The following chapters recommend how to reach CRC Milestone One, "Initiate Your Climate Resiliency Effort":

chapter 4 scope the climate change impacts to your major sectors

This chapter guides you to take the first step in initiating your climate resiliency effort: collecting and reviewing important climate information. The body of information you develop in this initial scoping step will provide a critical foundation on which all later stages of your preparedness effort will rest. As described later in this chapter, the sectors you address in your study may include: hydrology and water resources; agriculture; biodiversity; forests; recreation; energy; transportation; and health, among others.

4.1 Collect and Review Important Climate Information

Ask the question: "How could climate change affect my region, and do these impacts pose a risk for my community?" Answering this question requires collecting and evaluating basic information from published research on how climate is expected to change in your region – a fundamental and ongoing part of preparing for climate change impacts.

"Collecting essential information is an important and ongoing part of preparing for climate change."

Who does the work of collecting and analyzing information for you will depend on the resources you have available for this task (both in terms of staff and financial resources) and the amount of information available for your region. You may choose to do the work yourself, or delegate the task to other staff members, a consultant, a volunteer, or a university graduate student working under the supervision of a qualified researcher.

Determining how much information is enough will also depend on your resources and available information. Be aware that you will probably need additional information as your planning proceeds, and you should commit to monitoring the science over time for new information relevant to your community. The information provided in this chapter can help in these later stages as well.

4.1.1 Information Sources

You should be able to find some relevant information about regional climate changes, regardless of where your community is located, although you should be aware that the amount of detailed information available will vary widely from region to region. As a starting point, the 2000 U.S.

Box 4.1 – I'm Not an Expert. How Can I Evaluate the Credibility of a Source?

There are many sources of information on climate change, ranging from comprehensive synthesis reports to basic fact sheets. How can a non-expert evaluate the validity of climate change information?

The following questions will help guide an informal assessment of the credibility of individual climate change studies. Reliable research will have many – though not necessarily all – of the attributes listed below. In some cases, it may be difficult to determine if and how a study meets these criteria. When in doubt, consider consulting with experts from local universities, RISA teams, professional/technical organizations, federal agencies, and/or non-governmental organizations involved in climate change related activities. Also be aware that understanding the local impacts of climate change might require the expertise of more than one scientific discipline, and that you might want to consider consulting scientific experts from a variety of disciplines to ensure that your source is credible.

Questions to help you evaluate climate change studies:

- **Are the authors clearly identified as experts?** Are the authors considered credible and reliable sources of climate change information? Just as you would ask an expert witness to testify on the technical aspects of a case, you will want experts in climate science or climate impacts to guide your decisions. These experts may have advanced degrees in a related science (e.g., atmospheric sciences, chemistry, hydrology, fisheries, ecology, or forestry), be affiliated with respected climate change research groups, and/or have direct experience in climate science and impacts research.
- **Has the study been "peer-reviewed"?** To evaluate if a publication has been peer reviewed (or "refereed"), check the publisher's website, an individual issue of the journal in which the article appeared, or the preface of the report (if one exists). Some online databases and periodical directories now indicate peer-reviewed journals; reference librarians can also help track down information about individual sources. Unless explicitly stated otherwise, academic journals and major synthesis reports are generally peer reviewed, but conference proceedings, web-based contents, and other reports are generally not peer-reviewed (unless they are pulled directly from a peer-reviewed source).
- **Do the study results make sense?** Are the authors using data and peer-reviewed research to support their claims? Are the conclusions based on reasonable assumptions supported by other studies and consistent

National Assessment analyzed all regions of the U.S. (see Chapter 2); regional summaries from the U.S. National Assessment are provided in Appendix C.

Additional (and in some cases more current) information about projected changes in regional climate and climate change impacts can be found in regionally-focused climate change reports, fact sheets, and web sites such as those listed in Appendix D. Good potential places to find this information include: local universities, NOAA-funded Regional Integrated Sciences and Assessment (RISA) teams (see Appendix D.5), Regional Climate Centers, State Climatologists, state environmental agencies, and the U.S. Environmental Protection Agency. The utility of any one information source will depend on your specific information needs and the level of detail to which you want to explore a particular issue.

