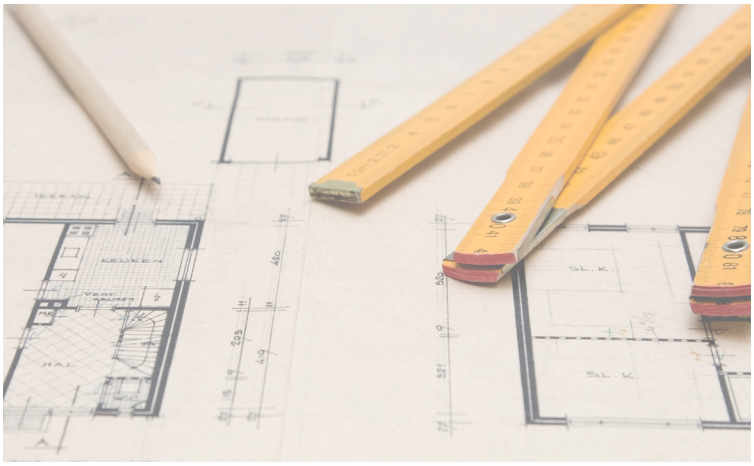

PROFESSIONALS AND **CLIMATE CHANGE**

How professional associations can get serious about global warming

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WEST COAST environmental law

West Coast is a non-profit group of environmental law strategists and analysts dedicated to safeguarding the environment through law. We believe in a just and sustainable society where people are empowered to protect the environment and where environmental protection is law. For almost 40 years, we have played a role in shaping BC and Canada's most significant environmental laws, and have provided support to citizens, First Nations, and communities on practically every environmental law issue imaginable.

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SUMMARY

Increasingly, Canadians look to professionals – individuals with special expertise and training, such as biologists, engineers, planners and foresters – to make decisions about a wide range of issues. Climate change is a cross-cutting issue that affects advice and decision-making in many different professions to an increasing degree. From architects and engineers advising in the construction of a factory that will produce greenhouse gases, to professional foresters or biologists advising on the long-term survival of a forest ecosystem type, professionals are advising clients on climate change and its implications.

However, despite the work being done by professionals on the ground in terms of responding to climate change, there has been little discussion of the professional obligations related to this work. Professional associations, often created by government, govern the activities of their members through codes of conduct and ethics, standards of practice, requirements for continuing professional development, policy statements, and other guidelines. What do these rules say about climate change?

Given the important role of professionals in helping individuals and society at large respond to climate change, and to prepare for its impacts, professional associations should be very explicit about how their members are expected to act when dealing with climate change.

Recommendations

West Coast Environmental Law would like to see professional associations take leadership roles on climate change by:

1. Recognizing the urgency of climate change and calling for government to act

Many professional associations have publicly recognized the reality of climate change, often highlighting their members' expertise in addressing climate problems. But while it is easy for a professional association to hold up one's members as being part of the solution to climate change, it is equally important for professional associations to call for action, to support their members who are publicly calling for action, and to publicly support governments that do take action.

2. Incorporating climate change into governance decisions

Some professional associations have recognized that climate change is central to their profession by establishing new decision-making criteria and committees to ensure that the association itself analyzes major decisions through a climate lens.

3. Requiring members to receive education and training on the implications of climate change for their professional work

Professional associations that have already offered their members training on climate change and its implications are to be applauded, but professional associations should also make continuing education regarding climate change mandatory for their members, and particularly for members engaged in activities which require special climate-related expertise.

4. Giving direction to members on best practices related to climate change

Setting out the best practices to be used by members in addressing climate change and its impacts helps define professional, client and public expectations related to climate change, and what it will be reasonable for members to do in conducting doing such work.

5. Recognizing the professional obligations that their members owe to their clients and the public in relation to climate change

If professional associations acknowledge that their members play a crucial role in addressing climate change, they must also ensure that their members consider climate change in their decision-making, and do so competently and with appropriate knowledge and training. Failure to do so may result in lost opportunities to reduce emissions, or lock in planning decisions that will not be flexible enough to deal with changing temperatures.

Professional associations should recognize that their existing professional ethics requirements already implicitly provide guidance related to climate change. Climate-related ethical requirements include obligations to: participate in continuing professional education; act in the public interest (including promoting sustainability); not speak beyond one's expertise or competence; not make misleading statements or falsify data; and act with due diligence.

Professional associations could also amend their existing codes of ethics to explicitly recognize their member's professional obligations in relation to climate change. For example, codes of ethics should reflect the need to consider, and inform clients about, the relationship between the advice sought and climate change.

6. Cooperating with other professional associations to encourage all professionals to appropriately consider and address climate impacts

Professional associations should share information and coordinate their efforts to find ways to provide climate change leadership and direction to their members.

Conclusion

There are very real practical challenges involved in a professional body moving to require its members, many of whom currently have only limited training on climate change, to tackle the climate change implications of their decisions. However, climate change itself represents a still greater challenge, and one in which we believe that professionals, and professional associations, need to play a significant leadership role. Ultimately, professional associations that are created by statute receive their mandate from the government and the public, and we hope that they will act to address this issue without the need for government intervention.

Because of the extent and variety of professional activities that are relevant to climate change, the recognition of professional responsibilities to take action on climate change has the potential to have a significant impact on mitigation and adaptation.

DEDICATION AND DISCLAIMER: As lawyers, the program staff of West Coast Environmental Law, understand well the potential and benefits that dedicated professionals can bring to fighting climate change. This paper is dedicated to all the professionals who use their professional expertise and knowledge to help protect our environment.

That being said, we do not believe that professions and professional associations, even at their best, remove the need for regulation or environmental action by government and society as a whole. We strongly disagree with legislation, government policy or corporate practice that relies uncritically on professionals, assuming that their advice can address complex and value-laden issues such as environmental protection and climate change. Making the changes recommended in this paper will not by themselves solve the climate change crisis. They are merely one piece in a larger societal shift which needs to happen.

CLIMATE CHANGE AND PROFESSIONAL RESPONSIBILITY

Introduction

Climate change caused by human activities is one of the greatest challenges of our time. Scientists tell us that the build-up of carbon dioxide and other "greenhouse gases" in the Earth's atmosphere is already causing a rise in global temperatures, triggering a wide range of environmental, economic and social problems. To avert even more serious consequences, we need to use every opportunity to cut our emissions of greenhouse gases, while at the same time ensuring that human communities and natural ecosystems adapt to changes in our physical environment occurring as a result of current and past emissions. While expertise in various professions with respect to mitigating and adapting to climate change is growing, both due to market demand and government policy, to date little attention has been paid to what sort of ethical and legal responsibilities professionals might have to provide advice to clients and to offer public leadership on climate change risks and solutions. This paper aims to explore this topic in more detail and highlight areas that require further investigation and discussion.

