

Scenario Planning for Community Resilience

A One Sky model for community engagement for climate change adaptation

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Purpose

The purpose of this guide is to share the methodology and model One Sky used to engage community on climate change adaptation with other practitioners and communities who may be interested to begin similar processes. The seven steps give a overall guide, with One Sky’s activities provided as examples. Our hope is that the reader will apply the steps in his or her own context as needed, allowing for creativity and responsiveness to whatever is arising in their own communities.

Overview

History

In July 2011, One Sky convened a small group of people to look at the issue of energy, resilience, climate change and conservation in British Columbia's Northwest region. For two days we discussed the potential changes and adaptations we will have to go through if energy prices continue to increase, if climate change predications turn out to be accurate and if our economy continues to be affected by globalization. What piqued our interest as a group was the "business as usual" scenario. If the world continues on its current path what will our region look like in ten to fifteen or even fifty years? Our conclusion is that we simply don't know but it will likely be very, very different!

Resilience is central to adaptation in these coming times. But understanding how best to increase or foster resilience requires a better understanding of the coming scenario. On September 8th and 9th, 2011, with the support of B.C. Hydro, we hosted a second meeting along with the Bulkley Valley Research Centre, the Office of the Wet'suwet'en and the Northwest Community College. This engaged people in a process of exploring and examining, so to better understand, potential scenarios in a context of 1) a changed climate based on current understanding of the impact of climate change for our region, and 2) the evolution of "peak oil" and or the use of non conventional fossil fuel. All this is of course embedded in the continued globalization of our economies and the impact of increasing demographics on our region. These scenarios are predicted to take place over the coming 25 years in a significant way, and through the exercise, we sought to better understand how the possible scenarios for how it might play out.

The gathering was think tank to better understand local perspectives on the issues of resilience, leadership and conservation in the energy sector. From this, we have built out a model or methodology that could be useful in other municipalities in Canada, or in other places in the world.

Why Scenarios?

Scenario planning, also called scenario thinking or scenario analysis, is a strategic planning method that some organizations use to make flexible long-term plans. It has a history of use in the military as well as the corporate sector. More recently, it has been brought into the Millennium Assessment and other social change processes, including climate change adaptation planning. Since the timelines for planning for climate change adaptation, and the factors and conditions that need to be accounted for, require a thought-experiment rigorous enough to expand our thinking beyond it's normal range, scenario planning is an excellent option as a planning tool.

Scenario planning may involve aspects of *systems thinking*, specifically the recognition that many factors may combine in complex ways to create sometime surprising futures (due to non-linear feedback loops). The method also allows the inclusion of factors that are difficult to formalize, such as novel insights about the future, deep shifts in values, unprecedented regulations or inventions.

Research from developmental psychology suggests that most adults' minds don't usually conceptualize 25 year timelines, and so often when considering the impacts of climate change, it is difficult to imagine the kinds of changes that may occur in that large a time envelope. We also don't naturally consider the multifaceted impacts of changes, and tend to focus on that which we are attuned to (usually things in our immediate lives or aspects of the discipline we were trained in).

So, when a group comes together to craft scenarios, not only are they themselves building their capacity and awareness of the possible 'future histories', but they are also doing the leg-work of mapping out these future histories for others to benefit from. Those who come after and make use of these narratives get a quick easy snapshot of the future histories that are possible. Scenario planning gets around the difficulties of a large time envelope and the challenging multifaceted nature of the issues, and presents data in an accessible and useful way.

Layout of this Guide

To give longevity to the work we did this summer, we have compiled a brief methodological guide for our own references when working in other municipalities as well as for use by other researchers and organizations on this topic in their home regions.

The guide is divided chronologically from the first steps through the final steps, with recommendations at the end for follow-up that can be carried out afterwards.

Step One: Gathering Community Perspectives

Knowing how your community is perceiving the issues, what information is common knowledge and what is not, and getting a sense of the community's values on the issues are important for preparing and aligning the rest of the community engagement activities.

