A Public Engagement Toolkit For Sea Level Rise

Tina Barisky

UBC SCARP MA Planning Candidate

July 2015

Greenest City Scholars Program
Mentors: Tamsin Mills & Doug Smith

Prepared for the Sustainablility Group, City of Vancouver


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Executive Summary

Coastal cities all over the world have begun planning for sea level rise out of the recognition of its potential impacts on our land, infrastructure and communities. Although many municipalities are already well-equipped to engage the public on standard planning issues, the specific challenge of sea level rise demands that planners utilize innovative tools and strategies to be effective. This project responds to leading research about climate communication best practice as well as policy directions from the Greenest City 2020 Action Plan and the City's 2012 Climate Adaptation Strategy.

Research and interviews with engagement professionals have shown the framing and delivery of climate change messages can have a tremendous impact on peoples' ability and willingness to process, accept and act on climate change. As such, effective communication with the public on climate-rated issues must appeal to shared community values, connect to locally relevant and observable impacts, emphasize solutions as well as the benefits of action, and offer the community a meaningful role in the action to address the problem.

There are multiple mechanisms for achieving these communication best practices. The following table summarizes the types of tools listed in this report. It also highlights case studies where these tools have been employed, as well as local tips applicable to the Vancouver context. Finally, the level of IAP2 participation achieved by the tool is indicated to ensure that Vancouver is satisfying a range of engagement tactics.

Summary of Tools

COMMUNICATION PRINCIPLE	TOOL TYPE	CASE STUDIES (CS) & LOCAL TIPS (LT)	LEVEL OF IAP2 PARTICIPATION
1. Effective climate conversations appeal to shared values.	1.1. Getting to know your audience 1.2. Connecting to values	LT: Talk Vancouver LT: Building partnerships with Vancouver's small business sector on sea level rise CS: A Stronger, More Resilient New York CS: Fostering dialogue at Boston Greenovate's Community Climate Summit CS: Citizen dialogues on sea level rise in Tampa, FL	Consult Involve Collaborate
2. Climate conversations must be grounded in local, relevant and observable impacts.	2.1. Visualizing the impacts 2.2. Making it locally relevant 2.3. Highlighting personal experiences	CS: Rotterdam's Climate Proof Adaptation Programme and 3D simulations CS: Using FutureCoast to visualize sea level rise in Anne Arundel County, Maryland LT: improving & expanding Vancouver's public art CS: Flood resiliency engagement in St. Mary's, GA CS: Sustainable DC's photography contest	Inform Involve
3. Clearly state the benefits of action and focus on solutions.	3.1. Framing the discussion 3.2. Developing an ongoing connection	CS: The City of London (UK)'s risk management approach to climate adaptation CS: Los Angeles' online climate change hub CS: Sustainable DC's e-newsletter and listserve LT: The City of Vancouver's 311 service LT: Pop-Up City Hall	Inform Consult Involve
4. The community must have an opportunity to take on a meaningful role in climate action.	4.1. Linking to the bigger climate adaptation picture 4.2. Encouraging peer-to-peer engagement	LT: Neighbourhood Emergency Preparedness Program LT: Community Disaster Support Hubs CS: Encouraging New Yorker action with flood risk communication CS: Sustainable Cleveland's Neighbourhood Climate Action Toolkit CS: Sustainable DC's Ambassador Program	Involve Collaborate Empower

A Roadmap for Public Participation

A roadmap for public participation is also suggested as follows to demonstrate how the tools in this report may be used in combination and to jumpstart the engagement planning process. This roadmap is not intended to be seen as the only way to successfully achieve public participation on sea level rise, rather it should be viewed as one of many options for an engagement strategy.

Stage 1: Collect information about key audiences	Communication Principle	Level of IAP2 Participation
Utilize Talk Vancouver to conduct neighbourhood surveys with a focus on what matters most to the community as well as their current level of understanding about sea level rise.	Effective climate conversations appeal to shared values.	Consult
Compile a list of existing and potential community partners in your target areas who may act as assets in the outreach process. Approach them to find out how they might partner with you in gaining wider participation.	Effective climate conversations appeal to shared values.	Collaborate
Create a calendar of community events in key neighbourhoods where sea level rise has the greatest potential impact and find out how engagement can complement these activities.	Effective climate conversations appeal to shared values.	Involve

Stage 2: Educate and build awareness on sea level rise	Communication Principle	Level of IAP2 Participation
Declare a city-wide sea level rise awareness week complete with educational activities (like a public information booth with the OWL sea level rise viewer) and actions residents can take (the HighWaterLine project is a good example).	Climate conversations must be grounded in local, relevant and observable impacts.	Inform
Plan an outdoor kick-off event nearby the Cambie street bridge public art project, or work with Parks, Recreation & Culture to have a new project commissioned in a key spot for unveiling at the event.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform
Host a king tides photo competition and offer prizes for the best photos. As a part of the awareness week, offer photography lessons to draw in more than the usual participants. Announce the winners at the kick-off event.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Consult Involve
Create a City webpage to house basic, accessible information and to communicate key messages about sea level rise (see c-change.la as an example). Select a digital sea level rise viewing tool to develop and make it accessible on the site. Make the site a hub for sharing photos and stories from the king tides competition.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Involve

Stage 3: Identify community assets and concerns together	Communication Principle	Level of IAP2 Participation
Work with community partners to host listening sessions to collect resident values and concerns related to sea level rise.	Effective climate conversations appeal to shared values.	Involve Collaborate

Stage 3 (cont'd): Identify community assets and concerns together	Communication Principle	Level of IAP2 Participation
Follow up with a series of workshops that acknowledge community vulnerabilities but focus on identifying strengths and assets (using VCAPS or a similar approach). At these workshops, maximize common understanding by utilizing simulations of various future scenarios (such as those produced by CanVis) as well as by showing participants how to use the digital sea level rise viewer.	Effective climate conversations appeal to shared values. Clearly state the benefits of action and focus on solutions.	Inform Consult Involve

Stage 4: Collaborate on solutions, both City and community-driven	Communication Principle	Level of IAP2 Participation
Utilize MetroQuest or a similar tool to get broad public feedback online about the City's flood-risk management options. Link this web-based platform to the City's webpage on sea level rise.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Consult
Provide workshop participants with a pamphlet that contains basic facts about sea level rise as well as actions they can take to increase their preparedness (link to the City's Emergency Management department and other existing support programs).	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Empower
Establish a sea level rise ambassador volunteer program so that citizens can educate others on sea level rise and/or be involved in soft measures to reduce risk (look to Washington DC and Storm Busters as examples).	The community must have an opportunity to take on a meaningful role in climate action.	Inform Empower
Form a local business advisory council to provide input on the City's flood-risk management options.	The community must have an opportunity to take on a meaningful role in climate action.	Empower

Stage five: Build ongoing connection and support	Communication Principle	Level of IAP2 Participation
Train and equip 311 staff to handle calls and queries regarding the City's sea level rise strategy.	The community must have an opportunity to take on a meaningful role in climate action.	Consult
Create a positive e-newsletter to update people on the engagement process and upcoming events.	Clearly state the benefits of action and focus on solutions.	Inform
Produce a neighbourhood action toolkit on sea level rise to guide neighbourhoods in creating their own community resilience-building projects. Consider offering funding options to support this initiative.	The community must have an opportunity to take on a meaningful role in climate action.	Empower

Next Steps

Preparing to undertake a process like the one above requires a few basic considerations. The following are a set of actions that can ensure the City is ready to begin engagement.

- Form a working group to learn how to coordinate sea level rise engagement with other key departments (such as Corporate Communications, Emergency Management, and Parks, Recreation & Culture).

- Establish goals, expectations, budgets and desired level of engagement. Completing the engagement planning worksheet with the Corporate Communications team should help with this.

- Work with Corporate Communications to establish key messages to be communicated in the engagement process.

- Clarify the intended length of engagement, including how the City will close the process or provide ongoing support to activities beyond the boundaries of the official engagement period.

Enacting public engagement on sea level rise not only responds to Vancouver's policy directions on climate adaptation, but it can also help the City to build upon its partnership with the people of Vancouver and should be viewed as a cornerstone to achieving a stronger and more resilient future together.

Table of Contents

Background

Why a public engagement toolkit on sea level rise?

Public participation is a key part of good planning processes. However, the scope and complexity of climate change demands that planners utilize innovative tools to communicate and engage with the public.

Scientists project that sea level rise will pose a significant challenge for Vancouver by mid-century. The Coastal Cities at Risk Project named Vancouver the 11th most vulnerable city in the world for exposed assets. With more than 25,000 people living within 300m of the shoreline and a potential loss of 18km of beach, much is at stake. Planning for sea level rise is a vital way to ensure that Vancouver will thrive in the face of climate change impacts.

The Province of BC has recommended that local governments plan for 1m of sea level rise by the year 2100 and 2m by the year 2200. Currently, the City of Vancouver is evaluating long-term coastal flood-risk management options for each area and reviewing these with both internal and external stakeholders. As climate adaptation measures are often difficult decisions that possess trade-offs, it is vital that the public understands and can contribute to the planning process for such options. A public engagement toolkit on sea level rise will provide planners with an evidence-based set of strategies for communicating and deliberating with the public on these decisions, and this is part of building broader community resilience on climate adaptation.

