In previous tasks, the team learned about some factors that affect the spread of mosquito-borne diseases. These factors include temperature, precipitation, disease hosts, and income.

**Objective**

In this task, the team will explore some other factors that can affect the spread of mosquito-borne diseases in a community. The team will also work to understand how these factors have changed over time in the community. These factors include urbanization, natural disasters, deforestation, and changes in population. To understand how these factors have changed in your community, the team must talk to local people of various ages.

In this task, the team will be focusing on the following questions from the question map.

- What factors influence how mosquitoes develop and reproduce?
- What factors influence how mosquitoes spread disease?
- Who are local people, organizations, associations that can provide valuable information related to this problem?

1. Go to the Task 4-5 folder and get the Meet the Team reading. This reading includes the interview questions.
2. As a team, read the Meet the Team reading.
3. Outline three to five very important points from the reading. Share as a team.
4. Use the resources in the Learning Lab task folder to learn more about the effects of natural disasters and urbanization on mosquitoes.
5. Read the interview questions provided.
6. Decide which questions you will use during your interview.
7. Create any additional interview questions as a team.
8. Identify various people in your community that team members could interview.
9. Determine how you will document the responses of the people you are interviewing.

10. Conduct interviews with these people.

11. As a team, share and compile the results of these interviews.

12. As a team, discuss the following:
   - Based on your interviews, how has the urbanization of your community changed over time?
   - Has it become more crowded? Have many people moved there or moved away? Has human contact with animals increased or decreased?
   - Have any natural events, such as large storms, tornadoes, or hurricanes, happened in the area?
   - Have people become more or less healthy? How has their living situation changed for better or worse?
   - What are some limitations of these types of interviews?
   - How are interviews about the past different than data or evidence from the past?
   - How did the interviews shed light on the present? Write a few examples of current things that make more sense now than before you heard about the past.
   - How might these things, or other parts of what you heard, tie into the community's health?
   - How can the information from these interviews be useful when considering the problem question and other questions from the map?
   - What factors influence how mosquitoes develop and reproduce? What factors influence how mosquitoes spread disease?
   - Who are local people, organizations, associations that can provide valuable information related to this problem?
   - How can we ensure health for all from mosquito-borne diseases?

Research Tip
Use the field safety tips in the safety documents on Learning Lab before going out into the community to survey or interview people. Be polite, never go alone, and always be aware of your surroundings.
Task 4-5 Collecting Local Transmission Histories – Interview Questions

Use these questions to interview different people in your local community to learn more about its history.

1. Was our community always as crowded as it is now?
2. In your opinion, how has the community’s health changed as a result?
3. Have many people moved here or moved away during your life? Were there ever any large events of immigration or emigration?
4. Has the community become more urban over time? How do you think the community’s health has changed as a result?
5. Has the community built more homes or buildings over your life?
6. What roles do animals play in the community and how has this changed over time?
7. Have people been in contact with wildlife in your community during your life?
8. Has this contact changed over time?
9. Has the way land is used in the community changed during your life?
10. Has wild land in the community been cleared for agriculture during your life?
11. Have any unusual natural events, like large storms or strange seasons, occurred during the time that you have been here, and did they cause any changes in the community’s health or the amount of mosquitoes you noticed?
12. When you were younger, do you remember being bitten by mosquitoes more or less often than now?
13. Could you please describe any changes in your lifestyle or in the community that could be responsible for this?
14. Have guests always visited the community and where do they usually come from?
15. Has access to clean drinking water, electricity, and roads always been the same?
16. Create your own questions:______________________________________
**Mosquito! Task 4-5 Collecting Local Transmission Histories**

Learning about the changes to a place from the local people

Kelly Bennett - Biologist - Smithsonian Tropical Research Institute (Panama)

Mosquito-borne diseases like dengue, Zika, and yellow fever are emerging and reemerging all over the globe. The emergence of these diseases can be connected to urbanization and changes in land use over time. Urbanization is an increase in the number of people and a change in the way land is used in an area over time. As the number of people in a location changes, things like land use and contact with wildlife can change. These changes can affect the spread of mosquito-borne diseases in a community.

