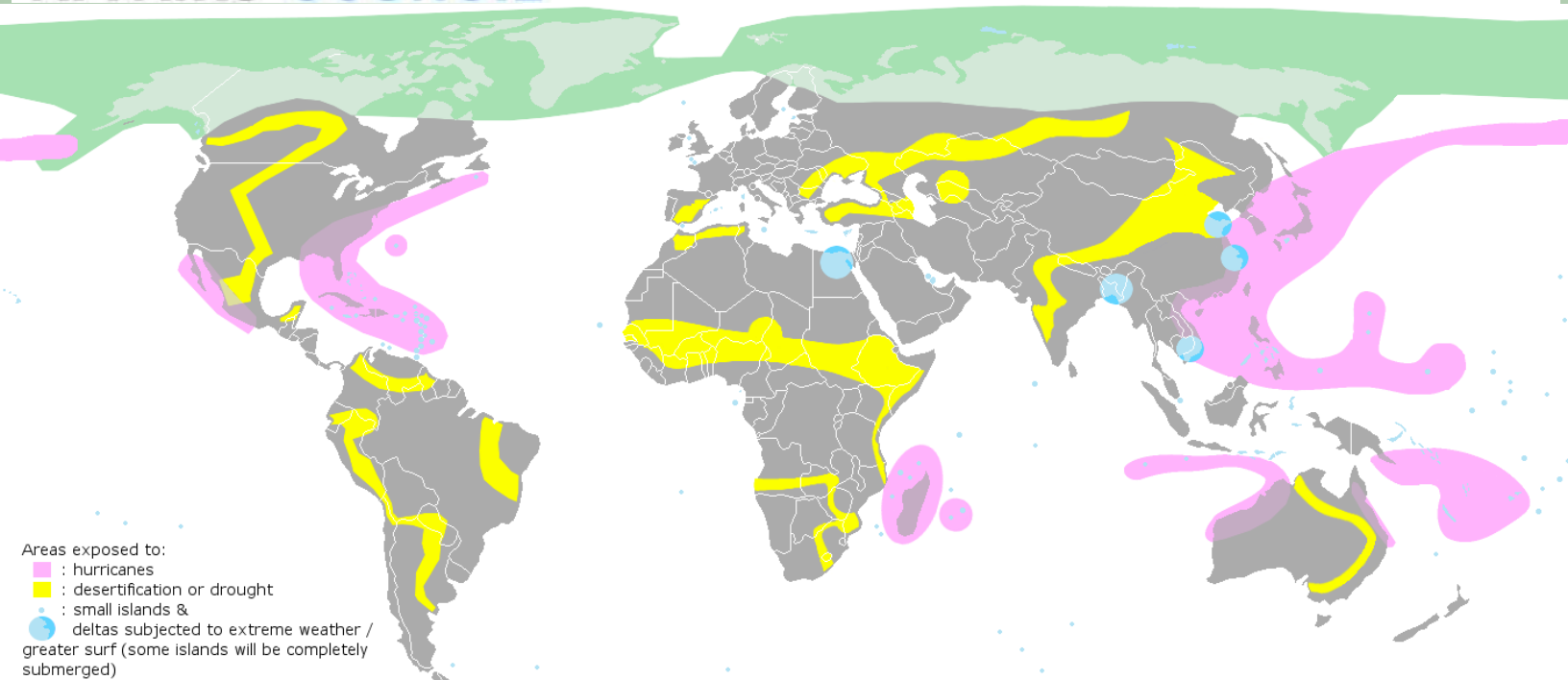




# Climate Change and Human Rights



## A Resource Packet for Educators

Compiled by: Su Rim Han, Mark Orines, Maggie Archbold, Ryan Hauck

Global Classroom Teacher's Workshop, in partnership with Facing the Future at Western  
Washington University



*Global Classroom Workshops are supported by the Center for Global Studies at the University of Washington*