Policy Context

A public engagement toolkit for climate adaptation and sea level rise fits into the wider policy context of the City of Vancouver's Greenest City 2020 Action Plan. Adopted in 2011, the Greenest City 2020 Action Plan is Vancouver's blueprint to become the greenest city in the world by 2020. The Greenest City Framework sets out objectives to help prepare Vancouver for potential impacts of climate change while building thriving and resilient communities.

Specifically, the public engagement toolkit for climate adaptation and sea level rise supports the Greenest City goal of Climate Leadership, which is to eliminate Vancouver's dependence on fossil fuels. Although this goal is primarily associated with mitigation efforts aimed at curbing greenhouse gas emissions, adaptation is also needed to respond to climate changes already underway. This project directly supports the 2012 Vancouver Climate Adaptation Strategy, which has the stated objective of increasing the resilience of Vancouver's infrastructure and assets to coastal flooding and erosion. This project contributes to an enhanced partnership between the City and the public on the climate front, making the way for a green and liveable city that maintains its values, character and charm in the face of climate change.

Report Objectives

This report is divided into three major sections. First, a literature review on climate change communication provides the rationale for designing and implementing conversations with the public regarding sea level rise. Second, a toolkit is presented, integrating communication principles with international best practices and case studies. Third, a roadmap is presented to demonstrate how the tools can used in combination to achieve public participation on sea level rise.

The Basics

What is 'good' public engagement?

Public engagement tactics and approaches vary according to the issue at hand, who is affected, and how it affects them. At its simplest, 'good' public engagement encourages opportunities for levels of public participation appropriate to the issue, ultimately resulting in better decisions.

In October 1998, Vancouver City Council adopted its Guiding Principles for Public Participation. These guidelines are designed to improve decision-making by articulating a clear set of basic principles to follow for any public engagement initiative.

To summarize, the basic guidelines for 'good' public participation are:

1. Setting goals and objectives:

   The purpose and objectives of the process, as well as the roles of participants, must be clearly defined.

2. Identifying participants in the process:

   All who are potentially affected by an issue should have the opportunity to be involved, and special efforts should be made to include a diversity of voices.

3. Selecting involvement strategies:

   The process should be transparent and foster civility and mutual respect among all parties, soliciting input from varied opinions regarding outcomes.

4. Selecting communications strategies:

   Communications strategies should be accessible, clear and inclusive, and include regular and adequately disseminated updates on a project's progress.

5. Resourcing the process:

   The process should devote adequate resources, including staff trained in public participation, to achieve the stated mandate. Resources should be used effectively and efficiently.

6. Using public input, follow-up and evaluation:

   Communities affected by an issues should be informed of the process outcomes, and participants should be satisfied that a process achieved its mandate upon completion.

In addition to the basics of 'good' public engagement, research on climate change communication best practice can also inform the tactics and approaches needed to involve the public in decisions concerning sea level rise. The following section summarizes key principles for designing and delivering dialogue on climate change, climate adaptation, and sea level rise.

Learning from the science of climate change communication

Increasingly, climate experts are emphasizing the importance of understanding human cognition and behaviour in designing conversations on climate change. The framing and delivery of climate change messages can have a tremendous impact on peoples' ability and willingness to process, accept and act on climate change. As such, planners leading climate-based conversations must be well-informed on approaches that support learning, collaboration, and openness.

A review of current literature on climate change communication reflects four key principles that every climate-related public engagement process should consider:

Effective climate conversations appeal to shared values.

Climate conversations must be grounded in local, relevant and observable impacts.

Clearly state the benefits of action and focus on solutions.

The community must have an opportunity to take on a meaningful role in climate action.

Each of these lessons will be discussed in the section below.

1. Effective climate conversations appeal to shared values.

People perceive the world in a way that is values- based, meaning that they interpret new information through the lens of their existing views. Research shows when it comes to climate change, people seek out information that supports their beliefs and reject information that contradicts their beliefs. As such, individuals whose views are not compatible with climate change may not perceive its effects. For example, a 2012 study found that Americans' experiences of weather events strengthened their existing beliefs about climate change, regardless of whether they were concerned or skeptical about it.

Climate communicators can build common ground by tapping into commonly-held values, such as preparedness, prevention, responsibility and ingenuity. Recognizing the core ideals and interests at the heart of adapting to climate change can help people move beyond debating worldviews.

What this means for the City:

The City can optimize engagement with the public by identifying shared values that support the case for climate adaptation and incorporating these into conversations at the outset of participation efforts. For example, asking people to discuss the things they care about at workshops using dialogue-based tools can help establish common values across communities and set the stage for actionable priorities. Once these values are identified, storytelling tools can also be employed to highlight those supporting adaptation that resonate deeply with audiences. More details about these tools can be found in the tools and resources section.

2. Climate conversations must be grounded in local, relevant and observable impacts

Studies of behavioural psychology have demonstrated numerous ways that the human brain responds to large and complex issues. The following coping mechanisms can become barriers to addressing climate change:

- Psychological distancing refers to the idea that people tend to numb themselves to problems that are large in scale by disconnecting themselves from its implications. In the case of climate change, this means that people can underestimate how they will be impacted by its effects. For example, British public polling indicated that people generally perceive climate change as a phenomenon that will occur far into the future and in faraway places.

- Displacing risk is the concept that, when faced a large number of threats, people will direct their attention towards the most immediate concerns while ignoring those threats perceived to be far in the future. As there are only so many things that people can worry about, climate change slips the list of priorities.

- Protection motivation theory states that people must feel a certain degree of personal threat before they are motivated to make behavioural changes. For example, a US survey indicated that the more people felt susceptible to a climate-related event, the more likely they were to take steps to prepare an emergency kit and to reduce their energy consumption.

What this means for the City:

In order to overcome these barriers, the City must utilize techniques that reduce the psychological distance of climate change by showing how its impacts are expressed here and now. In other words, public engagement on adaptation needs to address the question, "what does this mean for me?". Talking about and showing specific and local climate impacts makes climate change personally relevant to people and increases their understanding.

For example, showing tangible images of local flooding occurrences can help people to grasp the urgency of the problem, while simulations of sea barriers and other flood-risk management options can assist them in better envisioning how they might experience and interact with the future physical character of their community.

3. Clearly state the benefits of action and focus on solutions.

Emotions are believed to play a fundamental role in how people process information and determine risk. In fact, emotions have been found to have a larger impact on behaviour than abstract or technical knowledge. Research shows that for many people, experiences can be framed in ways that trigger unconscious emotions that cause them either to further open up or to shut down. Climate change communications that invoke fear or guilt may cause people to turn away from the conversation. On the other hand, messages that acknowledge fears but centre on hope and action can be very fruitful in terms of increasing peoples' openness to learning about climate change.

Research suggests that climate communication is most effective when it focuses on solutions, as it builds confidence that climate change can be addressed, making people more likely to accept the issue and the need for adaptation. People are even more likely to endorse the proposed solutions if they align with their own worldviews. However, naming and working through fears is also important. By acknowledging the grief that accompanies the change needed for adaptation, people are more prepared to reinvest the emotional energy required to adjust, think through and accept solutions.

What this means for the City:

In its engagement on sea level rise, the City needs to be mindful of the emotional impacts that can result from different messages, and staff need to be trained and equipped to hold the space for these kinds of conversations. Messages about climate adaptation should be carefully crafted to emphasize the possibilities and benefits of action, while also leaving room for people to express and address their feelings of grief. In other words, effective

communication should be prepared to acknowledge the loss associated with climate change, but also move beyond this to identify what we might stand to gain from adaptation. For example, a well-designed workshop may utilize a risk-management framework on sea level rise, whereby participants are invited to consider risks with the purpose of learning about options to become better prepared in the face of such uncertainties. More tools and ideas about framing can be found in the tools and resources section of this report.

