Climate Change: Can we rise to the challenge?

Humanity is immersed in a historic, transformative moment that we cannot possibly bring fully into focus from our position in the eye of the storm. Right now, all we know is that the pandemic has put a microscope on global inequality, rapidly changing technology and climate change – and that each of these are inextricably intertwined. Opportunity? The end of the world as we know it? We aren't able to say yet, but what is abundantly clear is that we cannot continue down the path of planetary neglect if we want anyone to have a chance at hindsight.

In November 2021, with the UN Climate Change Conference (or COP26) in full swing, Doha Debates' 11th debate turned to the question the world is asking: *What's the best way to solve climate change?* The three speakers struggled to find common ground amid lively discussion about prioritizing solutions to climate change, examining late-stage capitalism, harnessing technology and balancing the human and economic costs. The lesson plans in this unit are designed for learners to engage critically with these issues through better conversation skills, systems thinking and creative solutions. This full teaching unit parallels and expands upon our **online module** for this debate topic.

GOALS

- To understand varying perspectives on climate change and how we might address it, particularly in light of growing inequalities magnified by the pandemic.
- To synthesize the intersecting perspectives of economics, technology and policymaking where stakeholders have differing impact and influence over each other.
- To develop skills to engage in critical conversations about difficult, politicized and overlapping systemic problems.
- To think creatively and learn to focus on asking the right questions before proposing solutions.

Climate Change: Can we rise to the challenge?

LEARNING OUTCOMES

After this unit, learners will be able to:

- Articulate different perspectives on the issue of climate change and recognize it as a system of interconnected elements and interdependencies.
- Locate climate change in the historical context of colonialism and exploitation.
- Identify stakeholders in the climate crisis, differentiating between their positions and underlying interests.
- Understand the importance of asking questions in systems thinking.
- Articulate their own worldview on the issue of climate change.

BETTER CONVERSATION SKILLS

- Active listening
- Move from positions to interests
- Gain perspective from other stories

SOCIAL EMOTIONAL LEARNING SKILLS

- Relationship skills: communication, social engagement, teamwork
- Responsible decision-making: analyzing situations, solving problems, reflecting, ethical solutions
- Social awareness: perspective-taking, empathy, appreciating diversity, respect for others

ESSENTIAL QUESTIONS

- How can we gain a better understanding of climate change as a system of interconnected relationships?
- Why is it important to ask the right questions before seeking solutions to complex problems? What strategies can we use to refine how we ask questions?
- Who are the stakeholders involved in the climate change system and which of them have the most influence and/or power?
- How can we reshape our conversations about climate change to make room for different perspectives on the issue?
- How can young people contribute to the social, political and economic debates around climate change in their communities?

TEACHING UNIT OVERVIEW

Part I: Prepare

In this phase, participants will begin to explore the complexity and evolving terminology around climate change as they prepare to watch a debate on the issue.

LESSON 1 Establishing what we know about climate change

GOAL

To establish what participants already know about climate change and build a shared vocabulary associated with the issue.

LEARNING OBJECTIVES

- Participants will explore terminology associated with climate change.
- Participants will become familiar with how climate change affects different people in different parts of the world.
- Participants will gain a broader understanding of the role of colonial history and Indigenous perspectives on climate change and the natural world.

TIME

60-75 minutes

MATERIALS

- "Definitions drive debates: Understanding the language of climate change"
- "The colonialist roots of climate change"
- "Protecting the Earth: Indigenous solutions to the climate crisis"
- Appendix A: Key concepts from unit media
- Sticky notes
- Open wall or board
- Pens or markers

ADAPTATIONS FOR ONLINE DELIVERY

- Use a digital tool like Jamboard for the vocabulary brainstorming activity.
- Use breakout rooms on a platform like Zoom or Google Meet for small-group work.

LESSON 1 **Establishing what we know about climate change**

INSTRUCTIONS

15 minutes (or prior to meeting as a group)
Ask participants to read "**Definitions drive debates: Understanding the language of climate change**" and make note of the vocabulary and concepts specific to climate change.

20 minutes
Invite participants to briefly share their overall responses to the assigned article. Explain that they will be building a shared vocabulary of terms and concepts related to climate change.

Clear a space on a wall or board and distribute 5-10 sticky notes to each participant.

Ask participants to brainstorm terms, concepts or ideas they associate with climate change, beginning with terms from the article, and write them on sticky notes (one response per note). Have them post their notes on the board or wall.

Once they have finished brainstorming, ask them to group similar or related terms, concepts and ideas by moving sticky notes around on the board until every sticky note is in a group or category. Encourage dialogue as they engage in the activity.

20 minutes
Watch "**The colonialist roots of climate change**" (10 minutes) and ask participants to take notes on new terms and concepts that are introduced.

Lead a group discussion using the following questions:

- *What is your opinion about the message in this video? How alarmed should we be about climate change?*
- *What are the geographic, social, demographic and racial factors underlying the "inequality of climate change" as discussed in the video?*
- *What is the connection between climate colonialism, internally displaced persons (IDPs) and carbon offsetting?*

LESSON 1 **Establishing what we know about climate change**

10 minutes
Ask participants to work in small groups to add any new terms or concepts from the video to the board or wall. At this point, you may also choose to include terms and concepts from **Appendix A**: Key concepts from unit media.

Work together as a group to consolidate the new terms and concepts, eliminating any repeats. Ask participants to define new terms as they generate them. (Note: This may require additional time if discussion of definitions is necessary.)

Once the board or wall contains all of the terms and concepts that have emerged, ask participants to engage in the same grouping activity they did earlier, moving and consolidating sticky notes until every note is in a group or category. This may involve moving terms and concepts to existing groups or categories and/or adding new ones. Encourage dialogue as they engage in the activity.

10 minutes
Ask participants to briefly discuss how the groups or categories are interconnected and how they interact. This conversation will both build familiarization with the terms and introduce the issue of climate change as a complex system of interconnected elements (which will be explored in more depth later in the unit). If there is time, ask participants to place an asterisk (*) on any sticky note that describes a "stakeholder" in the climate change system (such as farmers, children, the global south, etc.).

If possible, make the vocabulary board visible throughout the unit for easy reference.

HOMEWORK

Ask participants to watch the #DearWorldLive episode "**Protecting the Earth: Indigenous solutions to the climate crisis**" (37 minutes) and respond to one or more of these prompts in writing:

- *What does "climate justice" mean to you?*
- *Why is storytelling important in conversations about climate change?*
- *Why is it important to examine the language used to talk about climate change?*
- *Why might Indigenous voices be particularly important when it comes to imagining solutions to climate change?*

LESSON 2 **Taking perspective on our worldviews**

GOAL

To explore storytelling and diverse perspectives on the climate crisis and begin to map your own worldview of climate change.

