

Building Adaptive Community Capacity to Meet the Challenges of Global Climate Change: Challenges for Community Leadership

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INTRODUCTION

There is now a scientific consensus that global climate change is happening and it is a result of human activity (Smithers & Smit, 1997). As we now know, global climate change brings a variety of negative consequences for human populations including: increased deaths, injury and illness as a result of extreme weather events; more frequent food poisoning as a result of microbial proliferation; increases in infectious diseases as a result of changes in vectors-path-host relations; impaired livestock, crop and fisheries yield leading to issues of food security and/or impaired nutrition, health and survival; loss of livelihoods and displacement leading to poverty and adverse health. These adverse effects necessitate two forms of action: mitigation and adaptation. Mitigation is relatively straight forward and involves few systems and is, for the most part, focused on energy use. It is characterized by governments entering into agreements to manage and regulate their natural and economic resources (i.e. decreasing reliance on fossil fuels and increasing reliance on renewable energy sources). Solutions are relatively simple if the political will is there. The goal is to reduce, and perhaps eventually eliminate, the discharge of greenhouse gases into the atmosphere.

Adaptation, on the other hand, is a much more complex process requiring engagement from a variety of different stakeholders who are likely to have different priorities and views on the correct course of action; adaptation strategies must take into account not only the interplay among the impacts of climate change, but how climate change interacts both nationally and locally with social, cultural and economic variables. In this sense, it is the essence of a wicked problem, and like all wicked problems, there is no one definitive solution (Lauzon, 2015); community adaptation requires continuous adjustment which requires continuous individual and community learning. While all biological systems have some capacity for adaptation, humans are different from other biological systems. Smithers and Smit capture this when they write that

Social and economic systems, and individuals within them, can and do adapt to changing environmental circumstances. An important distinction, however, is that human systems possess the ability to plan and 'manage' adaptation. Thus, while the responses of non-human biological systems to perturbations are entirely reactive, the responses of human systems are both reactive and proactive. (1997, 133)

While adaptation can be undertaken at any geographical scale from the international to national to regional to local, it is the local or community level that is of interest in this chapter. Community is the level in which our lived lives intersect with the forces of global climate change as we have seen for those

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people exposed to forest fires or floods. From the community perspective, global climate change is not an abstract concept but is very much part of the everyday fabric of life. Schipper (2012) argues that adaptive strategies at the community level must be based upon community capacity and is a product of an ongoing dialogue within the community. She notes that often top-down strategies do not meet the needs of all community members, and in the worst cases, they actually increase vulnerabilities either for select members of the community or for the community at large. Despite often conceptualizing communities as consisting of a homogeneous population who share interests, perspectives or beliefs, “communities can be composed of different groups, whose interest may conflict when shared resources are under pressure (Shipper, 2007, p. 7).” Communities can be sources of conflict and contestation, particularly when leadership serves particular interests while ignoring the interests of others, or simply assumes they know best.

This chapter is concerned with how communities respond to global climate change, and in particular what this means for local leadership. We begin by briefly outlining global climate change as a wicked problem, followed by a discussion of adaptation, resilience and an exploration of these concepts in the context of community. I then discuss leading and managing in the learning community followed by implications for community leadership.

Global Climate Change as a “Wicked Problem”

Global climate change means we have ventured into unknown terrain where there is no precedent from which we have learned from. In fact, global climate change represents a wicked problem characterized by uncertainty and despite attempts to build models that predict potential outcomes of global climate change, the outcomes are not known. As Patton (2011) notes, under conditions of complexity outcomes are unpredictable, uncontrollable and unknowable in advance. A small intervention can reverberate throughout the system and manifest large changes. It is the parable of the butterfly that flaps its wings on one side of the world and precipitates a hurricane on the other side of the globe. Change is characterized by a continuous process of emergence; life is characterized by a continuous process of adaptation.

Head and Alford (2008) suggest that one way of confronting wicked problems is through collaborative activity. Clearly there is no one solution to global climate change that can be implemented by any one actor be it a mitigation strategy or an adaptive strategy; collaboration is necessary. And it is through collaborative activities that build socio-economic-ecological resilience and adaptive capacity locally. It is adaptation and resilience that we turn to now.

Adaptation and Resilience

Caldwell et al. (2015) argue that resilience is key to understanding adaptive processes for meeting the challenges of global climate change. Pahl-Wostl (2009) has argued that adaptive systems are defined as “the ability of a governance system to first alter processes and if required convert structural elements as a response to experienced or expected changes in the societal or natural environment (355).” She further argues that adaptive systems develop in response to uncertainty and surprise, much of what global warming offers us; while we can model global change we really do not know what it holds for us or what this might mean for particular communities. There is a need for greater emphasis on informal network structures and what is described as community learning as a strategy for developing community resilience. This is the foundation of adaptive community capacity.

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