4. The community must have an opportunity to take on a meaningful role in climate action.

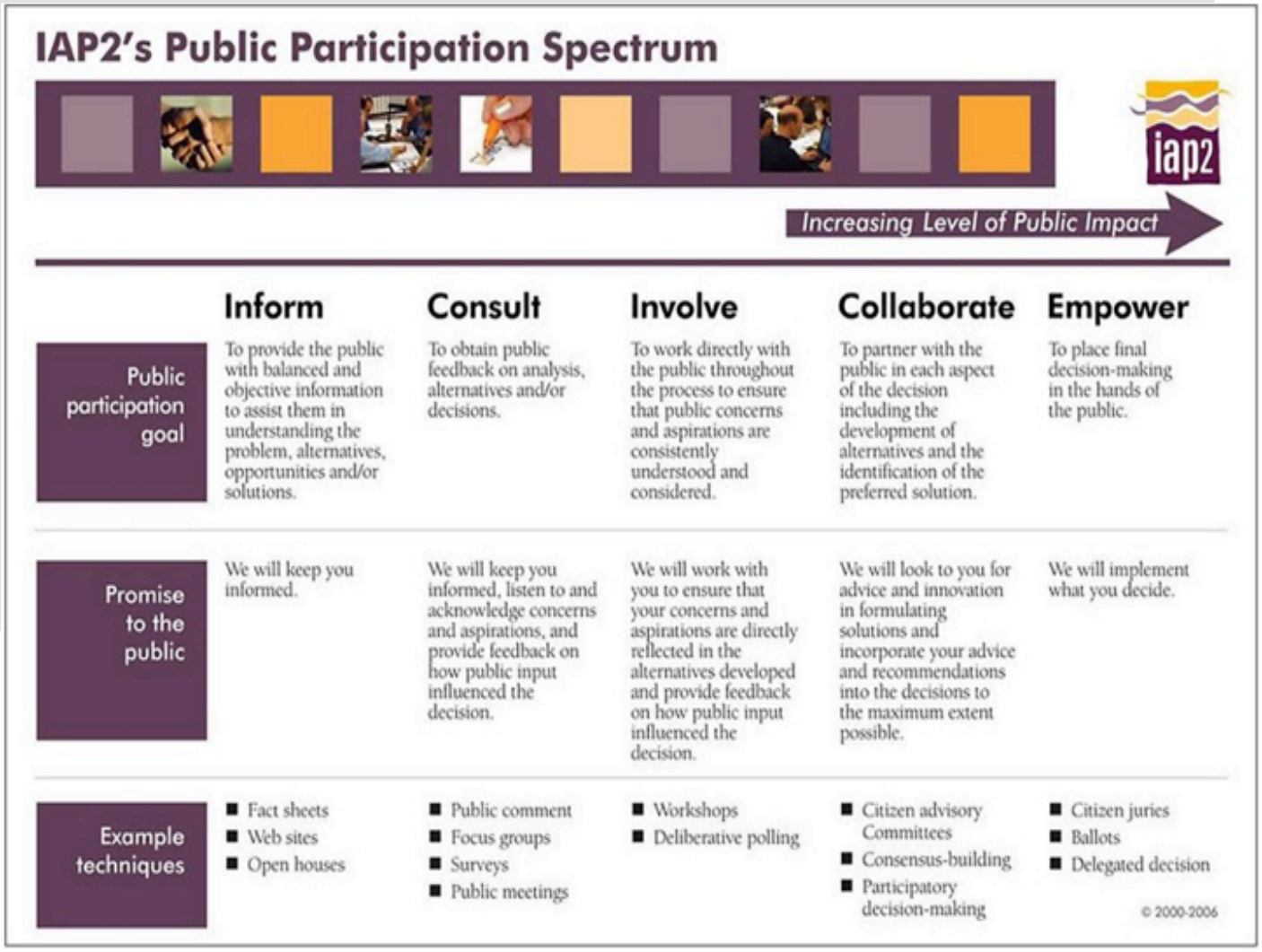
A sense of efficacy is the belief that people have the capacity to undertake action that will impact the outcome of a situation. Research shows that many people feel doubtful about their ability to impact climate change, and this can undermine their hope and their ability to respond. The more that people feel confident in their ability to address the issue, the more likely they will be to feel a sense of hope.

Efficacy can be enhanced when individuals view themselves as part of a larger group effort. Framing climate change as a group challenge reduces the scale of the problem in peoples' minds, making action more achievable. When people make decisions or process information as part of a group, they are also more inclined to behave in ways that are potentially more conducive to climate adaptation, such as promoting whole-community outcomes (like sea barriers), and focusing less on individual goals (like financial self-protection). Channeling the power of groups by mobilizing existing neighbourhood associations, religious groups, and local clubs can be an effective way of involving the community in climate action.

What this means for the City:

The City should create room in its engagement for dialogue about specific actionable ideas that people can undertake in their everyday lives and within their communities. While the City's sea level rise strategy primarily focuses on options for which the City is responsible

(such as structural and policy supports), it is important for residents to deliberate about how they can be involved in supporting these options by working together. Goals that indirectly complement the sea level rise strategy, such as building community resilience, adaptive capacity and emergency preparedness are thus important elements of the conversation.



Source: www.iap2.org

Tools & Resources

How this toolkit works

The following toolkit offers an adaptable approach to designing a public engagement process on sea level rise that is based upon current research and best practices for involving the public in climate adaptation. Each tool type is categorized according to the key principle in climate communication that it helps to achieve. Local tip boxes highlight tools already available to the City or ideas related to the local context.

In addition to the literature review on climate change communication, this report incorporates practical knowledge in the form of case studies from municipalities and research institutes around the world. Although many cities have yet to undertake a formal public engagement strategy specifically on sea level rise, most have engaged with the public in some manner regarding broader climate adaptation plans. In addition to insights from these, lessons can be garnered from other entities, such as non-profits and research institutes, who have initiated community dialogue processes on sea level rise. These findings have been integrated into the report to highlight specific tool types.

To assist with the City of Vancouver's engagement planning, the level of participation achieved has also been specified for each tool type. The City refers to the IAP2's spectrum of public participation to inform its decisions on the types of engagement tactics to undertake. Specifying each tool's public opportunity for influence will thus provide an easy reference guide for ensuring a strategic and effective approach.

Summary of Tools

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1. Effective climate conversations appeal to shared values.

1.1. Getting to know your audience

Identifying what matters to your target audience can help craft messages about planning for sea level rise that are effective and relevant, but this involves first getting to know them. Several tools can be helpful in accomplishing this.

Surveys can help gather information regarding what the community cares about concerning sea level rise as well as how they prefer to be engaged throughout the rest of the process. The following are tools that help to craft effective surveys to get baseline information about a community.

- What is a Survey (www.whatisasurvey.info) offers directions and resources for developing and implementing surveys.
- SPARC BC's Resident Satisfaction Survey Guide (www.sparc.bc.ca) provides tips on survey design and how to identify and collect relevant information on target audiences.

Local Tip: Talk Vancouver

Talk Vanocuver (www.talkvancouver.com/Portal/default.aspx) is the City's very own online tool in which people can sign up to participate in surveys and online forums. Over 4,500 residents are already members of Talk Vancouver, making it a useful starting place for gathering information about local concerns and opinions. Surveys and polls can be created for specific communities and neighbourhoods.

Finding and partnering with trusted community leaders is another way to get to know your audience and ensure that the engagement process will be credible and well-received.

- The Healthy People Toolkit (http://www.healthypeople.gov/2010/state/toolkit/08partners2002.pdf?visit=1) is a guide for identifying and engaging community partners. It includes tips, an action checklist and examples of how various levels of government and nonprofits have used different methods to involve partners, from focus groups to business advisory councils.

- The Brains Trust Method (www.enablingchange.com.au/brains_trust.html) is an approach to holding workshops that can engage local 'elders' and community leaders to gather local knowledge and identify appropriate engagement practices for the rest of the community.

Local tip: building partnerships with Vancouver's small business sector on sea level rise

Local businesses are vital to both the character and economic resilience of Vancouver's neighbourhoods, and can help to champion engagement on sea level rise. Vancouver may choose to partner with Local Business Improvement Associations (BIA's) to establish a process of engagement and/or disseminate messages about upcoming events and activities. More information about Vancouver's BIAs is available at http://vancouver.ca/doing-business/business-improvement-areas-bias.aspx.

Case study: A Stronger, More Resilient New York

In June 2013, the City of New York released A Stronger, More Resilient New York, its comprehensive strategy to increase resilience, improve infrastructure, and help communities re-build in the aftermath of Hurricane Sandy. The plan is the culmination of a six-month process that involved consultations with local stakeholders, climate experts, and the community, and is now in its implementation stages. At the outset of the public engagement process, New York's outreach team worked to ensure that leaders of the community were able to disseminate information about workshops and key messages to their networks. A key partner in this outreach was the Mayor's Community Affairs Unit (CAU), an assembly comprised of local leaders that represented community concerns to the City in five boroughs. CAU partnered with New York's Special Initiative for Rebuilding and Resiliency to connect with local businesses and organizations about the workshops. They found that working with these important and trusted community representatives increased participation at their in-person events and general public support for the process. Overall, over 1,000 New Yorkers engaged in-person with outreach workers. As a result of the community input, the City of New York was able to produce an award-winning plan with over 250 practical recommendations.

1.2. Connecting to values

Appealing to shared values involves creating the opportunities for those values to be identified and discussed. The following set of tools offers ideas on how to engage the public in conversations that highlight values.

Dialogue-based tools can foster the kinds of discussions needed to establish the shared understanding and basis for action on climate adaptation and sea level rise.

- Choice-dialogue (http://www.viewpointlearning.com/our-approaches/choice-dialogue/) is a dialogue facilitation tool that provides insight into public opinion, views and values that goes beyond polls or focus groups. It is a guide line for day-long workshops with the intent of revealing participants' views on complex issues.

- The VCAPS Process (http://www.vcapsforplanning.org/) is a facilitation process designed to increase resilience through dialogue. Using participatory modelling, participants can engage in dialogue about future weather and climate threats in order to summarize and integrate knowledge about how their community will be impacted.