LEARNING OBJECTIVES

- Participants will understand the importance of listening to other stakeholders' perspectives in the climate crisis.
- Participants will begin to assess the elements and interdependencies in the complex system of climate change.
- Participants will use their current knowledge to develop a system map of their own worldview of climate change.

TIME

75 minutes

MATERIALS

- "Understand their story"
- Systems Mapping slide deck: PowerPoint version, Google Slides version, or Appendix B: Systems Mapping slide deck PDF with script
- "The Five Whys" from IDEO.org
- Sticky notes
- Markers
- Large sheets of paper

ADAPTATIONS FOR ONLINE DELIVERY

Use a digital tool like Jamboard for the mapping activity.
Use breakout rooms on a platform like Zoom or Google Meet for small-group work.

INSTRUCTIONS

10 minutes

As a whole group, watch "Understand their story" from the Better Conversations series and discuss some or all of these questions:

- *How does Dr. Govinda Clayton's advice in the video relate to the global climate change conversation?*
- *Do you think storytelling contributes significantly to the climate change conversation? Why or why not?*
- *Are you directly affected by climate change in your part of the world? What is your viewpoint on the issue?*

LESSON 2 **Taking perspective on our worldviews**

20 minutes

Explain to participants that they will use role-play to imagine diverse perspectives on the climate change issue.

Assign one of the following roles to each participant and allow them several minutes to imagine the lived experience of the person they are assigned. (Note: You may wish to add to or change this list.)

- a resident of an area with frequent hurricanes or forest fires
- a small-scale farmer
- a local fisherman
- a coal miner or oil rig worker
- a coal or oil executive
- a founder of a solar power company
- a politician advocating for climate action
- an Indigenous person living off the grid
- a biologist studying biodiversity
- a 14-year-old climate activist
- a religious leader
- a talk show host

Have participants engage in a carousel discussion to share their imagined stories with each other:

- Divide participants into two even groups: an inner circle facing out, and outer circle facing in.
- Participants facing each other will each have one minute to respond aloud to the prompt: *Who are you, and how has climate change affected you?*
- After two minutes of sharing, instruct participants in the outer circle to move one step to their right so that they face a new participant in the inner circle. Each person should take one minute to briefly share their story again, this time adding their response to this prompt: *What are you most concerned about, or afraid of, when it comes to climate change?*
- After two minutes of sharing, instruct participants in the outer circle to move one step to their right. Each person should take one minute to briefly share their story again, this time adding their response to this prompt: *What would help to address the climate-related problems you experience or anticipate?*
- After two minutes of sharing, instruct participants in the outer circle to move one step to their right. Each person should take one minute to briefly share their story again, this time adding their response to this prompt: *What ideas did you hear in the last round and how might they affect you?*
- If there is time, participants can continue around the circle, recycling questions and generating new ideas.

LESSON 2 Taking perspective on our worldviews

Debrief this activity by asking the whole group to share any thoughts about the role of storytelling in the global climate change discussion.

10 minutes
Introduce systems mapping using the Systems Mapping slide deck (PowerPoint or Google Slides) and the accompanying script. Appendix B also contains PDF slide images and the script.

30 minutes
Explain to participants that they will now collaborate to develop their own worldview system maps of the complex problem of climate change.

Create small groups (3-4 participants) and provide each group with sticky notes, markers and large sheets of paper. Guide groups through this four-step process of constructing system maps:

- **Step 1:** Ask groups to identify at least 20 elements associated with climate change, and write each element on a sticky note. Point out that shared vocabulary terms may be considered elements, and refer them to the vocabulary board or wall created in Lesson 1. Any of the stories they have heard so far reveal people – often stakeholders – who are also elements of the system.
- **Step 2:** Ask groups to arrange their sticky notes on a large sheet of paper with enough space between them to eventually draw connecting lines. Explain that it is helpful to cluster closely related elements near each other.
- **Step 3:** Remind participants that none of these elements exist in isolation – they function in relation to each other. Ask groups to review their elements and discuss the relationships between them. As they do so, they can move elements around and add new ones if they wish. Emphasize that their dialogue is the most important part of this step.
- **Step 4:** When they are ready, have groups identify the interdependencies by drawing lines between elements that are connected. Ask them to use thicker markers to draw lines between elements with strong interdependencies. Remind them to describe the relationships they are seeing, so that all group members benefit from the worldviews of others. Ask them to ensure that all elements on their maps have a line or lines connecting them to other elements.

Save participants' completed maps. You will return to them in Lesson 6.

LESSON 2 Taking perspective on our worldviews

EXIT SLIP

5 minutes

Ask each participant to identify one strong interdependency on their group's system map. They will use this interdependency as the basis for their homework.

HOMEWORK

Explain to participants that in systems thinking, it is important to ask many questions before seeking solutions. These questions should arise from the relationships (or interdependencies) among the elements and will help them deepen their understanding of both the relationships and the overall issue.

Ask each participant to develop 3-5 questions from the strong interdependency they identified on their group's system map.

Refer participants to IDEO.org's "The Five Whys" method to help them generate the "right questions": Have them ask a preliminary question, then formulate five follow-up questions that dig deeper by asking "why" based on the revelations from the previous question.

Part II: Engage

LESSON 3 **Watching the debate and identifying positions and interests**

GOAL

To identify the debate speakers' positions and interests and identify common ground between them.

LEARNING OBJECTIVES

- Participants will expand their own worldviews on the issues at hand.
- Participants will engage in critical analysis of the speakers' positions.
- Participants will learn to separate those positions from the speakers' underlying interests.

TIME

90 minutes of debate viewing + 60 minutes of activities

MATERIALS

- "**Climate change: Can we rise to the challenge?**" debate
- "**Change your approach**"
- **Appendix C**: Speaker Perspectives graphic organizer
- **Appendix D**: Speaker Positions handout
- **Appendix E**: Iceberg handout

ADAPTATIONS FOR ONLINE DELIVERY

- Use breakout rooms on a platform like **Zoom** or **Google Meet** for the Iceberg activity. Embed the Iceberg handout in a **Google Slides** presentation (one iceberg per slide; one slide per small group) so that participants can complete it digitally.
- For the Gratitude Circle, participants can express gratitude for the contributions made by the person who appears to the right of them on-screen (in grid view). If nobody appears next to them, they can randomly select someone who has not yet been chosen.

INSTRUCTIONS

90 minutes (or prior to gathering as a group)
Provide participants with the Speaker Perspectives graphic organizer (**Appendix C**) to fill out as they watch the debate. Remind them to also record any new terms or concepts to add to their vocabulary list.

Have participants watch the debate "**Climate change: Can we rise to the challenge?**" (82 minutes).

LESSON 3 Watching the debate and identifying positions and interests

10 minutes

Discuss some or all of these questions as a group:

- *Which speaker's remarks resonate most strongly with you, and why?*
- *Is there common ground among their positions?*
- *What would you like to know more about after watching this debate?*
- *What compelling questions do you have after the debate?*

5 minutes

Explain that in any debate, people have their *positions* (what they want) and their *interests* (why they want the things they want).

