Moving Toward Community Resilience Planning

Several meetings

10 to 15 people

Low to average

RESOURCES REQUIRED

MATERIALS:
- PowerPoint presentation;
- Projector;
- Computer;
- Workbook or sheets of paper;
- Pencils; and
- Map of the area.

HUMAN RESOURCES:
- A facilitator.

SUMMARY

The "Vers une planification de la résilience communautaire" [toward community resilience planning] is a dialogue-initiation toolkit for community resilience planning to address climate and environmental changes. It is based on the development of adaptation strategies with which community stakeholders can address known issues and risk situations. These strategies can be incorporated into municipal emergency plans, resilience plans and/or development plans. The purpose of this tool is to make communities more resilient to climate and environmental changes by helping stakeholders take advantage of local knowledge and the capacity for self-organization.

To achieve these goals, participants must first identify the issues their community is facing in terms of climatic hazards, associated risks and consequences (social, economic, political, governance and biophysical) for the community. Once these elements have been clearly defined, concrete solutions are identified and prioritized to create adaptation strategies. Several basic concepts must be mastered in order to effectively use this tool.

Hazard: An event (natural or man-made) that threatens the health of coastal ecosystems and communities. This definition includes hurricanes, flooding, etc.

Resilience: A social or ecological system's ability to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organisation, and the capacity to adapt to stress and change (IPCC, 2007).

Risk: The probability of social, economic and environmental damages occurring in a coastal zone due to the presence a hazard (e.g., floods).

Vulnerability : Probability or degree to which a system is susceptible to, and unable to cope with, adverse effects of a change.

These definitions are taken and adapted from the glossary of terms used by the CCC-CURA.

Strengths ⬆

- Iterative process (inclusive and participatory);
- Allows stakeholders to take charge of the discussion elements and to jointly identify solutions that will achieve social acceptance of the strategy;
- Offers flexibility to reassess risks and consequences when conditions change; and
- Complements traditional municipal-planning tools (strategic planning, urban planning, emergency planning, etc.).

Weaknesses ⬇

- At the start of the activity, the participants may have a hard time understanding and mastering the concepts used (hazard, resilience, risk, etc.) and the benefits that may result. However, with time, the participants will master the various concepts and strengthen their understanding of the phenomenon, its impacts and possible solutions.

Information
Consultation
INVOLVEMENT
Collaboration
Empowerment

OBJECTIVES

The purpose of this tool is to identify the issues a community must deal with as a result of climate and environmental changes. First, this method makes it possible to identify climatic hazards and the risks associated with a specific situation by fostering dialogue among community members. Second, it makes it possible to better understand the nature of these two concepts and to clarify them. Third, this method makes it possible to identify the consequences of these situations. The ultimate goal is to develop actions to be implemented and to work together to develop a mechanism with which to track and evaluate these actions, so that the community can become more resilient to climate and environmental changes.

WHEN TO USE

This process can be initiated by community leaders, community non-government organizations (NGOs), or citizens' groups dealing with climatic hazards that have social and/or environmental repercussions.

BEFORE THE ACTIVITY

Estimated preparation time: 8 to 10 hours

1- Identifying the issue
The first step consists in defining the issues the community is facing as a result of climate or environmental changes. They may be specific (e.g., a street on which several houses are too close to the shoreline where erosion is a major problem) or more general (e.g., a decline in the quality of drinking water because seawater is seeping into the water table). With this approach, issues are dealt with one at a time.

Although this initial step can be performed by the organizers, it is highly recommended that the participants choose the issue to be analyzed, by first identifying several issues that are specific to the region, prioritizing them and then choosing one issue to start. Trying to deal with too many issues at once can be counter-productive given the complexity of the phenomena. The process of identifying and prioritizing issues with the participants can be done with a civic engagement tool such as the evaluation by group facilitation (MÉAG) method (see example below).

2- Recruiting participants
After securing the participation of the municipal authorities (for issues requiring action by elected officials), the organizers invite community members to participate in an activity that will take place over the course of several meetings. These meetings are open to anyone who wishes to attend and/or participate. The organizers must ensure that the various community sectors are represented (economic, public, civil). The organizers must then communicate with stakeholders or experts to discuss the chosen issue and gather as much information as possible, so that the situation can be clearly explained to the participants at the first meeting. Depending on the needs expressed by the participants, it may be necessary to obtain additional scientific expertise. Finally, the facilitator chosen should be familiar with the topic of climate change and vulnerability.

