EXPLORE SCIENCE
Sustainable Futures

Teen Forum:

Women's Rights and Sustainability

Sustainability is protecting people, planet, and prosperity.

Teen Forum:
Women's Rights and Sustainability

GENERAL DESCRIPTION

Type of program

Forum

Overview

In this guided conversation, teenagers explore a broad definition of sustainability that goes beyond issues focused solely on the environment to also include social and economic issues. With support from a facilitator, teens use a set of issue cards and character cards to consider the importance of women's rights to sustainability. Participants learn that advancing gender equity will have a big impact on the world's ability to accomplish the UN Sustainable Development Goals (SDGs). The program can be done in person or online.

Audience

This program works best for participants ages 13 and up.

Big ideas

- Sustainability means healthy people, communities, and environments, now and in the future.
- Sustainability science studies the interaction between people and the planet and finds innovative and responsible solutions to global challenges.
- We can work together to create a sustainable future. Everyone has a part to play.

Learning objectives

As a result of participating in this program, learners will understand that:
- Equitable societies are essential to accomplishing environmental, social, and economic goals central to sustainability.
- Women's access to education, family planning, job opportunities has a net positive effect on sustainability.
- One way we can measure our global impact by measuring how much CO_2 is in our atmosphere.
- Policies that create an equitable society have an important role in lowering CO_2 emissions.

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BACKGROUND INFORMATION

Sustainability

Sustainability is a big concept. According to the United Nations (UN), a sustainable way of living "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987). People's needs include food, water, shelter, work, happiness, and respect. This definition of sustainability prioritizes equity, because it recognizes that people all over the world have needs that are equally important. This view of sustainability also emphasizes the importance of considering how our actions today will affect society, the economy, and the environment in the future.

In 2015, UN countries adopted the 2030 Agenda for Sustainable Development and its 17 Global Goals (also called the Sustainable Development Goals, or SDGs). The Global Goals outline a pathway to a better and more sustainable future for all. They address the interconnected challenges we face, and recognize that ending poverty must go hand-in-hand with strategies that build economic growth, address social needs, and tackle climate change and environmental protection (United Nations, n.d. and 2015).

Quality education is one of the societal (or "people") priorities of sustainability. *Education for sustainability* "cultivates individual and collective potential…to increase the possibility that humans and other life can flourish on Earth now and into the future" (Cloud, 2017). Arizona State University's Sustainability Science Education program provides a brief introduction to education for sustainability (Arizona State University, 2014).

An international group of collaborators have created a companion set of Good Life Goals that explain how everyone can do their part to create a better future. These include 85 ways anyone can contribute toward the Global Goals for sustainable development (SDG Business Hub, n.d.). The Good Life Goals are more oriented toward individual (personal) action, whereas the Global Goals are more oriented toward collective (government) action.

Women's rights and sustainability

Project Drawdown (https://www.drawdown.org/) and the UN Women (https://unwomen.org/) agree

that women's rights and sustainability go hand in hand. This program examines this relationship through the specific issue of climate change, using global carbon dioxide (CO_2) emissions as a measure of progress (or lack thereof). CO_2 is the primary greenhouse gas in our atmosphere. It traps the sun's heat, warming the planet. As CO_2 levels increase, average global temperatures will continue to rise as the atmosphere retains more heat. And as the atmosphere warms further, it will drive changes in Earth's climate that will negatively impact ecosystems and people. Unfortunately, women are especially vulnerable to negative social impacts that result from climate change.

Conversely, advancing women's rights has the potential to have one of the largest positive impacts on reducing global CO_2 emissions. According to Project Drawdown, improving gender equality by educating women and providing access to family planning would reduce carbon emissions by 85 gigatons between 2020 and 2050. (For comparison, in 2017 the US produced 5.1 gigatons of CO_2 and the world produced 32.5 gigatons.) In the Project Drawdown analysis, improved health and education for women would be second only to reducing food waste in decreasing carbon emissions. Furthermore, improving women's access to education and family planning does not require financing to build "greener" industry or new technology, nor does it directly change how people interact with the natural world.

As a result, the United Nations and other organizations argue that in order to build a sustainable future, we need to empower everyone, regardless of sex, to make informed decisions about their person, family, community, and country while at the same time offering opportunity, growth, and stability.

> "Women and girls, everywhere, must have equal rights and opportunity, and be able to live free of violence and discrimination. Women's equality and empowerment is one of the 17 Sustainable Development Goals (SDGs), but also integral to all dimensions of inclusive and sustainable development. In short, all the SDGs depend on the achievement of Goal 5 (gender equality)." (unwomen.org)

It can be difficult to identify the impact of women's rights on sustainable development because the impacts on CO_2 and other common sustainability measures are largely indirect "co-benefits." Improving educational access for women has a direct impact on the lives of those women, and a co-benefit is that educated women make informed decisions. These decisions often help form stable families and equitable communities that use resources in a more sustainable way. Similarly, women who have access to education and family planning tend to have smaller families, and a co-benefit is that smaller families will reduce a community's CO_2 emissions.