Distribute the Speaker Positions handout (Appendix D). Ask participants to read it and take note of each speaker's position:

- **Naomi Klein**: It's now or never. We must rein in capitalism and fight the climate crisis and poverty at the same time.
- **Bjorn Lomborg**: Stop media-fueled alarmism. Climate change is real, but it's not the end of the world. To fix it, let's put spending into green innovation.
- **Ameenah Gurib-Fakim**: Be realistic – revolutionary change and green tech aren't necessarily tenable solutions for the global south – but demand fair policies and reduce emissions immediately.

15 minutes

Lead a group discussion on some or all of the following questions:

- *Do you think the summary statements assigned to each speaker accurately reflect their positions? If not, how would you change the statements?*
- *What do you think sets the speakers apart from each other?*
- *What would you say is driving each speaker's position? Why do you think they want what they want?*
- *Are the speakers' positions incompatible with each other? If so, how?*

5 minutes

Watch the *Better Conversations* video "Change your approach" about ways to improve difficult conversations. Encourage participants to pay particular attention to the part about positions and interests. If necessary, briefly review these concepts with participants after watching the video.

LESSON 3 **Watching the debate and identifying positions and interests**

10 minutes

Form three groups – one for each debate speaker – and distribute a copy of the Iceberg handout (**Appendix E**) to each group. Ask them to record their speaker's position at the top of the iceberg.

Ask groups to brainstorm their speaker's interests – based on the arguments they presented during the debate – and record them in the part of the iceberg below the water's surface. To guide them, participants may imagine asking their speaker the following questions:

- *Why do you care about this issue? Do you have a personal connection to it?*
- *What beliefs do you hold concerning this issue?*
- *What do you think will happen if this issue is not dealt with in a manner consistent with your beliefs?*

10 minutes

Ask each small group to present their iceberg to the whole group. Once everyone has presented, ask the whole group: *Where is there common ground between all three speakers' positions? Their interests?*

EXIT SLIP

5 minutes

Conduct a Gratitude Circle, which creates safety in the group and helps participants to end on a high note by recognizing the effort and contributions of each participant in the group.

Have participants sit in a circle. Ask each participant to express gratitude for one positive contribution made by the person sitting to their right. This could be related to content (e.g., the person made a good point or asked a good question), related to the **majlis** process (e.g., the person was skilled at consensus-building), or related to personality and demeanor (e.g., the person brought humor and cheer to the group).

HOMEWORK

Ask participants to write a reflection on the debate responding to these prompts:

- *Which speaker did you agree with the most, and why?*
- *What interests do you have in common with each speaker?*
- *Is there a speaker or speakers with whom you do not share common interests?*

LESSON 4 **Conducting a stakeholder review**

GOALS

- To identify the stakeholders involved in climate change and assess how each one impacts and influences the issue.
- To examine climate change stakeholders in the context of each debate speaker's position.

LEARNING OBJECTIVES

- Participants will gain a better understanding of stakeholders and the power they hold in the climate crisis.
- Participants will understand how stakeholder positions and interests are directly relevant to a systems view of the climate change issue.
- Participants will engage in discussion of climate change from different perspectives.

TIME

60 minutes

MATERIALS

- Appendix F: Stakeholder Review worksheet
- "Change your approach"

ADAPTATIONS FOR ONLINE DELIVERY

- Use breakout rooms on a platform like Zoom or Google Meet for the Stakeholder Review activity.

INSTRUCTIONS

10 minutes

Let participants know that the goal of the stakeholder review is to create space for different views, recognize the interests underlying different positions and collectively seek common ground. Provide participants with the following definition: *Stakeholders* are people, groups or individuals who have the power to affect – or are affected by – the issue at hand.

Lead the whole group in compiling a list of stakeholders in the climate change issue. Participants should make sure to include any major stakeholders identified in Lessons 1 and 2, using their vocabulary list and their system maps for guidance.

Form pairs or small groups (2-3 participants) and ask each pair or group to choose one stakeholder to represent.

LESSON 4 **Conducting a stakeholder review**

Note: The intention in this activity is to create a diverse array of stakeholder views. The more pairs or groups you are able to form, the more wide-ranging the discussions of stakeholders' perspectives. Ideally, there will be 4-8 pairs or groups.

20 minutes

Distribute a copy of the Stakeholder Review worksheet (Appendix F) to each group. Ask groups to briefly research their stakeholder's involvement in the climate change issue. Each group should outline the stakeholder's opinion of, and interest in, the issue, using the questions in the Stakeholder Review worksheet as a guide:

- *What is this stakeholder's general opinion about this issue?*
- *Why does this stakeholder care about this issue?*
- *What are some of the ways this stakeholder supports and addresses the issue?*
- *What are some of the ways this stakeholder obstructs or negatively impacts the issue?*
- *What influence does this stakeholder have on others regarding this issue?*

15 minutes

Ask groups to determine how the solution proposed by each individual debate speaker would impact their particular stakeholder, using the questions in the Stakeholder Review worksheet as a guide:

- *How is your stakeholder impacted by this speaker's position?*
- *Would your stakeholder stand to lose or gain if the solutions proposed by this speaker were implemented?*
- *Would your stakeholder agree with any of the speaker's solutions? Would they have any choices about how they were impacted by the solution?*

15 minutes

Ask small groups to take a few minutes to identify what the underlying interests of their stakeholder might be. Then have the whole group discuss the commonalities between stakeholders' interests and how they might collaborate for positive impact. Have them use the questions in the Stakeholder Review worksheet as a guide:

- *What are the interests underlying each stakeholder's position?*
- *Is there common ground among the different stakeholders' interests?*
- *What has this review of stakeholders demonstrated in terms of finding solutions to the issue at hand? Are any new ideas emerging?*

HOMEWORK

Ask participants to rewatch the "**Change your approach**" video from Lesson 3 and write a short reflection on how Dr. Clayton's advice might be relevant to a systems-thinking view of stakeholders.

Part III: Reflect

LESSON 5 Connecting *Better Conversations* and systems thinking

GOAL

To reflect on what it means to shift one's mindset through listening, empathy and systems thinking, and how this shift affects our personal lives as well as our approach to addressing climate change.

LEARNING OBJECTIVES

- Participants will understand that systems thinking requires strong interpersonal skills, including empathy and an ability and willingness to take the perspectives of others.
- Participants will practice self-reflection to embody their learning from this unit and observe shifts in their thinking.

TIME

60 minutes

MATERIALS

- Large sheets of paper
- Markers or other writing utensils

ADAPTATIONS FOR ONLINE DELIVERY

- Use a platform with drawing/doodling capabilities such Sketchpad, Aggie, or Google Slides for the poster activity.

INSTRUCTIONS

1 minute

Tell participants that they will be reflecting, in writing, on how they have practiced empathy during this unit, and the role of *empathy* in systems thinking. Remind participants that empathy means identifying with another person's feelings or being able to "step into another person's shoes" and take their perspective on an issue.

