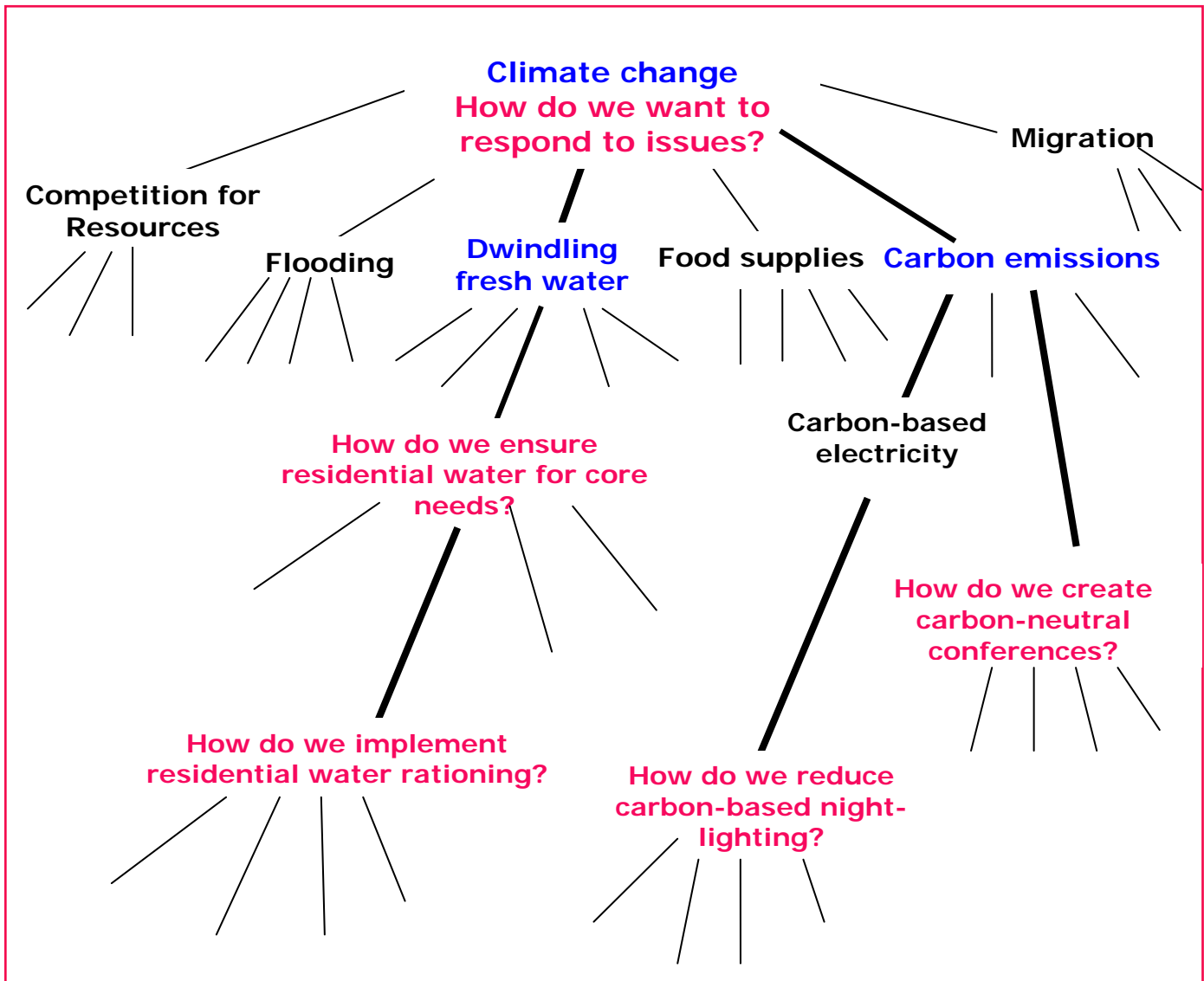


From Big Concerns to Specific Actions

A sample roadmap to deliberations that can generate
Comprehensive Public Action



**Deliberative Issue Frameworks Developed Using
*The Integral Process for Working on Complex Issuestm (TIP)***

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Ideas for How to Use this Booklet

First of all, we invite you to share this booklet with other conference participants after you have looked at it – we brought only a small number with us to Belo Horizonte. We can email you a copy after the conference if you give us your contact information (see Jan Inglis or Sara Ross).

Since these frameworks are process tools for deliberation, they do not contain answers, research, or recommendations. They can be used for different purposes, itemized below. Each framework begins with a brief introduction to its particular question. The introduction explains why such a question needs deliberation, and what makes it a complex issue. Then, each framework presents three to five different approaches to the issue. These illuminate a large number of different perspectives on the issue, both pro and con. The approaches further illustrate what makes the issue complex: each one will be contested by different parties for different reasons. That kind of social complexity demands deliberative decision making.

You might wish to use the booklet for any of these purposes.

- To consider if deliberating issues could be a Climate Leadership practice.
- As an introduction to some deliberative democracy practices.
- To get the feel for what these particular issues involve.
- To support our Climate Leadership efforts by helping us develop these frameworks further via your suggestions.
- To consider if you want to deliberate one of these issues with others.
- To consider if or how State of the World Forums can use such practices as these.

Introduction to Contents (and to naming, framing, and deliberating)

This booklet contains five “issue frameworks” for deliberation of a small selection of climate-change related issues. They are part of a *sample* roadmap to action on climate change as indicated on the cover. We invite you to tell us what you think should be added to them, to include all possible innovative ideas, information, perspectives, and life conditions. Note, these frameworks are process tools to assist deliberating about and designing solutions to these particular questions; *they are not “white papers” or recommendations.*

Deliberation is something we do individually when we make choices whether about where to take the family vacation or whether to attend a conference or change jobs. We consider options, weigh them

carefully, and arrive at a decision we can live with. The notion of **deliberative democracy** depends on individual *and* collective decision making—that is, *public* deliberation. A **public deliberation** is structured to support the public, including policy makers, to make considered choices about future directions and how to address complex public issues.

In the deliberative democracy field, **naming** issues means the questions to be deliberated result from a focussed analysis of what a problem is about and what causes it. The neutral **framing** process surfaces multiple perspectives driven by different worldviews on how to approach different solutions. It includes objective information people should have at hand. Once issues are neutrally named and framed, they are ready to be deliberated.

If designed and conducted well, public deliberation engages people’s values and deep concerns, helps them take others’ perspectives and consider those perspectives seriously, surfaces trade-offs and real tensions among possible approaches to solutions, and generates creativity and motivation to work on issues. In other words, deliberation of well-named and well-framed issues brings people’s best selves forward so they can generate the quality of public discourse so necessary for complex decision making and for coordinating and sustaining comprehensive actions.

Deliberative forums can be conducted at large and small scales. Whatever the design, people usually use a brief “issue booklet” –similar to these frameworks—that outlines diverse, viable approaches to action on an issue. The goal is to use the insights and information developed through the deliberative process. People can use this new knowledge to arrive at well-considered, shared understandings to inform their decisions and their support for taking effective actions and changing policies.

