

CLIMATE CHANGE

A Wicked Problem (Part I)

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Going back to March 2006 *Municipal World* has published at least 30 articles that have discussed climate change. The articles have focused on a wide array of issues, from the risk issues for people and property, to innovative waste management, to sustainable landscaping, and all sorts of issues in between. They've come from a wide range of experts – engineers, lawyers, researchers, economists, health professionals, educators and others. Some are municipal councillors and staff, and bring that municipal perspective; some come from other organizations that serve the municipal sector.

The articles have described various climate change risks and challenges for cities – for example, risks to private and public property; to natural areas that keep drinking water supplies clean, and provide other valuable ecosystem services; to the natural resource bases that can be critical to local economies; to public health and safety. These all stem from the fact that the global climate has changed and will continue to change

well into the future. Many others have addressed the energy side of the issue – waste-to-energy, community energy initiatives and the invisible resource, energy efficiency, to name a few. Reducing energy use and associated GHG emissions is critical to slowing climate change and preventing the worst it could bring. Other still have discussed the opportunities and challenges of living in a carbon-constrained future.

Collectively, they've presented some of the many aspects of the climate change issue, each a piece of a larger and more complex puzzle.

Research and work across the municipal sector, has revealed many more challenges, though. There is a lack of understanding amongst councils and staff, due to insufficient education, limited data, and blurred lines between science and policy debates. Climate change requires engagement from across municipal departments and from external partners. Connecting the dots between all of these players is difficult. Underlying the challenge of connecting the dots is a culture problem. Old habits, as George Cuff explained in the June 2007 issue, are tough to abandon. Some of us just want to keep on doing the things the way we always have.

Others have offered different insights. For example, Alex Boston has highlighted the idea that local govern-

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This article is the first in a two-part series that presents climate change as a wicked problem – a useful concept that can help us understand the complexities and full scope of the climate change problem and responses. Part II will appear in next month's issue of Municipal World.

ment structures and processes are inadvertently designed to build and operate GHG-intensive cities. Cities that establish new governing systems, ones that extend planning horizons, work top-down, and bottom-up, and horizontally across the organization and into the community, are the cities making the greatest progress on fighting climate change.

Nine-year Ottawa council veteran and writer Clive Doucet, in his book *Cities, Climate Change and Politics-as-Usual*, writes, "people have been looking in the wrong places for the answers to arresting climate change." He suggests that the changes needed are all about municipal collective action, political and justice reform. "To stop fueling climate change, we first must break the political chains that bind us."

So What's the REAL Problem?

Imagine someone asking, perhaps at

council or in a public forum, "What is the climate change problem that we, in our community, face? Is my property safe? Will my kids be okay? What are we doing about it? Have we done enough?"

You knew these questions were coming. The scientific consensus on climate change is stronger and more frightening than ever, and climate change is emerging in pop culture (through the likes of Al Gore's "An Inconvenient Truth" and the Live Earth concerts that rocked the globe). Not surprisingly, the public's concern is growing, prompting *The Globe and Mail* editor-in-chief Edward Greenspan to write, in early 2007, a piece titled "It's crystal clear: The environment will be the single most important issue of 2007."¹ (He went on to say that, with Kyoto only a year away, "the time has come to truly understand and debate the issue of what

Canada should do." Yes, 2007 is the year that we should finally come to truly understand. Amazing!) It was only a matter of time.

Smartly, you prepared. You revisited your trusty collection of past *Municipal World* issues and a handful of other sources. You remind yourself of the issues, and you try to make sense of it all.

The range of issues, perspectives and challenges is impressive. Unfortunately, they don't fit neatly into a box, and can't be represented in a simple cause-and-effect diagram that captures all the issues. *Can I explain this to the average Joe?* You humbly acknowledge you can't even explain this to yourself. You are left confused. What is the problem, *the real issue*, for our municipality?

¹ *The Globe and Mail*, January 27, 2007 online edition. "It's crystal clear: The environment will be the single most important issue of 2007."

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Climate Change is a Wicked Problem

One thing is for sure – climate change is a wicked problem. The idea of a wicked problem was coined back in the early 1970s by a couple of planning theorists, Rittel and Webber. They distinguished problems that could be solved using traditional analytic methods from the increasingly complex problems that we face in society more and more, and that can't be solved using the traditional methods. They identified various attributes that contribute to a problem being more or less "wicked."

To start with, there is no definitive formulation of the problem – it is ill-structured. The same problem can be viewed in different ways. Different stakeholders may construct the problem differently, according to their various worldviews, values, interests, etc. The problem can be difficult to distinguish from other problems, or can be viewed as merely a symptom of other problems. It is hard just to decide what the problem is.

With no definitive "the problem," there is no definitive "the solution." Many players "are equally equipped, interested, and/or entitled to judge the solutions," and their assessments cannot conclude that solutions are "true

or false" or "right or wrong." Instead, they are "better" or "good enough" or "satisfying."

These are only a few attributes of wicked problems, but they should give you a sense of what they are all about. In fact, they likely sound all-too-familiar. You may never before have heard of a "wicked problem," but you almost certainly have dealt with one. To a greater or lesser extent, many of the strategic issues (certainly most social and environmental policy issues) that we face today are wicked problems.

Just Don't Be (Too) Wrong!

Traditional approaches to problem solving are rooted in the scientific method. In response to a problem (or research gap), the scientist develops a hypothesis, then designs and runs experiments – in the end, trying to prove the hypothesis false. To the extent it fails to be proven false, the hypothesis is held to be true (or at least, not false). The tradition in science is to try to prove things wrong.

In the world of wicked problems, decision makers have to get it right. They have no right to be wrong! As Rittel and Webber² note, "Here the aim is not to find the truth, but to improve some characteristics of the

world where people live." With an issue as big and potentially catastrophic as climate change, this can't be understated. We can't get this one wrong. In any event, we haven't the luxury of experimenting with solutions.

We all know the importance of "doing the right thing," rather than simply "doing things rights." Wicked problems are complex and unwieldy. Managing them requires us to make strategic choices that make the problem more manageable. Getting the problem right is a critical first step in doing the right things. "What the problem is" will determine where and how you search for a solution, and what a solution might be.

Maybe Clive Doucet is right – maybe we've been looking in all the wrong places. Then, Edward Greenspan is absolutely right – the time has come to *truly understand*. Hopefully, this notion of a wicked problem can help. In Part II, we will elaborate on climate change as a wicked problem, and offer some insights into how to manage it. *NW*

2 Rittel, H. and Webber, M. (1973). "Dilemmas in a general theory of planning," *Policy Sciences*, 4, 155-169.

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