Above all, be an informed consumer of climate change science. Know that the usefulness of any of these given resources will depend on your specific information needs, as well as the level of detail to which you want to explore a particular issue. Evaluate the soundness of individual climate science reports and impacts studies. Box 4.1 provides questions for you to ask in order to gauge the credibility of the sources you find.

with the general theory associated with those assumptions? Are there obvious inconsistencies in the train of logic being applied or are the conclusions logically derived from the assumptions and supported by the data presented? Make sure that the claims are well documented, that they make sense to you, and that any information gaps or inconsistencies are adequately explained.

- **Are the results placed in the context of existing understanding?** Scientific research builds on the existing foundation of knowledge published in the peer-reviewed literature. Do the authors discuss the assumptions, data, analysis, and/or conclusions of their study in the context of the prevailing body of scientific knowledge? Do they support their conclusions with like examples from the published literature or point out differences and explain why they exist? Are the assumptions, analytical techniques, and conclusions well referenced with citations to relevant, credible literature, and other pertinent existing information?
- **Is there supporting evidence for the author's conclusions?** If multiple studies or individual researchers arrived at the same conclusion independently, the conclusion is more likely to have increased credibility.
- **Does the study address uncertainty?** Projecting climate change involves uncertainties in both how the natural world operates and how we alter it. Therefore, it is appropriate to report and discuss uncertainty. For example, projections of changes in climate or in regional impacts should be expressed as ranges of possibility (ideally with some estimate of the certainty associated with different numbers in the range) rather than as a single number.
- **What are the potential biases?** Who benefits from the study's conclusion? Who funded the study? Are the interests and values of the authors apparent? What are your personal biases – do you want to believe or ignore this author's conclusion? Awareness of potential biases helps you evaluate the validity of claims and your own decision making about the validity of scientific results.
- **How old is the study?** The science of climate change is rapidly evolving. As a specific example, the timing and amount of future warming is revised with every international assessment of climate change released by the IPCC. As a result, the timeliness of materials is often an important component of projected change and impacts. For older studies, the general findings may still be relevant even as the specific details change. What generation of climate change scenarios does this study rely on?

Based in part on Sagan 1997

4.1.2 How is Climate Expected to Change in Your Region?

You need to know something about the specific ways your region's climate may change in the future, in order to assess the potential impacts of climate change on your region. This section provides insights on the types of information you will want to collect and how to organize the information for use in the preparedness planning process.

Begin by collecting information on a few key climate variables, such as temperature and precipitation. Other important variables may include, but are not limited to, sea level, extreme weather (e.g., hurricanes and storms), and wind. As you collect your information, aim to respond to the question, "How is temperature (or precipitation, or sea level) projected to change during the 21st century?" with one of the following answers: "It is projected to increase/decrease/stay the same," or "The projected change is not yet known." Use specific numbers when available and always identify the specific future time horizon (e.g., 2020s, 2040s, 2080s).

Try to collect information about how climate changes will vary with season. Depending on availability, you might also be able to collect additional information about how the projected

changes will vary with season, or how other parameters (e.g., number of frost days, frequency of extreme rain events, etc.), or other conditions of concern (e.g., windstorms, heat waves) are projected to change. Another useful question to ask is, "Are the projected changes bigger or smaller than the variations between cold/warm or wet/dry years this region has experienced in the past?" This information will help you put the size of the projected changes into perspective.

Collect information about the range of climate change that your community could experience. When possible, avoid using only one projection of future climate (e.g., 12 inches of sea level rise). Remember that future changes in climate are really about a range of future possibilities ("projections"), *not* a single best-guess possibility (a "prediction") (Box 2.2). A common approach to planning for climate change is to develop three scenarios – "worst-case, "best-case," and "mid-range" – to limit the range of possible future outcomes. For now, collect what information you can about projected future change to make sure that your analysis adequately accounts for the amount of change your region could experience.

Understand and log the certainty of your information. Record the degree of confidence associated with the different aspects of the scenarios, regardless of the amount of detail available. In some cases, such as in the IPCC reports, this information will be clearly provided along with the climate change scenarios. In other cases, you may need to consult with climate science experts or use your best judgment based on the following **general** rules of thumb:

- temperature projections are much more certain than precipitation projections; and
- climate change projections less than five years old and/or based on multiple models are likely to be more robust and better reflect current understanding of climate change science.

You can also assess the certainty associated with climate projections by examining how much the available climate models agree about the direction of the projected change (more or less, up or down). In the U.S. Pacific Northwest, for example, ten climate models examined by the Climate Impacts Group universally agree that the region will warm during the 21st century, even though the specific amount of warming varies between models. There is less consensus in the models on whether precipitation will increase or decrease on an annual basis (although indications are that there will be a slight increase in annual precipitation with most of this increase coming during the winter months). Recognizing this uncertainty, King County chose to focus the vulnerability assessment informing its 2007 Climate Plan most heavily on impacts resulting from warmer temperatures, and less on those dependent on a specific change in the amount of winter precipitation.