Analyses of complex issues demonstrate that multiple approaches requiring multiple different actors are essential for comprehensive change. When the decision-making processes are facilitated to do so, such integrally-comprehensive “meta approaches” to working on complex issues enable individual and collective actions – voluntary and policy – to address the issue. Meta approaches accomplish objectives in a creative, systemic mixture that can use different interests and values equitably, and tailors actions to contexts.

Climate change and other complex issues are serious and the stakes are high. Thus, we believe it is vital to ensure the highest possible quality and integral outcomes from analyzing, naming, framing, and deliberating about issues. The Integral Process for Working on Complex Issuestm (TIP) is designed to meet such goals (<http://global-arina.org/TIP/TIP.html> for more information). It is the result of many years of action and theoretical research, and rests on foundations of not only previous field tests and international pilot projects but also integral approaches to developmental, behavioral, and complexity sciences.

Note: The deliberative issue frameworks in this booklet were developed using TIP methods, which enable preparation of similar kinds of frameworks for any other issues. We offer these with certain caveats.

- They were developed by people from different Western countries, so the various worldviews illustrated in them embed Western perspectives, social assumptions, and biases.
- They are also designed as generic frameworks, not specific to a particular community or country. They are partial sketches, inviting completion and not inclusive of all possible additions that may make them more useful to users in specific places.
- Therefore, they might benefit from having additional points or technical information to flesh them out and/or tailor them for local circumstances before using them.
- Then the frameworks are process tools that can be used by any people who want to deliberate about these issues.

How Do We Want to Respond to the Climate Crisis?

By Jan Inglis

Background

Steadily we are hearing that life as we have known it is rapidly changing and becoming unsustainable. This information is coming through movies like *The Inconvenient Truth*, *What a Way to Go* or *The 11th Hour*, many books or from regular daily news of storms, drought, terrorism, food, water and fuel shortages, rolling blackouts and pandemics. This information stimulates many different views and perspectives of how to respond which are being considered privately, or spoken of only in small like-minded groups. Although there is a lot of public concern and genuine desire to make a difference, much of this concern remains in isolated pockets. Much time is wasted due to fighting over ideologies. Each perspective has very different and very valid information that needs to be considered to see the whole picture. Each has different choices of actions associated with it that make sense when we see the assumptions they are based on. In addition, each approach has different costs, consequences and trade offs that need to be understood and weighed out. Through giving these approaches open-minded consideration, we are more likely to see and move beyond our preferred bias, and be able to identify an effective combination of actions we are willing to live with and support—from policy directions to voluntary changes, that help us develop inclusive approaches and comprehensive actions.

It is important for people wanting to initiate change regarding this topic to understand these differing perspectives as they occur within us and between us. This may help in understanding what kind of relationship we want to have with others, especially those who may think differently than we do. Otherwise, we may set off unexpected responses and chain reactivity. If we attempt to jump to action planning, without considering and including these underlying differences, we may just increase frustration, waste time and incur sabotage. Therefore it is important to take time to deliberate the question “*How do we want to respond to the climate crisis?*”

There are five different approaches to deliberate in this first framework.

How do we want to respond to the climate crisis?

Approach 1:

Although it is terrible to acknowledge, the reality is that the crisis is so immense that any efforts to respond are too little too late.

Assumptions underlying this approach

Scientists have steadily given us information that the temperature of the world is rapidly raising and very soon, if not already, it will be beyond our ability to control. But leaders just continue to argue over many other issues. With there being so little attention paid to this crisis by government or large groups of citizens, it is obvious that we are just not able to mobilize efforts to create significant change. It is very sad, especially for our future generations, to realize that humanity is so stupid as to have come to this demise. There is nothing we can do.

Actions that would make sense based on these assumptions:

1. Appreciate the gift of life every day
2. Keep being a responsible citizen by recycling, etc. but don't join the hysterical "save the earth" bandwagon
3. Keep attending some films and presentations on the topic if they sound interesting.
4. Do not bring the topic up when in social situations as there is no place for the conversation to go except down.
5. Take comfort that the full impact of this crisis will likely not occur in my lifetime.

Possible reactions to this approach that can be anticipated

1. "Get off your intellectual butt and do something, anything to help"
2. "Joining a structured caring community will guide those seeking inspiration to rise above futility and despair."
3. "All viewpoints, even this one, are equally important in helping us change the climate issue"
4. "There is a market here for philosophical books and documentaries"
5. "Can you leave your house and savings to me in your will?"

If this was the only approach we took, what trade offs or consequences would we need to consider?

- We would stay removed and conceptual rather than jump into the risk and effort of caring and engaging with the details, priorities and decisions that come with being real people with real issues.
- We would choose to believe in and perpetuate the limitation of our current human capacities rather than face the unknown risks of seeking more adaptive potentials.

How do we want to respond to the climate crisis?

Approach 2:

The best thing to do is put first things first: do whatever it takes for *our area* of the world to sustain itself so we can fend off looming impacts.

Assumptions underlying this approach

The state of the world is becoming threatening very fast. The only place we can actually do anything to protect ourselves now and to ensure survival of civilization in the future is to become self sufficient in small local areas. Globally, we need to define what our carrying capacity is and live within that means. When things become tougher in the world, our quality of life in this area will become more desirable. Locally, if too many people move here, we may become unsustainable. *Protecting our area* may become necessary before we lose everything.

Actions that would make sense based on these assumptions:

1. Set up seed saving, local food growing and storing processes, and alternative housing as quickly as possible
2. Rally people and defend our water rights, loudly and now!
3. Limit the population coming into our areas by not approving development permits.
4. For one day, let's think of ourselves as separate from the province, from Canada, and the world and see if we can operate.
5. Quit pretending we can impact huge global factors, and concentrate on our local scale where we, right here, have control over things.

Possible reactions to this approach that can be anticipated

1. "Planned orderly changes are necessary to avoid mayhem (e.g. food distribution, water regulations, building codes)"
2. "The potential justification of secret gorilla type hoarding and defending is scary"
3. "We need to be open and caring of everyone, not just those who already live here or who are able to grow their own gardens or build efficient shelters"
4. "Why waste time going backward to old technologies when we could go forward with proven new technologies"
5. "I am barely surviving now, let alone taking on the hysteria of some supposed crisis".

If this was the only approach we took, what trade offs or consequences would we need to consider?

- There would be even greater challenges to our survival if we disconnected from outside medical support, technological innovations, economic relief funds etc., even if we know the drastic changes coming will force us to compete for them or cut us off entirely.
- How would we ever decide who is the "us" we are protecting and who is the "them" we are protecting ourselves against, and once on this path, how far do we think we would go with this protectionism?

How do we want to respond to the climate crisis?

Approach 3:

The best thing to do is demand elected officials and organizations take responsibility for creating a better future, locally and globally.

Assumptions underlying this approach:

Citizens need to demand strong leadership to fix this situation and provide a centralized authority to coordinate change. Over the years, we have developed structures and policies so that life can proceed in an orderly fashion. We often take these for granted but now we need to rely on that system to create stable change. Most people do not understand issues such as climate change, water or fossil fuel shortage, so policy backed up by sanctions is required for individual and organizational conformity. Renegade reactivity needs to be controlled as it leads to violence. It is important to have good plans in place beforehand so we all know what we are supposed to do and prevent bad behaviour.