- Listening Sessions (http://portal.ncdenr.org/c/document_library/get_file?uuid=a756e1a5-1ece-4ae7-99c1-59b58cc7f076&groupId=61563) are a helpful way to get community members to share their experiences and values with municipal staff. This report offers a sample guide for designing listening sessions around sea level rise, complete with a list of example questions to ask participants, such as:

    - What changes are you seeing and experiencing in your communities and in your environment?
    - What do you think the impacts of these changes will be on your community as they relate to sea level rise and population growth?
    - What do you think are some of the solutions to these issues?

- Tip sheet: Dealing with deeply held concerns and other challenges to the public engagement process (http://www.ca-ilg.org/sites/main/files/file-attachments/deeply_held_concerns_final_draft.pdf). In some cases, participants' deeply held views and values may come into direct conflict with successful outcomes of dialogue on sea level rise. This tip sheet offers ideas for the planning and delivery of public engagement activities where this is an issue.

Case Study: Fostering dialogue at Greenovate Boston's Community Climate Summit

In 2014, Boston launched the Greenovate Boston Community Climate Summit as a way of engaging citizens on developing an update to its climate action plan (released four years earlier in 2010). The purpose of the Summit was to encourage dialogue about the things that were important to community members and to foster collaboration on protecting these things while reducing greenhouse gas emissions. Prior to the Summit, a web-based platform called MindMixer (http://mindmixer.com/) was used as an online public meeting forum: people were invited to propose and discuss ideas to help achieve the climate action plan, as well vote for others' proposals. The most popular ideas were then discussed and developed at the Summit. As a result of the dialogue-focused activity leading up to the Summit, it surpassed its participation goals, attracting a diverse group of more than 500 people to the event itself. The engagement process was also highly rated and people expressed that they felt a sense of ownership over the actions.

Case study: citizen dialogues on sea level rise in Tampa, FL

In 2013, the Union of Concerned Scientists partnered with Viewpoint Learning to host a day-long workshop exploring how the public comes to accept the issues and tradeoffs involved with sea level rise. The workshop relied on a dialogue-centred approach called Choice Dialogues. It utilizes a series of breakout discussions interspersed with questionnaires in order to improve public learning and prioritize action. At the beginning of the workshop, participants received a workbook constructed around a range of different approaches to dealing with sea level rise, from reactive to urgent action, with the purpose of capturing as many different points of view as possible. In between discussions, participants were asked to fill out questionnaires to gauge how their opinions about the scenarios might have changed throughout the day. The results showed that people found the dialogue itself to be an effective source of information. Participants rated the discussion as being even more helpful than the background materials in getting them to think about sea level rise. The dialogue also helped participants to find common ground, develop actions, and gain a stronger sense of ownership over their conclusions.

Story-telling is a powerful way not only to express the values inherent to climate adaptation, but also to educate and motivate others. By telling relevant stories and by encouraging people to share their own, climate communicators can piece together facts, feelings and context in a way that causes people to listen. The following are resources that assist communicators to craft compelling stories about sea level rise. Section 2.3 provides resources to encourage citizens to share their own stories and personal experiences of sea level rise.

- The Preparation Frame (http://www.climateaccess.org/sites/default/files/Climate%20Access_The%20Preparation%20Frame_0.pdf) is a guide to communicating climate messages using stories. Drawing upon the principles of effective storytelling by Marshall Ganz, it offers a practical guide to telling stories about climate change and helps to convey and reinforce values at the core of climate adaptation. Included in this resource are tips and sample talking points. Refer to the section beginning at p.17, Delivering the Frame.

- Storytelling Best Practices for Websites (www.climateaccess.org/sites/default/files/Goodman_Storytelling%20Best%20Practices_Websites.pdf) is a digital instructional booklet that provides suggestions for how organizations can improve their online storytelling techniques, by writer and orator Andy Goodman. The booklet draws from examples of websites from nonprofits, foundations, government agencies, and educational and cultural institutions.

- RISE Stories (www.sfu.ca/rise/entries/RISEstories.html) is a project entry for Simon Fraser University's RISE competition. It offers a high-level framework for how the City of Vancouver can utilize storytelling to engage with citizens on sea level rise.

- The Story Group (www.thestorygroup.org/category/nationalclimateassessment/) has developed a series of videos that explain the science behind the issue of climate change and show how climate change is affecting real people. These videos can act as a reference point for a locally adapted mini-film series focused on sea level rise. A proposal has already been put forth by Golder Associates to create such a series with the aim of showcasing personal and community stories in Coastal BC, so the City of Vancouver could collaborate with them on it.

- Storyboarding (http://coast.noaa.gov/digitalcoast/inundation/communicate/highlight) is a technique that helps tell the community a 'story' by tying together local maps, graphs, photos, newspaper clippings and other media to help highlight vulnerabilities that communities are most concerned with and to identify possible solutions. This technique was used in Miami-Dade County as an approach to discussing the challenge of sea level rise.

2. Climate conversations must be grounded in local, relevant and observable impacts.

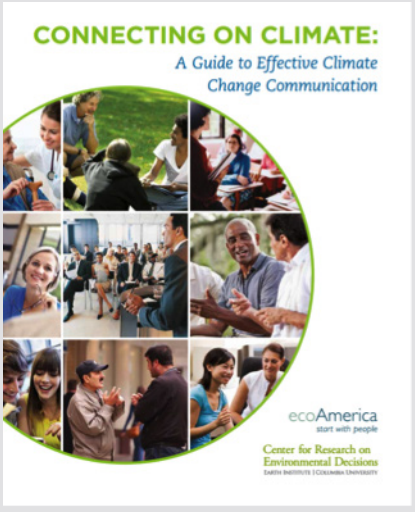
Building support for action on sea level rise requires that the issue be transformed from an abstract possibility to a future reality in the minds of the public. Fortunately, there are an increasing number of tools that help to show the impacts of sea level rise at a local scale and in tangible ways.

2.1. Visualizing the impacts

One way to help people understand the scale of sea level rise impacts on their community is to use compelling visuals. It's difficult for people to wrap their heads around the large and obscure numbers and science that often encompasses conversations on climate, but images and simulations using projection data can give people a picture of the future ahead. The following set of tools can help the City incorporate images and visuals into its engagement strategy.

Guides for communicating with visuals are useful for establishing how to use imagery when talking to the public about sea level rise. The following guides are great starting points.

- Resource Media's Seeing is Believing: A Guide to Visual Storytelling Best Practices (http://www.resource-media.org/wp-content/uploads/2013/04/Visual-storytelling-guide.pdf).This brief guide provides quick steps for integrating visuals into communications strategy (examples include how to ensure that images match the message and how to use captions effectively). At the end of the guide, there is a checklist for quick and easy referral.
- EcoAmerica's Connecting on Climate: A Guide to Effective Climate Change Communication (http://ecoamerica.org/wp-content/uploads/2014/12/ecoAmerica-CRED-2014-Connecting-on-Climate.pdf). This broad manual covers many aspects of climate change messaging, but section 6 on images is particularly helpful. It also includes a tip sheet that summarizes the main takeaways for communicators.



Sea level rise viewers are web-based platforms that model the impacts of sea level rise using scenario projections. There are now many viewers with a range of additional features, from calculating damage and cost estimates to overlaying geographical data with social indicators. The following table offers a comparison of the features of several key viewers.

Viewer Name	Features	Geographic Coverage	Ease of Use
Climate Central's Surging Seas (http://ss2.climatecentral.org/#) Contact: Dan Rizza, drizza@climatecentral.org	• 2D static layered map • Data derived from NOAA • Shows 0-10 feet seal level rise • Maps sea level rise against other social indicators such as population & ethnicity • Sea level & flood projections • Detailed exposure analysis • Comparison by country • All in one reports	US National, including: • Gulf of Mexico (FL, TX, MS, AL) • West coast (CA, OR, WA) • East coast (FL, NJ, NY) • Pacific (HI)	Medium
Eyes on the rise (http://www.eyesontherise.org/)	• 2D static layered map • Data derived from State of FL Emergency Management LiDAR ProjectLAS Datase • Search by location • Shows 0-6 feet sea level rise • Static sea level rise view (does not take into account tidal effects)	US Regional, including: • Miami • South FL	High
Nature Conservancy's Coastal resilience 2.0 (http://coastalresilience.org/) Contact: Zach Ferdana, zferdana@tnc.org	• 2D static layered map • Data derived from HAZUS estimates, • Custom 'Apps' that address geographically specific coastal issues for resilience • Displays assessment of natural ability of marsh, mangrove and coral reefs to protect human communities in some geographies • Measure area/distance • Toggle that allows for viewing 2 maps at once • Generate custom shortened URLs for easy map sharing • Save & print maps	International, including: • Gulf of Mexico & multiple bays • West Coast • East Coast • Caribbean • Central America	Low
COAST (Coastal Adaptation to Sea Level Rise Tool) (https://www.bluemarblegeo.com/products/COAST.php) Contact: sales@bluemarblegeo.com	• 3D Interactive Google Earth map • Based on GIS application Global Mapper SDL • KML/KMZ files that can be easily loaded and viewed in Google Earth • Models marsh migration due to sea level rise • Represents damage from sea level rise • Allows for basic cost-benefit analysis calculation	International	Low
Future coast (http://futurecoast.info)	• 2D static layered map • Shows historic trends • Two future impact scenarios (low and moderate acceleration) • Projections up to year 2100 • Summary of whole area impacts	US Regional, including: • Ann Arundel County	High

Case study: Using FutureCoast to visualize sea level rise in Anne Arundel County, Maryland

In 2013, the Community Adaptation to Sea Level Rise and Inundation project piloted a new platform for increasing citizens' engagement and discussion of local policy responses on sea level rise. As part of this platform, the project team utilized FutureCoast (http://futurecoast.info), a digitial web-based sea level rise viewing tool with detailed household, neighbourhood and county-level impacts data and visualization. The tool was introduced at the public deliberative event and residents were instructed on how to look up and view impacts on their home and neighbourhood. In a follow-up survey, participants were asked to rate its effectiveness. Results show that on the whole, participants felt the tool was very easy to use (67%), that it was helpful in their understanding of sea-level rise impacts (92% agreed for their home or property) and that it was useful to the discussion of potential local sea level rise policies (82% agreed). Project leads estimate that Futurecoast is potentially scalable to other communities at a cost of approximately $35,000. For more information and to see the full report findings of this pilot study, visit http://climatechangecommunication.org/sites/default/files/reports/CASI_FINALPROJECTREPORT_030513.pdf.

