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## Screening Toolkit & Discussion Guide

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### ***Film Synopsis***

In a groundbreaking new documentary, the 8 BILLION ANGELS team connects all of the planet's environmental emergencies, including climate change, with unsustainable population growth. 8 BILLION ANGELS weaves together the voices of ordinary people around the world, from Kansas and Maine to Japan and India, as they confront the growing impact of overpopulation on their lives and the health of the planet's rivers, oceans, land and air. With compassion and honesty, the film poses the question: *Do we want a world of more people with less opportunity for good health, peace and prosperity or fewer people with more of each.*

Feature Film Runtime: 79 minutes

Classroom Version Runtime: 53 minutes

### ***How to Use This Guide***

With this guide, you will learn how to coordinate a screening of 8 BILLION ANGELS, promote the event on social media, generate impactful post-screening discussions, and use the film to advance your organization's mission and vision. Intentionally formulated with a call to action at the end, 8 BILLION ANGELS can be adapted to your organization's local- and/or issue-specific solutions.

### ***Questions or Feedback?***

Contact our screening coordinator at: [info@earthovershoot.org](mailto:info@earthovershoot.org)



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### ***Spread the Word***

1) **Share your event online.** Publish the screening details on your organization's website as soon as possible. Include venue, location, time, length of screening and guest appearances. Post details about the event and 8 BILLION ANGELS on social media several times leading up to the event. For more information about the film and additional photos, visit our website, <https://8billionangels.org/downloadable-images/>.

2) **Create a Facebook event page** for your screening. Add @8BillionAngels as a co-host so we can help promote it. Email [info@earthovershoot.org](mailto:info@earthovershoot.org) with your confirmed event details and URLs so we can ensure that your event gets the most visibility possible.

3) **Tag 8 BILLION ANGELS' social media platforms:**

- Facebook: @8billionangels
- Instagram: @8billionangels
- Twitter: @8billionangels

4) **Use hashtags** to reach a larger audience:

**#climateaction**  
**#overshoot**  
**#earthovershoot**  
**#smallfamilies**  
**#familyplanning**

**#documentary**  
**#earth**  
**#noplanetB**  
**#climatecrisis**  
**#empowerwomen**



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### TIPS ON LEADING YOUR DISCUSSION

- **Before the screening**, familiarize yourself with the Resources section of the 8 Billion Angels website, <https://8billionangels.org/resources/>
- **As you view the film**, note the stories and science that you find most significant.
- **At the start**, announce how long the discussion will last. For example, "We are excited to have about 30 minutes to discuss the important points raised in the film."
- **If children are in the audience**, acknowledge them and invite them to participate in the conversation alongside the adults.
- **Start with a simple question** such as, "*What stories from the film resonated with you most?*"

The following questions are merely suggestions that can help you cover the most important issues outlined in the film and provide more detailed supporting information.



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### Discussion Questions & Information

#### **Population's Impact on the Environment**

##### ***Oceans***

**Question:** *The first section of the film talks about the oceans. Besides overfishing and ocean acidification and warming, what other harm is mankind causing in the oceans?*

##### **Information:**

1) **Pollution** - Each year, humans produce tons of plastic and other garbage that ends up in the oceans. Unlike other trash, the single-use grocery bags, water bottles, drinking straws, and yogurt containers, among eight million metric tons of the plastic items we throw away does not biodegrade. Instead, they can persist in the environment for hundreds of years, polluting our beaches, entangling marine life, and getting ingested by fish and seabirds. *The Washington Post* has reported that by 2050 there will be more plastic in the ocean by weight than fish.

2) **Chemical Run-Off** - Oil from boats, airplanes, cars, trucks, and even lawn mowers is also swimming in ocean waters. Chemical discharges from factories, raw sewage overflow from water treatment systems, and stormwater and agricultural runoff add other forms of marine-poisoning pollutants to the toxic brew. Together, this run-off causes massive dead zones where aquatic life is either poisoned by toxic bacteria or suffocates from a lack of oxygen in the water.