Actions that would make sense based on these assumptions:

1. Demand that government subsidize green practises: e.g. low flow toilets, water conservation, dense zoning, alternate fuel sources, and vote for new taxes to enable these.
2. Immigration policies at local levels, not just national, should be developed to regulate 'environmental' refugees
3. Governments should punish, and people should boycott, polluting corporations and reward green companies
4. Health authorities should develop and broadcast emergency procedures in case of power outages, pandemics etc
5. Vote for increased taxes to cover cost of operating public institutions due to increasing costs of fossil fuels, food etc.

Possible reactions to this approach that can be anticipated

1. "No one is going to tell me what to do with my water, my house and my lawn".
2. "Government leaders don't even know these issues exist and bureaucracy is too slow".
3. "Whole communities, locally and globally need to make plans, not just single leaders".
4. "I am not making ends meet now and just cannot take a tax hike".
5. "New directions will come from small skilled teams of innovators and entrepreneurs, not from government"

If this were the only approach we took, what trade offs or consequences would we need to consider?

- Even if people really want public leaders to take charge they may sabotage policy if they are not involved in understanding the need and setting standards for what 'good' policies are.
- Government leaders are not likely to take the risk of enforcing standards that might be unpopular in the short term, even if the long-term situation requires this.

How do we want to respond to the climate crisis?

Approach 4:

The best thing to do is to use our creativity, ingenuity and technical capacities to create a new future.

Assumptions underlying this approach

Information Technology in 20 years will enable us to change the issues which plague us such as fossil fuel shortage, pollution, health care and poverty etc. For example, we have tons of solar energy (10,000 times more than required to meet all our needs on the planet) but we need to capture it through nano technologies. Also, with new technology, health care will be able to model, simulate, and reprogram disease and aging processes. In ten years, these technologies will be 1,000 times more powerful than they are today and available globally and cheaply. Every challenge is an opportunity and we can move much more quickly if we just get some smart people to be in places of influence to set up good strategies so technologies can be put in place to create these outcomes.

Actions that make sense based on these assumptions:

1. Vote for new taxes which support technological research and inspirational programs promoting environmental solutions at the national, provincial and local level.
2. Meet with savvy thinkers to plan how to bypass the slow moving public processes and promote attractive 'green' business options.
3. Use multi media to create motivating educational presentations and chill out the 'ain't it awful,' doom and gloom message.
4. Set up school programs in which students get awards for having the most 'green' actions in their homes.
5. Use web cams, ipods and virtual meeting places for innovation sharing and futurist thinking.

Possible reactions to this approach that can be anticipated

1. "Our hope lies in caring, humane solutions, not technological ones."
2. "We have to define some moral criteria to control the use or abuse of technology."
3. "I don't even understand the words or how to use these things so it doesn't help me."
4. "Technology can't be trusted. It fixes one thing without seeing that it is damaging" something else; look at the food shortage due to switching crops to biofuel
5. "The human species and its technologies should just die off so that other species have an opportunity to survive"

If this were the only approach we took, what trade offs or consequences would we need to consider?

- We need to research the outcomes of some technological fixes to know if they cause more damage, even if it will demand a lot of extra time to educate ourselves.
- We need to rely on technological expertise of others even if they have different and often conflicting messages. We don't know if the competition distorts or promotes the innovations we need.

How do we want to respond to the climate crisis?

Approach 5:

The best thing to do is work together in a conscious manner in order to learn to build a more caring and sustainable world.

Assumptions underlying this approach:

All of nature and humans are completely connected and we cannot damage any one part without harming the whole. Through increasing our sensitivity and reaching out to include each other we can be united in making a healthier planet and healthier communities. We need to go inside ourselves more to understand our motives, find our strength and clarify our wisdom. From that place we will be more peaceful, more relational and less likely to harm others or the environment. We can show that we care for others and the environment by consuming less. By supporting others to be equal and find democratic methods of participating in their future, we will all be able to build a humane future. We can transform ourselves from being destroyers to co-creators.

Actions that would make sense based on these assumptions:

1. Develop forums where people feel safe to really share their feeling about the world condition
2. Develop peaceful protest marches re directing war money to much needed social and environmental programs
3. Create local and global art shows to inspire celebration and stimulate positive change
4. Realize the power and impact of intentional thinking on creating outcomes
5. Teach inner capacities of openness and meditation in order to find a source of wisdom

Possible reactions to this approach which can be anticipated

1. "I don't feel comfortable with this touchy feely narcissistic type of stuff."
2. "This kind of gathering takes far too long and never ends up in anyone 'doing' anything effective."
3. "At the end of the day our governments are run on majority rules."
4. "There is no source of higher wisdom out there that is going to guide us."
5. "None of these actions have anything to do with reversing climate change problems, or figuring out what to do when places are flooded, overrun with migration, run out of food, or become a desert.'

If this were the only approach we took, what trade offs or consequences would we need to consider:

- Unintentionally we may be leaving people out who aren't interested in, or don't know how, to do this kind of interaction, even if we believe everyone really needs to be involved.
- We need to include the institutionalized status quo systems in our conversations so we do not end up being powerless to really make big changes, even if this would mean having some different qualities of discussions.

How do we reduce the use of non-safety night lighting that relies on carbon-based energy?

By Sara Ross

Why this is an issue. The use of carbon-based energy sources contributes to climate change. Until we have converted to environmentally-friendly energy sources, we have to reduce carbon-based energy consumption everywhere possible. The use of lights at night is one area we can make immediate reductions until non-carbon based energy is a viable alternative.

Why we have night lighting. Some of the night lighting in cities and towns is for safety purposes, such as street lights. Yet, most of the lights turned on at night, especially in population centers, are not for safety purposes. Some lights are instructional, like when the names of buildings are displayed in large lighted letters. Many lights are decorative, like spotlights and other special lighting on buildings, landmarks, and bridges to show them off at night. Perhaps most lights serve commercial purposes of attracting customers, displaying the names of businesses and using attention-getting colors and flashing designs.

Why night lighting is a carbon reduction target. Lighting used at night in cities and towns requires a lot of energy. Satellites orbiting Earth show us how much our night lighting covers the planet. While these uses are nice, they are not all necessary. Deciding which behaviors are truly necessary and eliminating those that are unnecessary is a basic task when we have to quickly change our habits to avoid the worst impacts of the climate crisis. When necessity calls for reduction in carbon-based energy use, the non-safety uses of night lighting are legitimate targets.

Undesirable effects of night lighting. The most obvious “hard” effect of using night lighting for non-safety purposes is putting more carbon-based emissions into the atmosphere, because the constant lighting keeps up the demand to generate such power. There may also be a “soft” or subtle effect, a message that everything can continue the same as usual despite the climate crisis we are in. Keeping all the bright, attractive lights on gives the appearance that things are still “normal.” But can we afford to keep giving ourselves that false comfort, as if all our energy consuming habits can continue as before?