Understand and track why projections of a change may vary from one study to another. You may find that the specific amount of projected change varies from study to study, often depending on the specific global climate model(s) and emission scenario(s) used in the study, or the method used to translate projected global change to the local level (see Appendix B). It is important to track this information to understand the reason for these differences. By keeping track of such information, you will be more able to resolve apparent contradictions as they occur, and you will be ready to update your scenario information as projections are revised. You may be able to work with the local scientific community to determine which scenario(s) best reflect current understanding.

Track other critical information about the studies and reports you collect. As you note how climate is projected to change in your region, be sure to record:

- the source of the information (including publication and year);
- the climate model(s) used to construct the climate projection (e.g., the National Center for Atmospheric Research's Community Climate System Model [CCSM]);
- the greenhouse gas emission scenario(s) used to guide the climate projection;
- both the timeframe for the future projection (e.g., the 2040s) and the timeframe for comparison (e.g., the 1970-1999 average historical climate);
- the geographical area over which the projection was made (e.g., the United States; the Pacific Northwest, which includes Washington, Oregon, Idaho; or the State of Washington).

As you review sources for information about projected changes in regional climate, you may come across reports on impacts to specific areas of interest, such as water supply, forests, and human health. These areas are referred to in this guidebook as sectors. Hold onto this information; you will want it for the next step.

Consider assembling the information you have collected in a table, such as that shown in Table 4.1 for the U.S. Pacific Northwest. When possible, work with knowledgeable climate change experts to review these scenarios for obvious errors, reasonable (or unreasonable) results, and appropriate confidence estimates.

Checkpoint: *Upon finishing this section, you should have a summary of how your region's climate is projected to change as a result of climate change. You should also have general understanding of how to identify what information is relevant to your community, so that you are able to communicate why and in what specific areas preparing for climate change will be important.*

SUMMARY OF PROJECTED CLIMATE CHANGES FOR THE U.S. PACIFIC NORTHWEST						
Climate Variable	**General Change Expected**	**Specific Change Expected and Reference Period**	**Size of Projected Change Compared to Recent Changes**	**Information About Seasonal Patterns of Change**	**Confidence**	**Source(s) & Context**
Temperature	Increase	+0.7 to 3.2°F (2020s) +1.4 to 4.6°F (2040s) compared to 1970-1999 average	- Projected warming much larger than the regional warming observed during the 20th century. - By the 2020s, average temperatures could be higher than most of those experienced during the 20th century.	Slightly more warming in summer than winter.	High confidence that the Pacific Northwest will warm (all models project warming).	- Publication: Mote et al. 2005b - Projections derived from ten climate models from IPCC 2007 simulating climate changes associated with high and low greenhouse gas emission scenarios. - Geographical region is the PNW, defined as Washington, Oregon, Idaho, and western Montana.
Precipitation	Very small increase	-4 to +7% (2020s) -4 to +9% (2040s) compared to 1970-1999 average	- Projected change is very small relative to the range of precipitation observed during the 20th century.	Slight decreases in summer and slight increases in winter.	- Changes in precipitation are less certain than changes in temperature. - Changes in summer precipitation are less certain than changes in winter precipitation. - Future years projected to continue to swing between relatively wet and dry conditions, making it likely that the change due to climate change will be hard to see	
Sea level	Increase	+7-23 inches globally at 2090-2099 (compared to 1980-1999 avg). Regional variation in land movement could affect sea level rise in specific locations	- Projected changes are in the ballpark of those observed recently (7”/century globally during 1961-2003 and 12”/century globally during 1993-2003).	n/a	- High confidence that sea level will increase globally, but much uncertainty in the specific amount of increase and how it will vary by location. - Some uncertainty about data indicating subsidence in South Puget Sound.	- Publication: IPCC 2007a, Snover et al. 2005 - Projections derived from multiple climate models simulating climate changes associated with high and low greenhouse gas emission scenarios.