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### Population's Impact On the Environment

#### **Land**

**Question:** *The second section of the film featured the industrial agriculture system created to feed billions of people across the world. What are some of the dangers associated with the current system?*

#### **Information:**

- In the drive to achieve higher and higher yields, **soils** across the world have been **eroded** and **stripped** of their nutrients. Farmers now use massive amounts of artificial fertilizer, made with depleting resources of natural gas, nitrogen and phosphorous, to provide the much-needed nutrients to grow our food and boost crop production. Eventually, these resources will become scarce and farms may fail to produce the yields needed to feed the planet.
- Industrial farming uses a lot of **pesticides** and **herbicides** to kill weeds and insects to increase production. Insects are a vital chain in the web of life because they provide food for birds and other animals. Pesticides and herbicides are also linked to the collapse of bee colonies that pollinate the plants we rely on for food.
- Because the generous use of water can triple a crop's production, **aquifers, wells, rivers** and **lakes** across the world are being **depleted** at alarming rates. When these go dry, crop yields will decline dramatically.
- Our **agricultural system** uses a significant amount of energy, primarily from fossil fuels, to fertilize and till the soils, plant crops, pump water and harvest and deliver food to distant places. When this fuel is gone, without an alternative energy source, the current system will collapse.
- As we add **80 million people** to the planet every year, we continue to **cut down forests** and destroy wild plant and animal life at alarming rates to make room for more agricultural and grazing land to feed more people.



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### Population's Impact On the Environment

#### ***Rivers and Air***

**Question:** *The third section of the film examines our rivers and air. What are some of the sources of air pollution?*

**Information:** Air pollution is a result of many different activities, from burning cropland to make way for a new field, to cooking food, to burning coal to stay warm, to generating electricity in coal power plants and exhaust from all of the trucks and cars on the road.

**Question:** *One of the scientists in the film says what we are seeing is a "tragedy of the commons" in the oceans. What does he mean?*

**Information:** The "tragedy of the commons" is a term describing what can happen with a common natural resource like air, fresh water and fish when people act in their own self-interest and ignore what's best for the whole group. In the film, New Zealand scientist Ben Harvey describes how overfishing results when people who are relatively disconnected from one another believe they are entitled to as many fish as possible rather than protect them for others or future generations.

**Question:** *Where else in the film, do you see a "tragedy of the commons" connection?*

**Information:**

- Draining the aquifers for farming;
- Polluting the rivers and the oceans with fertilizers, pesticides and herbicides that are used on farmland upstream;
- Polluting the air from operating a motor vehicle or other activity burning fossil fuel;
- Fouling the waters by dumping garbage onto the streets or into streams or directly into the rivers and oceans.





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### Population's Impact On the Environment

#### Climate Change

**Question:** *What is the connection between population and climate change?*

**Information:** Each person on the planet emits an average of approximately 5 tons of CO<sub>2</sub> annually into the atmosphere. People in the developed world like the United States are responsible for as much as 16-20 tons of CO<sub>2</sub> and in underdeveloped nations less than a ton of CO<sub>2</sub>.