Conclusion: Why we need to deliberate about this. Even though many people may agree that we have to reduce carbon-based emissions, how to reduce them is complicated because every idea for reducing energy use affects people differently. Reducing night lighting may be a problem for businesses and even city governments that use it. Advertising that uses lighting at night has become a normal part of life since electricity became more widely available. Cities and towns want to look attractive at both night and day to attract tourists and businesses. And, honestly, most of us really like the look of a brightly colored city or town. Businesses want to get their advertising out to potential customers at the maximum levels possible, including at night. In smaller towns that do not have street lights, businesses’ commercial use of night lighting often provides the only night-time safety lighting available to residents. Some businesses and local governments may argue that if they have the funds to pay for the energy, they should be permitted to use night lighting. Yet the climate crisis demands we shift our priorities to preserving the larger common good, not just our own interests.

The common practice of night lighting for non-safety purposes is one of many habits that consume carbon-based energy and must be limited. We recognize that alternatives will become more widely available sometime in the future. Some alternatives are viable now in certain climates, like solar panels. However, the cost to prepare for, purchase, and install alternative methods is too high for many to afford. Thus, it will take a long time to replace carbon-dependent lighting. Until then, we have to seriously reduce the rate of damage night lighting contributes to carbon emissions. Waiting is not an option. We need to deliberate about how to stop using so much non-safety night lighting, within the limitations of the current electric grid and local infrastructures. How to do this will be a contested issue. We need to deliberate by weighing our options carefully, and taking into account all the pros and cons of various approaches so we take wise action.

**How do we reduce the use of non-safety night lighting
that relies on carbon-based energy?**

Approach 1: Set and enforce limits on permissible hours and type of lighting.

People may favor this approach if they assume that:

- It is human nature to do whatever we want unless there are punishable limits. So if it is crucial to make something happen, laws are the only guaranteed method.
- ...
-

People who favor this approach believe it is best because:

- We do not have time to lose. Passing such laws can be done quickly and result in immediate reductions.
- Uniform enforcement of across-the-board limits is fairest to everyone.
- To have governments take climate change leadership this way is the only way we will reduce CO₂ emissions.
-

Actions that a diverse array of actors could take to implement this approach effectively:

- Federal , state/provincial, and local governments implement policy to limit or eliminate night lighting on their governmental buildings and other public structures (e.g., landmarks, bridges).
- State/provincial legislatures pass laws to limit or eliminate night lighting on all other buildings including residences and stipulate which minimal types of lighting are permissible.
- Local governments are given criteria by state/province for issuing exemptions when government or business night lighting serves safety purposes in rural or other small population areas.
 - Substantial penalties would be charged for not complying with lighting regulations.
 - Police would issue tickets to businesses or residential buildings that did not comply.
 - ...
 - ...

This approach may be worrisome to others, because:

- Electrical circuits for night lighting might have necessary non-lighting hookups and cost small businesses too much to change the wiring - an unfunded mandate.
- There could be major, time consuming disagreements about what constitutes “non-safety” lighting since all lighting close to the ground adds some degree of night safety.
- ...
- ...
-

If this was the only approach we took, what trade-offs or consequences would we need to consider?

- ...
-
-

How do we reduce the use of non-safety night lighting that relies on carbon-based energy?

Approach 2: Implement tax incentives and low-interest loans for conversions to solar-powered lighting, and public awards for voluntarily turning lights off and making conversions.

People may favor this approach if they assume that:

- Most night-lighting is done by businesses profitable enough to afford this.
- Enough public and private funding is available to make loans with low return on investment.
- Incentives are stronger motivators than keeping the status quo of existing lighting.
-

People who favor this approach believe it is best because:

- Incentives are powerful market forces, and market forces have the power to bring sweeping change.
- The large amount of money it takes to convert to solar power will not be invested unless tax incentives offset it.
- It will create jobs in solar panel manufacturing and construction trades.
- It gets us moving now on the long term direction we need to take anyway.
- ...
-

Actions that a diverse array of actors could take to implement this approach effectively:

- State and local governments establish public-private partnerships with the business sector to fund loans.
- Legislatures pass tax incentives for solar conversions.
- Chambers of commerce or other local leadership organizations establish Planet Award Commissions to recognize building owners and tenants who convert to solar or just turn off or reduce their lighting.
-
-

This approach may be worrisome to others, because:

- In cities, only the highest buildings likely get enough sun exposure for solar panels.
- This may not be as quick and easy as it seems. Complications such as architectural limitations, multi-tenant buildings, re-wiring for new metering, and disputes over these and other factors could grind progress to a halt.
- Incentive systems that presume businesses have enough money ends up privileging those with more resources than others to afford making the conversion.
- Businesses that barely make a profit do not pay enough tax to be motivated by tax incentives and also for that reason cannot afford to convert to alternative lighting. They may not be able to take on more debt or even be rated credit-worthy to borrow money to make the conversion. The majority of businesses are small, so little real change would result.
- No business makes costly changes without being forced to: only regulation will ensure reductions.
- In this tight economy, survival by attracting as many customers as possible is a more pressing business need than reducing either taxes or climate impacts.
- Additional bureaucracy would have to be created to manage this, an unfunded mandate for state or local governments to bear.
- ...
- ...

If this was the only approach we took, what trade-offs or consequences would we need to consider?

- The very real likelihood that no meaningful reductions would happen and we will be that much farther from reducing carbon emissions.
- ...

How do we reduce the use of non-safety night lighting that relies on carbon-based energy?

Approach 3: Reduce consumerism & return to pre-electricity habits: Abandon all non-safety night lighting.

People may favor this approach if they assume that:

- Changing our collective consciousness and behaviors is the key to saving the planet
- Climate change impacts will be reduced to the degree we simplify how we live, including how we advertise and entertain ourselves
- ...

People who favor this approach believe it is best because:

- Even solar-powered lighting generates heat, and urban centers give off too much heat.
- Especially in this tight economy, businesses will benefit from eliminating all night-lighting costs from their electric bills. It is wasteful to decorate our towns and cities with energy-wasting lights.
- Consumerism is the problem. To convert our lifestyles to simple, non-wasteful habits in all areas is really the key to limiting all kinds of climate change impacts.
- ...
-

Actions that a diverse array of actors could take to implement this approach effectively:

- Local governments could solicit bids and select a design for economical, same-size lighted street numbers for all building owners to install and turn on at night to identify the building.
- Savings in previous night lighting would pay for new street number light.
- Local government provide, and assess businesses small fee for, street corner map displays that identify businesses by name and street number so pedestrians can find them in dark as needed.
- Create opportunities for community connections (street fairs, etc.) as the new way carbon-free to advertise
-
-
-

This approach may be worrisome to others, because:

- If turning off lights is not mandated, it simply will not happen. It is too radical a change to expect businesses to do unless they are forced to.
- Since no building would be required to turn off lights, businesses that opt to keep lights on would have uneven advantage over other businesses by getting more attention and customers at night.
- It is hard to turn our backs on our modern lifestyle; the status quo is too comfortable to change, and it is depressing to go backward to a hardship mentality.
- Resentments could build between those who do turn off lights and those who do not – we could become divided rather than united in shared struggle.
- ...
- ...

If this was the only approach we took, what trade-offs or consequences would we need to consider?