We did this in several ways. We held a two-day think-tank with some key 'thought leaders' in the community. This was a way to co-design the later process, but was also a way to gather community perspectives on the issues and what to do about the issues.

We then designed a survey and had a team go to key nodes in the community where these issues might be on people's minds, such as the gas stations, the grocery stores, as well as on Main Street. This survey randomly sampled citizens in the community on climate change, peak oil and globalization.

Step Two: Examining the Issues

Once we had a sense of where the community was at with the issues, we then held another two day event with a larger group of participants. This included a personal invitation to each person invited.

The event was held in a central place in the community. In this case, the North West Community College, which is a LEEDS designed building and aligned with the intention of the event.

In order to get into a discussion on the issues, we first had to take some time to discuss and examine them. We did this by inviting guest speakers to present on the two themes, climate change and peak oil, in the context of globalization. These were 40-45min presentations and included question and answer periods after each.

Taking this time to examine the issues together builds mutual understanding on what we are in fact talking about. After all, there are numerous interpretations, for example, of climate change, so by examining the issue together, we could hone in on what we were wanting to refer to over the two days and how it applied to our local community and bioregion.



Step Three: Discerning Stressors and Drivers

While guest speakers were presenting, participants were tasked with hearing for the stressors and drivers for climate change and peak oil, writing them on a post-it note to be placed up on the wall afterwards.

This fostered a discussion on what are stressors and drivers, and then we grouped and analyzed the different categories of stressors and drivers that were placed on the wall, adding any that may have been missing.

Step Four: Crafting Scenarios

Overview

The basic 'rules' of scenario planning are that as a group you set some variables that create a 'scenario space.' Then, choose two variables of considerable impact, and assign each along the x and y axis from a spectrum of little change to a lot of change across each. This discloses four domains or quadrants that are possible scenarios to be explored. In small groups, participants 'fill out' the scenario spaces in each quadrant on a flip chart, first thinking globally and then on another flip chart sheet translating this into the local conditions of the community and region. The group is careful that each scenario is 'internally coherent.' They also consider the 'drivers', 'responses', 'game changers', and 'breakthroughs.' This is shared with the larger group, refined, and worked into a spread sheet for later use in decision-making, planning, and community awareness.

Axis of change methodology

With two axis (climate change and peak oil) that both progress from very little change to a lot of change, we bounded the 'scenario space' with parameters. See figure 1.

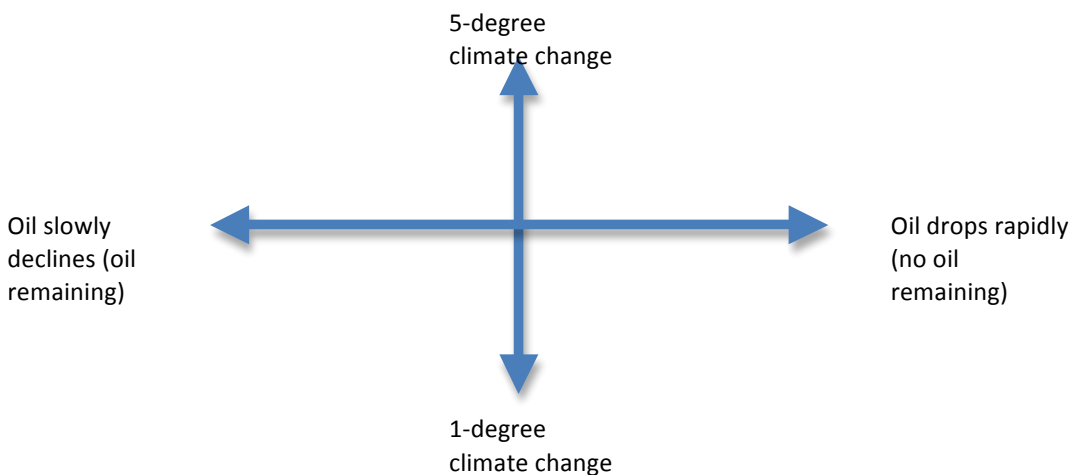


Figure 1: Creating the scenario space by setting parameters and looking at the possible scenarios until 2050.