SUMMARY OF PROJECTED CLIMATE CHANGES FOR THE U.S. PACIFIC NORTHWEST						
Climate Variable	**General Change Expected**	**Specific Change Expected and Reference Period**	**Size of Projected Change Compared to Recent Changes**	**Information About Seasonal Patterns of Change**	**Confidence**	**Source(s) & Context**
Heavy rainfall events	Unknown	Unknown	There has been an observed increase in the variability of average winter (October-March) season precipitation since 1973 for the Pacific Northwest, but no information on changes at smaller time scales (monthly, daily changes). Cause of this change is unknown at this time.	Unknown	Although heavy rainstorms are expected to increase globally, whether they do in the Pacific Northwest will be related to where and how the storm track moves in the future – could increase, decrease, or stay the same.	- Publication: Hamlet 2006
Wind storms	Unknown	Unknown	Unknown	Unknown	n/a	- Discussion with Climate Impacts Group

Table 4.1 – Sample summary table for projected regional climate change.

4.1.3 What are the Projected Impacts of Climate Change in Your Region?

Changes in temperature, precipitation, and sea level can affect communities in a variety of ways. It is often useful to group this information in relation to ***sectors*** – a general grouping used to describe any resource, ecological system, species, management area, activity or other area of interest that may be affected by climate change.

Table 4.2 lists potential impacts for common sectors. Impacts for your region would likely include some of the impacts listed there. The information sources identified in 4.1.1 are also good starting points for learning more about projected climate change impacts in your region. Additionally, sector-specific climate change reports (e.g., special reports on water resources, forest resources, etc.) may include information relevant to your region.

INITIAL SCOPING: A SAMPLE OF SECTORS AND POTENTIAL CLIMATE CHANGE IMPACTS	
Sector	**Impacts in some regions could include…**
Hydrology and water resources	• Shift in the timing of spring snowmelt to earlier in the spring • Lower summer streamflows, particularly in snowmelt-dependent water systems in the western U.S. • Increased risk of drought • Increased risk of flooding • Increased competition for water • Warmer water temperature in lakes and rivers • Changes in water quality (varies by water quality parameter)
Agriculture	• Changes in crop yields (varies by crop) • Potential ability to "double crop" • Increased risk of heat stress, particularly in the South • Increased demand for irrigation water due to longer and warmer growing season • Increased risk of pest outbreaks and weeds
Biodiversity	• Shift in the distribution and range of species • Loss of species not able to adapt to changes • Increased competition from invasive species • Loss of habitat
Forests (including parks and urban forests)	• Increase in growth and productivity in the near-term where soil moisture is adequate and fire risk is low • Shift in the distribution and range of species • Increased risk of insect outbreaks • Increased risk of forest fire • Increased competition from invasive species
Recreation	• Increased opportunities for warm season activities in milder regions of the U.S. • Decreased opportunities for warm season activities during the hottest part of the year, particularly in the southern U.S. (e.g., from heat, forest fires, low water levels, reduced urban air quality) • Reduced opportunities for cold season recreation due to decreased snowpack and/or reduced snow or ice quality • Increased reliance on snow-making at ski areas • Shifts in tourism dollars within a community from one recreation sector to another, or from communities losing recreational opportunities to communities gaining opportunities
Energy	• Reduced heating demand during winter months • Increased cooling demand during summer months • Increased or decreased hydroelectric generating capacity due to potential for higher or lower streamflows

INITIAL SCOPING: A SAMPLE OF SECTORS AND POTENTIAL CLIMATE CHANGE IMPACTS	
Sector	**Impacts in some regions could include…**
Transportation	• Fewer travel disruptions and lower maintenance and infrastructure costs associated with snow and ice • More travel disruptions associated with landslides, road washouts, and flooding • Increased road surface damage from higher temperatures • Potential reductions in water-based navigation due to lower summer streamflows • Increased maintenance requirements for roadside and median strip vegetation • Increased brush fires in roadside and median strip vegetation
Infrastructure	• Need for new or upgraded flood control and, erosion control structures • More frequent landslides, road washouts, and flooding • Increased demands on stormwater management systems with the potential for more combined stormwater and sewer overflows • Reduced effectiveness of sea walls with sea level rise
Coastal resources and ecosystems	• Increased erosion or damage to coastal infrastructure, dunes, beaches, and other natural features due to sea level rise and storm surge • Loss of coastal wetlands and other coastal habitats due to sea level rise, erosion • Increased costs for maintenance and expansion of coastal erosion control (natural or man-made) • Saltwater intrusion into coastal aquifers due to sea level rise • Increased risk of pollution from coastal hazardous waste sites due to sea level rise Loss of cultural and historical sites on coastline to sea level rise and related impacts
Aquatic ecosystems	• Shifts in species range and distribution • Increased competition from invasive species • Loss of near-shore habitat and coastal wetlands to sea level rise, where sufficient space for habitat migration is not available • Increased stress on coldwater species in lakes and rivers
Business	• Price volatility in energy and raw product markets due to more extreme weather events • Increased insurance premiums due to more extreme weather events • Fewer shipping disruptions associated with snow and ice • Impacts on business infrastructure located in floodplains or coastal areas • Shifts in business opportunities
Health	• More heat-related stress, particularly among the elderly, the poor, and other vulnerable populations • Fewer extreme cold-related health risks • Increase in vector-born illnesses (e.g., West Nile) • Reduced summer air quality in urban areas due to increased production of ground-level ozone
Emergency response	• Increased demands on emergency response services related to extreme weather events (e.g., heat, flooding, storms)