However, people around the world feel very differently about family planning and population growth depending on their personal circumstances and values. As a result, it is important not to present different choices and opinions as "right" or "wrong," but it is possible to note the correlation of some behaviors with CO_2 emissions. Here are some perspectives to inform the discussion of family planning:

> "Honoring the dignity of women and children through family planning is not about governments forcing the birth rate down (or up, through natalist policies). Nor is it about those in rich countries, where emissions are highest, telling people elsewhere to stop having children. When family planning focuses on healthcare provision and meeting women's expressed needs, empowerment, equality, and well-being are the result; the benefits to the planet are side effects." (Hawken, 2017)

> "How many people might call this planet home in 2050 or 2100? That will depend, in large part, on fertility rates and the headway we make on securing gender equality and advancing human well-being. When levels of education rise (in particular for girls and young women), access to reproductive healthcare improves, and women's political, social, and economic empowerment

expand, fertility typically falls. Across the world and over time, this impacts population." (Project Drawdown, 2020)

The section on "Common questions," below, has more information on addressing sensitive issues relating to family planning.

There are many other important women's rights issues that are integral to an equitable society. These include job opportunities, inheritance rights, equal representation in government, access to capital, and freedom of movement. Inequities such as these exist in societies all around the world. The Issue Cards for the program are a quick and easy way to familiarize yourself and the participants on initiatives geared towards creating an equitable society that can support the UN Sustainable Development Goals and, ultimately, create a sustainable future with reduced CO2 emissions.

The following materials provide helpful background information on the gender equality issues that are discussed in this program. All are freely available online:

- *Women and the Sustainable Development Goals (SDGs):* https://www.unwomen.org/en/news/in-focus/women-and-the-sdgs

- *Drawdown Review.* pp. 4-7, 66-72, and 72-8: https://www.drawdown.org/drawdown-framework/drawdown-review-2020)

- *How empowering women and girls can help stop global warming*: https://www.ted.com/talks/katharine_wilkinson_how_empowering_women_and_girls_can_help_stop_global_warming

- *So Over Population (Part I and II).* Optional but helpful background for conversations about overpopulation: http://outsideinradio.org/shows/2018/10/11/so-over-population

References

Arizona State University. (2014). Sustainability science education. Sustainability education framework for teachers: https://sse.asu.edu/ways-of-thinking/

Brundtland, G.H. (1987). Our common future: Report of the World Commission on Environment and Development. Geneva, UN-Dokument A/42/427. http://www.un-documents.net/ocf-ov.htm

Cloud, J., ed. (2017). Education for a sustainable future: Benchmarks for individual and social learning. *Journal of Sustainability Education,* pp. 1-66.

Drawdown Review 2020. PDF available to download: https://www.drawdown.org/drawdown-framework/drawdown-review-2020

Hawken, Paul, ed. (2017). *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming,* pp. 76-83.

Outside/In Radio. (2018). *So Over Population (Part I and II).* Helpful background for conversations about overpopulation: http://outsideinradio.org/shows/2018/10/11/so-over-population

Project Drawdown. (2020). The *Drawdown Review: Climate Solutions for a New Decade:* https://www.drawdown.org/drawdown-framework/drawdown-review-2020)

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United Nations. (n.d.) The sustainable development agenda.
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United Nations. (2015). Sustainable Development Goals.
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UN Women. (2019). *Women and the Sustainable Development Goals (SDGs):*
https://www.unwomen.org/en/news/in-focus/women-and-the-sdgs

Wilkinson, Katherine. (2018). *How empowering women and girls can help stop global warming.* TED
Talks:
https://www.ted.com/talks/katharine_wilkinson_how_empowering_women_and_girls_can_help_stop_
global_warming

Yarnal, Brent. *Human Vulnerability to Climate Impact*: https://www.e-
education.psu.edu/geog438w/node/252

OVERVIEW

During this program, teenagers work in small groups to engage with ideas that contribute to
sustainability and women's rights. Learners will consider the holistic approach to sustainability
represented by the United Nation's Sustainable Development Goals. This program can be offered as an
in-person or online discussion. This program guide provides instructions for both formats. The
MATERIALS and PROGRAM DELIVERY sections below are different for in-person and online program
formats. The other sections apply to both program formats.

The program includes a combination of whole-group and small-group ("breakout") discussions. Each
small group should include one co-host and 5-10 participants. You'll need at least five participants for
this program, to ensure a good diversity of perspectives and active discussion. We recommend an upper
limit of around 30 people.