**W**  
GLOBAL STUDIES  
UNIVERSITY of WASHINGTON  
The Henry M. Jackson  
School of International Studies

# Table of Contents

|                                                                                       |       |
|---------------------------------------------------------------------------------------|-------|
| Introducing the Speakers.....                                                         | 3     |
| Framework and Guiding Questions.....                                                  | 4     |
| Climate Change: An Introduction.....                                                  | 5     |
| Climate Change: Causes & Effects.....                                                 | 6-7   |
| Climate Change: Our Changing World.....                                               | 8     |
| Climate Change: Resources for Young Learners....                                      | 9     |
| Climate Change: Activities & Lesson Plans.....                                        | 10    |
| Human Rights: An Introduction.....                                                    | 11    |
| Climate Change and Human Rights.....                                                  | 12-13 |
| Climate Change, Poverty and Development.....                                          | 14-15 |
| Climate Change and Indigenous Peoples.....                                            | 16    |
| Case Studies.....                                                                     | 17-19 |
| Northern Kenya.....                                                                   | 17    |
| Oceania.....                                                                          | 18    |
| Bangladesh.....                                                                       | 19    |
| Climate Justice.....                                                                  | 20    |
| Human Rights: Activities & Lesson Plans.....                                          | 21    |
| Assignment: Global Classroom's 2016 World Citizen<br>Essay Contest (Grades 3-12)..... | 22    |
| The Worldwide Water Crisis.....                                                       | 22-30 |
| Take Action.....                                                                      | 31    |

## USING THIS RESOURCE GUIDE

NOTE: Many of these descriptions were excerpted directly from the source website.



RECOMMENDED RESOURCE



VISUAL MEDIA



LESSON PLAN



STEM RESOURCE



AUDIO



ENGLISH/LANGUAGE ARTS



CHARTS AND GRAPHS



Source: unep.org

GLOBAL CLASSROOM WANTS TO KNOW HOW YOU HAVE USED THIS RESOURCE PACKET IN YOUR CLASSROOM!

EMAIL GCSTAFF@WORLD-AFFAIRS.ORG AND TELL US YOUR STORY.

## Introducing the Speakers



Dr. Jennie Hoffman has been broadly engaged in the field of climate change adaptation for over a decade. She helps organizations integrate climate change into their work through direct engagement and targeted research, and develops and leads adaptation-related workshops and trainings for diverse audiences. Her areas of expertise include decision making in times of uncertainty, climate change vulnerability assessment, and adapting conservation, planning, and resource management for a changing climate. Jennie has a PhD in marine ecology.



Dr. Troy Abel is Associate Professor of Environmental Policy in Western Washington University's Huxley College of the Environment. He is currently involved in several large grant projects focused on environmental governance including one from the National Science Foundation. He is an award-winning author of several books including *FIVE SEASONS IN ECTOPIA: Rainforest Immersion and Conservation Action in Costa Rica*.



Ryan Hauck is the Director of the Global Classroom Program at the World Affairs Council and has 25 years of experience as a classroom teacher in Upper School Social Sciences. He currently teaches at Glacier Peak High School in Snohomish. Ryan completed his master's degree in Globalization and Educational Change from Lehigh's Comparative & International Education Department. He brings his own real-life experiences into the classroom so that his students begin to understand the value of cross-cultural understanding and humanitarian action.



Tami Caraballo teaches science and biotechnology at Glacier Peak High School. She won a Science Teaching Excellence award of \$10,000 from Amgen in 2015 in order to develop a Biotechnology course on global human health in partnership with Fred Hutchison Cancer Research Center, Seattle Bio Medical Research Institute, and the University of Washington.



# Framework and Guiding Questions

What are the major causes of climate change, and what role do humans have in contributing to global warming?