10 minutes

Ask participants to write a reflection on their experience of taking a systems-thinking approach to studying climate change with their peers, using these prompts to guide them:

- *Think of a moment you were able to see another person's perspective during this unit. How have the activities and discussions helped you understand the ways in which other people – including those you disagree with – are affected by climate change?*
- *Has thinking systemically about climate change shifted your personal perspective in any way?*

LESSON 5 Connecting *Better Conversations* and systems thinking

5 minutes

Ask participants to respond in writing to the following prompt:

- *In what ways does thinking systemically help you attribute the challenge of solving climate change to systems rather than individuals? Describe how this shift could change the way you see and interact with others in the future.*

5 minutes

Invite volunteers to share a few of their reflections.

10 minutes

Read aloud this quote from *Designing Regenerative Cultures* by Daniel Christian Wahl:

"We need a new way of thinking, a new consciousness, a new cultural story; only then will we be able to get the questions right, seeing more clearly what underlying needs have to be met. If we jump into action without deeper questioning, we are likely to treat symptoms rather than causes." (2016, p. 26)

Engage in a whole-group discussion of any or all of the following prompts:

- *What does the idea of "regenerative cultures" mean to you?*
- *How does Wahl's quote relate to the issue of climate change?*
- *How does this quote encompass both systems thinking and the idea of changing your approach to have better conversations?*

20 minutes

Form small groups (3-4 participants) and give each group a large piece of paper and markers. Ask them to discuss the following questions, then create a visual representation of the conversation (a poster) by doodling or drawing the causes of climate change and the actions they identify during the conversation.

- *Which "right questions" have you generated during this unit that have led you to pinpoint causes of climate change rather than symptoms?*
- *Which cause of climate change is most important to you to try to solve?*
- *What actions are you willing to take to help reach that solution?*

EXIT SLIP

10 minutes

Invite groups to briefly share their posters, explaining key points from their conversations.

LESSON 6 Revisiting and reflecting on our worldview system maps

GOAL

To reflect on the unit learning and the feelings that have arisen from that learning, and to synthesize those feelings and ideas before taking action.

LEARNING OBJECTIVES

- Participants will discuss individual vs. systemic responses to climate change action.
- Participants will explore their personal connection to the climate crisis and, through reflection, contemplate actions they might be compelled to take.

TIME

60 minutes

MATERIALS

- "Can YOU fix climate change?"
- Appendix G: Five Facts about Systems Thinking handout
- Worldview system maps from Lesson 2

ADAPTATIONS FOR ONLINE DELIVERY

Small groups can continue using a digital tool like Jamboard to update their maps, meeting in breakout rooms on a platform like Zoom or Google Meet.

INSTRUCTIONS

25 minutes

Watch "Can YOU fix climate change?" (15 minutes), then lead a whole-group discussion using any or all of these questions:

- *Which of the statistics mentioned in the video were most surprising to you?*
- *Were all three debate speaker positions reflected in the video? How?*
- *Did viewing this video change your perspective on any of the arguments put forth in the debate? How?*
- *Does the video take a systems-thinking approach?*

25 minutes

Distribute copies of the Five Facts about Systems Thinking handout (Appendix G) to participants.

Ask participants to break into their small groups from Lesson 2 (the groups in which they created their system maps).

LESSON 6 Revisiting and reflecting on our worldview system maps

Ask the groups to read the handout, then use the following prompts (also located at the bottom of the handout) to update their maps by adding new elements and drawing new interdependencies:

- *Who else is involved in this system?*
- *What are the perspectives of everyone who has a stake in the problem?*
- *How are the specific elements of the problem connected? How are they connected to me?*
- *How would a change in one part of the system impact the other parts?*

Ask each participant to locate themselves in the system and represent themselves on their group's map with a symbol of their own design.

Remind participants to practice listening and empathizing. Encourage storytelling and, if necessary, allow additional time for groups to engage in meaningful dialogue.

10 minutes

Ask each group to present their revised system map. Each participant should point out their personal symbol on the map and briefly explain its location. Collect and display system maps in one place for easy access in Lesson 7.

Part IV: Act

LESSON 7 **Taking action on climate change**

GOAL

To put new knowledge into action by developing and carrying out a civic-engagement project to mitigate impacts of climate change.

LEARNING OBJECTIVES

- Participants will identify how they wish to take action to mitigate climate change.
- Participants will apply what they have learned about systems thinking to a service, art or writing project.

TIME

60 minutes for steps 1-3; time will vary for step 4

MATERIALS

- "Brainstorm Rules" from IDEO.org
- Appendix H: Climate Change Action Assignment Guide
- #SolvingIt26
- All system maps from this unit
- All stakeholder reviews from this unit
- Markers or other writing utensils
- Sticky notes or index cards
- Large pieces of paper or an open wall/board
- A device from which to play upbeat music
- Optional: Art supplies (for art projects)

ADAPTATIONS FOR ONLINE DELIVERY

- Use a digital tool like Jamboard for the brainstorming activity.
- Use breakout rooms on a platform like Zoom or Google Meet for small-group work.
- Participants might choose to use a collaborative project-management tool like Asana, Trello, or Airtable to assign and track project action steps.

LESSON 7 Taking action on climate change

INSTRUCTIONS

15 minutes

Explain to participants that they will be designing a group service, art or writing project that embodies the concrete actions called for in the debate speakers' closing statements and reflects participants' own beliefs and wishes. Project ideas should be guided by the speakers' perspectives, and groups should consider whether there are potential projects that might address all three; namely:

- **Economic**: reining in capitalism and the perpetual growth model
- **Technological**: harnessing technology and innovation to create a better future for all
- **Governmental**: making policies to achieve equity for the global south

Have participants return to their small groups from Lessons 2 and 6 and come to a consensus on which type of project they wish to collaborate on: service, art or writing. As they discuss which project they want to pursue, they can review all system maps and stakeholder reviews from the unit and take note of the most salient features or "aha" moments from previous lessons.

Play some (non-intrusive) upbeat music as groups work to help set a creative and energetic mood.

15 minutes

Provide groups with a link to IDEO.org's "Brainstorm Rules" and quickly review them. Ask groups to use these rules to engage in active brainstorming for their project, writing as many ideas on sticky notes (or index cards) as possible and posting them on a board or wall. As each person has an idea, they should describe it to the group while posting it.

Continue to play upbeat music in the background as groups brainstorm.

Once their brainstorm is complete (10 mins), ask groups to come to a consensus on the action project they will complete.

You may wish to share these suggestions for projects if participants need inspiration:

Writing

- Speech to present at the UN
- Letter to the editor of a major newspaper
- Advertising campaign
- Short story or film treatment that captures your plan for change

Art

- Public mural
- Performance art
- Video campaign

Service

- Start a school or community group to advocate for policy change
- Identify organizations currently doing work that resonates with your idea for change, and create a plan to mobilize them around a common message or campaign
- Hold an awareness-raising event at your school or university

Participants may draw additional inspiration from the changemakers working to combat the climate crisis profiled in Doha Debates' **#SolvingIt26** series.