There are three different components that are carried out over the course of 45-60 minutes:

- <u>Introduction</u>: Participants introduce themselves and discuss what sustainability means to them.
  (5 minutes)
- <u>Issue cards</u>: Working in small breakout groups, participants discuss 15 cards that present
  sustainability goals and their relationship to women's right issues. They reflect on the issues
  presented on the cards and consider what they value in their own lives. (10–15 minutes)
- <u>Character cards</u>: Each participant is given a card (at random) that presents a character that may
  be from another part of the world, with a different life journey, and living situation. In their
  breakout groups, participants reevaluate the issue cards based on the perspective this person
  might have. (15 minutes)
- <u>Slide presentation</u>: A presenter shares contextual information about the relationship of
  women's rights and sustainability. (5 –10 minutes)
- <u>Wrap up</u>: The entire group reflects on their experience. (5 –10 minutes)

ADVANCE PREPARATION

Background information

Because the issues involved in this program are so complex, we strongly recommend reading the
background information and additional suggested resources.

Marketing

Attendance will vary depending on how extensively the program is publicized. Be sure to use language or marketing materials that your institution has found to work best with older audiences (ages 13 and up). Here are some ways you can get word out about your event:

- Museum website, newsletter, and member email list
- Social media (Facebook, Twitter, Instagram)
- On-site marketing, including announcements at other programs, as well as posted flyers or slides
- Local media outlets (newspapers, television, community papers)
- Craigslist (www.craigslist.org)
- Meetup groups (http://www.meetup.com/)
- Community calendars and email lists
- Museum partner organizations and area schools
- Posters and flyers around the community
- Local businesses and organizations
- Local festivals or community events

Pre-registration and communication with participants

Having participants pre-register using an online survey resource will allow you to gather information such as their email address and any accommodations for people with disabilities. It is highly recommended that you send out an event reminder a few days prior to the program. There are several websites that allow you to manage a registration list. Some options are SurveyMonkey, Eventbrite, and Google Forms.

MATERIALS – IN-PERSON PROGRAM

- Tables and chairs, arranged to seat around 5 people at each table
- Slide presentation
- 15 issue cards (one set per table)
- 10 character cards (one set per table)
- Projector and screen, or a digital TV that can display a computer file
- Paper and pencil for each participant
- Whiteboard and dry erase markers (or large sheets of paper)
- Mic and speakers (for presentation) (optional)

Graphic files and slide presentation are available for free download from nisenet.org

SET UP – IN-PERSON PROGRAM

- Organize the room with five chairs at each table and a clear view of the slides and whiteboard
- Place a set of issue cards face down on each table
- Have a set of character cards on hand for each table (you will hand these out later)
- Make sure your audiovisual system is working and quickly run through your slideshow in presenter mode

PROGRAM DELIVERY – IN-PERSON PROGRAM

Program delivery

<u>Introduction</u> (5 minutes)

This section introduces the program and key concepts. You can use the first few slides to support this presentation and discussion.

SLIDE 1: Introduce yourself and any co-hosts. If you have a small group, ask participants to introduce themselves. If your group is large, have them do introductions with the others at their table or assigned to their breakout room when you move into small group work.

SLIDE 2: Explain that sustainability can mean many things to different people and that this program will explore a different approach to sustainability than they might be familiar with. Write "What does sustainability mean to you?" on the whiteboard and/or show Slide 2. Ask the group to share their thoughts. Let them know that there are no wrong answers to this question, but that this program might expand their idea of what sustainability is.

Many participants will likely share concepts related to the natural environment, such as saving the rainforest, recycling, cleaning the oceans, and lowering carbon emissions. Others may know definitions that focus on maintaining resources for the future. These are all valid answers and can be affirmed. Explain that some definitions of sustainability include more than just the natural environment and that this program will explore holistic ideas about what a sustainable future looks like.

SLIDE 3: Introduce the UN's 17 Sustainable Development Goals. Let participants know that these 17 goals were adopted by all United Nations Member States (including the US) in 2015. They provide a shared blueprint for peace and prosperity for people and the planet, now and into the future. The goals recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Explain that in this program, we will focus on the goals that emphasize equality, equity, education, health, and representation. We will think about the things that we all value in our daily lives and how these values might fit within the UN Sustainable Development Goals.

Next, discuss that the goals need a metric with which to measure success. Possible measures include education levels of women, percentage of women in the workforce, wage gaps, and representation in government, to name a few. These are important metrics we can use to measure how equitable a society is with regard to gender, but any one of these measures doesn't show the impact on gender equity for all the SDGs. Can we find another measure that gives us a bigger picture of global sustainability that is suitable to discuss given the time allotted?

Explain that if we want a simplified metric that is measurable and has a predictable impact on the sustainable future of our world, we can use the levels of CO_2 in our atmosphere. This measure allows us to look at the bigger picture of sustainability and consider how stable or unstable our climate will be for the next 50+ years. By reducing our carbon emissions and drawing them down, we can prevent the worst impacts of rising global temperatures.