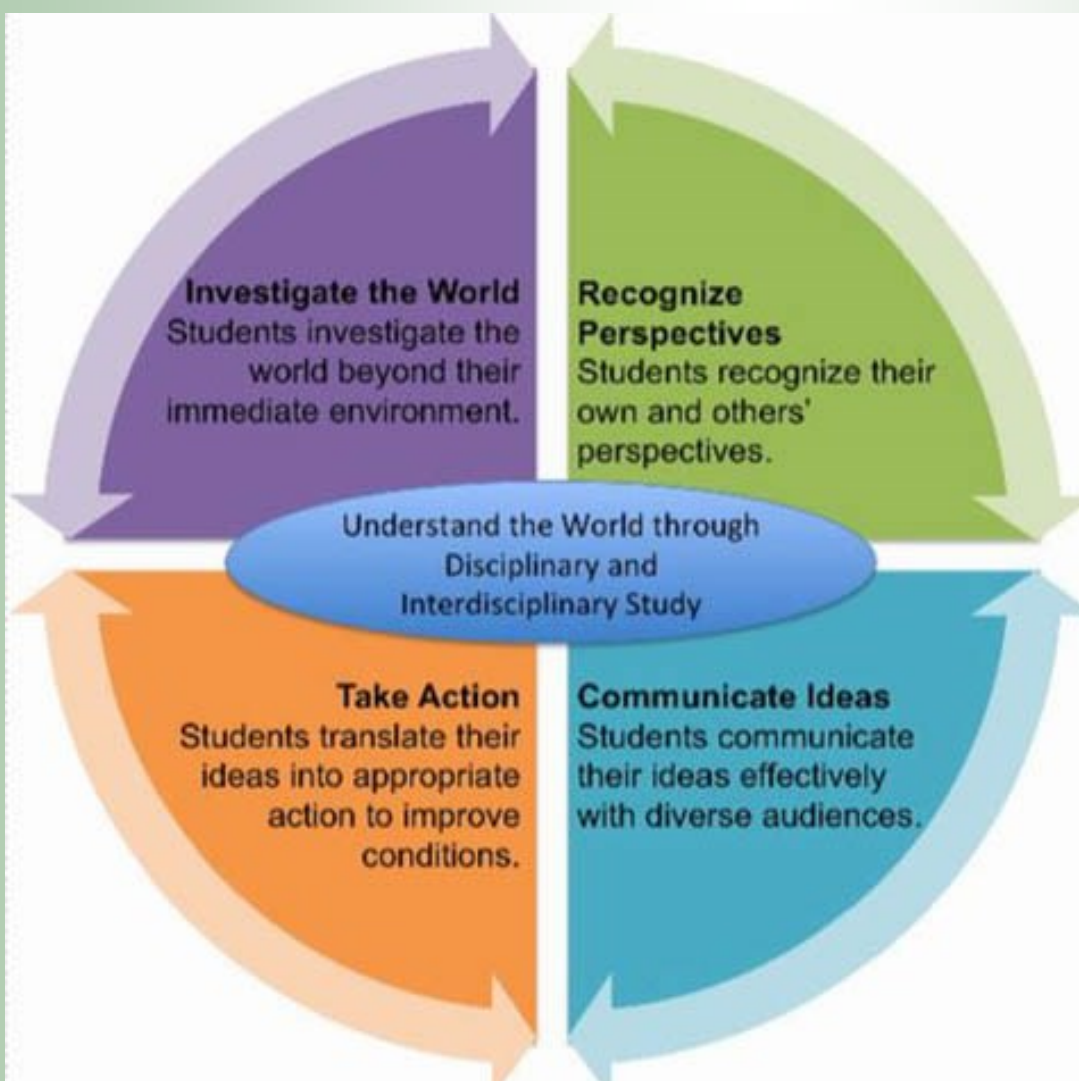
What threats do climate changes have on human societies?

How do identity constructs like gender, nationality, ethnicity, and economic status intersect with issues around climate change?

What human rights principles apply in the context of climate change?

How can human rights be integrated in climate-change related actions?

Why integrate human rights in climate change-related actions?



What actions have been taken by international human rights mechanisms so far in order to mitigate the effects of global warming?

What steps should be taken going forward, by governments, nonprofits, corporations, and by individuals?

Left: The Global Competence Matrix by the Asia Society Partnership for Global Learning

# Climate Change: An Introduction

Key terms you need to know to understand climate change

<https://www.climate realityproject.org/blog/key-terms-you-need-understand-climate-change>

A list of the top terms you need to know to understand the basic science and political sphere of climate change.



**PBS Global Warming The Signs and the Science (56 mins)**

<https://www.youtube.com/watch?v=xVQnPytgwQo>



**Climate Change: The State of the Science**

[https://www.youtube.com/watch?v=\\_EWOrZQ3L-c](https://www.youtube.com/watch?v=_EWOrZQ3L-c)

**Short Answers to Hard Questions About Climate Change**

[http://www.nytimes.com/interactive/2015/11/28/science/what-is-climate-change.html?\\_r=0](http://www.nytimes.com/interactive/2015/11/28/science/what-is-climate-change.html?_r=0)

It is a list of quick answers to often-asked questions about climate change. This should give you a running start on understanding the problem.



**To understand climate change, understand these three numbers (3 mins)**

<https://www.youtube.com/watch?v=5KtGg-Lvxso>

A clip from 350.org's the "Do the Math" movie.



**An introduction to climate change in 60 seconds**

<https://www.youtube.com/watch?v=n4e5UPu1coo>

This 60-second animation from the world's two leading science academies brings you the science behind climate change. Video by the Royal Society and the US National Academy of Sciences.

**Video 5 Things We Learned About Climate Change**

<https://www.youtube.com/watch?v=dGG7JGT4Fdo>

SciShow's Hank Green boils down a new report from the United Nations about global warming and tells you five things you really need to know about our warming world.



**Gallery of Weather and Climate**

<http://climatekids.nasa.gov/weather-and-climate-gallery/>

Images from around the world revealing the impact of climate changes across our planet.