The Role of Professionals in Climate Change Mitigation and Adaptation

Increasingly, Canadians look to professionals – individuals with particular technical expertise and training, such as biologists, engineers, planners and foresters – to make decisions about a wide range of issues. Climate change is a cross-cutting issue that affects advice and decision-making in many different professions to an increasing degree. Some examples, provided as an illustrative, not exhaustive list, include:

- Architects and engineers advising an industrial company that wants to build a new factory on matters related to energy efficiency (reducing greenhouse gas emissions) and susceptibility to future climate change impacts (climate change adaptation);
- Professional foresters modeling future growth patterns of forests for forestry companies based on a changing climate to be used as the basis for decisions about logging and re-planting;
- Biology professionals advising governments at various levels on how to manage salmon runs in light of climate change;
- Insurance professionals evaluating risk related to climate change impacts and providing clients with insurance products that aim to shield them from defined risks;
- Accountants and other professionals putting in place systems to measure

greenhouse gas emissions produced by businesses and in some cases, providing third-party verification of those measurements, and offering advice about meeting regulatory reporting requirements; and
- City planners advising on how cities and other communities can change development patterns to address and prepare for the impacts of climate change, such as extreme weather events, sea level rises and drought conditions.

Professionals should be providing advice on these and other climate-related matters based upon the best science and information about climate change. However, since many professionals have not received formal training related to climate change, we are concerned that professionals may sometimes fail to appreciate this aspect of their work. There are real and serious consequences, for example, if a forester fails to appreciate that the geographic range of a tree species used in replanting will be shifting over the coming decades due to rising temperatures or changes in hydrology tied to climate change.

Professionals should be providing advice on climate matters based on the best science and information...

But many professionals are actively engaged in investigating the impacts of climate change on their work, learning on the job and contributing to the knowledge of the profession. A study of climate change and water use in B.C. found that representatives of professional organizations "were observing the impacts of climate change in their domains," including

> [i]ncreased frequency of extreme precipitation events, later freeze-up leading to short seasons for ice-road dependent resource extraction, a locally urgent need to dredge and dike, the impact of mountain pine beetle on runoff, streamflow, turbidity and groundwater, earlier freshets, algal blooms in both fresh and salt water and shorter flood-return periods.[1]

The representatives of the professional organizations also expressed concern that "government and society in general [is] slow in reacting."

Generally speaking, it seems reasonable for the public to look to professionals for leadership and advice on an issue like climate change that has many technical implications. While individual competency may vary, some of the features that are associated with a "professional" (not an exhaustive list) include:
- specialized knowledge and skills in their areas of practice,
- intellectual standards that do not allow external influences to interfere with his or her professional judgment, and
- a recognition of an obligation to act in the best interests of the public.[2]

1 Harry Swain, "Climate Change and Water Users in British Columbia", Pacific Climate Impacts Consortium (November 2007), online at http://pacificclimate.org/sites/default/files/publications/PCIC.ClimateChange-WaterUsersBC.Nov2007.pdf, at 5.

2 W.May. Beleaguered Rulers: The Public Obligation of the Professional. (Louiseville, Kentucky: Westminster John Knox Press, 2001) at pp. 7-11. The first two of these points flow from what W. May refers to as "the Intellectual Mark" of a profession; the last flows from the "moral mark". In addition to these two marks of a professional, May identifies a third mark – the organizational mark – related to the willingness to cooperate with, and govern, other professionals through a professional organizational structure. See also Russell L. Gruen et al., Journal of the American Medical Association. 2004;291(1):94-98 (doi:10.1001/jama.291.1.94) at p. 95 for discussion of the marks of professionalism within the medical profession.

Moreover, with respect to climate change, professionals do much of the work on the ground to determine how to implement measures to reduce greenhouse gas emissions (mitigation) and to plan for and address the impacts of changing temperatures (adaptation). Their expertise can allow them to be innovators in crafting solutions and responses, and in taking an ongoing role in adaptive management, as the full implications of climate change become clear.

Professionals may also have a role as trusted commentators or spokespeople on the issue as it relates to their areas of expertise, including disseminating information to the public or encouraging action on climate change. Professionals therefore have both an incentive and a responsibility to be aware of climate change in their work.

However, despite much work being done by professionals on the ground in terms of responding to climate change, there has been little discussion of the professional obligations related to this work.

Professional Associations: Self-regulation and Climate Change

Most professions in Canada are governed by self-regulating, self-governing professional associations created through legislation. Provincial governments have recognized the need to regulate professionals, but accept the argument that, due to their high level of expertise, proper professional conduct is best determined and regulated by other members of the same profession.

These self-regulating professional bodies govern the activities of their members through codes of conduct and ethics, standards of practice, requirements for continuing professional development, policy statements, and other guidelines. In general, the legislation creating such professional regulatory bodies explicitly requires them to work in the public interest, and their codes of conduct generally recognize this obligation to the public.

Climate change is an over-arching issue, related not just to the natural environment, but also having economic, human health and social dimensions. Climate change brings with it great risks for the clients of professionals, as well as to the broader public. Within the scope of their work, professionals have a responsibility to their clients to identify and recommend ways to minimize these risks. Professional associations need to address these responsibilities.

Given the important role of professionals in helping individuals and society at large respond to climate change, and to prepare for its impacts, professional associations should be very explicit about how their members are expected to act when dealing with climate change. This could help avoid future liability for failing to consider adaptation to climate change in professional advice given, but it is also consistent with the professional's responsibilities to the public. And many professional associations

are striving to educate their members about climate change, and calling for government action.

How Professional Associations Can Help

West Coast Environmental Law would like to see professional associations take leadership roles on climate change by:

1. Recognizing the urgency of climate change and calling for government to act;
2. Putting in place decision-making criteria and structures to ensure that climate change plays a central role in decisions made by the professional association;
3. Encouraging or requiring members to receive education and training on the implications of climate change for their professional work;
4. Giving direction to members on best practices related to climate change;
5. Recognizing the professional obligations that their members owe to their clients and the public in relation to climate change; and
6. Cooperating with other professional associations to encourage all professionals to appropriately consider and address climate impacts.

The discussion which follows will examine what each of these leadership roles might look like. In addressing the first three, we can look to the many professional associations that have taken important steps. However, few have begun grappling with the third – the recognition of their member's professional obligations to respond effectively and appropriately to climate change.