The problem of mosquito-borne disease has also been affected by increased human movement and trade around the world. Over time, this movement allows mosquitoes to travel and establish new populations. In addition, urbanization can increase contact people have with the surrounding forests. Over time, this contact is where diseases can switch from using animals as hosts to using humans as host. Increasing urbanization of communities means we must work together when thinking about this problem.

Mosquitoes can be highly adaptive. New mosquito-borne diseases are emerging and spreading rapidly. A recent example is Zika virus. This disease has been around for a long time. However, it has only recently become a worldwide problem. This is likely due to the adaptive nature of *Aedes* mosquitoes, which are able to take advantage of their association with humans.

To fully understand urbanization and changes in a community over time, we have to start to uncover its history. For some things, this can be hard to do. Big histories, like those of nations, are often written down and are easy to find. Smaller histories, on the other hand, like those of towns, families, or events, are usually recorded in our memories and passed down through stories. This gives personal stories of the past, passed from one generation to the next, big value. They help us understand our current situation in ways that other methods cannot.

In this task, you will interview elderly members of your community to learn about the past. From this history, your will work to better understand the urbanization and changes of your community over time.

When you do your interviews, try to interview some people your parent’s age, and some who are even older. The point is to see how things have changed over time.
In your interviews, try to listen much more than you talk, but still remain an active listener. Keep an ear out for themes like urbanization, globalization, contact with wildlife, natural events, health, and development. Understanding how these things have become the way they are will help you keep your community healthy.

Below are some questions to use in your interviews. Feel free to come up with more, especially ones that are specific to your area, but see these as a framework to follow.

How you set up an interview is your choice. If you aren’t sure what to do, simply explain the project you are working on and politely ask your interviewee if they would be willing to tell you about the past of this place. It is best to meet someone in a space where they feel comfortable, and to start with some simple questions to let them warm up. Then, when they seem open to sharing stories, you can ask them the following interview questions.

- Was our community always as crowded as it is now?
- In your opinion, how has the community’s health changed as a result?
- Have many people moved here or moved away during your life? Were there ever any large events of immigration or emigration?
- Has the community become more urban over time? How do you think the community’s health has changed as a result?
- Has the community built more homes or buildings over your life?
- What roles do animals play in the community and how has this changed over time?
- Have people been in contact with wildlife in your community during your life?
- Has this contact changed over time?
- Has the way land is used in the community changed during your life?
- Has wild land in the community been cleared for agriculture during your life?
- Have any unusual natural events, like large storms or strange seasons, occurred during the time that you have been here, and did they cause any changes in the community’s health or the amount of mosquitoes you noticed?
- When you were younger, do you remember being bitten by mosquitoes more or less often than now?
- Could you please describe any changes in your lifestyle or in the community that could be responsible for this?
- Have guests always visited the community and where do they usually come from?
- Has access to clean drinking water, electricity, and roads always been the same?
Harvey's Next Danger: Massive Mosquito Clouds
Description:
After the catastrophic devastation of hurricane Harvey, the people of Texas are now facing a slew of problems from contaminated floodwaters to toxic mold to giant alligators sneaking into homes to floating rafts of fire ants. But as Joe Hanson at Texas Monthly reports, Harvey victims have yet another galling problem to add the mix: giant clouds of mosquitoes.

The World's Megacities Are Making Dengue Deadlier
Description:
While the world’s attention is focused on the Zika virus spreading through the Americas, large urban areas in Southeast Asia are fighting off outbreaks of dengue fever.
http://www.smithsonianmag.com/science-nature/worlds-megacities-are-making-dengue-deadlier-180958009/

Protecting Land in Brazil Reduces Malaria and Other Diseases
Description:
In the Brazilian Amazon, getting back to nature may really be the healthiest option. Data covering hundreds of municipalities show that people who live near areas under strict conservation protection experience lower incidences of common diseases and infections such as malaria.