Other interactive tools can be used to visualize and communicate the impacts of sea level rise.

- CanVis (http://coast.noaa.gov/digitalcoast/tools/canvis) is a free image editing program developed by the U.S. National Agroforestry Centre for creating natural resource planning simulations. CanVis is easy to use and allows viewers to 'see' potential community impacts from coastal development or from sea level rise. Users can download a background picture, and then create a vision of the future by adding objects such as docks, buildings, and rising water from the photo objects library. These images can then be used to help audiences understand a variety of future scenarios.

- Plan2Adapt (http://www.pacificclimate.org/analysis-tools/plan2adapt/) is a digital platform that produces maps, plots and data describing projected future climate conditions for regions throughout British Columbia. Developed by the Pacific Climate Impacts Consortium, it is designed to help those involved in local community planning to understand climate change in their own region using standard climate model projections. Simply select a region, timeframe (up to year 2099) and season to get started.

- The University of British Columbia's Collaborative for Advanced Landscape Planning (CALP) (http://calp.forestry.ubc.ca/projects/) has been working in partnership with the corporation of Delta to identify, model, visualize and evaluate potential flood impacts and adaptation options for the region. CALP possesses the tools to produce a set of 2D and 3D visualizations that can be used to communicate sea level rise, and may be looking to expand this work to other cities in the Lower Mainland.

- MetroQuest (http://metroquest.com) is a platform software designed specifically for planning project teams undertaking community engagement. This site design allows the public to learn about projects and provide input through several visual tools, including map inputs, scenarios, and visualizations. It has been used to guide the community engagement for sustainability plans of Cincinnati, Southern Nevada, and the District of North Vancouver.

Left: Visualization screen allows participants to review and vote on alternative scenarios through sketches, videos, images, etc.

- OWL (http://www.owlized.com/) is a public outdoor virtual reality viewer that helps users to visualize the future physical character of a place. It has been designed for city planning in order to help people connect with their surrounding environment and to visualize possible design solutions to current issues (such as structural barriers to address sea level rise). This tool reaches people not typically involved in public engagement processes and helps municipalities to communicate design options. It was recently tested in San Francisco to receive input on building a new and greener Market Street, and the majority of users felt more informed about the project.

Case Study: Rotterdam's Climate Proof Adaption Programme and 3D simulations

In 2008, the City of Rotterdam introduced its Climate Proof Programme to plan for climate adaptation and resilience by the year 2025, with an expressed goal of protecting the City against flooding. As part of the public engagement process, residents were informed about water systems and flood safety strategies. Municipal staff found 3D simulations (such as the multifunctional dyke reinforcement pictured) to be especially helpful in conveying ideas and comparing present visuals with future options.

2.2. Making it locally relevant

Sea level rise can also be made more real and salient to people through locally relevant projects that capture their attention.

Public art projects can increase public awareness of sea level rise and improve support for projects focused on responding to it. They can also inspire people to imagine a city reshaped by higher sea levels. Several public art projects have been undertaken in various cities to highlight sea level rise.

- HighWaterLine (http://highwaterline.org/about/) is a project by artist Eve Mosher that works with local communities to draw chalk lines demarcating flood zones to create curiosity and interest. Workshops are often held prior to line drawing to consult with residents to determine areas of importance where markings should be placed and to train those doing the chalking to speak with curious passersby about sea level rise. Project leads also partner with local community organizations and attend local events to spread awareness about the project. Lines have been drawn in London, Philadelphia and Miami.

- The Blue Line Project (http://www.sfu.ca/rise/entries/the-blue-line.html) is a project entry for Simon Fraser University's RISE competition. It offers a blueprint for how the City of Vancouver can tackle public engagement on sea level rise through the marking of streets and public spaces representing projected sea levels.

- PLUNGE is a public art installation by artist Michael Pinsky using low energy blue LED lights on three of London's iconic monuments, including the Seven Dials Sundial Pillar and the Duke of York Column. The lights mark the projected sea level at 3012, prompting passersby to imagine the possible impacts of climate change on the urban landscape.

Local tip: improving & expanding Vancouver's public art

Currently, the False Creek neighbourhood features a sea level rise public art project in which the pillars of the Cambie Street Bridge were painted to mark the midpoint of sea level rise estimates. While this project has high visibility from a distance, the City can improve upon the public's relationship with the surrounding space to draw further awareness to it. Hosting public events nearby, such as arts festivals highlighting our relationship to the ocean, can activate the space and bring to life in residents' minds. The space can also be utilized as a backdrop in the City's communications photo-shoots for related issues. Working with the Parks, Recreation & Culture, the City can also expand its art projects to other neighbourhoods. The Civic Public Art Program allots a budget for projects that reflect civic priorities every year. There may also be opportunities to install temporary art installations at no additional cost to the City with the non-profit Vancouver Biennale, as in the past. More information can be found at http://vancouver.ca/parks-recreation-culture/create-and-place-public-art.aspx.

Case study: flood resiliency engagement in St. Mary's GA

In 2013, St. Mary's was selected through a nationwide grant competition to undergo community resilience and adaptation planning with funding from NOAA's National Sea Grant Program. With over 90% of its historic structures located below the current 100-year flood evaluation, the community agreed that sea level rise planning and flood-risk management was a priority. The St. Mary's Flood Resiliency Plan was created in part through a public engagement strategy to collect the community's insights and experiences with flooding, adapted from a previous adaptation project on Tybee Island. A public Town Hall meeting was hosted in March 2014 to collect local knowledge on the community's vulnerabilities. The event was timed in conjunction with the community's king tide event so as to appear timely and to attract more attendees. The project team found that by timing its event in accordance with the local King Tide, the issue was more salient and pressing to people because its effects were more noticeable.

2.3. Highlighting personal experience

Drawing attention community members' personal experiences with sea level rise is yet another way to make it tangible and locally relevant to the public. The use of oral history and first-hand narratives from locals makes sea level rise both a relatable and immediate issue.

Storytelling tools encourage citizens to share their perspectives and first-hand experiences with flooding and with the changing climate and landscape.

- The King Tides Initiative (http://kingtides.net) is a web-based project that raises awareness about sea level rise by inviting people to share their visual experiences and stories concerning sea level rise. Citizens are encouraged to take photos during a king tide event and upload then to social media, tagging the post with #kingtides. Local projects can also be organized on the same platform.

- 350.org's Climate Impacts Day (https://350.org/2014-review) is a public campaign that connects extreme weather issues and climate disruption by inviting people to take and upload pictures of what they think represents a climate impact. The site also provides an instructional manual for the public on how to tell an effective story.

- Climate Stories Project (http://www.climatestoriesproject.org/) is an online collection of stories that highlight the impacts of climate change on peoples' personal lives. Visitors can listen to climate stories and directly participate in the storytelling by adding their own.

- Future Coast (http://futurecoast.org/about/) is a web-based storytelling project about possible climate-changed futures. It imagines an alternate reality in which there is a software glitch in the voicemail system, causing the voicemails of the future to be sent back in time to the present. Users can record their ideas of possible futures on a designated phone line and these are uploaded on the site as 'voicemails of the future'. This tool is a way to listen to diverse ideas about how climate change will impact our future. To learn more behind the scenes information about the project, visit http://www.futurevoices.net/.

Case study: Sustainable DC's photography contest

In spring 2015, the District of Washington DC launched a photography contest called Picture This as a part of its Sustainable DC initiative. The contest was an effort to strengthen the connection between climate change and daily life in the District. People were invited to submit photos that reflect the impacts of climate change in their neighbourhoods as well as adaptation measures in response to these, for a chance to win one of four prizes. Workshops were also held to invite people to learn how to take strong photos, with the intent of also providing a space in which people could learn about and discuss climate change. The contest closed on July 12th 2015, and photos are intended to be highlighted in a public exhibit showcasing the meaning of climate change to local residents. Visit http://www.sustainabledc.org/climatephotos/#!prettyPhoto to find out more about the photography campaign. (See Appendix D for the full poster of the campaign).