30 minutes

Provide groups with the Climate Change Action Assignment Guide (**Appendix H**) to help them develop, execute and reflect on their projects. Answer any questions they may have after reviewing the guide.

VARIABLE TIME, DEPENDING ON SCOPE OF PROJECT

Have groups use the Climate Change Action Assignment Guide to develop common and achievable action plans, execute them, share the results and reflect on the experience.

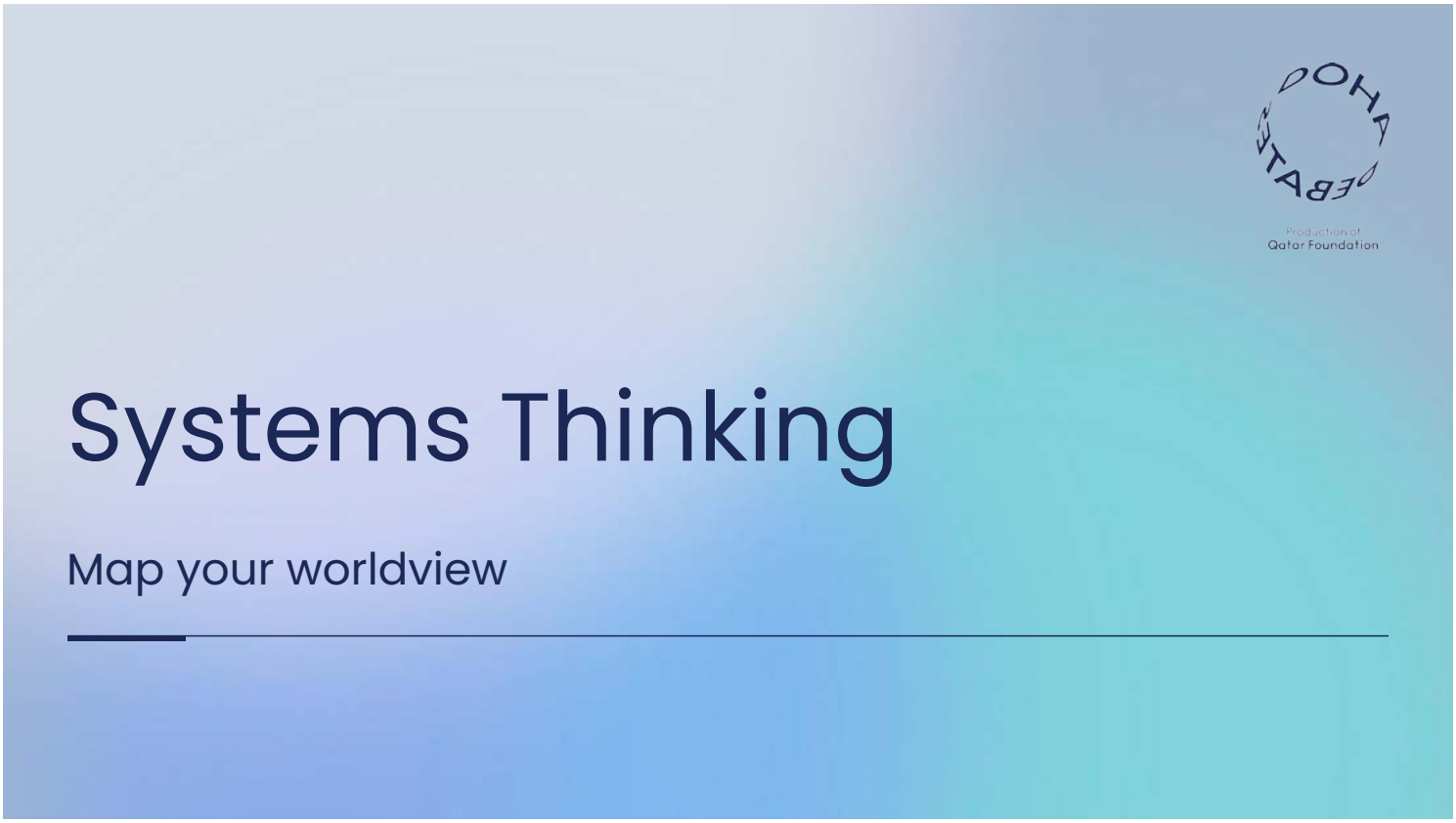
Key concepts from unit media

Below are key terms from the debate "**Climate Change: Can we rise to the challenge?**", the video "**The colonialist roots of climate change**," and the #DearWorldLive episode "**Protecting the Earth: Indigenous solutions to the climate crisis.**"

biodiversity
blood coal
carbon dioxide (CO2)
carbon offsetting
capitalism
clean energy
climate colonialism
climate justice
climate refugees
consumption
decolonization
deregulation
droughts
emissions
equilibrium
extraction
factory farming
floods
fuel subsidies
global north
global south
greed
green energy
Green New Deal
greenhouse gases
greenwashing
hurricanes
Indigenous ways of thinking
industrialization
inequality
infrastructure
innovation
interconnectedness
intersectionality
methane
new technologies
nuclear energy
outsourcing of burden
over-consumers
patents
rare-earth metals
raw materials
renewable energy
rising sea levels
slow tech
solidarity
storytelling
tax havens
tokenism
transnational capital
wildfires

Systems Mapping slide deck with script

Slide 1



You will be synthesizing everything you have explored thus far into visual maps of your worldviews on climate change as a complex system. To do this, you will use basic systems thinking and approach the task collaboratively, which will help you embrace complexity and accept that, when addressing complex problems, there will be no single solution and diverse perspectives are essential.

Slide 2

The systems-thinking mindset

"Systems thinking requires a shift in mindset, away from linear to circular. The fundamental principle of this shift is that everything is interconnected. We talk about interconnectedness not in a spiritual way, but in a biological sciences way."