Sources: NAST 2000, IPCC 2001b, NAST 2001, Mote et al. 2003, UKCIP 2003

Table 4.2 – A sample of sectors and potential climate change impacts. Planning for climate change requires identifying which sectors of a community are likely to be affected by a changing climate. Most communities will be sensitive to climate change in one or more of the sectors listed above. The likelihood of any one impact occurring will vary by community. This list is not all-inclusive; other impacts not listed here may also occur.

Depending on your information needs, resources, and the amount of climate change information available for your region, a preliminary list of impacts like Table 4.2 (but tailored to your region) may be sufficient for launching for your preparedness planning effort. As you develop your list, identify the various departments and/or programs that may be affected by these projected impacts. This information will help you determine which departments need to be involved in developing your preparedness plan.

In some cases a more detailed assessment may be needed to gather necessary support from your internal and external stakeholders. In all cases, more detailed information will be needed for your vulnerability assessment and developing your preparedness plan. For each source you examine, evaluate and record:

- the sector(s) and/or types of species (where relevant) covered by the study
- the changes (impacts) projected by the study
- the time period in which those changes are expected (e.g., the 2020s, 2040s, 2100) and the reference period for comparison (e.g., 1950-2000 average conditions)
- how the size of the projected changes compare to recent conditions
- the models and greenhouse gas emissions scenarios used
- the amount of confidence in the projections (to the extent that this can be assessed)
- the geographic area covered by the study
- the departments and/or programs within your community government that will be affected by the projected impacts
- any other details that may be important for comparing and assessing the study results.

As with your research on changes in regional climate, record when projected impacts differ from study to study, and track the reasons that may have led those different conclusions. Remember that climate change impacts are estimated based on specific climate change scenarios; you will likely find a range of impact scenarios when there are a variety of climate change projections. Impact scenarios can also vary because of different methodologies and uncertainty associated with translating climate changes into sectoral changes, e.g., changes in water supply or fire risk.

Whether or not you need to consider a full range of impact scenarios depends partially on whether the climate change scenarios used to create them are up-to-date. For example, you might read a report that projects increased tree growth in your region's forests during the summer. Examining the context of that projection, you may realize that the report is based on a scenario of significant increases in summertime precipitation. Your research on projected regional climate change, however, may have clearly indicated that summertime precipitation is now projected to decrease slightly. Given that the projected impact was based on outdated climate change scenarios, you might choose to eliminate it from consideration. Alternately, you might recall that

simulation of future changes in summertime precipitation is considered to be extremely uncertain and decide to include the scenario of increased tree growth as a potential, but low-probability, future change caused by climate change.

Be sure to record this and other contextual information identified in Section 4.1.2. This information can help you evaluate the relevance or accuracy of the projected impact given the current understanding of how climate in your region is expected to change.

Checkpoint: *Upon finishing this section, you should have a summary of how climate change is likely to impact your region's natural and built resources, and which departments are likely to be affected by these projected impacts*

4.1.4 How to Work with Little Information

More is currently known about how climate change will affect some parts of the country and some resources than is known about others. Depending on where your community is located, you may have trouble finding impacts information that seems sufficiently detailed for planning, or you may have trouble finding impacts information at all.