3. Clearly state the benefits of action and focus on solutions.

The cognitive-emotional consequences of facing the realities of climate change mean that the conversation about sea level rise must be approached carefully. A wrongly-crafted message can induce fear and even panic in the public, causing them to dismiss the issue altogether. However, arriving at acceptance and action requires a focus on the benefits of adaptation as well as solutions. The following set of tools provides guidance for crafting messages with this focus.

3.1. Framing the discussion

There are multiple ways that a conversation on sea level rise adaptation can be framed to emphasize benefits and solutions. The following resources offer different approaches.

- EcoAmerica's Moral Foundations Fact Sheet (http://ecoamerica.org/wp-content/uploads/2014/12/ecoAmerica-CRED-2014-Connecting-on-Climate.pdf, p.14) provides a reference for reframing climate change issues using different moral foundations, or the foundations that drive people's understanding of what is 'good' and 'right'. This resource describes 6 moral foundations along with the characteristic emotions, relevant virtues, and climate communication themes and concepts associated with each. Since some moral foundations resonate more strongly with some audiences than with others, this resource can help identify the best themes to emphasize.

- Conveying the Human Implications of Climate Change Primer (http://www.climateaccess.org/sites/default/files/Maibach_Conveying%20the%20Human%20Implications%20of%20Climate%20Change.pdf). There is growing evidence to suggest that framing climate impacts as a human health issue can resonate with many audiences. This primer designed for public health professionals offers tips on how to emphasize the health benefits and 'win-wins' associated with taking action. Refer to Section 3 (p.18) for details.

- Science Communication Portfolio on Sea Level Rise (http://www.soest.hawaii.edu/soest_web/Documents/SciCommPortfolio_SLR.pdf) is a short guide developed by the University of Hawaii and the Union of Concerned Scientists that provides communication steps to deliver a message on sea level rise. Refer to this guide for sample messages that communicate solutions and relay the benefits of taking action.

Case Study: The City of London (UK)'s risk management approach to climate adaptation

As the core of the Greater London Area, the City of London is considered a site of strategic economic and infrastructural importance. A serious heatwave in 2003 resulted in more than 2,000 deaths in Greater London and provided the impetus for climate adaptation planning throughout the area. In 2007, the City adopted the world's first climate adaptation strategy, followed by an implementation progress report in 2010. The City of London adopted a risk management approach to its planning and public engagement process, whereby participants identified the risks of climate change and collaborated on steps to reduce these based on the agreed assumption that it is better to be safe than sorry. In workshops, the project team focused on providing information regarding the changing climate and allowing people to deliberate on its impacts for them while strategizing ways to address them. A tool called the Local Climate Impacts Profile (LCLIP) was used to help people understand the City's current vulnerability to the weather. The LCLIP consists of a spreadsheet that allows people to fill in past experiences and impacts with the weather drawing from previous news stories and memory (http://www.ukcip.org.uk/wizard/current-climate-vulnerability/lclip/). This helped participants to clarify the nature of their area's vulnerability as a way of identifying feasible solutions. The project team found that a risk management framing of the issue can assist the public in moving beyond fears about climate change to hope and action.

Case study: Los Angeles' online climate change hub

In 2012, Los Angeles launched c-change.la, a user-friendly digital hub that translates climate science into common language with a positive and hopeful framing of the issue. Developed and maintained by Climate Resolve, c-change.la features locally-specific science on climate impacts, such as temperature, snowfall and precipitation, while also being careful to emphasize local solutions. Success stories are designed to highlight achievements and keep the climate conversation hopeful. A 'Take Action' section of the site offers things that residents can do and links to further information. Resources like the 30-year timescale are a fun and forward-looking way to help users to put in perspective the timeframe needed for action. C-change.la is an innovative and well-crafted model for web-based messaging on climate solutions.

3.2. Developing an ongoing connection

Since communication focused on benefits and solutions is unfortunately not the default message when it comes to sea level rise, many municipal staff have found it important to communicate these messages on an ongoing basis. The following tools can be used to maintain a connection with the public as the planning process unfolds.

E-newsletters are an effective way of keeping in touch with large numbers of people to summarize in-person engagement events, link to pertinent information online and social media, and reiterate key messages.

- Best Practices for E-Newsletter Design (http://www.washington.edu/marketing/files/2012/10/DesignGuide.pdf) is a guide created by the University of Washington for producing an attractive and easy-to-read e-newsletter. It also includes links to other practical resources, such as a step-by-step manual for creating an e-newsletter.
- Emma (http://myemma.com/) is an email marketing service that provides an easy way to format and send personalized e-newsletters, manage contacts, and track responses.

Case Study: Sustainable DC's e-newsletter and listserve

In an effort to maintain a positive and energetic message on climate action and to update its residents on the progress of its Sustainable DC initiative, the District of Washington created an e-newsletter and invited residents to sign up at every in-person event. The e-newsletter is action-oriented, focusing on upcoming events and things that residents can do to promote sustainability in their everyday lives. It also provides regular reports highlighting the accomplishments of the Sustainable DC initiative to-date. District staff have tracked responses and readership levels, and have found this positive approach to generate strong community engagement. Source: http://us4.campaign-archive1.com/?u=659c4ece0c1135dfd98ca6386&id=3c9f22bd14

Other ways of keeping in touch include utilizing existing public service support tools, like phone talk-back lines, social media forums, and tabling booths at local events.

Local tip: the City of Vancouver's 311 service

The City's 311 service is a tool which allows citizens to connect with City Hall by phone 24 hours a day and in dozens of different languages. Citizens can use this service to ask questions, get information, share concerns and give feedback, making it a possible avenue for maintaining an ongoing connection about the sea level rise public engagement process. The City may wish to provide contact centre representatives with a primer on the key messages, events, and sources of online information on this topic, and/or a mechanism to receive feedback about the process. Find out more about 311 at http://vancouver.ca/your-government/contact-the-city-of-vancouver.aspx.

Local tip: Pop-Up City Hall

The City of Vancouver recently introduced Pop-Up City Hall as a way of improving the public's access to City services and encouraging active participation. Pop-Up City Hall is a mobile booth that sets up at local festivals and in various public spaces within the community to answer questions, provide resources like recycling bins and bike maps, and learn about the City's programs. This service already engages with the public on sea level rise indirectly, by offering people the chance to sign up for an emergency planning course. However, it can also be used to hand out materials on sea level rise and information about engagement events. Learn more at http://vancouver.ca/your-government/pop-up-city-hall.aspx.

4. The community must have an opportunity to take on a meaningful role in climate action

Meaningful public involvement on climate action is about providing people with actions that they can take in their everyday lives to be a part of the solution. The following set of tools offers suggestions for involving the public in action on sea level rise.

4.1. Linking to the bigger climate adaptation picture

Deciding how the public can be meaningfully involved in sea level rise action can be a challenge given that many of the adaptations are technical and structural in nature. Fortunately, taking action on sea level rise can also be about soft measures, such as encouraging green infrastructure, preparedness and community resilience, in which the community has a direct role to play.

Community resilience building tools help to strengthen community relationships and overall preparedness for disasters and emergency events.

- Cities of Service's Storm Busters Blueprint (http://www.citiesofservice.org/sites/default/files/StormBusters.pdf) is a step-by-step guide produced to assist municipalities in engaging residents on becoming volunteers to implement green infrastructure measures. These measures mitigate the impacts of flooding by planting trees and rain gardens, cleaning waterways, and restoring river and stream banks. This blueprint highlights ways that volunteers can best support water management approaches and describes required elements as well as steps to execute the plan.

Linking to existing City programs is an easy way for the City to offer the public an active role in adapting to sea level rise.

Local tip: Neighbourhood Emergency Preparedness Program

(http://vancouver.ca/home-property-development/free-emergency-workshops.aspx) The Neighbourhood Emergency Preparedness Program is a City program that offers free emergency planning workshops to groups of 15 or more residents at a time. The workshop topics include learning how to prepare, respond, and recover from disasters, including flooding events.

Local tip: Community Disaster Support Hubs

Currently, Emergency Services is planning to implement hubs to act as a gathering place for neighbours in the event of an emergency. A previous Greenest City Scholar project by Eliana Chia (http://sustain.ubc.ca/sites/sustain.ubc.ca/files/Sustainability%20Scholars/GCS%20reports%202014/Neighbourhood%20Social%20Resilience%20-%20Final%20GCS%20Report.pdf) recommended that these be expanded for more regular use during non-emergency periods, to increase neighbourhood relationships and connectedness as a way of making these hubs familiar and increasing preparedness.

Case study: encouraging New Yorker action with flood risk communication

As part of New York's comprehensive plan to strengthen communities against the impacts of flooding and in response to recent legislative changes affecting FEMA flood risk insurance rates, a communication plan was devised to let home and business owners know how they can protect themselves against flood risk. A public outreach team gave presentations to local neighbourhoods centred on the key message, "Know your risk" and provided materials that listed actions they could take. For example, community members received Z-cards, wallet-sized pamphlets that showed the difference in floodplain insurance coverage and advised them on proactive steps to take to ensure their financial property investments are protected (pictured or see Appendix C). The flood risk insurance and policy team found that it was highly effective to communicate flood risks alongside tangible actions that residents could take, as residents were more interested and engaged in the process itself, and the action points allayed concerns about vulnerability.