**Climate Change in Images**

<https://www.earthhour.org/blog/climate-change-images>

A window into the world of global warming.

**Thin Ice**

<http://www.timesfreepress.com/news/opinion/cartoons/story/2009/nov/28/thin-ice/244543/>

Bennett, Clay. Times Free Press. 2009.

Discuss the image to the right with your students. Students can think about the meaning and implications of the image, and also about the role of art in examining culture and current affairs.

Challenge your students to create their own cartoon to represent climate change. Students can present their images to the class.



# Climate Change: Causes and Effects

## Causes of climate change: A blanket around the earth

<http://climate.nasa.gov/causes/>

Most climate scientists agree the main cause of the current global warming trend is human expansion of the “greenhouse effect” – warming that results when the atmosphere traps heat radiating from Earth toward space.



### Carbon dioxide back 800,000 years

<https://www.youtube.com/watch?v=SXHDwdd7Tf8>

Time history of atmospheric carbon dioxide from 800,000 years before present until January, 2011.



### What's the Deal with Carbon?

<https://www.youtube.com/watch?v=2Jp1D1dzxj8>

This animation describes the carbon cycle and how it is affected by human activity. It was featured in the Sustainable Shelters exhibit at the Bell Museum of Natural History at the University of Minnesota.



### Vital Signs: Carbon dioxide, global temperature, arctic sea ice minimum, land ice, sea level

<http://climate.nasa.gov/vital-signs/carbon-dioxide/>

The first chart shows atmospheric CO<sub>2</sub> levels in recent years, with average seasonal cycle removed. The second chart shows CO<sub>2</sub> levels during the last three glacial cycles, as reconstructed from ice cores. The time series shows global distribution and variation of the concentration of mid-tropospheric carbon dioxide in parts per million (ppm). The overall color of the map shifts toward the red with advancing time due to the annual increase of CO<sub>2</sub>.

## Scientific consensus: Earth's climate is warming

<http://climate.nasa.gov/scientific-consensus/>

97 percent or more of actively publishing climate scientists agree: Climate-warming trends over the past century are extremely likely due to human activities. In addition, most of the leading scientific organizations worldwide have issued public statements endorsing this position. The following is partial list of these organizations, along with links to their published statements and a selection of related resources.



### Sea Ice Cover Reaches Record Low

<http://nca2014.globalchange.gov/report/sectors/indigenous-peoples#graphic-16631>

Interact with Nasa's graphic to explore how drastically sea ice in the Arctic has retreated over the last 30 years. The image shows that the extent of sea ice had dropped to 1.32 million square miles at the end of summer 2012.

## Evidence of climate change: How do we know?

<http://climate.nasa.gov/evidence/>

The Earth's climate has changed throughout history. Just in the last 650,000 years there have been seven cycles of glacial advance and retreat, with the abrupt end of the last ice age about 7,000 years ago marking the beginning of the modern climate era – and of human civilization. Most of these climate changes are attributed to very small variations in Earth's orbit that change the amount of solar energy our planet receives.

## Effects of climate change: The consequences of climate change

<http://climate.nasa.gov/effects/>

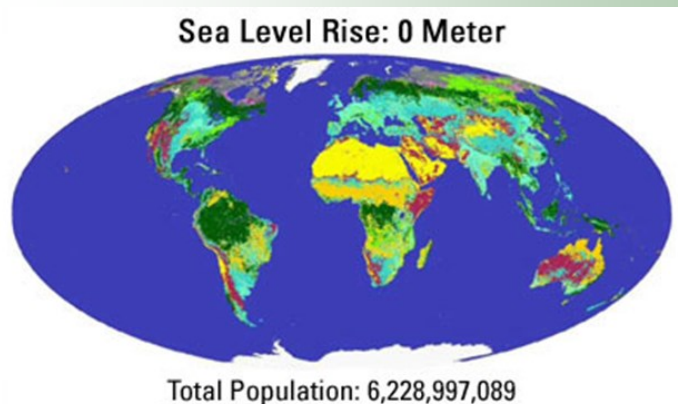
Global climate change has already had observable effects on the environment. Glaciers have shrunk, ice on rivers and lakes is breaking up earlier, plant and animal ranges have shifted and trees are flowering sooner.



### Sea-Level Rise (10 mins)

[http://cegis.usgs.gov/sea\\_level\\_rise.html](http://cegis.usgs.gov/sea_level_rise.html)

Time-lapse animations showing maps of sea-level rise at locations around the globe and the population numbers that could be impacted.