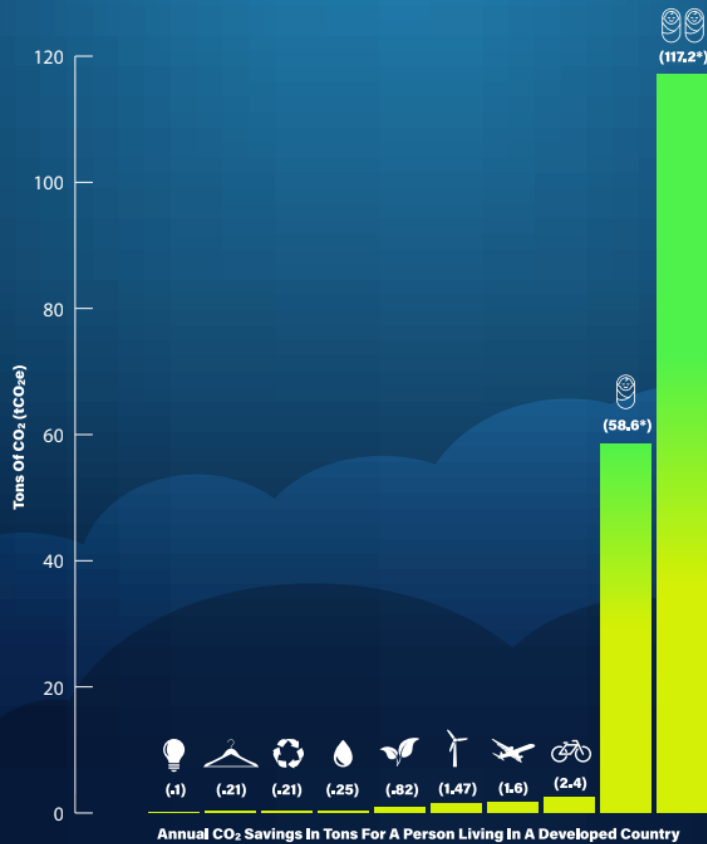
We are adding 80 million more people a year to the population and roughly 250 million additional tons of CO<sub>2</sub> every year to the atmosphere and assuming many of these people will eventually have children, even more CO<sub>2</sub> will be added in the future.

A 2017 study (Wynes, Nicholas) of the relationship between population growth and climate change found **having one less child in the developed world is 9 times more powerful in reducing CO<sub>2</sub> emissions than a lifetime of never driving, traveling by air, buying only green energy, recycling everything and eating a plant based diet combined.**

*See the infographic on the next page, which demonstrates the impact choosing to have one or two fewer children can make in terms of carbon emissions versus most other personal climate actions.*



# Top Personal Actions You Can Take To Address Climate Change



- Upgrade Light Bulbs
- Hang-Dry Clothes
- Recycle
- Wash Clothes in Cold Water
- Eat a Plant-Based Diet
- Choose Green Energy
- Avoid One Roundtrip Transatlantic Flight
- Live Car-Free
- Choosing to have One Less Child
- Choosing to have Two Fewer Children

\*Cumulative CO<sub>2</sub> emissions from descendants decreases substantially if national emissions decrease.  
Global Total Fertility Rate 2019: 2.5 births per woman - UN Population Division

Source: Seth Wynes and Kimberly Nicholas, Lund University, 2017



*This information is available for purchase as a poster, which includes additional supporting information and suggested student activities. For more information, visit: [www.earthovershoot.org](http://www.earthovershoot.org) or email [info@earthovershoot.org](mailto:info@earthovershoot.org)*



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### Population and Social Justice

**Question:** *Is overpopulation a problem only in certain countries?*

**Information:** Bioethicist Travis Rieder says in the film, "Overpopulation sounds like a problem concerning the numbers of people, but it's really not." A child born in a developed country consumes far more over their lifetime than a child born in an underdeveloped nation. Many developed countries like the United States may have declining fertility, but they still have one of the largest ecological footprints per person as measured by the amount each person consumes and pollutes over a lifetime.

### Girls Education, Family Planning and the Environment

**Question:** *Does scientific research support the claim that girls education and family planning bring environmental benefits and are worth supporting by those who care about environmental sustainability?*

**Information: Securing both education and family planning for all girls and women could mean 1 billion fewer people by mid century.** When girls are educated and have access to family planning, studies show they tend to have fewer children and space them apart more. The result is improved health for children and mothers, greater food and financial security, and more educational and economic opportunities for the parents and children.



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### Girls Education, Family Planning and the Environment

(continued)

According to the 2017 book, *Drawdown* by Paul Hawken, which was based upon meticulous research by the leading scientists and policymakers around the world, "Securing women's right to voluntary, high-quality family planning around the world would have powerful positive impacts on the health, welfare, and life expectancy of both women and their children."

This is not "population control" but smart population policy. Empowering women and giving them autonomy and a choice that invariably reduces births, raises living standards and reduces the overall use of energy, building space, food, transportation and the wastes generated by each of us every day.