4.2. Encouraging peer-to-peer engagement

In addition to directing people's attention to the City's existing programs that build resilience, the City can make a set of resources available online and in workshops to community members with a desire to play a more active role in determining new initiatives. The following resources are helpful starting points.

Self-serve training tools give aspiring community leaders the opportunity to educate themselves and become 'ambassadors' of sea level rise adaptation so that they can raise awareness on the subject and help others to do their part in preparing for its impacts.

- Community Resilience Learn & Tell Toolkit (http://www.rand.org/pubs/tools/TL163.html) uses a 'train-the-trainer' approach to teach people about community resilience so that they can then educate others about resilience. The kit includes a LEARN section with basic resilience concepts, definitions and stories, as well as a TELL section with tips, talking points, games and exercises to help users teach others about resilience.

- Bay Localize's Community Resilience Toolkit workshop guide (http://www.baylocalize.org/files/Community_Resilience_Toolkit_v1.0.pdf) provides a roadmap for local neighbourhoods to achieve resilience. It includes ready-to-use resources, such as facilitation notes and participant handouts. It can be used both as a reference for the City's engagement planning process and as a take-home resource for community groups wanting to define their own actions in support of sea level rise adaptation.

Case study: Sustainable Cleveland's Neighbourhood Climate Action Toolkit

Cleveland's climate action plan, introduced in 2013, made community engagement a high-level goal. To fulfill this goal, they launched the Neighbourhood Climate Action Toolkit, an online hub of resources to assist community partners, such as churches and community associations, host workshops in a step-by-step process to educate themselves about the problems and solutions of climate change and to envision and implement their own projects in response. The workshop planning toolkit consists of four steps: (1) learn about the local impacts of climate change, (2) identify neighbourhood assets and concerns linked to climate change, (3) develop a neighbourhood climate action idea, and (4) develop a neighbourhood climate action proposal. Links to resources are listed under each step to help achieve it, such as informative videos and guidelines for bringing together stakeholders. Projects can be submitted to Cleveland utilizing this model in order to receive a $5,000 grant for implementation. In the first phase of this initiative, 5 projects have received funding and are currently being implemented. For more information about the Neighborhood Climate Action Toolkit, visit: http://www.sustainablecleveland.org/resources/climatetoolkit/neighborhood-climate-action-tools/.

Funding tools can help neighbourhood groups attain the funding needed to pilot their own community resilience building projects.

- Neighbourhood Small Grants (http://www.neighbourhoodsmallgrants.ca/) is a program by the Vancouver Foundation intended to fund projects and activities undertaken by local residents. In addition, there are Greenest City Neighbourhood Small Grants (jointly funded by the City) which support the Greenest City Action Plan goal areas.
- In Our Backyards (IOBY) (https://www.ioby.org) is an online crowd-resourcing platform that helps neighbourhoods to submit ideas for improving their communities and to gain funding and support to implement them. Users are able to submit, review, and donate to projects that make neighbourhoods greener and more resilient.

Case study: Sustainable DC's Ambassador program

To help spread the word about sustainability across the District, Sustainable DC launched a program called Sustainable DC Ambassadors. The program is a peer-to-peer education model that trains volunteers to reach out to residents, community groups and local businesses about the Sustainable DC Plan and inform them about how they can be involved. Ambassadors attend community meetings, look for local events to spread the word, and act as voices of the community. The pilot phase ended in fall 2013 and has been successfully extended into several new seasons. To learn more about the Ambassdor program, visit http://www.sustainabledc.org/get-involved/serve-as-an-organizer/.

Towards a Strategy

A roadmap for public participation

Based on the key learnings of the research for this report, a roadmap for public participation on sea level rise is provided as follows. This roadmap is not intended to be seen as the only way to successfully undertake engagement on sea level rise, rather it is an example of how the City may choose to incorporate tools from the toolkit into a process that achieves the stated communication best practice principles and satisfies a range of participation levels. It should be viewed as one of many options for a public engagement strategy.

Stage 1: Collect information about key audiences	Communication Principle	Level of IAP2 Participation
Utilize Talk Vancouver to conduct neighbourhood surveys with a focus on what matters most to the community as well as their current level of understanding about sea level rise.	Effective climate conversations appeal to shared values.	Consult
Compile a list of existing and potential community partners in your target areas who may act as assets in the outreach process. Approach them to find out how they might partner with you in gaining wider participation.	Effective climate conversations appeal to shared values.	Collaborate
Create a calendar of community events in key neighbourhoods where sea level rise has the greatest potential impact and find out how engagement can complement these activities.	Effective climate conversations appeal to shared values.	Involve

Stage 2: Educate and build awareness on sea level rise	Communication Principle	Level of IAP2 Participation
Declare a city-wide sea level rise awareness week complete with educational activities (like a public information booth with the OWL sea level rise viewer) and actions residents can take (the HighWaterLine project is a good example).	Climate conversations must be grounded in local, relevant and observable impacts.	Inform
Plan an outdoor kick-off event nearby the Cambie street bridge public art project, or work with Parks, Recreation & Culture to have a new project commissioned in a key spot for unveiling at the event.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform
Host a king tides photo competition and offer prizes for the best photos. As a part of the awareness week, offer photography lessons to draw in more than the usual participants. Announce the winners at the kick-off event.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Consult Involve
Create a City webpage to house basic, accessible information and to communicate key messages about sea level rise (see c-change.la as an example). Select a digital sea level rise viewing tool to develop and make it accessible on the site. Make the site a hub for sharing photos and stories from the king tides competition.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Involve

Stage 3: Identify community assets and concerns together	Communication Principle	Level of IAP2 Participation
Work with community partners to host listening sessions to collect resident values and concerns related to sea level rise.	Effective climate conversations appeal to shared values.	Involve Collaborate

Stage 3 (cont'd): Identify community assets and concerns together	Communication Principle	Level of IAP2 Participation
Follow up with a series of workshops that acknowledge community vulnerabilities but focus on identifying strengths and assets (using VCAPS or a similar approach). At these workshops, maximize common understanding by utilizing simulations of various future scenarios (such as those produced by CanVis) as well as by showing participants how to use the digital sea level rise viewer.	Effective climate conversations appeal to shared values. Clearly state the benefits of action and focus on solutions.	Inform Consult Involve

Stage 4: Collaborate on solutions, both City and community-driven	Communication Principle	Level of IAP2 Participation
Utilize MetroQuest or a similar tool to get broad public feedback on the City's flood-risk management options. Link this web-based platform to the City's webpage on sea level rise.	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Consult
Provide workshop participants with a pamphlet that contains basic facts about sea level rise as well as actions they can take to increase their preparedness (link to the City's Emergency Management and other existing support programs).	Climate conversations must be grounded in local, relevant and observable impacts.	Inform Empower
Establish a sea level rise ambassador volunteer program so that citizens can educate others on sea level rise and/or be involved in soft measures to reduce risk (look to Washington DC and Storm Busters as examples).	The community must have an opportunity to take on a meaningful role in climate action.	Inform Empower
Form a local business advisory council to provide input on the City's flood-risk management options.	The community must have an opportunity to take on a meaningful role in climate action.	Empower

Stage five: Build ongoing connection and support	Communication Principle	Level of IAP2 Participation
Train and equip 311 staff to handle calls and queries regarding sea level rise.	The community must have an opportunity to take on a meaningful role in climate action.	Consult
Create a positive e-newsletter to update people on the engagement process and upcoming events.	Clearly state the benefits of action and focus on solutions.	Inform
Produce a neighbourhood action toolkit on sea level rise to guide neighbourhoods in creating their own community resilience-building projects. Consider offering funding options to support this initiative.	The community must have an opportunity to take on a meaningful role in climate action.	Empower

Next Steps

Preparing to undertake a process like the one above requires a few basic considerations. The following are a set of actions that can ensure the City is ready to begin engagement.

- Form a working group to learn how to coordinate sea level rise engagement with other key departments (such as Corporate Communications, Emergency Management, and Parks, Recreation & Culture).

- Establish goals, expectations, budgets and desired level of engagement. Completing the engagement planning worksheet with the Corporate Communications team should help with this.

- Work with Corporate Communications to establish key messages to be communicated in the engagement process.

- Clarify the intended length of engagement, including how the City will close the process or provide ongoing support to activities beyond the boundaries of the official engagement period.

Enacting public engagement on sea level rise not only responds to Vancouver's policy directions on climate adaptation, but it can also help the City to build upon its partnership with the people of Vancouver and should be viewed as a cornerstone to achieving a stronger and more resilient future together.

Concluding Remarks

Sea level rise is a significant challenge that requires a coordinated response from all members of the community. While sea level rise can be a sensitive topic for public engagement, research has shown that approaches with an emphasis on learning, collaboration and openness can help the City to achieve wide public support for action.

This toolkit focuses on the nexus between climate communications literature and best practice in order to develop an evidence-based guide for public participation. It provides a set of ideas and offers a framework the City can use as a roadmap for its engagement strategy.