Some assumptions could be made about each of the four extremes, such as:

- To get to only 1-degree change, would have required global cooperation and some technological transformation.
- Whereas to get to 5-degrees would suggest an increase in nationalism without a technological transformation.
- To retain oil in reserves and not burn it all, would have required technical change, education and a reduction in consumption.
- Whereas, to continue to expend all oil reserves until they were depleted beyond reasonable financial use, would suggest no technical change and an increase in consumption.

First in a large group, by delineating four quadrants across the room, we had everyone move to one side of the room or another depending where they personally felt the region was headed. This generated discussion, got people talking and knowing each other better, and immediately tried out the methodology as a group. This let participants ask clarifying questions and gave us as facilitators a chance to respond and explain.

Then, in groups of four, participants took their discussion further, familiarizing themselves with the scenario space that arose through these axes and parameters.

Scenario-building in small groups

In slightly larger groups, we then spent a good deal of time ‘filling out’ the scenario space of what would arise given four scenarios, both in terms of global dynamics as well as in the local context.

These four scenarios were:

- 1) Oil remaining, 5-degree climate change
- 2) No oil remaining, 5-degree climate change
- 3) No oil remaining, 1-degree climate change
- 4) Oil remaining, 1-degree climate change



Key steps in the building scenarios

Certain key steps needed to be taken when building scenarios.

- 1) Ensuring internal coherence: each scenario has to follow it's own internal logic. While we 'suspend disbelief' to some extent, when we are going down a line of thinking about a scenario, when we write down the future history it has to be internally coherent and 'believable.'
- 2) Drivers and Responses: It is important to clarify the drivers and responses per scenario so that your future history for that scenario is accounting for them appropriately.
- 3) Thinking globally, then locally: We had people pan out to the global context first, and then hone in with a second spreadsheet to consider the impacts and narrative for the local context.
- 4) Game-changers and breakthroughs: Watch for game-changers and breakthroughs which could break a scenario into two streams (option a and b, for example). This is allowed and important to include.
- 5) Naming your scenario: Quite naturally, as the scenario space is filled out, the group begins to see a pattern or a story, and then usually spontaneously give it a name. Naming your scenario can help give a meta-perspective on the whole idea of that scenario, which you can then disclose details through the narrative. Be creative and have fun with it.