But how does CO_2 emission relate to gender equity and women's rights? Ultimately, global climate change will impact everyone on Earth, but it is those who are most vulnerable who will be impacted the most. Vulnerability to climate change is a combination of several factors, including a person's degree of exposure to adverse climate changes, how much that harm impacts them, and the capacity with which

they might adapt. For example, a vulnerable person could be someone who lives mostly on the food they grow in an area susceptible to drought due to climate change, without the means to fight the drought or the money to adapt or move away.

Unfortunately, women all over the world are in a precarious situation and will be overrepresented in the category of "most vulnerable." By empowering women, we can both reduce global carbon emissions and lower the numbers of those who are vulnerable. Ultimately, everyone benefits when societies are more gender equitable and we advance women's rights.

Issue cards (10-15 minutes)

In the next part of the program, participants review and discuss the issue cards in small groups (10 minutes). Then, the entire group will convene and share their ideas (5 minutes).

Explain that they will be working with the others at their table. First, they will flip over the issues cards and read them. Each participant will select their top three to five cards. You can say, "On these cards, we have ideas that are based on the UN Sustainable Development Goals and how they intersect with women's rights. When you think of your present and future, which of these cards reflect what you believe will have the greatest impact on your sustainable future?" Ask participants to browse through the cards and only closely read the cards that really speak to them. Then, the small groups should try to come to a consensus about the top two or three cards from everyone's selections.

After about 10 minutes, give everyone notice that the entire group will be reconvening soon. Provide a few minutes for each group to reflect on their decisions.

With the entire group back together, ask each table to share their top cards and reasons for choosing them. If you have many small groups, you won't be able to go into detail about each table's conversation. You can do deep dive into one group's decisions or you just survey the groups' decisions.

Next, offer some reflective questions to help participants think more deeply about their decisions. These questions are important because it is sometimes hard for people to identify and summarize their values, especially when they are considering new information and possibilities. The reflection will also help participants think about how the ideas they value can contribute to a sustainable future beyond their personal lives.

Here are some possible questions you might ask to move conversations forward during this segment of the program:

- Does anyone have any questions about the cards?
- Why do you feel that this issue would be good for your future?
- Did any of the issues surprise you? As in, "I never thought about this idea before."
- Could one of these issues have a negative or positive impact on other things in your future?
- Which issue would have no impact on your current life?
- Are there things that could happen in the future that would change how you feel?
- When you think of women's rights, which of these cards speaks most to you?
- When you think about reducing carbon emissions, which one speaks to you?
- Which cards do you think contribute most to reducing CO2 while at the same time creates an equitable society?

Character cards (15 minutes)

Next, participants receive a character card and consider how they might approach sustainability differently if they were that person. Allow 5 minutes for participants to read and reflect on their

character card, 5 minutes to share their characters with others at their table, and 5 minutes for the small groups to share their ideas with each other.

Explain to participants that they will now return to their small groups. Give each person a character card. Make sure each person in a discussion group has a unique character (i.e. no one at a table has the same character).

Ask participants to read their card to themselves but not share it yet. Say, "After you have read about your character, reflect on the cards you sorted out before. Look at the cards as if you were this person. What are the top three cards you would now value most for their/your sustainable future?" Give them a few minutes to reflect, then have them discuss in their small groups.

After around 5 minutes, reconvene the entire group. Ask the small groups to share some of their conversation points with everyone. Finally, ask the entire group to reflect on how the introduction of the characters changed their thinking.

Here are some possible questions you might ask to move conversations forward during this segment of the program:

- Did you choose different cards when you were thinking about the issues as a character? How were they different?
- Could the same issue card mean something different to your character than it did to you?
- Why might different people prioritize different things?
- What challenges do you think your characters face in their community? Do you face those same challenges?
- Do you think sustainability might mean something else to this character and their community or culture?
- What might make your character more or less vulnerable to challenges in the future?
- How do you feel your character could contribute to the reduction of CO_2? Is this different from how you would reduce your CO_2 emissions, and if so, how?
- Which idea represented in the cards do you think would have the largest impact on the reduction of CO_2?

Slide presentation (5–10 min)

Finally, the entire group watches and listens to the slide presentation. The presentation provides some additional contextual information to help participants see the connection among women's rights, equity issues, and sustainability.

Start at SLIDE 4, using the slide notes as a guide for the presentation. We recommend keeping it brief, tailoring the presentation to build on and connect to the prior group discussions as much as possible. The slide notes and the background information in this guide will help you with the presentation, but try to explicitly reference how your participants reacted to the cards.

Wrap up (5–10 min)

To conclude, prompt participants to reflect on their learning during the program and share their thoughts with the group.