Enacting public engagement on sea level rise not only fits within Vancouver's Climate Adaptation Strategy, but it can also help the City to build upon its partnership with the people of Vancouver and should be viewed as a cornerstone to achieving a stronger and more resilient future together.

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Appendix A: General Resources

The following is a list of additional resources that may be helpful as references on the general subject of climate communications and public engagement.

Resource	Description
Communicating on Climate: 13 Steps and Guiding Principles www.ecoamerica.org/research/#comm13steps	Combines the latest research on climate communication with road-tested communication best practices in an easy-to-use, practically applicable guide.
Understanding Coastal Inundation http://coast.noaa.gov/digitalcoast/tools/list/Climate%20Adaptation	Offers a toolkit for communicating and adapting to coastal inundation.
The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public www.guide.cred.columbia.edu/	Synthesizes research from across the social sciences to explain the disparity between knowledge and action on climate change. It also includes tips for presentations, lists of effective words, highlights of successful strategies, and suggestions for better communication tools.
US Climate Resilience Toolkit https://toolkit.climate.gov/	Provides scientific tools, information, and expertise to help people manage their climate-related risks and opportunities, and improve their resilience to extreme events. The site is designed to serve interested citizens, communities, businesses, resource managers, planners, and policy leaders at all levels of government.

Resource	Description
Climate Communication, Public Awareness and Engagement https://fortress.wa.gov/ecy/publications/publications/1201004o.pdf	Offers sample list of strategies and actions to take for climate change public engagement.
Citizen Participation and Community Engagement in the Local Action Plan Process http://www.fcm.ca/Documents/tools/PCP/Citizen_Participation_and_Community_Engagement_in_the_Local_Action_Plan_Process_EN.pdf	Profiles communities at different stages of the local action planning process. Ideas and insights can be used to create a citizen participation process for sustainable community plan.
Innovative Techniques for Local Community Engagement on Climate Change Adaptation http://global-cities.info/wp-content/uploads/2013/11/Innovative-Technologies.pdf	Summarizes a project to evaluate several face-to-face activities to engage communities in North East Victoria, Australia, on climate change adaptation. Offers a toolkit of ten community engagement activities drawing upon the experiences and learnings from the project.
Sea Level Rise Adaptation: Emerging Lessons for Local Policy Development http://www.academia.edu/5365821/Sea_Level_Rise_Adaptation_Emerging_Lessons_for_Local_Policy_Development	Analyzes coastal communities that have begun adaptation processes on sea level rise to propose a set of lessons for policy development. Offers a process for planning the sea level rise process, including points at which the public should be involved in decision-making.

Appendix B: Acknowledgements

My deepest gratitude goes to the following planning professionals, municipal staff, and engagement specialists who were consulted in the writing of this report:

Larry Atkinson, Professor, Old Dominion University

Nick van Barneveld, Senior Advisor, Municipality of Rotterdam

Jon Crowe, Meister Consultants Group, Boston MA

Olive Dempsey, Professional Facilitator and Public Engagement Specialist, Vancouver BC

Jason Evans, Assistant Professor of Environmental Science, Stetson University

Dan Guilbeault, Policy Analyst at Department of the Environment, District of Washington DC

Matt Gray, Director, Mayor's Office of Sustainability, Cleveland OH

Brian Holland, Director of Climate Programs, ICLEI USA

Lolita Jackson, Chief of Staff to the Mayor's Senior Advisor for Recovery, Resiliency & Infrastructure, New York City

Dana Kochnower, Senior Policy Advisor at Mayor's Office of Recovery and Resiliency, New York City

Susan Love, Climate and Resiliency Planner, Delaware Coastal Programs

Tamsin Lyle, Ebbwater Consulting

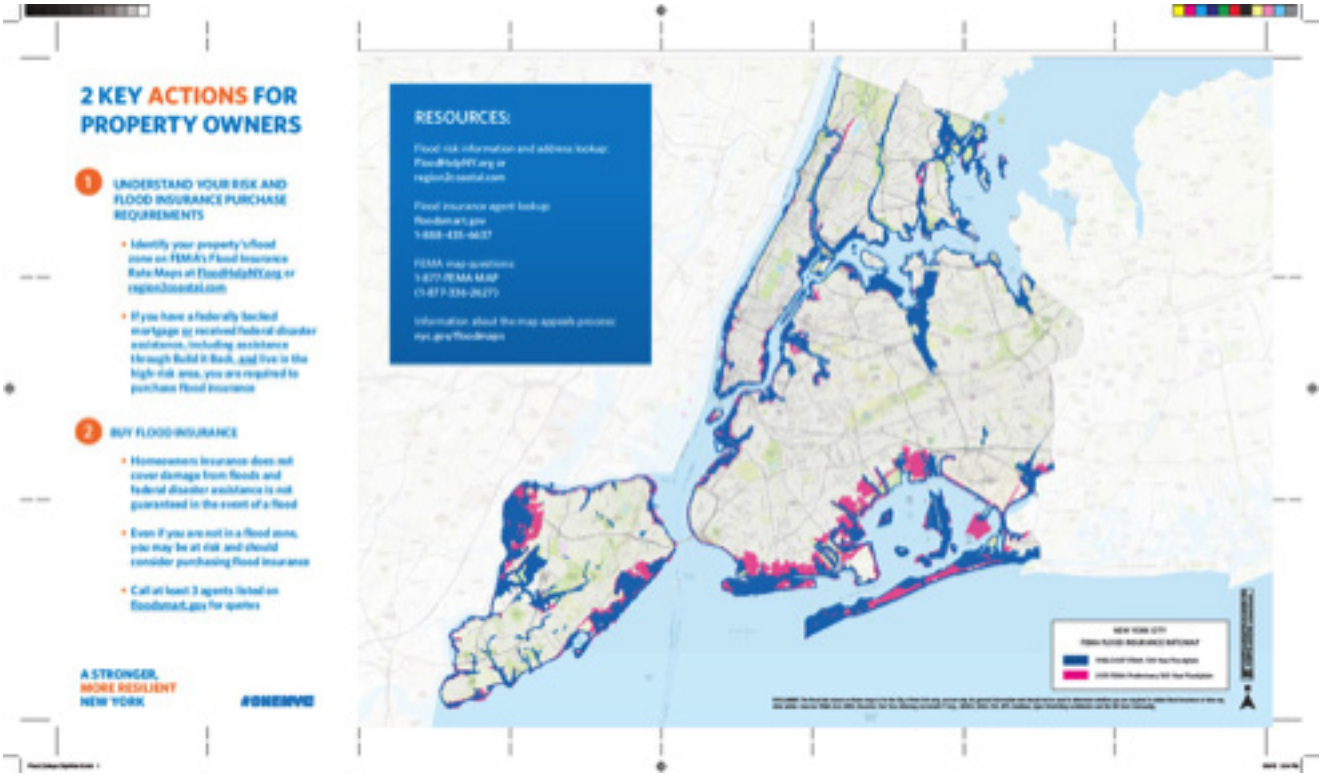
Simon Mills, Head of Sustainable Development, City of London

Eve Mosher, Artist, HighWaterLine Public Art Project

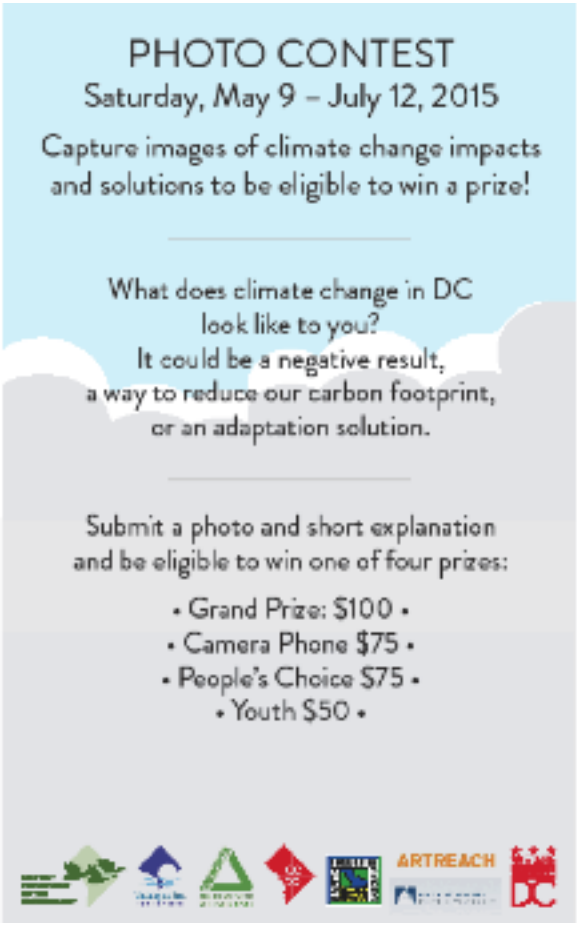
Pat Ryan, Senior Advisor for Legislative Affairs at Mayor's Office of Housing Recovery Operations, New York City

Neil Veilleux, Meister Consultants Group, Boston MA

Appendix C: New York Z-Card



Appendix D: Washington Picture This Photography Contest Kickoff Poster



Prepared for the Sustainability Group
City of Vancouver
453 West 12th Ave.
Vancouver, BC
V5Y 1V4