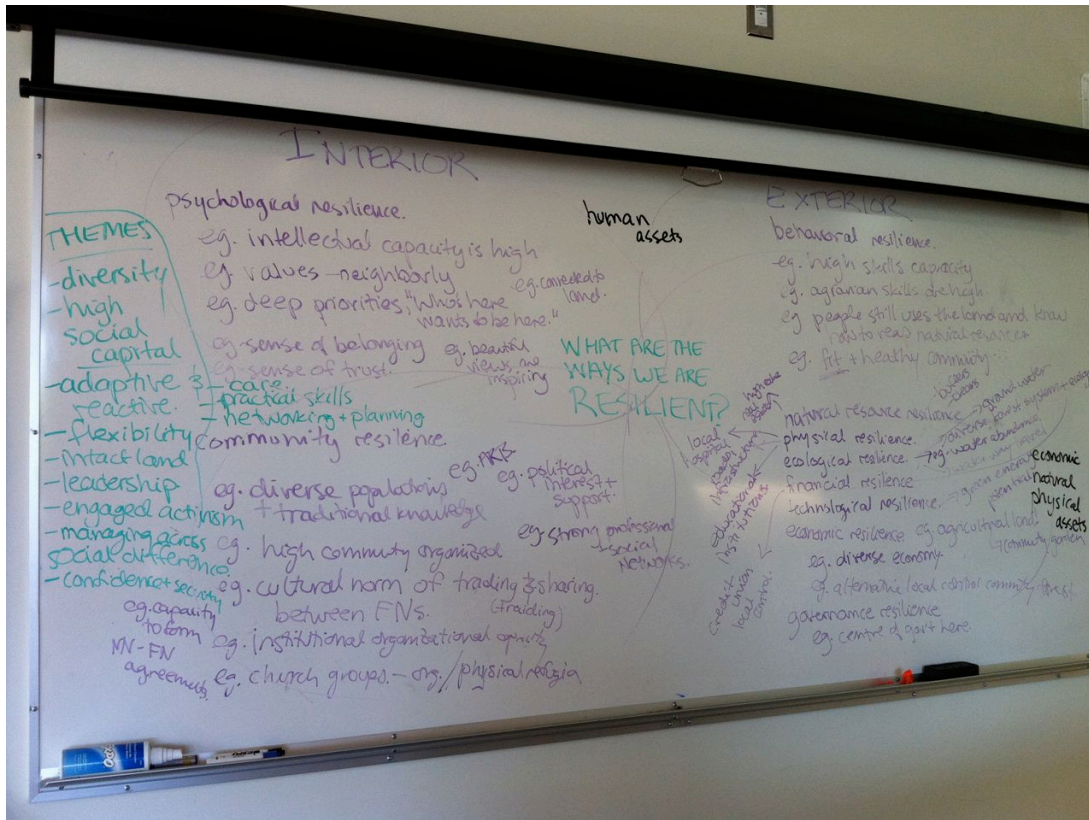
Step five: Share and refine

After the scenarios were built, we came back together as a group to share, discuss and refine them. We combined the individual groups scenarios into four that the entire workshop could agree on. Later, these were placed into a spreadsheet, and then the narratives written for public use.

Step six: Considering community resilience

This exercise can provoke fear and depression for some participants, since the material is heavy. We recommend ending the workshop by looking comprehensively at the community's resilience already in place. The model we used included the interior and exterior, individual and collective dimensions of resilience (as per Wilber's Integral Theory). This is depicted in figure two with some examples, but the actual exercise done this summer is also shared in the photo below.

	Interior	Exterior
Individual	<p><i>Psychological resilience</i></p> <p>Eg. Intellectual capacity is high, values are neighbourly, sense of belonging and trust, connected to the land.</p>	<p><i>Behavioral resilience</i></p> <p>Eg. High level of skills, particularly agrarian skills, people still use the land and know how to reap natural resources, the population is characteristically fit and healthy.</p>
Collective	<p><i>Community resilience</i></p> <p>Eg. Diverse populations and traditional knowledge, high community organization, cultural norm of trading and sharing between First Nations, institutional organizational capacity is high, churches could be used as refuges, political interest and support is high, strong professional networks.</p>	<p><i>Systems resilience (such as ecological resilience, physical resilience, financial/economic resilience, technological resilience, etc.)</i></p> <p>Eg. High value real estate and local infrastructure like hospitals, credit unions, and educational institutions, diverse economy with a variety of economic activities, forest diversity and fresh water in abundance.</p>



Step seven: Recommendations for Action

Community capacity building

Creating scenarios themselves are a capacity building exercise that strengthens adaptive capacity, awareness about the issues, and interpersonal skills about contexts that are stressful for many. The first and foremost use is for a community to build these strengths, consolidate and galvanize its message, and make (or consider making) lifestyle changes to account for these possible future histories.

Advocacy

However, how the scenarios can be used beyond the workshop itself is another matter. There is a diverse range of how they can be used. Recall that radically different futures that the life we perceive we are living are often difficult to conceptualize. These scenarios give a 'future history' quickly and effectively. As such, these can be used to get decision-makers and policy-makers thinking outside their usual mental boxes.

Planning

We began to see the potential of using the excel spreadsheet like a matrix of current activities could be used to assess what scenario a municipality is headed toward. This could be designed as a tool for planning new policies, laws and actions to align with

which future history is desired. (See photo below of our MP Nathan Cullen joining the workshop to discuss and consider the future plan for the Skeena-Bulkley region.)



Acknowledgements

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