Recognize the Urgency

Many professional associations have publicly and explicitly recognized the importance of climate change and recognized that it affects how their members practice. For example, in Ontario:

> The Ontario Society of Professional Engineers (OSPE) sees climate change as an issue for this generation in which engineers and the engineering profession will play significant roles related to the design and application of solutions.[3]

A symposium held by OSPE on the impacts of climate change highlighted the many roles played by engineers in addressing clean energy, efficiency, and infrastructure and confirmed that engineers "offer sound technical advice and act as key interlocutors between scientific researchers, industry leaders and policymakers."[4]

The Association of Professional Biology, which advocates for the interests of biology professionals, has stated that its members "have a crucial role to play in reducing

3 Ontario Society of Professional Engineers, Climate Change (February 2009), online at http://www.ospe.on.ca/resource/resmgr/doc_advocacy/2009_ps_11feb_enviro.pdf.
4 Ibid.

the adverse impacts of climate change on ecological goods and services by developing…solutions," and should be included in reviewing policy to maximize its effectiveness.[5]

The Canadian Institute of Planners (CIP) identifies planners as "one of the key professional groups that have the ability to mainstream climate change adaptation strategies in their communities," and says climate change affects "every dimension" of the profession.[6] In addition, CIP has indicated that it will champion action aimed at responding to climate change:

> CIP endorses the following actions to ensure planners contribute to mitigating and adapting to climate change:
>
> 1. CIP will champion action on climate change policy nationally and internationally. …
>
> 7. CIP will continue to work with Natural Resources Canada and Environment Canada for the development and consolidation of reliable data, adaptation tools and mitigation techniques that are usable at the regional and local level. …
>
> 8. CIP will issue a Report Card to monitor how well this policy is being implemented.[7]

[I]t is … important for professional associations to call for action, to support their members who are publicly calling for action, and to publicly support governments that do take action.

It is easy for a professional association to hold up one's members as being part of the solution for climate change (which is, after all, an important economic opportunity for the members). But it is equally, or perhaps more, important for professional associations to call for action, to support their members who are publicly calling for action, and to publicly support governments that do take action.

Incorporating Climate Change into Governance Decisions

At first glance, it may not be obvious that climate change should mean major changes to how a professional association organizes itself and makes major decisions, but the recommendations of a Task Force[8] set up by the Professional Engineers and Geoscientists of BC (APEG BC) would suggest otherwise.

A central recommendation of the Climate Change Task Force, made in February 2010, was to establish a permanent Climate Change Advisory Group to

5 Association of Professional Biology, Climate Change Statement, online at http://www.professionalbiology.com/sites/default/files/APB%20Climate%20Change%20Statement.pdf.

6 Canadian Institute of Planners, Planning for Climate Change (2009), online at http://www.planningforclimatechange.ca/wwwroot/dsp_HomePage.cfm.

7 Canadian Institute of Planners, Climate Change Policy, at http://www.cip-icu.ca/_CMS/files/CIP%20Climate%20Change%20Policy_e.pdf.

8 See the Task Force's terms of reference at http://www.apeg.bc.ca/ppractice/documents/Climate_Change_Terms_of_Reference.pdf.

advise APEG BC's Council on matters related to climate change.[9] In April 2011, the Council took an important step to implementing this recommendation by accepting Terms of Reference for a Climate Change & Adaptation Advisory Group.

In addition to creating the new Advisory Group, the Climate Change Task Force (in addition to recommendations which will be discussed in other sections below) recommended that APEG BC integrate climate change into all of its organizational decision-making:

> 1.4 Association Decision Making Criteria
>
> 1.4.1 Demonstrate leadership to members, government and the public by requiring integration of climate change considerations into the work of the Association and its members.
>
> 1.4.2 Incorporate consideration of climate change adaptation and mitigation responsibilities into the decision making framework for policy and operational decisions of the Association.[10]

It is too early to predict the extent to which the Advisory Group will change APEG BC's long-term engagement on Climate Change, but clearly this new Group alone represents a recognition that climate change deserves a central place in APEG's organizational structure.

Similarly, the Canadian Institute of Planners has established a permanent Climate Change Committee to advise the Institute on climate-related matters.[11] In addition, the APEG BC Task Force also discussed governance structures related to cooperation between professions – recommendations which are discussed further at page 20.

Continuing Education and Training

In addition to making statements on the role of their members in addressing climate change, some professional associations have taken an active role in educating their members and others on climate change and on best practices for professionals seeking to address climate-related problems.

The Symposium held by the Ontario Society of Professional Engineers (OSPE) has already been highlighted above. Similarly, the Association of Professional Engineers, Geologists, and Geophysicists of Alberta have used its publication, The PEGG, to educate members on the relationship between the profession's work and climate change on several occasions.[12]

9 Report of the Climate Change Task Force, February 2010, Professional Engineers and Geoscientists of BC, available at http://www.apeg.bc.ca/ppractice/documents/ClimateChangeTaskForceRpt.pdf.
10 Ibid.
11 The Climate Change Committee's terms of reference are available at http://www.cip-icu.ca/_CMS/files/Climate%20Change%20Committee%20TOR_Approved%2011Mar2010.pdf.
12 The PEGG, available at http://www.apegga.org/environment/news.html.

Professional planners have again been on the forefront of continuing education related to climate change. In addition to provincial-level conferences focused on climate change,[13] in its Policy on Climate Change, the CIP commits to "empower its members to consider climate change in their actions and recommendations," and to "increase the knowledge and skills amongst its members to develop suitable adaptation strategies."[14] CIP is acting on these responsibilities by, for example, developing a Continuous Professional Learning program to help planners stay up-to-date,[15] and developing climate change units for use by academic institutions in training planners.[16]

[P]rofessional associations should consider making some type of continuing education regarding climate change mandatory for their members...

The APEG Climate Change Task Force also recognized the importance of educating professional engineers and geoscientists on how climate change affects their professional practice, identifying a number of means of reaching APEG's members. However, the Task Force also recommended that knowledge of climate change be incorporated into registration requirements for new professional engineers and professional geoscientists and into the Association's process of practice review of current members.[17] So far as we are aware, this is one of the few examples of a professional association considering making education and knowledge of climate change adaptation and mitigation mandatory for would-be and current members.

> Such initiatives are to be applauded and should be emulated, improved and expanded upon by Professions that have not yet developed a formal response to climate change. Indeed, professional associations should follow the example of APEG BC and consider making some type of continuing education regarding climate change mandatory for their members, and particularly for members engaged in activities which require special expertise related to climate change.

Practice Direction

Setting out the best practices to be used by members in addressing climate change and its impacts helps define professional, client and public expectations related to climate change, and what it will be reasonable for members to do in conducting doing such work. And a professional association might choose to develop different practice directions for different types of professional activities, recognizing the wide range of circumstances in which issues related to climate change might arise.

The ever-innovative Canadian Institute of Planners again leads the way on providing its members with direction on how climate change planning should be done. CIP

13 Climate change was one of the main issues discussed at the Atlantic Planners Institute's November 2010 "Global Challenges – Local Solutions" Conference, and the Planning Institute of British Columbia's 2008 conference was entitled "Planning for Climate Change: Acknowledging the Past, Preparing for the Future."