# Climate Change: Causes and Effects



NASA animation of temperature data from 1880-2011

[https://www.youtube.com/watch?v=OtY8DpA\\_XNE](https://www.youtube.com/watch?v=OtY8DpA_XNE)



Why the new climate math is a declaration of war

<http://www.climatechangenews.com/2016/10/05/the-new-climate-math-is-a-declaration-of-war/>

A mathematician might write it like this:  $942 > 843$  ☐ no new extraction. There is new climate math and it is the most irresistible yet. So we've heard from two of the most eloquent voices for action on climate change: Bill McKibben and George Monbiot.

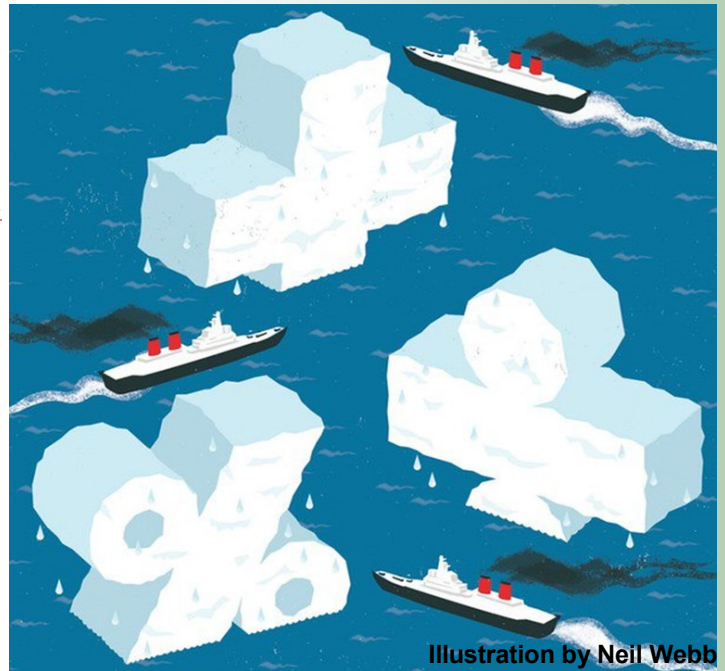


Illustration by Neil Webb

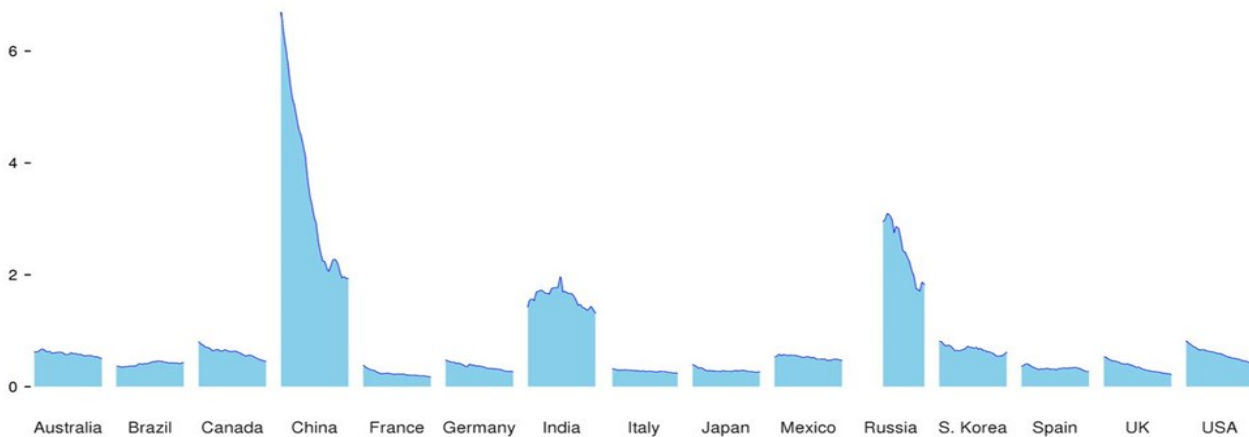
## 11 global energy graphs that may surprise you

<http://www.climatechangenews.com/2016/10/03/10-global-energy-graphs-that-may-surprise-you/>

Which European country uses the most solar or wind power? What year did UK coal consumption peak? Does US industry use more or less electricity than in the 1950s? All questions Robert Wilson, a research associate at the University of Strathclyde has been answering on his twitter feed for the past few months, day and night. His charts tell a story of the slow but steady transition of vast economies like the US away from heavy industry, the rapid deployment of renewables in the EU but their relatively small share of the region's power output.