One option for dealing with little information about projected climate change impacts is to look at how sensitive your community is to past and present-day climate (e.g., drought) and weather events (e.g., floods). A good place to begin is with the various department heads and staff in your community government. What does their experience tell them about sensitivity to 20th century climate and weather events? What analyses have been done within their respective departments on climate and weather impacts? Consider developing and distributing a questionnaire to gather the relevant information. King County, Washington, for example, added questions about sensitivity to climate variability into a larger survey on potential climate change vulnerabilities in the County (see Box 8.3). Other options include collecting information through staff meetings, special workshops, or lunch-time brown bag discussions. Interviews with long-time residents, examining government records, and reviewing media archives are also effective ways of gathering more information on the impacts of notable past climate and weather events.

In addition to examining past and present climate impacts, you can extrapolate information about local impacts from broader-scale studies or studies from other regions to develop a picture of how climate change might affect your region or specific sectors within your region (e.g., forests or water supply). This exercise can provide valuable qualitative information, but it is important to note that local impacts may vary from study results given the specific characteristics of the local system. If possible, consult with an expert familiar with the underlying causes of climate sensitivity to evaluate whether that information holds true from one region to another, and to find out any necessary caveats. The Appendix provides additional sources of information on climate change impacts and adaptation.

If you are not able to consult experts, we recommend that you do not rely on this information for developing detailed preparedness actions, except those that could be considered "no-regrets" (Chapter 11).

4.2 What Will Your Level of Commitment Be?

Once you have collected and reviewed a body of basic information about climate change impacts to your region, it is time to decide whether the information warrants moving forward with preparedness planning. Using the impacts listed in Table 4.2 or your own list of potential impacts for the region, ask the questions: Will climate change have an impact on my community and my government's responsibilities? Do these impacts appear significant enough to begin preparing for climate change?

"Yes, we will prepare for climate change." If the answer to these questions is "yes," it is time to begin preparing for climate change. If you are a public official, consider proposing a resolution that directs your government to form a team and take steps to prepare for climate change, including writing a preparedness plan with regular updates. This kind of legislation, like King County's Executive Orders on Global Warming Preparedness of March 2006 or the King County Council Ordinance on Global Warming of October 2006, can provide a useful foundation to which your government, your future preparedness team (Chapter 6) and your successors will be able to refer at a later date.

Your level of commitment to planning will differ from that of other governments. Several factors may influence the scale of your community's planning efforts, including:

- **The degree of interest and support for preparedness planning among your community's elected officials, your senior management, and your public.** Perceptions of how climate change may or may not affect the community will strongly influence this initial interest. Over time, you may find that the results of your vulnerability assessment will influence these perceptions, and persuade your stakeholders to commit more resources to a preparedness effort. Look for suggestions about building and maintaining support for preparedness in Chapter 5.
- **Logistical factors such as community size, resource availability, and types of authorities.** The size of your community will obviously determine the type and amount of technical, fiscal and staff resources available for preparedness planning. Lack of access to technical experts outside your government could also limit your efforts. Additionally, the range of authorities that your government has could influence how ambitious you want to be in developing your process and plan.

In some cases, your initial scoping exercise may show that climate change is a concern for your community, but that there is little your community can do on its own to plan for these impacts. For example, you may be part of a small community with limited public services. Or, climate change may have greater relevance to other levels of government (such as your county government) that provide many basic services to your community. In these cases, you may still want to move forward in the planning process with the objective of building support for planning within the other government organizations that do have a role in managing climate change impacts on your community. Your case may be strengthened by working with other similarly situated small communities in your region.

Consider proposing a resolution that directs your government to form a team and take steps to prepare for climate change, including writing a preparedness plan with regular updates.

If the answer is unclear, you may want to look for additional information and/or consult with local experts again (when available) to review your initial assessment. Box 6.2 provides information on identifying and selecting science advisors. Alternatively, the initial scoping exercise may show there are currently few impacts to the community that warrant preparedness actions. If so, stay tuned to developments in climate change science and your impacts assessment. New information may change your initial assessment.

The planning process provided in this guidebook can and should be scaled to the level that is appropriate for your community. At one end of the spectrum, you may need to work on this process in incremental steps, focusing initially on a simple literature review, reducing vulnerability to today's climate and weather events in one or two key sectors, and basic public education. At the other end of the spectrum, you may decide to launch an officially-recognized, multi-sector climate change preparedness program using a formally established preparedness team, a full-time preparedness coordinator, and new research (where appropriate) to examine climate change impacts and preparedness needs across multiple government departments.

Checkpoint: *Upon finishing this section, you should have passed a resolution that directs your government to form a team and take steps to prepare for climate change, including writing a preparedness plan with regular updates.*