- It really could be depressing to voluntarily strip ourselves of conveniences we are used to, especially something as basic as the beauty and energy of night lighting!
- We would have to expect this to take a long time to succeed, probably not till it is too late to make a difference.
- We would have to start feeling scared before we would take this seriously and do it on our own.
- ...
-

How do we create more carbon-neutral conferences?

By Jan Inglis

Background on the issue

In the last 50 years travel to conferences has become a very significant part of learning and doing business across the world. For those able to travel, this allows for face-to-face networking and the development and sharing of ideas and resources. It usually involves a great deal of travel by air as well as food and accommodation in locations that are much less energy efficient than “home” life.

Air travel is growing by approximately 7% a year and is one of the fastest growing source of greenhouse gases. For example the average estimated CO₂ emissions for a round trip flight from Miami to Rio de Janeiro is 1642 Kg of CO₂. Hotel emissions per night, per hotel room, range from 29 to 49 kg of CO₂. These are luxuries available for only a few but the carbon emission impacts will create a burden for the many.

Why we need to deliberate

Although many people realize that business and professional travel is using far too much carbon-based fuel, many will say that real time, in person meetings with others from around the world has also created our sense of our global village. It has allowed us to develop a necessary meta understanding of our interconnected ecological, economic and cultural diversity. Restricting these activities might impact our economic, and political relationships in ways that many may not want. Yet for those wishing to decrease carbon emissions by 80% by 2020, travelling to conferences is not in keeping with that goal. As there are many options to develop, perspectives to anticipate and trade offs to consider we need to address the question: *How do we create more carbon-neutral conferences?*

Note: This issue framework will benefit from your suggestions for points that come from additional perspectives – please let us know what you suggest be added!

Resources

http://www.ehow.com/how_4562879_have-green-ecofriendly-conference.html

<http://www.castell-roomtothink.co.uk/english/links.html>

<http://www.confpeople.co.uk/greeneventsintro.html>

http://www.ecotourism.org/site/c.orLQKXPCLmF/b.4983745/k.674C/Greening_the_Conference.htm

<http://www.sustainabilityintelligence.com/HotelCarbonIndex/index.php>

Approach 1:

We restrict who can travel and where they can stay based on their official capacities.

Assumptions underlying this approach.

We do not need so many people travelling to conferences. The interactions of elected leaders and VIPs is beneficial for everyone and should be given higher priority as it contributes to the common good. We have systems in place for their interactions to be conveyed to the larger populations and this is a much more efficient and orderly use of finite resources. As airlines use so much greenhouse gases flights, need to be put under government control to ensure we do not squander these resources.

Actions that would make sense based on these assumptions:

1. People would apply to their government for a visa to travel outside of their home territory stating the reason for their use of this amount of fossil fuel in that manner
2. Attendees would act as representatives needing to present full reports during and after their conferences

How do we create more carbon-neutral conferences? (cont'd)

3. Accommodations will post a Hotel Carbon Index: and not have pools, large bedrooms, lobbies, fitness rooms etc.
4. Companies, based on their business will be allotted a fossil fuel ration for use for conferences.
- 5.
- 6.

Possible reactions to this approach that can be anticipated

1. I don't get to talk to officials now, how will my voice be heard at those high level meetings
2. This sort of mass control of how we interact will kill spontaneity, creativity and innovation.
3. To build fields of energy to support our emergence it is important that the right people be authentically moved to be together at the right time.
- 4.
- 5.

If this was the only approach we took, what trade offs or consequences would we need to consider?

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-

Approach 2:

We use stimulating fun in-person conferences as phase 1 to get people to buy into phase 2 conferencing using effective online technologies

Assumptions underlying this approach.

We cannot replace in person conferences until people find online technologies that satisfy their need for networking, strategic partnerships and innovative thinking. Most people do not know how to use these yet, so motivating and educational campaigns need to be attractive as well as effective. There is a lot of data which can be made available online, so boring conference speakers are passé. High energy conferences set up to find the right players are still necessary.

Actions that would make sense based on these assumptions:

1. Existing in-person conference could provide trade fairs and training opportunities sponsored by virtual conferencing providers.
2. Conference would be market places for both eco-friendly geographic locations as well as new virtual locations of conference centres.
3. Companies could buy carbon offset credits to allow their personnel to travel where ever they want to.
4.
5.

Possible reactions to this approach that can be anticipated

1. We have to stop flying right now to meet the 2050 by 2020 goal and this approach is still playing around.
2. This is allowing the rich and famous to do what they want at the expense of climate change impacts on the poor.
- 3.
- 4.

How do we create more carbon neutral conferences? (cont'd)

If this was the only approach we took, what trade offs or consequences would we need to consider?

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Approach 3:

We deepen relationships locally through face to face conferences while connecting globally by using video conferences

Assumptions underlying this approach.

If we really choose to we can create deep relationships with anyone who is concerned about the planet. Developing common ground whether through in-person group work or online conferences can work if we are all aligned towards this bigger goal. In this way, we can be inclusive of everyone without having to exclude those not financially or physically able to travel to conferences as well as reduce our carbon emissions.

Actions that would make sense based on these assumptions:

1. Local non profits with their sister global organizations can develop coordinated meetings.
2. Agreements can be made on agendas, how we want to relate and consensus can be sought on decisions even at a global level.
3. Interpreters can be made available for cross cultural meetings.
3. Practise session will be designed to assist participants to become more relaxed and personable when using technology
4.
5.

Possible reactions to this approach that can be anticipated

1. The reason I go to international conferences is to meet significant people I will never meet locally.
2. These meetings will have a lot of phoney niceness to them, are too slow, costly and inefficient
3. The perks of flying to a conference in a nice hotel is what helps me survive in a boring job
4. ... Video conferencing needs high-speed transmissions and expensive equipment, often not available in less developed countries and poorer institutions. Dependence on it can exclude large populations.
5. ...
6. ...

If this was the only approach we took, what trade offs or consequences would we need to consider?

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Introduction to Climate-Change Related Residential Water Issues

Developers of this summary and its following two related issue frameworks:

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Introduction

Given that we want to create a sustainable, fulfilling way to use the resources that we have now; how do we use residential water “equitably/fairly” from here on out? In the future, there will be a day when the water does not come out of the faucet. What’s plan B? Why isn’t this being handled already?

The context of the issue

When we look at residential water use, we note that in developed residential areas, the public water infrastructure has become a permanent fixture. It delivers clean consumable water to everyone. When population grows, the water delivery and sewage treatment plants typically grow to serve more people and industries. When we consider how to use residential water in more responsible ways given the risks of many areas running out of water supply, we recognize that this public water infrastructure is part of the problem in reorganizing how we think about and use water. This means infrastructure is not matched to present day and future realities of water use. It means people must figure out ways to change residential water use using different means. Our track records indicate it can take decades to replace or redesign major infrastructure. We could run out of water before that. We have to be proactive rather than maintaining our current ways of operating.

Causes of the problem

Our integral analysis indicates to us that causes are multifaceted. There are structural factors, behavioural factors, and attitudes that all contribute to this.

Attitudes:

We don’t understand the issue very well, and we don’t question the system. We believe the common person tends to be ignorant of possible alternatives.

If we take the issue seriously, we question how much work might a person have to do learn about the issue while being consumed with normal living demands, surviving all our normal challenges.