3- Meeting logistics
The schedule and ground rules should be jointly established by the organizers and the participants. The number of meetings needed should be established at the outset, although changes can be made along the way, depending on the complexity of the discussions. Since this process involves multiple meetings, it is a good idea to recapitulate at the start of each meeting, as new members may have joined the group along the way.

The organizers will have to find a meeting place that is large enough to accommodate the group, and reserve the facilities for each meeting. They will also have to ensure that they have sufficient workbooks or paper and pencils for each participant to take notes, to ensure continuity and keep track of information between meetings. If sheets of paper are used, the organizers should keep them for subsequent discussion sessions (collective memory of the activity).

The organizers should also ensure that they have access to a computer and presentation so that they are well prepared to explain the concepts that will be part of the process and the steps that will be used to identify solutions. Nonetheless, they should be careful not to intimidate the participants with complex presentations and highly scientific or academic language.

ACTIVITY

1. Explaining and selecting the issues

During the initial meeting, the organizers should clearly explain the "toward community resilience planning" process, including the various steps involved in identifying solutions, to the participants. Certain concepts (hazard, resilience, risk and vulnerability) should also be explained, discussed and debated during that meeting. During the initial meeting the participants will be surveyed to determine which issue to tackle and to ensure that all participants have a clear understanding of the issue. It is important to convey to the participants the merits of addressing the issue and the reason they are gathered for this activity.

2. Identifying the community's climatic hazards as regards the jointly selected issue

Once the issue has been identified, the next step consists in assessing and understanding the relationship between the issue and climatic hazards (e.g., flooding, coastal storms, winter thaws, etc.) that have made this an important issue for the community. It is also necessary to identify the factors that exacerbate these climatic hazards (e.g., single access route, coastal village at water level, etc.), as these factors contribute to vulnerability.

3. Identifying the risks and impacts

Next, for each climatic hazard identified, the participants will identify the risks and the physical, social, economic, environment and governance impacts. The information can be compiled in table form:

Situation: Ex. Coastal road prone to erosion

Hazard 1: Flooding

Risks	Environmental impacts	Physical impacts	Socio-economic impacts	Political and governance impacts
Floods	Silting of salmon spawning ground	Destruction of public and/or private infrastructures	Increased debt as a result of clean-up costs	Loss of confidence in elected officials

Hazard 2: Coastal storms

Risks	Environmental impacts	Physical impacts	Socio-economic impacts	Political and governance impacts
Erosion	Wetland loss	Receding coastline and loss of land	High cost of relocating houses	Reduced tax base, citizen engagement, crisis cell

4. Identifying the accommodation measures

The final element needed in order to specify the accommodation measures is to identify the legal, legislative and social frameworks already in place, in order to jointly identify ways to increase community resilience. This entails listing existing adaptation measures (e.g., casualty insurance, arena used to accommodate victims, government financial assistance, tracking of past measures, etc.).

ACTIVITY

5. Identifying and integrating potential solutions
At this stage, the combined elements will provide an overview of the community's situation as far as the discussed issue is concerned. It is a good idea to use drawings, maps, tables, etc. to summarize the collaborative efforts that have been implemented from the outset in order to take ownership of the solutions and knowledge jointly identified by the stakeholders.

The participants should also identify solutions or strategies to mitigate vulnerabilities. Participants are encouraged to identify all options, in order to best adapt and increase resilience to climatic hazards. The participants will then analyze the pros and cons of all the options identified based on several criteria, including cost, social acceptability, ecosystem impacts, socio cultural impacts, technological feasibility and time.

6. Prioritizing the solutions
Next, the solutions are prioritized through a process of dialogue, consultation and the analysis of the pros and cons conducted during the previous phase. The solutions are then submitted to the local political authorities who will validate the findings. This validation is crucial because the findings must then be presented to local residents.

7. Présentation des résultats à la population locale
The organizers will be asked to present their finding to local residents.

AFTER THE ACTIVITY

The actions identified using this method will be incorporated into an implementation plan. An action tracking process will help identify the actions that work and reorient those that do not. This tracking can be achieved using the Tracking Commitments and Expectations (SENAT) tool. The community can then repeat the process with other issues, if need be.

PITFALLS TO AVOID

- Performing this process without decision-makers. It is important to ensure the long-term participation of decision-makers;
- Dragging the process out over an extended period of time;
- Attempting to obtain consensus on the outcomes rather than on the process;
- Proceeding too quickly without a full understanding, and not giving the participants an opportunity to share their experiences and knowledge;
- Including too many components or issues;
- Using language that is overly scientific and beyond the reach of the participants.