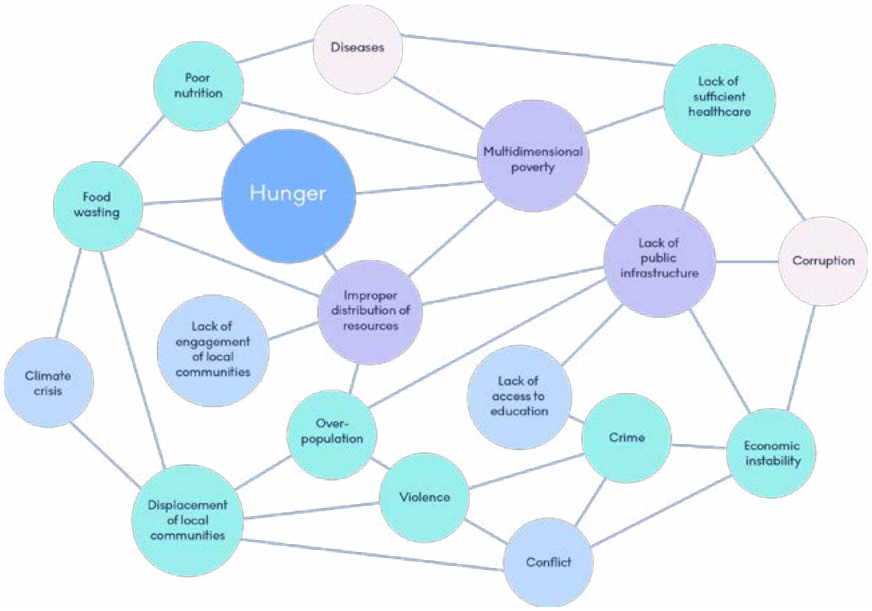
Leyla Acaroglu, "Tools for systems thinkers: The 6 fundamental concepts of systems thinking." *Medium*, September 7, 2017.

Let's look at this quote by Leyla Acaroglu in a 2017 *Medium* article: "Systems thinking requires a shift in mindset, away from linear to circular. The fundamental principle of this shift is that everything is interconnected. We talk about interconnectedness not in a spiritual way, but in a biological sciences way." What do you already know about systems thinking? (*Pause for responses.*) The mapping activity will help you look at the issue of climate change as a whole — in the same way that we think of the human body as a whole even though it is made up of many interconnected parts and dynamic systems.

Slide 3

System Map: Global hunger

- Up to 2 links
- 3 links
- 4 links
- More than 5 links



This sample system map illustrates two key terms you'll be working with today: the boxes are *elements* and the lines are *interdependencies*.

Slide 3

Key terms in systems mapping

Elements: The discrete parts of a system; in other words, the persons, places and things that make up the system. In a system that is engaging with a social problem, the elements might include different types of organizations, public and private institutions, products, currencies, technologies, policies and, of course, people.

Interdependencies: The relationships that connect the elements. In systems thinking, interdependencies help tell the story of what is happening inside the system and how the system can adapt to changes. In social systems, interdependencies might include funding patterns, supply and distribution chains, service relationships, education and advocacy, among others.

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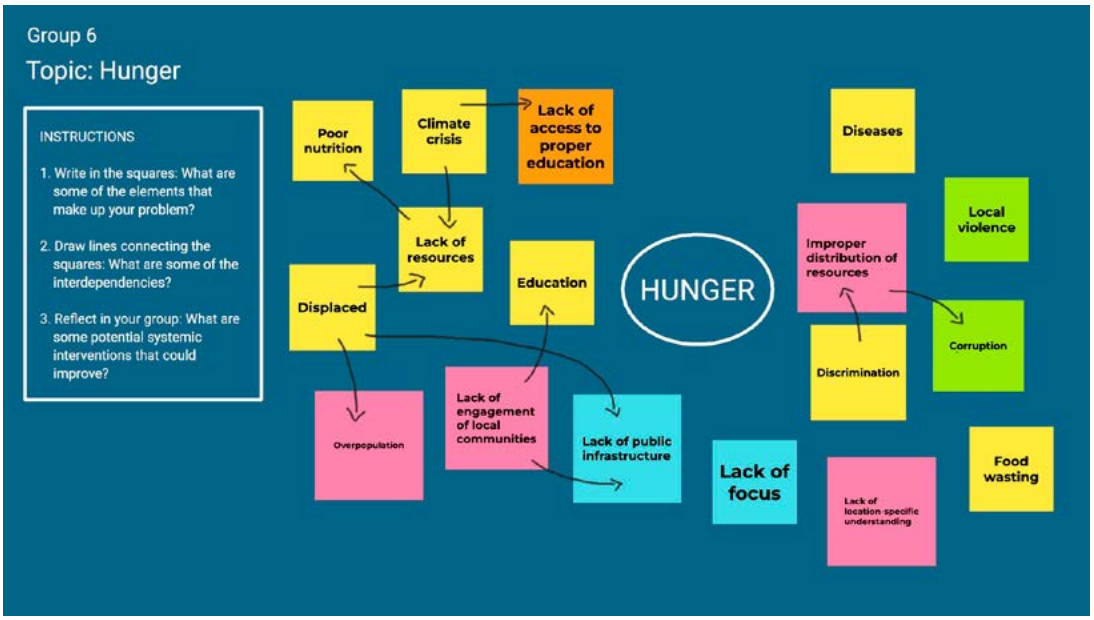
Slide 3

Group 6

Topic: Hunger



This Jamboard brainstorm example is the precursor to the global hunger system map you saw on slide 3. When making a system map, we first identify the elements, represented by the boxes. Many elements of the climate change system surfaced in our first lesson when we brainstormed vocabulary. Many more surfaced when we heard the stories of different stakeholders. Telling stories reveals the interdependencies, represented by the drawn lines. Once refined, this brainstorm becomes a system map.

Slide 3

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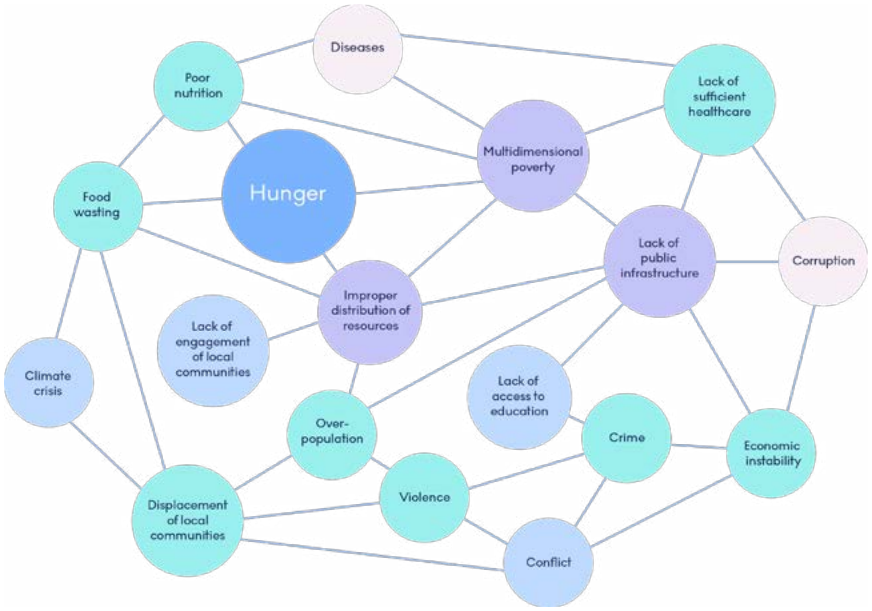


System maps are used to gain a deeper understanding of an issue. They do *not* contain solutions – that comes later, after asking questions and reflecting on the issue's complexities.