14 Above, note 7.

15 Canadian Institute of Planners, Planning for Climate Change: Projects and Initiatives – Educational Learning Modules (2009), online at http://www.planningforclimatechange.ca/wwwroot/dsp_ProjAndInits_Modules.cfm.

16 Personal communication between A. Gage and J. Wall, 7 June 2011.

17 For information on APEG's Practice Review process, see http://www.apeg.bc.ca/ppractice/pracreview.html.

has developed a "model Standard of Practice for Climate Change Planning"[18] which is intended to:

> allow planners to move from recognition of the challenges of climate change – and their professional responsibility to address it – to effective action on both climate change mitigation and adaptation. The Standard includes two elements:
> - A statement that establishes principles of responsible professional practice for addressing climate change.
> - A framework to serve as a model to planners as they consider climate change in their professional practice....
>
> The Standard aims to be a resource to planners in whatever circumstances they find themselves. Therefore, the Standard presents a framework for addressing climate change that is flexible and meant to be tailored to meet local conditions. It can be drawn on at a number of levels: it can serve as a tool kit for a comprehensive approach to climate change, or the principles it presents can be drawn on in a more selective way. At the very least, even for planners working in situations where the conversation on climate change has been limited to date, the Standard will help planners start thinking about the implications of climate change for their work and serve as a gateway to further information.
>
> The goal of the CIP is to help planners take action to address climate change mitigation and adaptation, to incorporate it into their day-to-day practice and, vitally, to get started right now.

The Statement of Practice sets out principles to be considered in climate-related planning, and a series of steps to be carried out. As such, it helps define what it will be reasonable for members to do in conducting such planning. While not directly enforceable as an ethical requirement, we believe, as discussed below, that the Statement of Practice might help to inform disciplinary complaints made under the Codes of Practice of CIP or related provincial-level organizations.

The Professional Engineers and Geoscientists of BC (APEG BC) has also been providing leadership on this front – with the Climate Action Task Force recommending the development of practice direction. The Task Force wrote:

> Currently no practice guidelines address climate change and members practice. To address this, the Task Force recommends the following:
>
> 2.1. Include a section on climate change in the new Guideline for Professional Practice (formerly known as the Guideline for Professional Excellence);
>
> 2.2. Incorporate best practice standards for climate change adaptation and mitigation into existing and future practice guidelines. This includes working with APEG BC's Director, Professional Standards and Development to develop a series of questions with regards to both adaptation and mitigation as it relates to members' practice.
> Potential questions to include are:

18 Canadian Institute of Planners, Model Standard of Practice for Climate Change Planning (Canadian Institute of Planners: 2010).

- Have you considered the changing climate in your design?
- Have you met your legal obligations to reduce GHG's?
- Have you considered life cycle costing?
- Have you considered the increasing cost of energy?

APEG BC referred these recommendations to its Professional Practice Committee and has recently amended its policies to incorporate some of the Task Force's recommendations. A first "practice guideline" related to the risk assessment of flood hazards is currently under development.

We have been unable to find other examples of practice directions of this type adopted by professional associations.

Professional Ethics and Climate Change

Despite recognizing that their member professionals can play an important role in addressing climate-related problems, professional associations have not generally explained to their members or the public what, if any, obligations their members may have in relation to climate change.

The most obvious way that professional associations could signal their expectations regarding their membership is through their professional codes of conduct or other ethical requirements.

What professional and ethical standards apply to the professional's performance of their role in relation to climate change? Few professional associations have grappled with this issue.

One example of a professional association that is seeking to the address professional implications of climate change is the Greenhouse Gas Management Institute (GHGMI). The GHGMI, which acts as a professional body for individuals engaged in providing Greenhouse Gas offsets and similar services, is not a regulated association, in that it has no enabling statute, and individuals offering such services may or may not be a member. However, it has created a Code of Conduct for its members.

The GHGMI Code of Conduct[19] reads very much like the professional codes of conduct or ethics adopted by other professional associations, except that its focus is exclusively on the regulation of individuals engaged in GHG mitigation services. As such, it provides a useful model for understanding how current codes of practice may apply directly to existing ethical requirements.

19 Greenhouse Gas Management Institute, Code of Conduct, Version 1, March 2009, available on-line at http://ghginstitute.org/wp-content/uploads/2009/11/code_of_conduct.pdf, last accessed June 30, 2011.

The Task Force on Climate Change established by APEG BC appeared to recognize the link between climate change and professional obligations, stating in the introduction to its report:

> The first tenet of the Code of Ethics states that Professional Engineers and Professional Geoscientists shall hold paramount the safety, health and welfare of the public, the protection of the environment, and promote health and safety within the workplace. Climate change is a public safety issue. It is also an issue where protection of, and in fact understanding of, the environment is key to professional engineers and professional geoscientists carrying out their public safety obligations.[20]

However, the Task Force did not further explore this link to ethical requirements, and did not make any recommendations explicitly related to professional responsibilities.

The otherwise ground-breaking CIP Policy on climate change emphasizes "empower[ing] its members to consider climate change in their actions and recommendations," but makes no reference to its members' responsibilities. CIP does appear to recognize that its model Standard of Practice for Climate Change Planning has ethical dimensions; as the Standard was developed the CIP stated that it was intended to:

> … deal with planners' substantive, legal and ethical obligations in complying with CIP's policy on climate change. Application of the standard would occur at the [Provincial] level and in compliance with any applicable provincial legislation governing the profession. [21]

This at least seems to acknowledge that members have ethical obligations related to climate change. However, the Standard of Practice is not an attempt to expand the CIP's Code of Practice. As discussed above, the Standard of Practice is more in the nature of a "best practices" direction. CIP staff explain:

> [T]he wide variety of ways to consider and incorporate climate change in a planning process make it hard to enforce compared to the code of practice which is oriented around the way that planners must conduct themselves vis-à-vis the public and other members. The SoP provides a method of approaching a planning project (whatever its nature) and incorporating climate considerations. The Code of Practice relates to the legal obligations of members which is qualitatively different that prescribing a planning practice that all members must adhere to.[22]

20 Above, note 9, at p. 2.

21 Canadian Institute of Planners, Planning for Climate Change: Projects and Initiatives – Tools and Resources (2009), online at http://www.planningforclimatechange.ca/wwwroot/dsp_ProjAndInits_ToolsAndResources.cfm, last accessed June 9, 2011. Provincial level (originally reading "Affiliate level") refers to the provincial professional associations that are members in the CIP. Some of the provincial affiliates are regulated, in the sense of being governed by provincial legislation, while others are societies, which members may choose to join or not.

22 Personal correspondence between A. Gage, West Coast Environmental Law and J. Wall, CIP, dated June 7, 2011.

With these exceptions, we are aware of no examples of professional associations that have explicitly recognized that its members have professional responsibilities related to climate change mitigation and/or adapting to the impacts of changing global temperatures.