Nor do we want to spend any more money than we have to, to bear additional costs, for example, for our volume of usage or for infrastructure improvements; we do not want more new taxes.

Some of us don’t feel we are individually responsible for this problem, e.g., regarding our particular circumstances, or ourselves, as “exceptions to the rule” in some ways. We don’t believe there is a need to monitor water usage. It’s also too far away, not imminent, and many of us seem to believe that before it becomes urgent, we will have developed technology to fix it. Some of us get skeptical and wonder if this a true issue, if we’re being told the truth or if it has political origins.

Many of us realize we really love water, long showers, deep baths, and all the other uses we have for it. We don’t want to deal with scarcity because we like using as much as we want. We don’t want to change: water is a common resource, one many of view as a right to have access to. It goes against everything we have been habituated to, to change our thinking about it becoming scarce.

If we look the issue in the face, we get in touch with our fear of the unknown and having to deal with change. It is easier to not know about this issue at all. It is also really hard to care, to believe that this is happening; to be proactive and to make it a priority.

Behaviors:

Our water usage behaviors are reflected in the attitudes we have toward water itself and toward grappling with this issue proactively. Some of the behaviors that contribute to the issue are things we do, and some are things we could do but do not. For example, we aren't adapting to the changes as population increases in general and in water-challenged areas. We do not control our population growth. As technology and innovation produces more appliances for efficiency and convenience, our usages of water grow. When confronted with proposals that could address this issue in various ways, especially if they will cost us money, we tend to vote them down, vote politicians out of office, and vote into office those who won't propose such things. In a similar way, we are content to not investigate alternatives, such as using gray water when we could, e.g., for non-cooking, non-drinking uses.

Structural:

Social systems we have in place support some of these behaviors: for example the bureaucracy and red tape limit updating of system so infrastructure isn't adapted to changing conditions. Long term planning and decision protocols and methods are out-dated; for example, implementing plans developed long ago but not adapting their assumptions to these changing conditions.

It is common for communities to have out-dated sewer systems and equipment (and as noted above, we don't tend to vote for paying more to improve/replace them). Such factors mean we have a limited scope on possible solutions.

Nor are we using technology to make water use more conservational. One basic example is new piping in consumers' residences/businesses and public water systems to use and process gray water and white water in their different ways. Our systems do not distinguish that there are differences in how to actually use the water, e.g., each business moving in and suddenly being a consumer of water at a very high percentage, leaving less, in effect, for residences. The infrastructure of pipes and pumping was not designed to enable flow control to destinations or other ways to formalize the present-day fact that certain priorities and needs may need to come before others.

Finally, the kinds of people involved in addressing water use issues have been limited. Our social structure has government and special interests exercising control over the entire water table. Some people wonder if there are back-room payoffs of officials to influence decision making. The larger community does not have an active voice, and, for example, a way to be heard when critical of the government implementing outdated plans. The way we do public business largely leaves normal citizens out of the picture.

Conclusion

We recognized that at least two issues needed deliberation initially.

- First, the broader question of **How do we ensure residential water to meet core needs?** This would indicate direction setting we could agree on.
- When the outcomes of that deliberation indicated to us that residential water rationing would have to be part of a meta-approach to ensure sufficient residential water, we framed one of the next important questions: **How do we implement residential water rationing in a way that is context sensitive?**

Both of these issue frameworks follow below.

How do we ensure residential water to meet core needs?

APPROACH 1: Band together in whatever ways we can to get access to water

People may favor this approach if they assume that: Shortages will hit us before anything can be done to prevent them. We really will have the scenario of everyone scrambling for water.

People who favor this approach believe it is best because: Since water is a basic survival need, it cannot be assured by each person trying to fend for themselves, especially where public water systems are used. Rather, everyone in your family/community/friends/social groups must band together to make it through more comfortably. When people form groups and pool resources, they can define their own rules of usage and access and feel more in control in a scarcity situation. In fact, this could even foster creativity and build stronger groups and communities. Neighborhoods, not just family and friends, could develop awareness of the severity of the problem, learn more and do their part, as well as disperse the needed information to one another. This is how humans survived in pre-modern times. This approach makes sense because scarcity is a pre-modern kind of condition that we now have to adapt to.

Actions that a diverse array of actors could take to implement this approach effectively:

- Where public water system exists, the water board could monitor neighborhoods and publicize for peer pressure if any population is consuming more water per capita than others.
- The individual neighborhoods could organize to educate individuals and households that are less prepared to manage water shortages effectively.
- Private interests and cooperatives would install neighborhood water cisterns and taps to collect and share rain water.
- Citizens would have to monitor others in their chosen grouping and levy punishments of some sort so no one “games the system” and uses more than their fair share.
- Formal and informal community leaders or group heads would have to develop systems to ensure there are no great disparities within their groups and equalize supply among group members.
- ...
- ...

This approach may be worrisome to others, because:

- This approach is reactive, rather than proactive with serious conservation measures that might alleviate dire scarcity in our region.
- Possible water hoarding, poaching, and black markets as groups or neighborhoods could steal water
- The struggling members of society could have a more difficult time organizing themselves compared with the more educated members.
- This embeds a competitive segregation into the social unit (neighborhood, community, or region) with worrisome effects on the kind of society it would create.
- Independent and concrete individuals who lack larger social networks could be unable to make the “right” decisions about their rate of water consumption, throwing others’ access out of balance.
- The competitive survival dynamic is unsafe, with not much difference between an individual going it alone in survival mode versus a group that banded together in group survival mode. The golden rule would vanish.
- More violence is likely; severe conditions may form gang-type groups that care only for themselves, leading to social chaos, neo-tribalism. And if one group or community started fighting another, it would force others to follow suit in tit for tat mode, like reverting to the Wild, Wild West.
- ...
- ...

APPROACH 1: Band together in whatever ways we can to get access to water
If this were the only approach we used, what consequences and trade-offs would it involve?

- Must reprogram our mindsets to move away from survival mode even though “everyone for themselves” feels comforting and maybe surer to guarantee we make it, because that mode will tear apart communities instead of tying them together so more people survive.
- Although the thought of reverting to pre-modern social groupings seems primitive, we need to do it even if it means accepting the days of plenty are gone.

How do we ensure residential water to meet core needs?

APPROACH 2: Government must control access, and mandate certain uses and limits

People may favor this approach if they assume that: Massive public changes in behaviors and infrastructure is only possible when government mandates and implements them.

People who favor this approach believe it is best because: The water situation is too dire and too vital to life and health to gamble: ensuring public welfare properly resides with government. Government must take the lead on planning and installing new water infrastructure that makes conservation possible. Controlling water consumption has been hampered too long already by infrastructure that delivers potable water for all uses, rather than for only safety-required uses such as human consumption and hygiene. Jobs to rapidly add new gray water public and residential infrastructure will help local economies.

Actions that a diverse array of actors could take to implement this approach effectively (include which actors would have to be involved):

- Transfer control from water utility boards to local/regional governments.
- Add features to water systems to monitor usage and turn access off and on.
- Ration residential usage.
- Mandate collecting rainwater and provide rain barrels for all residential buildings for watering lawns, washing cars, and other safe uses of it.
- Legislate required use of gray water for all non-consumption, non-hygienic uses.
- Levy taxes to pay for adding infrastructure to collect and distribute gray water.
- Increase water fees to help fund infrastructure changes.
- Assess penalties for overuse, tampering with meters, and unauthorized uses of potable water.
- Require all heads of household to be trained and certified in water conservation and facts about water scarcity and gray water usage.
- ...