Here are some possible discussion questions:

- Did you find that your character's priorities influenced your own? In what way?
- Did the presentation change your idea of your priorities?
- What decisions might you make differently in the future?

Thank the participants and make yourself available to answer any questions. You may need to do some quick research together or follow up by email, because this is not a simple subject.

MATERIALS – ONLINE PROGRAM

- Computer for the host and each co-host that has:
  - Webcam, microphone, and speakers
  - Webinar/videoconference software (such as Zoom) that has breakout room capability
  - PowerPoint Presentation and PowerPoint software
  - Headphones (optional but strongly encouraged)
  - Webinar-specific lighting (optional but strongly encouraged)
  - Virtual whiteboard (such as Jamboard by Google) (optional); you can also screen share a word processor or use your webinar software's built in ability to make note-taking visible to participants
- Issue Cards PDF; posted in a place that is accessible to participants (such as Google Drive)
- Character Cards PDF; posted in a place that is accessible to participants (such as Google Drive)
- A random number generator where you can set up a random number list for the participants:
  - https://www.random.org/sequences/
  - If you just want to do a sequence of numbers 1 through 10: https://www.random.org/sequences/?min=1&max=10&col=1&format=html&rnd=new)
- List of participant e-mail addresses
- Pen and paper or word processor to take notes during the program

Notes

Graphic files and slide presentation are available for free download from nisenet.org

With an online/webinar format, it is important to have co-host(s) that can help with logistics and facilitation of small group discussions, since it is difficult for one host to facilitate multiple virtual breakout rooms. One co-host for every 5 participants is optimal; up to 10 participants per co-host is possible.

Setup for online program

Important: Start your setup 48 hours before the program.

Check your technical system 48 hours before the program

- Practice with your chosen webinar software and co-host(s) beforehand. It is important to do this with the same computer and equipment setup you will use for the program.

- If available, choose to use a wired network connection over a wi-fi connection. If you do use wi-fi, stay near your wi-fi router.

- Be sure you can use and demonstrate all the needed features of the software. For example, if you anticipate having more than 5 participants, practice sending participants into breakout rooms and recalling them to the main room. Be sure you know how to mute participants and can explain to them how to mute and un-mute their sound.

- Practice screen sharing your presentation while in the videoconference. Be aware that you may not have the same display options within the software that you have outside of the webinar. For example, in some webinar software, the presentation mode for your slides might not show the presenter notes for the slides. This is especially likely if you're using a single screen. If this is the

case, you can print out the notes beforehand or your co-host can share their screen with the PowerPoint and advance the slides for participants, and you can display the slides with notes on your computer.

- Come up with a plan for how you will break participants up into small groups (if you have more than 5 participants). If possible, maintain the same break-out room groups throughout the program: they function like table discussions would in an in-person program.

Contact participants 24 hours before the program

- Send out a final invitation/reminder with the webinar links in advance. Explain to the participants that they may need to download the webinar software to their computer or app to their mobile device.
- Send the participants the card PDFs ahead of time. Let them know they can print out the cards or view them on a second device (i.e. not the one they are using to access the webinar itself). Ask them to have the cards ready but not to read them all in advance.

Do your final setup an hour or so before the program
- Ensure your audio and video work and that you can screen share the PowerPoint Presentation.
- Generate a list of numbers 1-10 for each set of participants. If you have 20 people in your webinar, generate two lists with numbers 1-10 (or use the same sequence twice).
- Ensure one or two of your co-hosts are designated as co-hosts in the software.
- Be prepared to share a URL where participants can access the cards (in case some participants don't have them handy).

PROGRAM DELIVERY – ONLINE PROGRAM

Program delivery: Talking points and procedures

General tip: Talking in a virtual space with strangers can be a challenge for people. Be ready to move the conversation along during any lulls. Don't be afraid to call on specific people.

Introduction (5 minutes)

This section introduces the program and key concepts. You can use the first few slides to support this presentation and discussion.

SLIDE 1: Introduce yourself and any co-hosts. If you have a small group, ask participants to introduce themselves. If your group is large, have them do introductions with the others at their table or assigned to their breakout room when you move into small group work.

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Many participants will likely share concepts related to the natural environment, such as saving the rainforest, recycling, cleaning the oceans, and lowering carbon emissions. Others may know definitions that focus on maintaining resources for the future. These are all valid answers and can be affirmed. Explain that some definitions of sustainability include more than just the natural environment and that this program will explore holistic ideas about what a sustainable future looks like.

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Explain that in this program, we will focus on the goals that emphasize equality, equity, education, health, and representation. We will think about the things that we all value in our daily lives and how these values might fit within the UN Sustainable Development Goals.