Why It Should Be Done

If professionals do not consider climate change in their decision-making, or do so incompetently and without appropriate knowledge and training, this may result in lost opportunities to reduce emissions, or lock in planning decisions that will not be flexible enough to deal with changing temperatures. Such decisions may result in harm not just to their clients, but also to the public and the environment. In addition, if the failure to appropriately address climate-change is widespread within the profession, the collective impact of these professional decisions may be still greater.

Climate change relates not just to the natural environment, but also to economics, human health and society itself.

As discussed above, climate change relates not just to the natural environment, but also to economics, human health and society itself. Professional associations have long recognized that they and their members have obligations related to such issues, and to ensure that their members address the risks associated with each.

Although most professional associations to date have not imposed new requirements on their members related to climate change, other self-governing associations are. For example, the United States Security and Exchange Commission recently released a document interpreting the obligation of public companies to disclose information in light of information about climate change-related risks, such as the impact of climate change legislation or of changes to the physical environment, to investors.[23] This indicates the SEC's acknowledgement of the severity of the problem and its recognition of its obligation to incorporate consideration of it into its regulation of business.

Professional associations also need to take the next step of explicitly recognizing their member's obligations related to preventing and dealing with climate change. In addition to the moral and ethical reasons for doing so, such changes will also help maintain public confidence in the profession's integrity and responsibility.

23 Luis Aguilar, Responding to Investors' Requests for SEC Guidance on Disclosures of Risks Related to Climate Change (27 January 2010), online at http://www.sec.gov/news/speech/2010/spch012710laa-climate.htm.

Different Approaches

There are at least two different, and potentially complementary, approaches to recognizing professional obligations related to climate change.

First, a professional association can clarify how existing ethical obligations apply in light of climate change. In many cases, professional Codes of Ethics can be interpreted as requiring member professionals to act in a transparent and responsible manner related to the causes and impacts of climate change. This can be particularly effective when used in combination with the type of practice direction discussed above.

Second, a professional association could amend their codes of ethics to explicitly address the reality of climate change.

Climate Change Under Existing Professional Codes

Professional ethics may already have something to say about climate change. Each profession has its own code or equivalent set of rules, and certain ethical requirements are common to many professional associations. Existing codes of conduct generally contain obligations to the public, to the profession as a whole and to its individual members, and to clients, all of which may have implications in terms of climate change. Some of the requirements commonly found in existing professional codes that might apply to matters related to climate change include requirements relating to:

- continuing professional education,
- promoting sustainability,
- not speaking beyond one's expertise or competence,
- not making misleading statements or falsifying data; and
- acting with due diligence.

A failure to meet these ethical obligations may result in a professional association disciplining a member, with consequences up to and including expulsion from the organization. For professions where membership is required by provincial laws, this can have very significant consequences.

Each of these ethical requirements will be examined in turn.

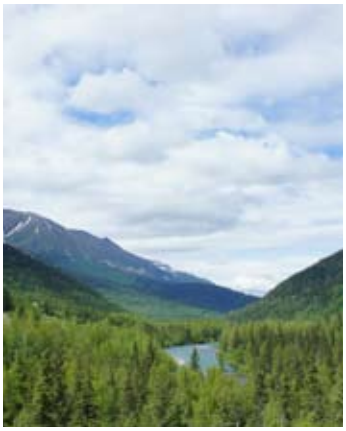
1. Continuing professional education

Many codes of ethics make reference to continuing professional education. For example,

- the Association of BC Forest Professionals' Code of Ethics includes a responsibility to the profession "[t]o keep informed in the member's field of practice and to be aware of current issues and developments in forestry."[24] In this context, this might include recommending that cut levels and forestry practices in general must consider the health and integrity of the forest in light of climate change.
- the Code of Ethics of the Association of Architectural Technologists of Ontario states that "[a] member shall follow a program of continuing education and maintain a level of proficiency that will meet the needs of the public,"[25] and
- the College of Alberta Professional Foresters requires that its members strive to "[p]repare work that is consistent with current scientific knowledge."[26]

Most other professional associations have similar requirements.

Climate change is part of the context in which professional judgment must be exercised...



Climate change is part of the context in which professional judgment must be exercised, and professionals' continuing education is important for their continued competence and expertise. Drawing on the academic theory concerning the value of continuing professional development, climate change might be seen as particularly worthy of inclusion due to its dynamic nature, and the extent of its relevance to professionals' work and their ability to serve the public and their clients.[27]

As noted above, a number of professional associations have recognized the importance of providing Continuing Professional Development (CPD) opportunities related to climate change to its members. We have not found any examples, however, of professional associations emphasizing to their membership the ethical obligation to participate in such training, or requiring that members offering advice related to climate change take steps to upgrade their professional training on these issues.

A failure of a professional to educate themselves on how a changing climate will directly impact the subject matter of their professional advice could clearly raise professional issues.

2. General requirements to promote sustainability

Professional associations' codes of ethics, particularly for resource-oriented professions, often include requirements relating to the environment and sustainability.

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24 Association of BC Forest Professionals, Code of Ethics (17 September 2003), online at http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeofEthics.pdf.

25 Association of Architectural Technologists of Ontario, Code of Ethics (2008), online at http://aato.on.ca/about-aato/code-of-ethics.

26 College of Alberta Professional Foresters, Code of Ethics and Standards of Practice (26 June 2003), online at http://www.capf.ca/pdfs/CAPF_Code_of_Ethics.pdf.

27 See, for example, Andrew Friedman and Mary Phillips, "Continuing Professional Development: Developing a Vision," 17 Journal of Education and Work (2004) 361 at 373.

- The Association of BC Forest Professionals' Code of Ethics states that members have a responsibility to the public "[t]o advocate and practice good stewardship of forest land based on sound ecological principles to sustain its ability to provide those values that have been assigned by society."[28]
- The College of Applied Biology of B.C. asserts in its Code of Ethics that "professional ethics are founded upon … a responsibility to provide sound management and conservation of biological resources."[29]
- Members of the Alberta Society of Professional Biologists are required to have "the highest regard for the health and safety of the public and for the environment,"[30] and
- Members of the College of Alberta Professional Foresters must "[u]se sound ecological principles as part of the basis for management decisions."[31]

The privilege of self-regulating status entails a responsibility to act in the public interest. Professional codes which do not refer to the environment should nevertheless refer to the public interest, and obligations, implied or specific, to have regard for the public interest are also relevant. For example, the Guideline for Ethical Practice of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta indicates that, despite the absence of an explicit reference to environmental impacts and sustainable development in that organization's Code of Ethics, these concepts are included in the "public interest" that members are expected to uphold.[32]

Protection of the environment can, therefore, be read into the broad wording of most codes which fail to mention it outright. What are the implications of such professional responsibilities for professionals advising about climate change?