Speaker Perspectives

	Speaker's perspective on climate change	My observations (what I noticed about their remarks)	My opinions (what I think about their remarks)
Naomi Klein			
Bjorn Lomborg			
Ameenah Gurib-Fakim			
Me			

Speaker Positions

NAOMI KLEIN
Journalist, author, filmmaker and activist

Naomi Klein is an award-winning journalist and a *New York Times* bestselling author. She is senior correspondent for *The Intercept* and a Puffin writing fellow at Type Media Center. From 2018-2021, she was the inaugural Gloria Steinem Endowed Chair at Rutgers University. In September 2021, she joined the University of British Columbia as UBC Professor of Climate Justice.

Naomi's Position: It's now or never. We must rein in capitalism and fight the climate crisis and poverty at the same time.

In the debate, Naomi said that solving climate change requires a multi-pronged approach that simultaneously reins in capitalism, reduces global north consumerism and battles poverty. There's no quick fix or simple solution, she argued – instead, "our moment calls for holistic and systemic solutions" that are "designed to meet the basic needs of all while radically lowering emissions – ones that do not gamble the lives of billions on capitalist shell games." She said that the climate justice movement has a vision and concrete ideas, like a commitment to green public schools in the poorest neighborhoods first, Indigenous-owned and -led renewable energy efforts and rich countries paying their climate debts.

BJORN LOMBORG
President, Copenhagen Consensus Center

Dr. Bjorn Lomborg researches the smartest ways to help the world. He is one of *Time* magazine's 100 most influential people in the world, one of *Esquire* magazine's 75 most influential people of the 21st century and one of the 50 people who could save the planet, according to the UK *Guardian*. *Foreign Policy* has repeatedly listed him among the top 100 global thinkers. In 2020, he published the book *False Alarm: How Climate Change Panic Costs Us Trillions, Hurts the Poor, and Fails to Fix the Planet.*

Bjorn's Position: Stop media-fueled alarmism. Climate change is real, but it's not the end of the world. To fix it, let's put spending into green innovation.

Bjorn began the debate by saying, "It's really simple" – climate change is real, and yes, it needs to be addressed, but it's "not the end of the world." Blaming "relentless" media hype for fueling a false sense of urgency, Bjorn said that "in the 1920s, about half a million people died" climate-related deaths; since then, those deaths have "declined ... by 99%." [*Editor's note: Doha Debates was unable to independently confirm these statistics, which Bjorn has written about more extensively in an article titled "Welfare in the 21st century: Increasing development, reducing inequality, the impact of climate change, and the cost of climate policies."*] He argued that, historically, innovation has solved every problem that humanity has faced, and climate change is no different. "The current approach keeps failing," he said, and "we need a better way. And that way is green innovation." He proposed dramatically increasing spending on renewables in order to make renewable energy globally cheaper than fossil fuels.

AMEENAH GURIB-FAKIM

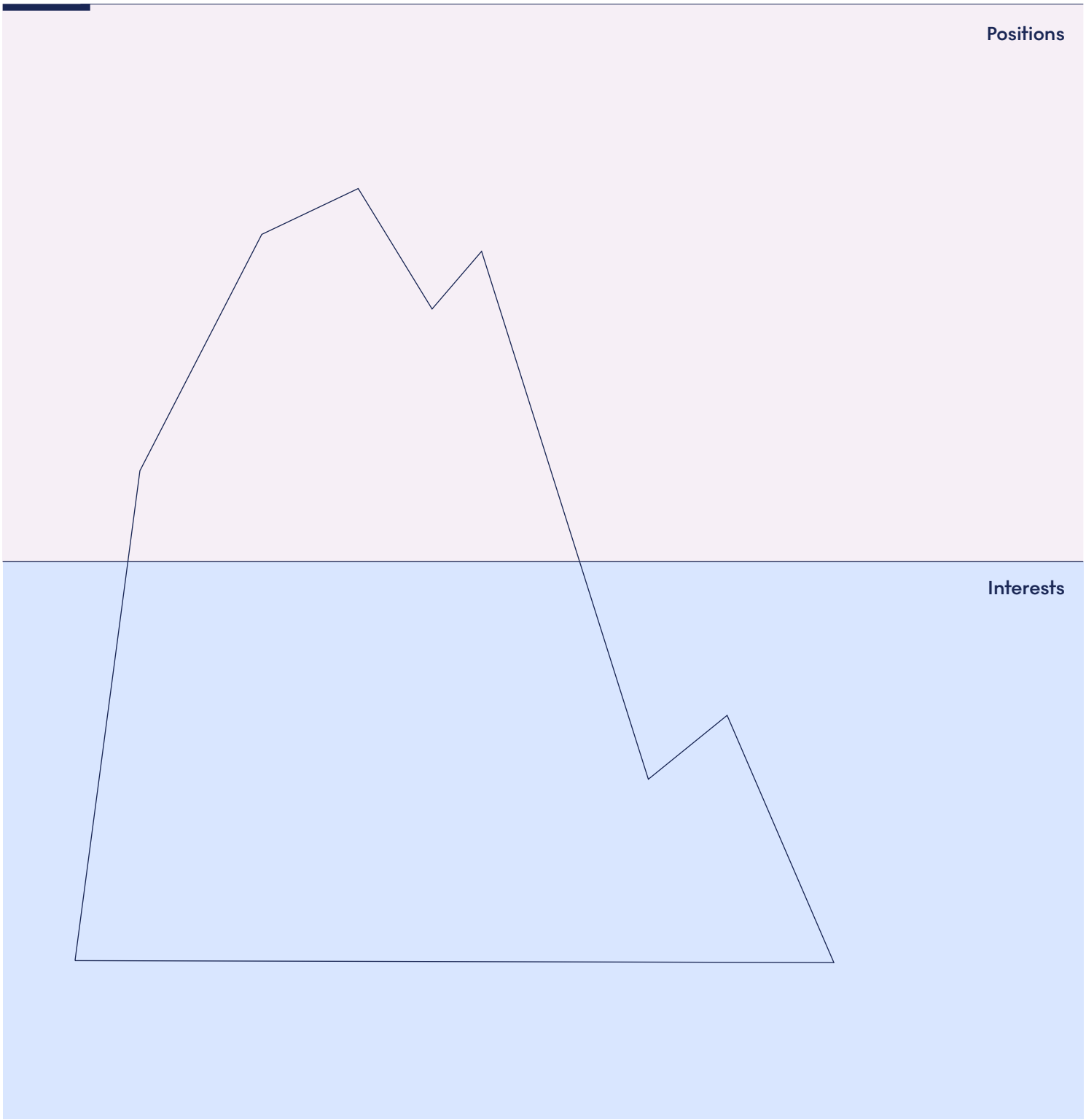
Former president of Mauritius, biodiversity scientist

Ameenah Gurib-Fakim was the first female president of Mauritius, serving from 2015 to 2018. Prior to her presidency, she was the managing director of the Centre International de Développement Pharmaceutique (CIDP) as well as a professor of organic chemistry. In 2015, she was honored as one of *Foreign Policy's* global thinkers. She has written and co-edited 26 books in the field of biodiversity conservation and sustainable development.