Next, discuss that the goals need a metric with which to measure success. Possible measures include education levels of women, percentage of women in the workforce, wage gaps, and representation in government, to name a few. These are important metrics we can use to measure how equitable a society is with regard to gender, but any one of these measures doesn't show the impact on gender equity for all the SDGs. Can we find another measure that gives us a bigger picture of global sustainability that is suitable to discuss given the time allotted?

Explain that if we want a simplified metric that is measurable and has a predictable impact on the sustainable future of our world, we can use the levels of CO_2 in our atmosphere. This measure allows us to look at the bigger picture of sustainability and consider how stable or unstable our climate will be for the next 50+ years. By reducing our carbon emissions and drawing them down, we can prevent the worst impacts of rising global temperatures.

But how does CO_2 emission relate to gender equity and women's rights? Ultimately, global climate change will impact everyone on Earth, but it is those who are most vulnerable who will be impacted the most. Vulnerability to climate change is a combination of several factors, including a person's degree of exposure to adverse climate changes, how much that harm impacts them, and the capacity with which they might adapt. For example, a vulnerable person could be someone who lives mostly on the food they grow in an area susceptible to drought due to climate change, without the means to fight the drought or the money to adapt or move away.

Unfortunately, women all over the world are in a precarious situation and will be overrepresented in the category of "most vulnerable." By empowering women, we can both reduce global carbon emissions and lower the numbers of those who are vulnerable. Ultimately, everyone benefits when societies are more gender equitable and we advance women's rights.

Issue cards (10-15 minutes)

Now, participants will review and discuss the issue cards in breakout groups (10 minutes). Then, the entire group will convene and small groups will share out their ideas (5 minutes).

Explain what is going to happen next. In a moment, you will split the group up and they will go into breakout rooms to talk with a smaller group. Make sure everyone has the PDFs and offer links in chat or if your software allows it, direct downloads of the PDFs.

Explain what the breakout groups will be doing. First, each person will open the Issue Cards PDF file (or look at their printouts). The Issue Cards are the aqua-colored cards that are oriented vertically (portrait mode) and have issues like "clean water" on them.

Each participant will briefly read then select their top three to five cards. You can say, "On these cards, we have ideas that are based on the UN Sustainable Development Goals and how they intersect with women's rights. When you think of your present and future, which of these cards reflect what you

believe will have the greatest impact on your sustainable future?" Ask participants to browse through the cards and only closely read the cards that really speak to them. Then, the breakout groups should try to come to a consensus about the top two or three cards from everyone's selections.

Make sure your co-host(s) are facilitating each room. You can also have the entire group volunteer insights if the group sizes are 5 or less. It can be difficult to do consensus building in an online environment but it is possible. You may need to structure your discussions a bit more than you would if you were in person. Do not be afraid to call on people. Co-hosts and the host should take notes within each breakout room; you can also use a virtual whiteboard.

After about 10 minutes, give everyone notice that the entire group will be reconvening soon. If possible, before going back to the larger group, see if there is a consensus. Also, designate someone to share out. (If no one volunteers, then the co-host/host can share. Provide a few minutes for each group to reflect on their decisions.

With the entire group back together, ask the breakout rooms to share their top cards and reasons for choosing them. If you have many small groups, you won't be able to go into detail about each table's conversation. You can do deep dive into one group's decisions or you just survey the groups' decisions.

Next, offer some reflective questions to help participants think more deeply about their decisions. These questions are important because it is sometimes hard for people to identify and summarize their values, especially when they are considering new information and possibilities. The reflection will also help participants think about how the ideas they value can contribute to a sustainable future beyond their personal lives.

Here are some possible questions you might ask to move conversations forward during this segment of the program:

- Does anyone have any questions about the cards?
- Why do you feel that this issue would be good for your future?
- Did any of the issues surprise you? As in, "I never thought about this idea before."
- Could one of these issues have a negative or positive impact on other things in your future?
- Which issue would have no impact on your current life?
- Are there things that could happen in the future that would change how you feel?
- When you think of women's rights, which of these cards speaks most to you?
- When you think about reducing carbon emissions, which one speaks to you?
- Which cards do you think contribute most to reducing CO2 while at the same time creates an equitable society?

Character cards

Next, participants receive a character card and consider how they might approach sustainability differently if they were that person. Allow 5 minutes for participants to read and reflect on their character card, 5 minutes to share their characters with others at their table, and 5 minutes for the small groups to share their ideas with each other.

Explain to participants that they will now return to their breakout groups. They will be using the Character Card PDFs. The Character Cards are the bright green cards that are oriented horizontally (landscape mode) and have people like "Chinese factory worker" on them. Each person will be assigned a character card and will consider how they might approach sustainability differently if they were that person.