We believe that, at a minimum, professionals:

- should identify, correctly characterize and highlight greenhouse gas emissions, and options to manage them, in making resource management or other decisions that relate to emitting (or sequestering) GHG emissions;
- clearly consider climate change impacts on the environment, the public and others in making recommendations where climate adaptation is an issue;
- be aware of and consider, in addition, expected future requirements and costs associated with regulation of greenhouse gas emissions; and
- consider and advise the client on alternatives that minimize greenhouse gas emissions and/or improve the resilience of the project or related ecosystems to a changing climate.

28 Association of B.C. Forest Professionals, Code of Ethics, Bylaw 11 (September 17 2003), online at http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeofEthics.pdf.

29 https://www.cab-bc.org/files/Code%20of%20Ethics%20colour%202008%20one%20page.pdf

30 Alberta Society of Professional Biologists, Code of Ethics (15 June 2010), online at http://www.aspb.ab.ca/about/ethics.

31 College of Alberta Professional Foresters, Code of Ethics and Standards of Practice (26 June 2003), online at http://www.capf.ca/pdfs/CAPF_Code_of_Ethics.pdf.

32 Association of Professional Engineers, Geologists, and Geophysicists of Alberta, Guideline for Ethical Practice V2.1 (June 2005), online at http://www.apegga.org/pdf/Guidelines/GuidelineEthical.pdf, at paras. 4.1.4, and 4.1.1.

However, a professional association could also provide further direction to its members about how its obligations to promote sustainability should be met. In this way, documents such as the CIP's Model Statement of Practice on Climate Change Planning might be relevant to the professional's ethical obligations (see the discussion under "Acting with Due Diligence" for further thoughts on the impact of this type of direction to members of a profession).

3. Requirements not to speak beyond one's expertise

Almost all professional associations require that their members do not speak beyond their particular expertise and training. For example, the Association of Registered Professional Foresters of New Brunswick states that professionals must "express opinions on forestry matters only on the basis of knowledge, skill, experience and honest conviction and to refute untrue, biased or exaggerated statements."[33]

Most professional associations have similar requirements aimed at ensuring that professionals base their opinions only upon their knowledge and experience.[34] Other codes offer slight variations, but the same basic requirement is common to most. The B.C. Institute of Agrologists, for example, adds that professionals must understand the particular context in which the opinion is given.[35]

These requirements are often characterized as obligations to the profession in order to maintain its reputation, but they also function as obligations not to mislead or confuse members of the public or clients, i.e. professionals should not use their professional designation in such a way that purports to lend legitimacy to opinions that are outside their professional expertise.

Many people are speaking about things outside their expertise on the subject of climate science. For example, one review of a frequently mentioned and controversial petition of scientists questioning global warming found that only 0.5% of the signatories self-identified themselves as having any background in some form of climate science.[36] Professionals who do not identify the limits of their knowledge and expertise on climate change creates confusion, as the public may not differentiate between scientists with different areas of expertise, such as climatologists versus biologists.

This makes it particularly important for professionals not to speak beyond their competence. Additionally, it is important that they not criticize climate science

33 Association of Registered Professional Foresters of New Brunswick, Code of Ethics (2006), online at http://www.arpfnb.ca/?section=6&subsection=36&PHPSESSID=8230b21d5f5b19859588ad24ee216ee1&PHPSESSID=8230b21d5f5b19859588ad24ee216ee1.

34 Association of B.C. Forest Professionals, Code of Ethics (17 September 2003), online at http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeofEthics.pdf, at para. 3.9; Association of Professional Engineers, Geologists, and Geophysicists of Alberta, Guideline for Ethical Practice V2.1 (June 2005), online at http://www.apegga.org/pdf/Guidelines/GuidelineEthical.pdf; B.C. Institute of Agrologists, Code of Ethics, online at http://bcia.com/images/client_docs/Schedule%20C.pdf.

35 BC Institute of Agrologists, Code of Ethics, online at http://bcia.com/images/client_docs/Schedule%20C.pdf.

36 Kevin Grandia, The 30,000 Global Warming Petition is Easily-Debunked Propaganda, DeSmog Blog (22 July 2009), online at http://www.desmogblog.com/30000-global-warming-petition-easily-debunked-propaganda.

publicly without being absolutely clear that they are speaking as individuals, and that the area is outside their expertise, if that is the case. Among climate scientists, there is little debate that climate change is occurring and that human greenhouse gas emissions are the major cause. Professional associations should hold responsible members who use their professional status to attack these climate scientists or the scientific consensus.

This does not limit the ability of professionals who have personal views on the issue to speak against (or, indeed, in favour) of mainstream climate science or climate policy; however, such personal statements should acknowledge that the professional is not a climate scientist and that climate scientists, almost without exception, agree that human-caused climate change is occurring.

Among climate scientists, there is little debate that climate change is occurring and that human greenhouse gas emissions are the major cause.

4. Not to make misleading or inaccurate statements, or falsify data

Many professional associations explicitly require their members to refrain from making misleading or inaccurate statements. For example,

- the Association of B.C. Forest Professionals' Code of Ethics states that foresters have a responsibility to the profession "[n]ot to misrepresent facts," and to the public "[t]o work to extend public knowledge of forestry, and to promote truthful and accurate statements on forestry matters."[37]
- The Association of Professional Biology's Advocacy Policy states that they will undertake advocacy "using current, balanced, scientific information as the basis for APB comment," and "in a way that will maintain or enhance the Association's reputation as a reliable source of scientific information."[38]
- Members of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta must always "express the results of their work clearly and accurately."[39]

Codes generally require some combination of honesty, objectivity, and accuracy in advice or expressions of opinion, both to safeguard the profession's reputation and to inform, not mislead, the public.

The possibility of people spreading false information about climate change science or policy is cause for concern due to the potential for confusion and skepticism about an extremely serious issue. In response to a skeptical British television program which distorted data and made false statements about climate change, the British Antarctic Survey noted that "[a]ny scientist found to have falsified data in the manner of the Channel 4 programme would be guilty of serious professional misconduct."[40] Spreading misinformation about climate change would, indeed, violate professional

37 Association of B.C. Forest Professionals, Code of Ethics (17 September 2003), online at http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeOfEthics.pdf, at paras. 4.4, 3.6.

38 Association of Professional Biology, Advocacy Policy, online at http://www.professionalbiology.com/sites/default/files/APB%20Advocacy%20Policy.pdf.

39 APEGGA, Guideline for Ethical Practice V2.1 (June 2005), online at http://www.apegga.org/pdf/Guidelines/GuidelineEthical.pdf, at paras. 4.1.1, and 4.3.3.