Ameenah's Position: Be realistic – revolutionary change and green tech aren't necessarily tenable solutions for the global south – but demand fair policies and reduce emissions immediately.

In the debate, Ameenah centered the burdens shouldered by the countries in the global south, saying, "Extractive industries keep digging out resources recklessly, destroying the forests in the global south, the lungs of our world." A sustainable world requires an immediate reduction in greenhouse gas emissions, she said, but it also requires that we tackle greed and inequality on a global scale, curbing the extraction of precious resources that serve the interests of the global north while polluting the global south. Ameenah said that stopping this extraction altogether is unrealistic – but so is a complete switch to renewables. She admitted that she was not especially optimistic that the burden on poorer countries would be alleviated any time soon, asking, "Can the global south ever expect decent compensation?"

Iceberg



Stakeholder Review worksheet

Stakeholders are people, groups or individuals who have the power to affect – or are affected by – the issue at hand.

I. Research and understand your stakeholder

- Who is the stakeholder your group will represent?
- What is this stakeholder's general opinion about this issue?
- Why does this stakeholder care about this issue?
- What are some of the ways this stakeholder supports and addresses the issue?
- What are some of the ways this stakeholder obstructs or negatively impacts the issue?
- What influence does this stakeholder have on others regarding this issue?
- What is/are your stakeholder's position(s) on the issue?
- What are your stakeholder's interests concerning the issue?

II. Determine the impact of each speaker on your stakeholder

Speaker 1: Naomi Klein

- How is your stakeholder impacted by the position of Speaker 1?
- Would your stakeholder stand to lose or gain if the solutions proposed by Speaker 1 were implemented?
- Would your stakeholder agree with any of the solutions of Speaker 1?

Speaker 2: Bjorn Lomborg

- How is your stakeholder impacted by the position of Speaker 2?
- Would your stakeholder stand to lose or gain if the solutions proposed by Speaker 2 were implemented?
- Would your stakeholder agree with any of the solutions of Speaker 2?

Speaker 3: Ameenah Gurib-Fakim

- How is your stakeholder impacted by the position of Speaker 3?
- Would your stakeholder stand to lose or gain if the solutions proposed by Speaker 3 were implemented?
- Would your stakeholder agree with any of the solutions of Speaker 3?

III. Discuss with other groups

- What are the interests underlying each stakeholder's position?
- Is there common ground among the different stakeholders' interests?
- What has this review of stakeholders demonstrated in terms of finding solutions to the issue at hand?

Five Facts about Systems Thinking

1. *Stakeholders* are people, groups or individuals who have the power to affect – or are affected by – the issue at hand. Stakeholders may range from private citizens to small businesses to corporations to governments to educational systems. Each stakeholder holds a unique worldview of the problem with potentially differing value judgements. Some may have similar views on the problem, but they may formulate (or express) the problem differently.
2. *Elements* are the discrete parts of a system; in other words, the persons, places and things that make up the system (including stakeholders). Each element that makes up a complex problem is connected to other elements in different ways. When represented visually, this looks like a web or a system rather than a list.
3. Because the elements are interconnected, addressing one element will likely cause unexpected consequences in another. A systems map can help us to anticipate these consequences by visually reminding us to consider the impact of any change on an interconnected element.
4. The interconnections between elements means that there is no single solution, nor is there any one organization that can just eliminate the problem. However, a systemic understanding of the problem helps us consider where we might make the most impact.
5. Not all stakeholders have the same power within a system to make change. Consider, for example, how government policies or industry lobbies might strongly impact how resources are allocated to tackle climate change, while Indigenous perspectives on how to use those same resources might have significantly less impact. To reduce conflict and marginalization, we need to expose and discuss our *boundary judgments* – that is, whose statements or values we (consciously or unconsciously) consider relevant, and whose we leave out or consider less important. Only then can we find ways to ensure that all stakeholder voices are heard. Through dialogue about beliefs and boundary judgments, a much deeper understanding of the problem emerges.

In short, systems thinking (or thinking systemically) helps minimize the distorted thinking that happens when we're entrenched in our own worldviews, and helps us see the world more accurately. When we listen to each other's perspectives and find connections, we are better equipped to understand the scope of the challenge and develop a systemic response together.

So how do we address complex problems?

Before formulating any solution, we have to look at the whole system. This requires us to ask some important and difficult questions (especially when we're used to seeing things from our own little corner of the system):

- *Who else is involved in this system?*
- *What are the perspectives of everyone who has a stake in the problem?*
- *How are the specific elements of the problem connected? How are they connected to me?*
- *How would a change in one part of the system impact the other parts?*

Climate Change Action Assignment Guide

In this assignment, you will design and execute a project based on what you have learned from during this climate change unit. The goal is to demonstrate your learning by taking concrete and meaningful action.

Step 1: Develop an action plan

Create an outline of your action plan that includes the following details. Use the questions in parentheses to help you plan.

1. The goal of the action (What do you hope to accomplish?)
2. The method(s) you will use (How will you accomplish your goal?)
3. Additional research (What more do you need to know to meet your goal?)
4. Specific action steps (What are the tasks that need to be done in order to accomplish your goal?)
5. Individual assignments and deadlines (Who will complete each task? When should each task be completed?)

Step 2: Conduct your action

Use your action plan to complete your project. Document your work along the way by taking notes and (if appropriate) photographs and/or videos.

Note: You may need to adjust your action steps as you go – that's OK. Part of the process of taking action is remaining open to learning new things and then taking them into account. Notice how your plan changes and roll with it.

Step 3: Share your action

Share the results of your project with the whole group in a 5-10 minute presentation. The presentation should include:

- The goal of your action
- The action that you took
- How your plan changed along the way

Step 4: Reflect on the process

Write a 1-2 page reflection on the process that answers the following questions:

- *What did you learn by taking this action?*
- *What surprised you about taking this action?*
- *How did your plan change along the way?*
- *What would you do differently next time?*
- *How might you continue taking action in the future?*

Climate Change Action Assignment Guide

If you need inspiration, consider these suggestions for projects:

Writing

- Speech to present at the UN
- Letter to the editor of a major newspaper
- Advertising campaign
- Short story or film treatment that captures your plan for change

Art

- Public mural
- Performance art
- Video campaign

Service

- Start a school or community group to advocate for policy change
- Identify organizations currently doing work that resonates with your idea for change, and create a plan to mobilize them around a common message or campaign
- Hold an awareness-raising event at your school or university

You may draw additional inspiration from the changemakers working to combat the climate crisis profiled in Doha Debates' **#SolvingIt26** series.

References and resources for further study

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