If you have a small number of participants you can simply assign the characters yourself. If you have a larger group, you can use the random number generator to assign a number from 1-10 to each participant. That number will be the page number in the character card PDF. You may want to assign characters once they're in their breakout rooms to avoid two or more people getting the same character. Your co-hosts can also keep track of who was in each breakout to make assigning characters easier. Regardless of webinar size, if you have two people using one webcam, you can assign them two characters or one. It's up to you, but keep track of it.

After assigning a character card, explain what they will do in their breakout rooms. Say, "After you have read about your character, reflect on the cards in the issue PDF from before. Look at the cards as if you were this person. What are the top 3 cards you would now value most for their/your sustainable future?" Give them a few minutes to reflect, then have them discuss in their breakout groups. You should invite them to introduce themselves as their character and share what they value now as this person.

Place participants in their breakout rooms. You and/or your co-host(s) can share a screen with the character card PDF and show the group the card while the participant is talking. After around 5 minutes of discussion, ask who will report out.

Reconvene the entire group and ask each breakout group to share some of their conversation points with everyone. Finally, ask the entire group to reflect on how the introduction of the characters changed their thinking.

Here are some possible questions you might ask to move conversations forward during this segment of the program:

- Did you choose different cards when you were thinking about the issues as a character? How were they different?
- Could the same issue card mean something different to your character than it did to you?
- Why might different people prioritize different things?
- What challenges do you think your characters face in their community? Do you face those same challenges?
- Do you think sustainability might mean something else to this character and their community or culture?
- What might make your character more or less vulnerable to challenges in the future?
- How do you feel your character could contribute to the reduction of CO_2? Is this different from how you would reduce your CO_2 emissions, and if so, how?
- Which idea represented in the cards do you think would have the largest impact on the reduction of CO_2?

Slide presentation (5–10 min)

Finally, the entire group watches and listens to the slide presentation. The presentation provides some additional contextual information to help participants see the connection among women's rights, equity issues, and sustainability.

Start at SLIDE 4, using the slide notes as a guide for the presentation. We recommend keeping it brief, tailoring the presentation to build on and connect to the prior group discussions as much as possible. The slide notes and the background information in this guide will help you with the presentation, but try to explicitly reference how your participants reacted to the cards.

To conclude, prompt participants to reflect on their learning during the program and share their thoughts with the group.

Here are some possible discussion questions:

- Did you find that your character's priorities influenced your own? In what way?
- Did the presentation change your idea of your priorities?
- What decisions might you make differently in the future?

Thank the participants and make yourself available to answer any questions. You may need to do some quick research together or follow up by email, because this is not a simple subject.

TIPS AND NOTES ABOUT PROGRAM CONTENT

Notetaking

It is helpful to write down participant responses during the group discussions, in a way that is visible to everyone if possible. This can help keep them engaged and feel that their ideas are important, and will also be helpful reminders to you as you give the final presentation and wrap up the day.

Gender

In this program, a "woman" is someone who identifies as the female gender. The Chilean Salmon Fishery Worker is non-binary and uses the pronounces "they/them."

"Informed" versus "better" decisions

Be careful about using judgmental language. "An educated woman makes *informed* decisions" is a less judgmental statement than "an educated woman makes *better* decisions." The word *informed* implies that there are many possible decisions and outcomes that are subjective, whereas the word *better* implies that there are more limited decisions and outcomes that are objectively good or bad.

Family planning

This issue is both complex and potentially controversial. Family planning can cause people to think about overpopulation and government policies to limit or encourage population. Historically, some of these programs have targeted certain segments of society and/or used methods that are ethically and morally problematic. In addition, some cultures and individuals object to access to contraceptives and abortion. You should acknowledge the wide range of opinions people have, but the bottom line for this program is summarized by Project Drawdown: "When family planning focuses on healthcare provisions and meeting women's expressed needs, empowerment, equality, and well-being are the result; the benefits to the planet are side effects." If participants start talking about limiting our planet's population please monitor the conversation carefully.

Developed and developing countries

Participants often end up comparing developed countries to developing countries in this program. Given the serious issues related to women's rights (and other types of equity) in developing countries, it is sometimes easy for participants to focus more on developing parts of the world than the problems in developed areas. It is certainly true that people, especially women, in developing countries are more vulnerable to climate change, and participants are rightfully concerned about them. It is good for

participants to realize that solutions that may work in the US and other developed countries may not work elsewhere. But it is also essential for everyone to remember that developed countries such as the US consume most of the world's resources and emit the vast majority of CO2, and that exploring our own issues of consumption and inequities is important, too.

If participants look at all of the issue cards, they will probably be able to find or work out a list of issues that both developing and developed countries struggle with in each case. For example, the group can probably share experiences where they have felt like they were not represented in government, lacked job opportunities, or didn't feel safe moving around alone.