### Carbon intensity of the world's major economies from 1980 to 2011

Metric Tons of Carbon Dioxide per Thousand Year 2005 U.S. Dollars



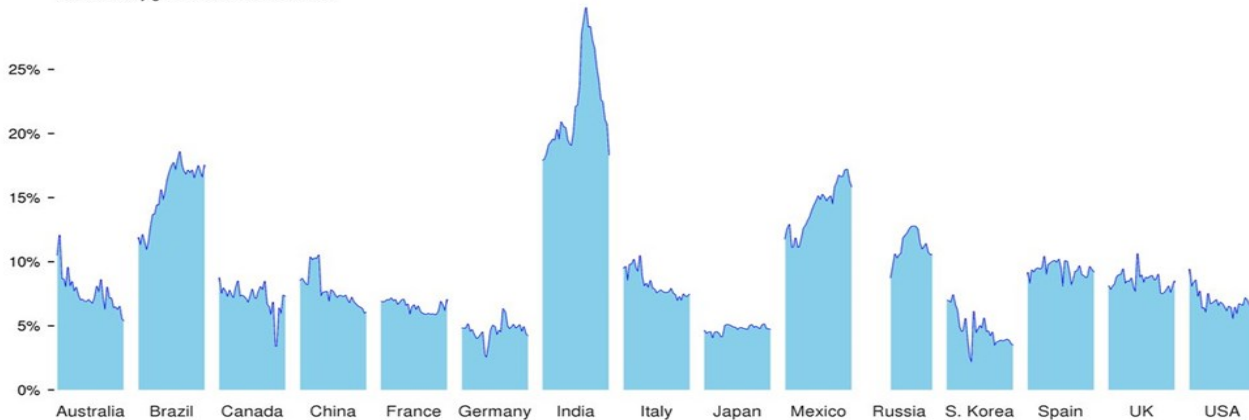
Data source: EIA International Energy Statistics

Russian data begins in 1992

Figure by: robert.wilson@strath.ac.uk

### Electricity lost in distribution in the world's major economies from 1980 to 2012

% of electricity generated lost in distribution



Data source: EIA International Energy Statistics

Note: Percentages shown are distribution losses divided by total electricity generation

Russian data begins in 1992. Pre-unification Germany data is combined

Figure by: robert.wilson@strath.ac.uk

# Climate Change: Our Changing World



## Images of Change

<http://climate.nasa.gov/images-of-change?id=589#589-flooding-on-the-ganges-river-india>

This areal image reveals the flooding of the Ganges River in India between 2015 and 2016.



## Hurricane Matthew looks a lot like the future of climate change

<http://www.cnn.com/2016/10/07/opinions/sutter-hurricane-matthew-climate-change/index.html>

But as the impact of the storm becomes clear, there's an uncomfortable truth the rest of us should wrestle with: Hurricane Matthew looks a lot like future climate change. And if we want to stop storms like this from getting even more intense, we need to do everything we can to rid the economy of fossil fuels.



## Painting with Time: Climate Change

[https://www.participate.com/app\\_reviews/907-painting-with-time-climate-change](https://www.participate.com/app_reviews/907-painting-with-time-climate-change)

Paint with Time: Climate Change gives users two pictures of the same location to show this change in action. This app is interactive and gives students options for exploring on their own and extra information to support their learning.

## What are the impacts of climate change where I live?

<https://www.epa.gov/climatechange>

See climate change impacts by region, state, or by sector.

## Glacier Erasure: South Cascade Glacier in a Changing Climate—Local to Global Resource Length: 3 min

<http://wa.water.usgs.gov/projects/glacier/video.html>



Time lapse images from 1958-2006 showing changes to South Cascade Glacier in Skagit County, Washington.



## Stunning photos of climate change

<http://www.cbsnews.com/pictures/stunning-photos-of-climate-change/>

27 images from around the world that reveal the devastating impacts of climate changes on animals, environments, and human societies.

## Stunning photos of climate change: Walrus haul-out

<http://www.cbsnews.com/pictures/stunning-photos-of-climate-change/9/>

It is said walruses are "hauling out" when they congregate in large groups, like the one seen

here. Recently, there have been years when more than 30,000 of these Pacific animals have come ashore together on Alaska's beaches, a dangerous trend that often leads to significant loss of life. This on-land crowding is particularly dangerous for baby walruses, who are uniquely susceptible to being crushed during stampedes.