40 British Antarctic Survey, Statement about Channel 4 programme on Global Warming (March 20 2007), online at http://www.antarctica.ac.uk/about_bas/news/news_story.php?id=178.

codes of conduct. Accusations have also been made in the other direction, against climate scientists, including in the "Climategate" incident at the Climate Research Unit at the University of East Anglia; however, an independent investigation vindicated the scientists, deeming their actions honest and their research reliable, and finding only that they should have been more open in sharing data.[41]

[M]ost professions do not yet have widespread agreement about what due diligence or professional standards require in relation to climate change.

In relation to bald statements about climate change and whether or not it is occurring, the obligation not to mislead will often be related to the professional's obligation not to speak beyond their area of expertise or competence. However, in relation to climate change questions arising in a particular professional context (i.e. a biologist advising on how to keep fish populations healthy in a stream that will be impacted by climate change), professionals should still be careful to be accurate and not mislead the public and their clients on matters related to climate change. Professional associations should make it clear that a high level of transparency and clarity is required in relation to climate-related statements because of the public confusion surrounding the issue.

5. Acting with due diligence

As discussed above, having specialized knowledge and skills is part of the definition of a professional, and professional associations require their members to use their skills competently and in keeping with the ordinary standards of the profession. For example:

- The Professional Engineers of Ontario Code of Ethics requires the Association's members to act with "competence in the performance of any professional engineering services that are undertaken."[42]
- The Code of Ethics of the Registered Professional Foresters Association of Nova Scotia requires its members to "Maintain high standards of conduct in daily work and strive to raise the standards of practice", as well as to "Act in a conscientious, diligent and efficient manner."[43]

Because climate change is a relatively new phenomenon, and its impacts are still being understood, most professions do not yet have widespread agreement about what due diligence or professional standards require in relation to climate change. However, professional associations have the opportunity to provide leadership on this point, by giving direction to the profession about what is expected.

As noted above, the Canadian Institute of Planners (CIP) has adopted a Model Standard of Practice for Climate Change Planning. This document provides the CIP's members with direction as to what the best practices are related to planning for climate change. This is not a code of ethics, but by establishing guidance as to what is reasonable and professional practice in this area, the CIP has helped to define what

41 Raphael G. Satter, Climategate' inquiry mostly vindicates scientists, The Globe and Mail (7 July 2010).
42 Professional Engineers of Ontario, Code of Ethics, Section 77 of the O. Reg. 941, s. 1(v), available at http://www.peo.on.ca/Ethics/code_of_ethics.html, last accessed 10 June 2011.
43 Registered Professional Foresters Association of Nova Scotia, Code of Ethics, s. 3 (d) and (e), and 5(a), available at http://www.rpfans.ca/about/code_of_ethics.php, last accessed 10 June 2011.

due diligence will require. We suggest, therefore, that the CIP Statement of Practice has significant implications for how its members must act under its Code of Ethics.

Similarly, the Greenhouse Gas Management Institute's Code of Conduct, while not explicitly adopting a standard for verification of greenhouse gases as an ethical requirement, makes reference to such a standard (the Climate Registry Verification Protocol, 2008) as an aid to interpretation.[44]

This is not to say that the Statement of Practice or the Climate Registry General Verification Protocol, 2008, is binding on the members of these professional associations. However, by setting a norm of practice, professionals must think about, and be able to explain, deviations from this norm.

This approach has some significant advantages. It allows the development of guidance related to specific sub-fields of the profession, or particular tasks undertaken by members of the profession, linking specific types of obligations to particular tasks without needlessly complicating the Codes of Conduct or Ethics adopted by the professional association as a whole. And it can emphasize the importance of considerations that might otherwise be difficult to incorporate into an ethical standard.

We strongly recommend that professional associations adopt practice standards related to climate change, and that they explicitly recognize that these standards will inform the professional standards of diligence expected from member professionals.

Recognizing Professional Climate Change Obligations in Codes

As the preceding discussion demonstrates, climate change can be read into existing requirements already found in most professional codes of conduct and ethics.

At a minimum, professional associations should affirm that these and other rules of professional conduct can and do impose obligations upon their members related to climate change. Ideally, guidelines or policies interpreting the rules of conduct or providing practice direction should provide detailed guidance related to services and communications related to climate change.

However, we believe that professional obligations related to climate change go beyond obligations to ensure that a professional provides current, accurate and non-misleading information on areas within his or her expertise. It is true that strong Practice Direction, in combination with guidance on interpreting existing ethical obligations, can begin to encourage professional conduct which will actually work to minimize greenhouse gas emissions and to ensure that their projects will be readily

44 The Code of Conduct, above, note 19, states in its section on references for further guidance: "The Climate Registry General Verification Protocol, 2008 contains information specific to GHG verification and conflict of interest requirements. This information is available at: http://www.theclimateregistry.org/downloads/GVP.pdf."

adapted to a warmer climate. However, climate change will be a pressing and over-arching issue which professionals must address in their work for the foreseeable future, and we believe that professional associations must recognize this fact by directly and explicitly addressing this new reality in codes of ethics.

A professional association might amend their code of ethics in a number of ways to address climate change. Identifying precise ethical obligations is probably best left to professional associations, and we will seek merely to discuss some types of ethical obligations which might be incorporated into such ethical codes.

Climate change will be a pressing and over-arching issue which professionals must address in their work for the foreseeable future.

First, the code of ethics could explicitly recognize the climate-change related aspects of the existing ethical requirements, discussed above. Thus, there might be specific requirements that members giving climate-related advice:

- Acknowledge that there is a consensus among scientists trained in climate science that climate change is occurring, and explaining the role of the profession in providing advice related to responding to that reality;
- Ensure that their professional training addresses how climate change affects the advice they provide as professionals.

In addition, codes of ethics should reflect the need to consider, and inform clients upon, the relationship between the advice sought and climate change. This would include advising clients on:

- the direct and indirect impacts of a changing climate on the works or projects in respect of which advice is being sought; and
- the need to avoid GHG emissions, and all options to avoid or minimize GHG emissions that might arise directly or indirectly from the project.[45]

Clearly, responsible professional associations will want to ensure that their codes of conduct reflect their members' obligations in relation to from climate change. Ideally, these associations will amend their codes, or guidelines for interpretation.

However, it is disturbing that there are so few examples of professional associations pro-actively seeking to incorporate climate change into their codes of ethics or otherwise recognize the obligations that climate change imposes upon their members. We are not aware of previous public calls for professional associations to address climate change in their codes of ethics and hope that this discussion document will be a wake-up call for professional associations.

45 This is not to say that the client would necessarily follow the advice, particularly if doing so was not cost-effective, or if the alternative approaches require action by other parties. However, advising the client as to these alternatives at least provides the client with important information both about the actual emissions and about potential liabilities or implications of adding such emissions to the global atmosphere.