Stability versus vulnerability

The United Nations' report on women and the SDGs examines progress in equity for women around the world and assess how stable or vulnerable their situations are (https://www.unwomen.org/en/digital-library/publications/2019/09/progress-on-the-sustainable-development-goals-the-gender-snapshot-2019). In any community, it is the vulnerable that bear the brunt of negative impacts, and women are often among those that are especially vulnerable. Potential negative impacts are greater in an unstable community than in a stable one. Generally speaking, a stable community uses resources more responsibly than an unstable community. Thus, creating stability that is equitable can support a more sustainable future. For example, the percentage of women who are not in the labor force varies, and this leads to different kinds of challenges in different places (including developed and developing countries). This can be a productive discussion among participants.

COMMON QUESTIONS

Q: Is giving women access to job opportunities, education, and family planning the most important factor in lowering carbon emissions?

A: No. According to Project Drawdown, reducing sources of carbon emissions and supporting carbon sinks would have much greater impacts on reducing CO2 emissions than women's rights. Carbon emissions are used in this program because they allow us to compare the impacts of many different types of sustainability solutions with one measure. There are immense benefits to giving access to education and family planning to women. Ultimately, an equitable society is an important goal in and of itself. Creating an equitable society means that everyone can live up to their potential, and reducing carbon emissions is an important co-benefit.

Q: How can you figure out how much less CO2 a society would emit if women's rights were increased (specifically access to healthcare and education)?

A: To estimate the reduction of CO2 emissions, we first need to look at what the world's population will be in the future. We can roughly estimate that if we do not put additional resources into family planning and education for women, the world's total population will reach 10.1 to 10.7 billion people by 2050. But if we fund family planning and women's education at levels proposed by Project Drawdown—about $10.77 for each woman in a low-income country—one byproduct would be that families would be smaller. (Note: Project Drawdown is not advocating to force or coerce people to have smaller families but rather to empower women to make informed decisions, which often results in smaller family size.) These smaller families would result in a world population of somewhere between 9.4 and 9.7 billion people. Reducing the world's population by a billion or so people will reduce overall carbon emissions, between 80 and 120 gigatons CO2 less. (Source: Project Drawdown, Drawdown Review 2020, pp. 68-69 and 79–82).

Q: Is the problem just that there are too many people?

A: It's not that simple. Some people argue that a higher population doesn't necessarily contribute to more resource consumption. Progress sometimes means resources are used more efficiently or cleanly, but it can also mean people can easily consume more. The topic of population also raises the troubling, often racist, classist, and coercive history of population control. It's critical to note the vast disparities in emissions from high-income countries compared to low, and between the wealthiest individuals and those of lesser financial means. For example, almost half of consumption-related emissions are generated by just 10% of people globally. In making their estimations, Project Drawdown assumes we will continue to use current technologies and follow current trends. People can be reluctant to change their behavior and we don't want to count on a new "miracle" technology to save us. But if our rate of consumption and emission does go down, then our results will be even better.

GOING FURTHER…

Here are some resources you can share with program participants:

"The lazy person's guide to saving the world":
https://www.un.org/sustainabledevelopment/takeaction/

"Good Life Goal Challenge sheet":
https://www.nisenet.org/catalog/ecosystem-engineers

"Good Life Goals Pack of Actions":
https://docs.wbcsd.org/2018/09/Good_Life_Goals/Pack_of_Actions.pdf

Charles Mann, ***The relationship between population and consumption is not straightforward*** (book)

Population and Environment: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2792934/

Project Drawdown: https://drawdown.org

So Over Population (podcast): http://outsideinradio.org/shows/2018/10/11/so-over-population

UN Women: https://unwomen.org

CLEAN UP

Gather and put away materials. If you're using physical cards, be sure to group them so the sets don't get mixed up.

UNIVERSAL DESIGN

This program has been designed to be inclusive of visitors, including visitors of different ages, backgrounds, and different physical and cognitive abilities. The following features of the program's design make it accessible:

- Repeat and reinforce main ideas and concepts
- Provide multiple entry points and multiple ways of engagement

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Character card images and content are adapted from the NISE Network game "Nano Around the World" created by Sciencenter in Ithaca, NY, in partnership with the Center for Nanotechnology in Society at Arizona State University. The original activity is available at https://www.nisenet.org/catalog/nano-around-world-card-game

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Slide images and content

Graph of global carbon emissions from fossil fuels, 1900-2014; and chart of 2014 global CO2 emissions from fossil fuel combustion and some industrial processes: Boden, T.A., Marland, G., and Andres, R.J. (2017). Global, Regional, and National Fossil-Fuel CO2Emissions. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, Oak Ridge, Tenn., U.S.A. doi 10.3334/CDIAC/00001_V2017. Public domain.

Chart of Co2-eq Concentrations (ppm); graph of climate solution co-benefits; and Scenario 1: Project Drawdown, *Drawdown Review* (2020). Used with permission.

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