This approach may be worrisome to others, because:

- Public resistance out of fear and distrust of government controls means this option will never come about fast enough to safeguard the limited resources we have before it is too late.
- Too much political in-fighting and jockeying for position will doom this reform just as they have so many other important reforms, even though the stakes are high.
- In an already poor economy, new taxes would not generate enough to fund massive infrastructure additions.
- Rationing is frightening because one-size-fits-all governmental dictates could mean households are not allotted the amount of water they actually need.
- Too many people will be ineffective at limiting their water use, and run out.
- ...
- ...

APPROACH 2: Government must control access, and mandate certain uses and limits
If this were the only approach we used, what consequences and trade-offs would it involve?

- We would really have to buy into the scariness of impending water shortage to give over such control to government, and to enter the era of rationing this most basic resource.
- We would have to accept and pay the very high cost of changes that could ensure enough water, even though it is massive and will impact all of us negatively, it is necessary for the greater need to having water.
- ...

How do we ensure residential water to meet core needs?

APPROACH 3: Rely on market forces and technological innovation

People may favor this approach if they assume that: Once people really “get it” that a vital resource is scarce, both investment capital and technological innovation kick into high gear.

People who favor this approach believe it is best because: The real solutions lie in technology that has massive reach to change how we do things. There is an abundance of investment capital to fund technology development and implementation. This approach removes the burden of governments with already strained budgets to raise taxes in a slow economy, tax revenue that would not be enough to fund the massive improvements we need. Developing competition and incentives has proved effective over and over again, and in times of water scarcity is our last best hope to ensure enough water and improve how we use it.

Actions that a diverse array of actors could take to implement this approach effectively (include which actors would have to be involved):

- Venture capitalists fund and operate desalination plants in coastal areas.
- Manufacturing plants are re-engineered to eliminate disposal of production waste water into rivers and instead return it to public water systems for re-use.
- Major retailers sell water, add a premium to price to fund alternative conservation technologies
- Government solicits bids for private sector alternatives: water technology processes, waterless washing, etc.
- Venture capital funds and operates new water infrastructure to collect and distribute gray water
- Social entrepreneur philanthropists conduct competitions for best new water technologies
- Multimedia education on conservation, new technologies
- Organize data to inform industry/public/private: structure it in accessible ways for widespread lay and technical usage
- Legislatures pass business and residential tax credits for installing water-conserving and water-collecting devices
- Climate change philanthropists fund fiscal rewards to communities that use less water
- Chambers of commerce sponsor competitions for the least use of water in residential areas
- Popular TV shows promote conservative use of potable water, uses of gray water
- ...
- ...

This approach may be worrisome to others, because:

- This approach puts us well on our way to privatizing water, where water will become a costly privilege not a right.
- This doesn't force us to reduce our consumption behavior at all, an essential step we cannot skip.
- With all the demands on investment capital to meet other climate change demands, including reversing climate change impacts, this approach might get only spotty implementation, failing to ensure water for very many at all. Then what do we do?
- It gives us more hope but it is false hope without guarantee it will either happen or have large impact, especially

where water shortages are already dire and much harder to address.

- Technology development is a slow process, and this could well be too little, too late.
- Without government mandates and controls, those with resources will not be concerned enough with those areas in most dire need of water.
- ...
- ...

APPROACH 3: Rely on market forces, innovation, and technology

If this were the only approach we used, what consequences and trade-offs would it involve?

- The dependence on technology will increase our carbon-footprints when we need to be drastically reducing them: it is a catch-22, because what is gained in one way is lost in another: increase carbon-based energy use to increase water available.
- ...

How do we ensure residential water to meet core needs?

APPROACH 4: Pull together as a nation of communities and regions that share and equalize resources

People may favor this approach if they assume that: Our national boundaries are more relevant than local boundaries, and pulling together as a nation is essential in time of scarcity.

People who favor this approach believe it is best because: The pressure to migrate to regions with more water will strain every part of the country. It is better to be proactive and keep populations as stable as possible by moving water to where it is needed. By treating the nation as one body and caring for all of its parts, the entire national population benefits. To equalize water access maintains homes and industries where they are without straining the infrastructures of regions that would otherwise be subject to unsustainable increases in population. This approach could be implemented quickly, create jobs and more security, and unite the country in an essential common purpose.

Actions that a diverse array of actors could take to implement this approach effectively:

- Adopt-a-community and adopt-a-region programs to designate resource-sharing commitments
- Public-private partnerships launch new transport industry distributing water by truck, rail, and water pipelines from water-rich regions to water-poor regions
- Create a federal agency to ensure balance and non-discrimination of regions or communities.
- Regional rural-urban competition for water is incorporated into program to resolve conflicts between them in water-poor states.
- Federal and state promotion of low-meat diets to reduce livestock and related agricultural water consumption
- Promote new norms of co-responsibility and conservation so behaviors and attitudes change for greater good
- Publicly-funded installation of in-home/in-business water meters so water usage is closely monitored
- ...
- ...

This approach may be worrisome to others, because:

- Water forecast data can be manipulated to position regions as less water-rich than they are and exempt them from program

- Legal fights will delay implementation since politicians will be pressured by constituents to be parochial
- It could end up pitting regions against each other, create resentments and us vs. them mindsets that sabotage the effort.
- Idealism of this approach seems unrealistic, and it presumes more altruism and long-range thinking than we typically demonstrate.
- It could create a lot of conflicts within communities and regions as they negotiate what is “fair and equitable” to either give or receive, water-wise.
- ...
- ...

If this were the only approach we used, what consequences and trade-offs would it involve?

- We would have to believe we could make a 180-degree cultural change, to look out for others as much as we look out for ourselves.
- Regions that believe themselves to be comfortable in water supply would have to place great trust in forecasts to share their water with other regions, even though there are no guarantees that forecasts will pan out in this unstable time of climate change.
- ...

How do we implement residential water rationing in a way that is context sensitive?

APPROACH 1. Using the existing infrastructure to implement oversight and control now

People may favor this approach if they assume that: The people in charge of making rules will be fair in that no one would be left out. We have to have rules and legislation to make sure everyone takes responsibility and follows through. There are consequences for those that do not follow the rules. This keeps us all safe. You are either “on the bus or off the bus”. The situation is immediately critical and there is no time left to plan alternate strategies.

People who favor this approach believe it is best because: It will afford order and stable social relations. Existing infrastructure will be available to support this being put in place immediately. It is efficient and will handle the problem of water scarcity by enforcing behavior change quickly and fairly. This is a commonly understood method by which we govern ourselves and especially in times of crisis it is needed to keep control of what otherwise gets out of control rapidly. This approach provides a direct method of water control now, and has little or no upfront charge for the residents.

