**Chapter 4 instructions for selecting, gathering information, sorting, visualizing to assess equity and resilience in your community**

In this chapter, your core team and community constituencies will work with a set of indicators to assess how resilient and equitable community’s built, natural, and social support systems currently are.

When you finish, you will have answered indicator questions and sorted indicators by their relative resilience and equity, producing a 4-quadrant diagram. In Chapter 5, you will use the results of this assessment to identify the most urgent areas for action.

**Objectives:**

* + Assess how resilient and equitable your community's built, natural, and social environment systems are to disasters and climate change, using key indicators.
  + Convene discussions about equitable resilience with community constituencies

**Who?** The project core team and any additional community members

**Where:** in person or virtual meetings

**Time needed**:

1) Kickoff meeting with the core team and community members to discuss Chapter 4 objectives and select indicators that are relevant to where you live (2 hours)

2) Gather data and information to help you answer the indicator questions for each system and sector.

3) Community workshop where you will sort indicators by their relative resilience and equity into a 4-quadrant diagram and discuss the results of the assessment (time to plan; 2 hours for the workshop)

**Materials will you need:** easel pad, sticky notes, and markers (alt: whiteboard and dry erase pens, virtual whiteboard); SVA table/cards from chapter 3; hazards ID from chapter 3;

**Steps:**

* 1. Review and select built, natural, and social indicators that are relevant to where you live
  2. Gather information to answer each indicator question about your community.
  3. Place completed indicator cards into a four-quadrant diagram to show the most urgent areas of need
  4. Reflection and next steps

**Instructions for Kickoff meeting:**

1. Review Objectives; Review Built, Natural & Social Indicators; Select Set of Indicators to Work With (2 hours)

With your core team, review the main objectives for Chapter 4 and reflect on concerns expressed in Chapter 3 (for certain population groups, and for particular HDTs) to ensure team members have a clear understanding.

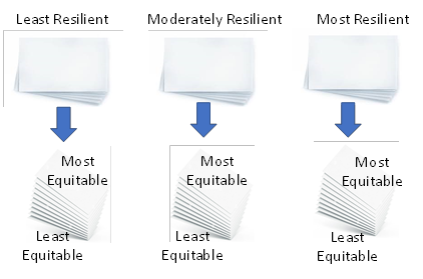
Together as a team, review systems and sectors using the indicators workbook (link to workbook – Excel file).

The indicators in this chapter are organized into “sectors” such as transportation and economy, within three major built, natural, and social environment systems. There are also two cross-cutting issues, equity and governance and planning, which have indicators in each sector.

|  |  |  |
| --- | --- | --- |
| **Built Environment** | **Natural Environment** | **Social Environment** |
| Food, water, shelter | Air, Water, and Soil | Society & Culture |
| Waste Management | Biodiversity | Economy |
| Energy and Fuel |  | Health & Well-being |
| Information and Communications |  |  |
| Transportation |  |  |
| Cross-cutting issues |  |  |
| Equity |  |  |
| Governance and planning |  |  |

1. Select which indicators are relevant for your community.
   1. **Find the indicators** for each sector listed ([Indicators workbook](https://teams.microsoft.com/l/file/82F0B8A7-FB6C-4919-95B3-8BCAD99085F0?tenantId=88b378b3-6748-4867-acf9-76aacbeca6a7&fileType=xlsx&objectUrl=https%3A%2F%2Fusepa.sharepoint.com%2Fsites%2FMETRO-CERIResilienceandsocialvulnerabilityteam%2FShared%20Documents%2FHCD%2FERB%20chapter%20content%2FERB%20Chapter4_Indicators%20Workbook_Template_Draft_13Dec2021.xlsx&baseUrl=https%3A%2F%2Fusepa.sharepoint.com%2Fsites%2FMETRO-CERIResilienceandsocialvulnerabilityteam&serviceName=teams&threadId=19:25b46df5ad8d4428902bd6a4f8c2c1c1@thread.skype&groupId=a0311f5e-b32f-4504-a8ca-129e1d2e365c)).The indicators are grouped into “sectors,” each of which has 10-15 indicators that represent the most important aspects of what an equitable, resilient sector is (reflected in the functional statements for each sector, listed in the workbook).
   2. **Divide team into small groups to review the indicators for each sector**. Review our recommended indicators to make sure they are relevant for your community (i.e., align with your community's built, natural, and social support systems) .
   3. Consider questions such as the following when selecting indicators:
   * Does the indicator relevant to a hazard your community faces?
   * Does the indicator reflect an equity priority in your community?
   1. **Figure out a plan** for who on your core team is responsible for collecting data and information to help you answer the indicator question for each selected indicator. Send team members off to gather this information, making sure to allow enough time before the indicators workshop for them to do so.
2. **Optional!** If there’s anything you particularly want to know that is not included on our list of recommended indicators, feel free to **add indicators** that are especially relevant for your situation. Note: When adding an additional indicator, be sure that it represents key aspects of the resilience of the system as realistically and objectively as possible (refer back to the functional statements). Being as transparent as possible will help build trust within the community and selecting only indicators that will yield a positive or negative picture of resilience will undermine confidence in the results.
3. **Gather information**
   1. **Gather the data or information** that will allow you to answer the ‘indicator question’ for each selected indicator. The indicator worksheet and indicator cards have an indicator question that you need to answer. They also contain suggested data sources (which range from asking the local recreation department to examining U.S. census data). Each core team member can be in charge of gathering information for a subset of indicators.
   2. I**nput the answer to the indicator question** on the indicator card. The answer depends on a) your community's data; and b) and the scoring method for that indicator.
4. **Instructions for Workshop:** 
   1. Sort completed indicator cards based on their results; produce a 4-quadrant diagram, Discuss (2 hours)
   2. Before the workshop: print out enough completed indicators cards for breakout groups to use.
   3. In the workshop, divide into breakout groups for each system (or sector, depending on how many people you have) to sort the indicator cards. Sort the indicator cards for into three stacks, using the completed indicator answers to help you determine whether this indicator shows that the sector is currently: Least Resilient, Moderately Resilient, and Most Resilient. Next, within each stack, order the cards by whether the indicators shows that the sector is currently: Least Equitable, Moderately Equitable, Highly Equitable.
   4. When sorting, consider the following questions (please refer back to previous Chapters' stories):
   * In what aspects/areas did you hear about least/greatest resiliency?
   * In what aspects/areas did you hear about least/greatest equity?

* How might these stories from previous Chapters change/inform the scoring of any indicators?



1. Produce visualization
   1. Take the cards you sorted in the previous step (for a specific sector) and paste them into the shared (large group) quadrants visualization, with the most resilient along the top two quadrants and the most equitable along the right two quadrants.
   2. As time permits, small groups should rotate to review and provide feedback to other small group's placement of their sector cards.
   3. Interact with the visualization to explore patterns. What are the most and least equitable sectors? Which hazards appear to have the most impact? Reflect on what are problem areas, as well as what appears to be doing well.
   4. Use the visualization and your discussion to identify 4-5 topics that you will discuss as potential action areas in Chapter 5.