<https://www3.epa.gov/climatechange/kids/impacts/signs/temperature.html>



# Climate Change: Resources for Young Learners



## Take a Climate Change Expedition!

<https://www3.epa.gov/climatechange/kids/expeditions/index.html>

Get your passport ready! It's time to go on a trip around the world to explore the effects of climate change. Each flag on the map below represents a stop on your journey, and you can visit them in any order you like. You'll see a short video at each stop... and you'll also need to complete a few challenges along the way!

## Global Warming for Kids

<https://www.youtube.com/watch?v=PqxMzKLYrZ4>  
You will learn about "Global Warming" in this video.



## The Climate Time Machine

<http://climatekids.nasa.gov/time-machine/>

Play with the Climate Time Machine. See back into the past and ahead to a possible future. How much Arctic sea ice has melted just since satellites started observing around 30 years ago? What parts of the world will be under water as sea level rises, inch by inch, foot by foot? How much has the greenhouse gas carbon dioxide increased in the air just in the last few years? How much has temperature risen around the world in just a little over 100 years?



## A Song of Our Warming Planet

<https://vimeo.com/69122809>

When faced with the challenge of sharing the latest climate change discoveries, scientists often rely on data graphics and technical illustrations. University of Minnesota undergrad Daniel Crawford came up with a completely different approach. He's using his cello to communicate the latest climate science through music.



## Climate Change Education

<http://climatechangeeducation.org/fe/hippeworks/index.html>

Animated cartoons and activities to help younger students engage more with concepts around climate change.

## Center for climate and energy solutions – Kids corner

<http://www.c2es.org/science-impacts/basics/kids>

The C2ES Kids Corner is designed to help you understand how and why our climate is changing, how climate change affects us, what people can do to slow climate change and prepare for it.



## Climate Kids – NASA's Eyes on the Earth

<http://climatekids.nasa.gov/>

Nasa's resources help elementary students learn about the weather and climate, energy, carbon, and technology.

## Clear the air for children: The impact of air pollution on children

[http://www.unicef.org/publications/files/UNICEF\\_Clear\\_the\\_Air\\_for\\_Children\\_30\\_Oct\\_2016.pdf](http://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf)

Children breathe twice as quickly as adults, and take in more air relative to their body weight. Their respiratory tracks are more permeable and thus more vulnerable. Their immune systems are weaker. Their brains are still developing. Every year, nearly 600,000 children under the age of five die from diseases caused or exacerbated by the effects of indoor and outdoor air pollution. Millions more suffer from respiratory diseases that diminish their resilience and affect their physical and cognitive development.

Around 300 million children currently live in areas where the air is toxic – exceeding international limits by at least six times.

In 2012, air pollution was linked with 1 out of every 8 deaths, globally – or around 7 million people.<sup>1</sup> Around 600,000 of those were children under 5 years old, globally.<sup>2</sup> Almost one million children die from pneumonia each year, more than half of which are directly related to air pollution.

# Climate Change: Classroom Activities & Lesson Plans



## Lesson Plans for Educators: A student's guide to global climate change (middle school)

<https://www3.epa.gov/climatechange/kids/resources/lesson-plans.html>

EPA has compiled a suite of hands-on, interactive lesson plans to complement and make use of the material on this website. The plans, aimed primarily at middle school students, work systematically and individually to reinforce students' knowledge of climate change, as well as enhance skills across multiple disciplines. The lessons are correlated to national science standards.

## HBO Documentaries: How to Let Go of the World and Love all the Things Climate Can't Change



Oscar-nominated director Josh Fox contemplates our climate-change future by exploring the human qualities that global warming can't destroy.

\*Might not be appropriate for younger viewers; please preview before showing to your class.



## An Earth System Science Teacher Professional Development Toolkit for Climate Science

<http://www.purdue.edu/discoverypark/climate/climate-change/toolkit/teacher%20lesson%20plans.pdf>

The Teacher Lesson Plans packet provides a description of and link to classroom lessons that align with the climate system content of the workshop and PowerPoint program. It is designed to assist teachers in the classroom implementation of the climate system content covered in the workshop. Many of the lessons identified engage students in analyzing and interpreting climate data and visualizations. Pedagogically the activities promote active learning and collaboration.



## British Council – Teaching English Lesson plans

<https://www.teachingenglish.org.uk/sites/teacheng/files/climate-change-lesson-plan.pdf>

This lesson is about climate change – and encourages students to think about their attitudes towards the environment. (Interesting fact you could use in the intro – according to Friends of the Earth the UK has 1% of the world's population, yet produces 2.3% of the world's carbon dioxide) This lesson could be linked nicely with the lesson plan on the weather.