Actions that a diverse array of actors could take to implement this approach effectively:

- Water officials calculate amount of water needed per person, disseminate the information to the residents and announce a set date to cut back flow of water
- Local or state/province ban on watering lawns and car washing
- No water ration allotments for pet animals
- Ban watering non vegetable and fruit gardens
- Abiding by water rules enforced by shunning: eviction from public events (e.g. if stealing from water trunk lines)
- Local or state/provincial government bans swimming pools/hot tubs
- Neighborhood watch on misuse of water
- Water officials allot each household a certain volume of water to use.
- Water officials publish a month water consumption/progress report so residents see the difference they are making
-

This approach may be worrisome to others, because:

- I won't get enough water
- My quality of life will suffer: my lawn will die and I love taking care of my yard!
- The value of my house will go down
- My cat won't have water and he's member of the family
- I have a medical condition and need more water than most
- I'm scared officials will hoard the water for themselves and not care about us
- They won't stop at controlling the water, it could be the beginning of a dictatorship.
- This approach stifles innovation as we are not giving chance to figure out another way
- I've worked hard, can afford to pay more so I why can't I buy the water I need?
- It's bad for the town's image, tourism, business and taxes
- If you have smart ways of conserving then you should be able to do use your leftovers on whatever you want,
- I'm concerned that this will divide our community instead of bring us together.
- It's too problem oriented, we need to seek a higher consciousness and not focus on lack and negativity
- I'm afraid of people creating a black market on water or hacking into water systems

If this were the only approach we used, what consequences and trade-offs would it involve?

- People during water shortages will trade away their accustomed personal hygiene and the societal norms will change dramatically over time
- I cannot have a flush toilet and a green lawn at the same time
- Public officials will not be able to hoard water for themselves and be fair to all
- Society being controlled to the lowest common denominator instead of developing traits for the common good
- Relinquishing the responsibility as the citizen and embrace that we are not contributing to the solution and creating something different
- There is potential for water resources to be taken over by private hands and private business. Water is a common resource and should not be controlled by private interests or sold for a profit. Price gouging may occur.

How do we implement residential water rationing in a way that is context sensitive?

Approach 2. Creative solutions that are scientifically-based

People may favor this approach if they assume that: We cannot rely on public bureaucrats to know what to do or to act quickly. Instead impartial experts provide trustable advice based on facts and are able to create clearly defined 20-30 year rationing plans. Smart officials and citizen will follow these, but others can be further motivated by outcome focused education campaigns and incentives.

People who favor this approach believe it is best because: People are more motivated by creative options than punitive rules. We can access impartial expert opinions without lining the politicians' pockets. Data driven plans are more likely to respond to variables and define legitimate exceptions so fairness of rationing will be understood. We will have more money and water this way than if we depend on slow moving greasy wheels of governments.

Actions that a diverse array of actors could take to implement this approach effectively:

- Utilize unbiased scientifically based data in order to devise the amount of water that needs to be rationed
- Local officials disperse this data to the public and inform them of it reliability, explain it in lay terms.
- Water officials study the most efficient use of existing infrastructures.
- Create a water credit system, with credits that can be traded among residents and recorded by water officials
- Local officials set up exchange systems with communities who have water.

This approach may be worrisome to others, because:

- That rationing will not be enough over a long enough time line.
- Whose expert advice do we trust and what if they get it wrong wasting precious time , money and water
- There will always be exceptions to the rule and plans need to be flexible.
- Potential for water resources which should be a communal right to we taken over by private hands and private business sold for a profit and creating price gouging.
- As this is a new problem it will take a long time to gather scientific data and we don't have that time.
- Privacy being violated with experts coming to your house and checking around.
- Who is going to manage that project and are they qualified? Who should delegate?
- Data can be manipulated by citizens or experts for self serving purposes.
- We are smart enough in this community that we could come up with our own solution, WE are the experts.
- Data collectors are only looking at numbers, what matters is usually not measurable.
- The design is not equal or compassionate to those who do not know how or cannot ration and will suffer.
- Because of the probably lower personal hygiene, I worry disease can potentially spread more easily.

If this were the only approach we used, what consequences and trade-offs would it involve?

- The more context sensitive the data the more privacy is being lost.
- Loss of personal freedom for the security of the resources so we can use them in the future.
- Money and time spent on research instead of direct action.
- Community autonomy is traded for reliance on outside experts.
- Personal freedoms to use water as one desires will be traded off for restraint in the interests of the common good.
- The incentive driven approach traded off against common concern and fairness, may privilege some folks over others.
- Transferring power to private enterprise versus public control of the common resources

How do we implement residential water rationing in a way that is context sensitive?

APPROACH 3. Community engagement to define criteria for how to set rations

People may favor this approach if they assume that: There is no better way than to go directly to the source of the people concerned. Households have unique information about their own needs such as a variety of special requirements. When we deprive ourselves of rights we have taken for granted, we need to do it through democratic self governance. If people are able to talk together about their needs, they will be able to reach an understanding about what fairness means for this community.

People who favor this approach believe it is best because: The willingness and motivation to respond to water scarcity will happen when the whole community is engaged democratically and make their own tough choices. It is important to ensure that there is water, AND to insure that people don't feel victimized by actions taken about water. Residents will trust how the rationing is done because they transparently created the information needed. By participating in defining the criteria it gets tailored to the varied needs within each household and community.

Actions that a diverse array of actors could take to implement this approach effectively (include which actors would have to be involved):

- Public officials hire professional consultants and volunteer citizens to design and customize public meetings for specific purposes, such as Internet and face to face meetings.
- Specially designed public meetings for citizens to describe special needs, define criteria for applying rationing, and choose how to get data
- Government officials publish and announce the results of all public meetings using media
- Feedback loops reflect each cycle of criteria development and data reporting
- Neighbourhood watch programs go door to door to offer care to needy neighbours.
- Public education will frame the water issue as a real and imminent threat so that the consultation process is able to focus on needs and responses to the problem, rather than debating whether the problem exists or not.
- Deadlines will be set for completion of the consultation phase and beginning of the implementation of rationing.
- Residents can immediately start certain forms of voluntary rationing, like not washing cars, refilling pools or hot tubs, not watering ornamental gardens or lawns.
- Local government could set up a special support hot-line to handle questions

This approach may be worrisome to others, because:

- I can't get to public meetings, I have small children, our voice will not be heard
- My needs are already going unmet and now not even water!! I can't see how to survive.
- We don't understand that kind of public meeting forum, it is not how our ethnic community talks
- The only way our groups voice will be heard is to lobby and advocate and take over these meetings
- This is going to take ages! I don't want to waste hours in inefficient chaotic meetings
- We can't trust people will be disciplined enough to make changes without strong leadership
- It will cost a lot of money and time and only create frustration and more work after to fix things
- There are too many residents that use these water systems. It is totally impractical.
- The influence of really sharp strategic thinkers is wasted in these feel good kind of meetings.
- It is a data and technical issue and doesn't need the public input. It is simple. We know what to do.

If this were the only approach we used, what consequences and trade-offs would it involve?

- Efficiency to get the water rationed soon versus inclusion so that people do not feel victimized
- We have to give up so much of our time at meetings so as not to give up our water rights
- We have to trust good meeting facilitation or trust good outside data and experts
- We have to rely on each other as being concerned versus independently getting on with our own business