**Question:** *What are some of the obstacles to the widespread adoption of small families and the reduction of unsustainable population growth?*

**Information:**

**Sex:** The topic of sex is an uncomfortable subject to discuss openly in many cultures.

**Culture:** Some cultures are still dominated by male patriarchy where the man determines how many children his partner will have and when. Early marriages for girls as young as 15 years old are also common in certain cultures. Other cultures encourage large numbers of children.

**Religion:** Many religions prohibit the use of birth control. Teachings and scripture written in biblical times when there were only a few hundred million people encourage followers to go forth and multiply.



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### Girls Education, Family Planning and the Environment (continued)

**Economic:** There is an unsubstantiated belief perpetuated by many economists that a country must keep growing its population to drive economic growth. This commitment to growth at all costs leads to the depletion of a country's natural resources like fertile land for crops, green space for living, and finite water supplies and the significant costs in infrastructure needs such as water, sewer, roads, energy and food production and distribution, pollution control, healthcare and educating the populace. Costs that are far greater than the additional incremental boost to the economy from adding more people.

**Ethical fears:** Many people fear discussing population and family size because of previous state-sanctioned human rights abuses in countries such as in India and China. India endorsed forced sterilizations in the 1960's and China implemented a coercive one-child policy in the 1970's to address the starvation and deaths of tens of millions of people from famine. Both countries infringed on the reproductive rights and autonomy of women, resulting in a fear of considering family size and population limits to address our environmental emergencies. However, there are many countries that have succeeded in reducing population growth and fertility by promoting small families in a human rights context and voluntarily.



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### Consumption vs. Population

**Question:** *Why can't we simply reduce our consumption to save the environment?*

Information:

We can, but there are three significant obstacles in achieving a sustainable future through attempting to reduce consumption:

**The Magnitude of the Problem:** Assessments, environmental scientists and economists all concur that global consumption or economic activity needs to be reduced by half if we are going to live sustainably and allow for the abundance and diversity of life to flourish alongside us. That reduction would require, if equitably shared, 7.7 billion people each living on approximately \$5500 a year. That reduction of wealth would be enormous and unprecedented in scale. World Bank data for the past 57 years shows that the global economy (our consumption) is far from slowing down and has grown on average at an annual rate of 4%; the exact opposite direction needed to achieve sustainability.

**Human Behavior:** There are more than 3.5 billion people currently living “the good life,” above the sustainable income level in many countries. How do we get them all to simultaneously and voluntarily reduce their consumption and material standards by as much as 50-90 percent? And for the remaining 4 billion-plus who are living below this sustainable level, who are fighting every day to live better lives marked by increased incomes and consumption of goods and services, should we prevent from striving for more? As the bioethicist in the film, Travis Rieder, stated we owe it to them to improve their lives because living on less than \$5500 a year is a grim, difficult and unpleasant existence. The world has not voluntarily reduced its wealth since we have been reliably recording global consumption and growth nor will 8 billion of us do it collectively and voluntarily in the future to the degree needed to live sustainably.



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### Consumption vs. Population

(continued)

**The Financial System:** Under any existing financial system it is very difficult to personally reduce one's consumption. If you choose to stop driving a car, you consume fewer of the resources needed to build and operate it. Without car payments, insurance and gas costs the average American can save approximately \$6000 in savings a year. What happens to these savings? It typically gets shifted to other economic or consumptive activities such as taking a vacation by airplane, renting a larger apartment, turning your heat up in the winter or your A/C down in the summer, or just buying more stuff.

### Technology and Population

**Question:** Why wasn't technology discussed in the film as a solution to sustainability?

**Information:** Technology rarely produces lasting solutions toward sustainability. Technologies create efficiencies of time and resources which allows people and businesses to become more productive and realize an economic benefit. If a business adopts a technology that uses resources more efficiently, that business will eventually see an increased profit. Any CFO from a large corporation will tell you that the profit from these savings either gets distributed to shareholders for their use and consumption, or reinvested back into the business in the form of equipment, inventory, technology, labor, and acquisition of other businesses, all with the objective of more growth and more wealth. As a result, technology and the efficiencies they create actually generate greater global growth into the resources that sustain us.

We can certainly use some technology to improve our environment like cleaning up our oceans, land and airways which is admirable and important, but it will only be a temporary relief if we don't recognize, slow or halt continued expansion of humanity and its consumptive activity all over the planet.



