, an alternate data collection instrument will be employed. One-on-one interviews will offer the researcher an opportunity to gather additional insights from involved stakeholders. If you would like more information regarding this research topic and/or would be willing to participate in a potential one-on-one interview, please provide your contact information here:

Name: _____ Phone #: _____

Stakeholder Affiliation: _____

Email Address: _____

This information will be used strictly for arranging one-on-one interviews. All personal information will remain confidential. Only stakeholder affiliation will be used in reference to research data.

Participant Informed Consent:
I understand and agree that the research procedures have been explained to me and I have received clarification regarding related details, to my satisfaction. I am aware that I may contact the researcher, as well as the researcher's supervisor, in the event I have additional questions or concerns. I have been assured that the research findings gathered through the survey will remain anonymous, with only the relevant affiliation that I may represent noted.

Name of Participant	Signature of Participant
Name of Researcher	Signature of Researcher

Date _____

APPENDIX E
Summary of Category Criteria

O = Openness/Honesty (and Transparency)
- Terminology that relates to open, honest and transparent behaviour. (e.g., honesty, secrecy, open process)

K = Knowledge/Expertise
- Terminology that relates to knowledge, expertise. (e.g., knowledge, expertise, no expertise or knowledge on which to base decisions)

C = Concern/Care
- Terminology that relates to concern/care and empathy. (e.g., lack of response and personal attention; caring, those that do not listen with concern)

GS = Group Structure/Membership and Affiliation
- Terminology that relates to group structure, membership and affiliation of organization(s). (e.g., affiliation with government, local membership, size of group)

A = Action/Application and Results Oriented
- Terminology that relates to action, results oriented, application of relevant action. (e.g., timely action, commitment, application of current knowledge to protect my interests)

PIC = Public Involvement and Communication
- Terminology that relates to communication, information, public/stakeholder involvement. (e.g., public involvement and discussion, inclusiveness, capacity to communicate)

R = Reputation (& History)
- Terminology that relates to and/or has impact on reputation; having history/experience on which to base reputation. (e.g., reliable (historically), previous track record, peer review (independent)

B = Balance & Bias
- Terminology that relates to having a balanced approach or viewpoint; influencing bias. (e.g., balanced viewpoint, objectivity, historical bias)

P = Political/Policy Reference
- Terminology that relates to political influence/involvement or policy implications. (e.g., driven by politics, clear policy basis, political interference and direction)

E = Economics/Profit
- Terminology that relates to economic influence or profit gained. (e.g., driven by economics, reliance on profitability, emphasis on buyouts)

ENV = Environmental Protection/Sustainability
- Terminology that relates to environmental aspect and/or reference to sustainability. (e.g., sustainability, environmental protection, when managed populations crash)

M = Miscellaneous
- Infrequent terminology seldom referenced that does not warrant separate category for coding. (e.g., impact on me, time pressures, energy level)

S = Skepticism

APPENDIX F
Letter of Intent

Patsy Vik
PO Box 1720
Rocky Mountain House, Alberta
T4T 1B3

Date

Dear RCMG Member;

As you know, I am pursuing my Master of Arts degree in Communication and Technology through the University of Alberta. I have developed my research plan and would like to advise you of some of the pertinent details.

I am interested in learning more about the determinants of trust and credibility as it relates to organizations, in particular, the Regional Carnivore Management Group (RCMG). My particular interest will focus on how key elements of trust and credibility relate to communication and stakeholder involvement. Understanding what stakeholders consider important determinants of trust and credibility will help in developing future communication and meaningful engagement as it relates to stakeholders and their involvement in program decision-making.

Research findings will be shared with the RCMG as findings will offer benchmark information from which the RCMG can measure its own credibility. The RCMG distribution list has been made available for this study in order to canvass its stakeholders. I appreciate access to this information and will treat it in confidence.

The instrument used to collect data will be a self-administered survey. This survey will be distributed by mail, likely in the early new year. There may be some insights brought to light through the research findings that do not reflect the RCMG's process or the government in a favourable light. It will be important that I present the findings in an objective and non-biased manner and do so without appearing in conflict of interest. This letter is intended to advise you of the potential, but to also reassure you that the findings will be presented in a professional, objective manner, guided by clear ethics and the assumptions of an established theoretical approach.

The findings should help to identify determinants that affect how relationships form and evolve. The intent is to offer managers food for thought that will ideally help to construct communication and consultation approaches that will be perceived as legitimate and credible. More details are provided in the attached Participant Consent Form.

Please contact me if you have questions or would like to discuss this further. You can reach me at 403-845-8277 or email patsy.vik@gov.ab.ca.

Sincerely,

Patsy Vik
cc: Pat Guidera