COMMUNITY ADAPTIVE RESILIENCE PLANS ADOPTED BY THE MUNICIPALITY OF MARIA

This tool was used in the Gaspé municipality of Maria in May 2013. The municipality suffered high tides in December 2010, and the Quebec government attempted to manage the crisis by means of a ministerial order. The regional county municipality (RCM) developed an emergency response plan with the municipalities. The municipality of Maria, working with the Coastal Communities Challenges—Community-University Research Alliance (CCC CURA), opted for a community adaptive resilience plan in support of the emergency response plan.

First, the residents of Maria were invited, via the municipal newsletter, to take part in an initial information meeting. A group of about a dozen individuals, including municipal officials and residents, was created. The main purpose of the initial meeting was to explain the process to the participants and to explain the evaluation by group facilitation method (MÉAG), which was used to identify and prioritize the issues. To help identify the issues, the following question was asked at the initial meeting:

- In your opinion, what are the main issues and challenges that Maria will face during the next 15 to 20 years as a result of climate change?

Following the initial meeting, the participants were given time to think about this question, discuss it with friends and relatives, enrich their knowledge of the topic and/or recruit new participants.

At the second meeting, the MÉAG method was used to establish a list of issues and to identify three priority issues, namely: creating community awareness of the impacts of climate change, the deterioration of municipal infrastructures with or without offsets (sewer system, water system, culverts, bridges) and the safety of individuals. The MÉAG process took about three hours.

Results of the votes on issues identified using the MÉAG method

Issue	1	2	3	4	5	No. of votes	No. of points	Ranking
Safety of individuals	3	2	3		5	4	13	3
Deterioration of municipal infrastructures with or without offsets (sewer system, water system, culverts, bridges)	1	3	4	4	2	5	14	2
Road and rail transportation	2	1	2	3		4	8	5
Rising repair costs					3	1	3	7
Long-term data collection						0	0	
Tourism and recreation						0	0	
Citizen engagement	4					1	4	6
Devaluation of heritage		4	1	5		3	10	4
Creating community awareness of the impacts of climate change	5	5	5	2	1	5	18	1
Solidarity				1		1	1	8
Drinking water supply					4	1	4	6

The organizers then explained the hazards, risks and consequences associated with Issue 1 (creating community awareness of the impacts of climate change). It took about two and a half hours to explain the concepts of risk and hazard. Two meetings were needed to work on the hazard and the risk, and two more meetings were needed to identify the impacts. The process of defining actions, intentions and tracking is ongoing.

FOR MORE INFORMATION:

CCC-CURA, http://www.defisdescommunautescotieres.org/.

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Pasteur, K., 2011. From Vulnerability to Resilience: A framework for analysis and action to build community resilience. Rugby, United Kingdom: Practical Action Publishing.

Plante, S., L. Vasseur and C. Da Cunha, 2014. "Adaptation to climate change and Participatory Action Research (PAR): lessons from municipalities in Quebec, Canada" in Climate Adaptation Governance. Theory, Concepts and Praxis in Cities and Regions, Jörg Knieling (ed.) (approved).

Plante, S., C Da. Cunha and L. Vasseur, 2014. "Gouvernance participative et développement territorial: l'adaptation des communautés côtières aux effets des changements climatiques sous l'angle de la résilience" in L. Lepage and N. Milot (eds,), L'adaptation aux changements climatiques. Presses de l'Université du Québec (approved) [in French only].

ROBVQ, "Boîte à outils sur la participation citoyenne". Available online in French only at https://www.robvq.qc.ca/guides/consultation_publique.

Vasseur, L., 2012. Vers une planification de la Résilience Communautaire. Une trousse pour initier le dialogue sur la planification de la résilience communautaire face aux changements environnementaux et climatiques. Trousse de formation préparée pour la Coalition pour la viabilité du sud du golfe du Saint-Laurent et l'Alliance de recherche universités-communautés – Défis des communautés côtières. 23 pages. Available online in French only at http://www.defisdescommunautescotieres.org/public/documents/aga/presentations2012/lietteFR.pdf

The Coastal Communities Challenges—Community-University Research Alliance (CCC-CURA) comprises a group of partners and researchers concerned with issues pertaining to resilience and governance for coastal and riverside communities in the context of climate change.

The Regroupement des organismes de bassins versants du Québec (ROBVQ) comprises some 40 watershed organizations operating in Quebec. It is a key partner of the Quebec government in the development of watershed management measures.

ROBVQ
Regroupement des Organismes
de Bassins Versants du Québec

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