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### Population and the Pandemic

**Question:** Won't unsustainable population growth solve itself through ways like the pandemic?

**Information:**

A pandemic is not the answer to slowing environmental destruction and improving human health -- it is impractical and cruel. A more humane and practical way to grow smaller is a rights-based path that empowers people with choices, improves human health, economic prosperity and restores the natural world.

**Question:** Shouldn't the pandemic be our focus right now in light of the social, economic and political upheaval it's causing?

**Information:**

Yes, we need to resolve the pandemic and its effects on human health and the economy. However, but only focusing on ending the pandemic and not its underlying causes, we perpetuate our relentless growth as a species and our destruction of the environment. We must recognize that the pandemic is a symptom of too many people consuming too many resources and emitting too many wastes. If we are ever going to achieve a sustainable future and avoid future pandemics we must immediately take action to end unsustainable population growth.





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### Solutions

**Question:** *What are some actions you, as an **individual** could try to address unsustainable population growth?*

#### **Information:**

As **individuals**, we can:

- **Educate ourselves** about the connection between population and the environment.
- Before having a family, **consider the implications** of bringing a child into the world where food, water, energy, pollution, climate and extinction emergencies are occurring with greater frequency and severity.
- If planning a family, **consider adoption**.
- **Have fewer children**. Choosing to have one or no children is the most profound action by far that an individual can take toward fixing climate change and restoring the environment.
- **Educate your teenage child(ren)** about sex and contraception early, without taboos.
- **Spread your knowledge and concern** about unsustainable population growth among friends and family and via social media. The more people having an honest conversation loudly and often enough, the more we can positively change social norms.
- **Reduce your personal consumption** and donate those savings to:
  - Environmental organizations addressing overpopulation as an important part of their platform;
  - Family planning programs in your own and other countries;
  - Organizations that promote and support girl's education and women's empowerment.
- **Vote** for politicians who acknowledge the detrimental impacts of unsustainable population growth and support important policies to address it.



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### Solutions

**Question:** What are some actions you, as a **community** member, could try to address unsustainable population growth?

#### Information:

- **Join local environmental groups**, encouraging them to “connect the dots” between population and the environment. Start a local chapter of Earth Overshoot.
- **Write opinion pieces** or letters to the editor for local media that help the readers connect population growth with the high cost of housing, loss of green space, traffic congestion, crowded schools, and noise pollution.
- **Advocate** for city and town councils to pass resolutions accepting limits to growth, and directing their national governments to develop policies to insure that population growth is in line with the natural resources available and their sustained use.

**Question:** What are some actions we, as a **nation**, could try to address unsustainable population growth?

#### Information:

- **Embrace** rather than fight **aging and shrinking societies**
- **Empower women**, assuring equal rights, treatment and opportunities for both genders
- **Provide information and greater access to reproductive health care**, including all types of low cost, safe, effective contraception
- **Require basic education curriculum** to include population's role in environmental degradation.
- **Encourage smaller families** through government public service announcements and economic incentives for choosing to have one or no children
- **Create a national security and environmental policy** built around an optimal population size, and work to achieve it



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### Solutions

**Question:** What are some actions you, on a **global** level could you try to address the population problem?

**Information:**

- Make ending population growth one of the **UN Sustainable Development Goals**;
- Greatly **increase the amount of foreign aid** going to family planning;
- **Financially support programs** designed to change social norms to promote smaller families through girls education, womens rights and family planning;
- **Support a new global treaty** to end unsustainable population growth, with all countries choosing population targets based on sustainability targets every half decade with a plan on how to achieve them.

### END THE DISCUSSION

Please remind people to visit [www.Earthovershoot.org](http://www.Earthovershoot.org) to sign up for volunteer opportunities or the "Sustainable Shoutouts" monthly newsletter.

Encourage others to host a screening like this one.

Thank you for being a moderator and participating in this positive movement for the future of our planet and our families!

Please send your feedback by email to us at: [info@earthovershoot.org](mailto:info@earthovershoot.org)