Cooperation between Professions

One additional recommendation of the APEG BC Climate Change Task Force that is worth highlighting is the suggestion that professional associations should share information and coordinate in their efforts to find ways to provide climate change leadership and direction to their members. The Task Force proposes facilitating such coordination through a Joint Practice Board of professionals focused on climate change:

> Pursue the formation of a Joint Practice Board that will include regulatory bodies whose members practice in both the adaptation and mitigation areas of climate change. This would ensure that a collaborative approach to developing areas of practice is utilized and duplication is minimized.[46]

We strongly agree that professional associations need to cooperate and to share experiences related to addressing climate change. Addressing climate change in the context of professional governance requires the professional associations to develop new solutions, and a formal board set up to facilitate the sharing of information and expertise could only facilitate this process. Professional associations have much to learn from each other and support each other in developing their own approaches to climate leadership.

Challenges

There are very real practical challenges involved in a professional body moving to require its members, many of whom currently have only limited training on climate change, to tackle the climate change implications of decisions which are likely to impact adaptation and mitigation efforts.

If professional associations require their members to address climate change in their work, then the professionals must have sufficient training and expertise to do so competently. Professional associations would need to accompany the requirement to give climate-related advice with requirements to obtain additional training and professional development, and their members would probably incur costs in doing so.

Additionally, there may be insurance issues arising from the new requirements. Since many professionals are already providing advice on projects that emit greenhouse gases and/or are impacted by rising global temperatures, professionals are already potentially liable for failing to address these impacts, or for addressing them incompetently. But the insurance companies covering these professionals do not appear, for the most part, to have re-evaluated their policies in light of the risks of climate-related liability.

Climate change carries with it many uncertainties, and insurance companies have not yet fully worked out how to address them. Demanding that professionals recognize

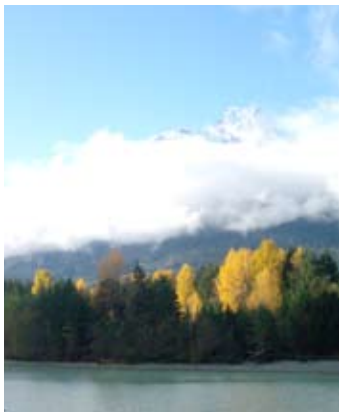
46 Above, note 9, at p. 7.

and address the climate change implications of the work that they are already doing should not, in and of itself, change the risks associated with that work, or the premiums. But to the extent that insurance companies have not fully incorporated climate risks into their policies, this shift (or even the debate that we are raising) could have significant consequences for insurance policies.

That being said, sooner or later insurance companies will begin adjusting their policies to address climate risks, whether or not the professional associations have shown leadership. And when that occurs, professional associations that have provided guidance and required that their members attain a minimum level of training on related issues should benefit.

None of these challenges are insignificant. However, climate change itself represents a still greater challenge, and one which we believe that professionals, and professional associations, need to play a significant leadership role.

Climate change is one of the challenges of our generation, and we will not be successful in addressing it if a major source of society's expertise and knowledge is not fully engaged in the fight.



Should the Government Step In?

It is disappointing to see so few professional associations grappling with the professional ethics implications of the actions of their members. Professional associations have often been willing to highlight the ability of their members to help address the problem, without recognizing the corresponding obligations to do so, and to do so competently.

In fairness to the professional associations, most of the public discourse around addressing climate change has focused on the need for government, personal and industry action. There has been little, if any, discussion, either amongst the public or within professional associations, about the need for professional associations to consider professional obligations in light of climate change. This discussion paper will hopefully start that debate, and lead to professional associations showing such leadership.

Many professional associations are created through statute, often receiving exclusive rights of practice and other benefits in return for managing themselves in a way that benefits the public as a whole. As such, they are ultimately accountable to governments and the public, although they are meant to be largely self-governing and free from external interference.

These means that there is a role for government if professional associations (at least those created through statute) do not require their members to act ethically in regard to climate change. Climate change is one of the challenges of our generation, and we will not be successful in addressing it if a major source of society's expertise and knowledge is not fully engaged in the fight. If, going forward, professional associations do not address the responsibilities of their members to address that challenge,

it may well be appropriate for government to request or even demand that they do so.

There are a range of options for a government seeking to encourage professional associations to regulate how their members address climate change-related issues. The most intrusive, which would hopefully be unnecessary, would be to legislate new content for a professional code of ethics. However, there are several options that are less prescriptive and more consistent with the self-regulating nature of professions:

- The least intrusive option would be for a government to simply request that professional associations consider the implications, if any, of climate change for professional ethics, and make corresponding amendments. If the professional association chose not to follow through on this request, there would be no immediate consequences, and the government would need to consider whether to adopt a different approach. This option is most consistent with the independent of professional associations and their traditional role as self-regulating professions.
- A slightly more intrusive option would be to enact legislation requiring the professional associations to consider the implications of climate change for professional ethics and to make any necessary amendments by a certain date. These options would not force the professional associations to adopt any changes, but would force them to have a discussion.
- A third option would be legislation which mandates that professional codes must address climate change. Such a provision would be unusual, in that content for codes of ethics for professional associations are generally not prescribed through legislation. In some cases, however, regulations state broad principles to be included in codes, and in rare instances, codes of ethics are actually outlined in legislation.[47] This option falls short of actually dictating standards that a Profession should adopt in relation to climate change and thus remains somewhat deferential to the self-governing role of the professional association.

We hope that professional associations will move quickly to address this important issue without the need for government intervention of any kind. However, it is important to recognize that government, and ultimately the public, does have recourse if professional associations refuse to recognize and address their member's responsibilities in relation to this critical issue.

47 For an example of legislation that outlines principles to be addressed in a code of conduct, the College of Applied Biology Act, S.B.C. 2002, c. 68, s. 1, which defines "conduct unbecoming a practicing member" as including (amongst other things) conduct which "undermines the principles of stewardship." An example of a legislated code is the APEGGA's Code of Ethics, found in the Alberta's *Engineering, Geological and Geophysical Professions Act*, R.S.A. 2000, C. E-11.1; the APEGGA does offer its own commentary detailing how the Act is to be interpreted, in its Guideline for Ethical Practice V2.1 (June 2005), online at http://www.apegga.org/pdf/Guidelines/GuidelineEthical.pdf.

Conclusion

Because of the extent and variety of their activity in areas of practice relevant to climate change, the recognition by professional associations of their responsibility to take action on climate change has the potential to have a significant impact on mitigation and adaptation. Responsibilities relating to climate change can already be read into existing responsibilities found in professional codes of conduct or ethics. Professional associations should build upon these obligations, but also introduce new requirements explicitly addressing climate change.

This change is necessitated by professional associations' responsibilities to their clients and the professions themselves, and especially their responsibility to the public, which goes hand-in-hand with their expertise and their self-regulating status. Ideally, action on this important subject should come from the associations themselves; failing that, government can step in to help ensure that a wide range of professionals will consider climate change in their work and take action to address it.