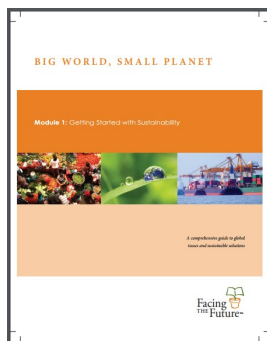


## How Do We Balance Environmental Conservation with Human Needs? (Lesson Plan for HS History)

[http://earthwatch.org/Portals/0/Downloads/Education/Lesson-Plans/How\\_Do\\_We\\_Balance\\_Environmental\\_Conservations\\_with\\_Human\\_Needs.pdf](http://earthwatch.org/Portals/0/Downloads/Education/Lesson-Plans/How_Do_We_Balance_Environmental_Conservations_with_Human_Needs.pdf)

Students will be asked to simulate a meeting between conservation biologists and representatives of local populations from the Peruvian Amazon; Yangtze River, China; and Hunter's Point in San Francisco, CA. Goal: For students to understand different perspectives in controversial conservation issues.

## From Facing the Future:



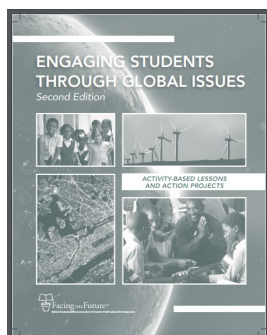
*Big World, Small Planet* is a student reader organized into four modules. Each consists of two related units, supported by 10 lessons. Insightful and straightforward, the curriculum offers a



**Facing<sup>THE</sup>Future™**  
Global Sustainability Curriculum and Teacher PD

frank approach to motivate and empower students to seek positive solutions to the challenges that evolve from the interconnectedness of environment, culture, society and economy.

Take a look inside: [https://cdn.shopify.com/s/files/1/1100/0740/files/BWSP\\_Module1\\_LookInside.pdf?17593597147074259861](https://cdn.shopify.com/s/files/1/1100/0740/files/BWSP_Module1_LookInside.pdf?17593597147074259861)



*Engaging Students through Global Issues, Second Edition* has eight sustainability Big Ideas, with activities appropriate for a range of students, grades 5-12. It is formatted for use in a wide range of classroom settings; formal and informal, as well as environmental learning centers, after-school programs, homeschool settings, adult learning contexts and more. The readability and vocabulary of student materials better meet the learning needs of English-Language Learners (ELL), adult learners, and individuals who may or may not have a deep conceptual understanding of sustainability or systems thinking. Take a look inside: [https://cdn.shopify.com/s/files/1/1100/0740/files/ESTGI-2ndEdition\\_LookInside.pdf?9755716664836323670](https://cdn.shopify.com/s/files/1/1100/0740/files/ESTGI-2ndEdition_LookInside.pdf?9755716664836323670)



# Human Rights: An Introduction



## What Are Human Rights? – Human Rights Defined

<http://www.youthforhumanrights.org/what-are-human-rights.html>

While some dictionaries define the word right as “a privilege,” when used in the context of “human rights,” we are talking about something more basic. What is a human right?



<https://www.youtube.com/watch?v=JpYqs1Agbsw>

An introduction to the concept of human rights, and the United Nations framework to promote and protect human rights.

## Classroom Activities & Lesson Plans



### Unfair Race

[http://www-tc.pbs.org/wgbh/rxforsurvival/campaign/givetime/pdf/Rx\\_Unfair\\_Race.pdf](http://www-tc.pbs.org/wgbh/rxforsurvival/campaign/givetime/pdf/Rx_Unfair_Race.pdf)

A fun exercise for your students. Purpose: to examine how the social and economic conditions in a country can affect the health of its people.

### What are human rights? Lessons for kids!

<http://kidworldcitizen.org/2015/02/02/human-rights-lessons-kids/>

“Human Rights” are inherent rights that are believed to belong to every person, without discrimination of any kind. Challenging for adults to explain and kids to understand, I have gathered the best resources, activities, books, and lessons on human rights to help parents and teacher introduce them to their kids.

### Human Rights Education

<http://www.amnestyusa.org/resources/educators/lesson-plans>

These lessons are carefully crafted by education professionals and represent the teaching perspectives of the authors and the Human Rights Education division of Amnesty International USA.



### Maldives Democracy Movement: The Island President Classroom Module

<http://ca.pbslearningmedia.org/resource/maldives-democracy-movement-the-island-president-classroom-module/>

Explore the basic premise of human rights, the history of human rights abuse and its consequences, human rights in the contemporary media, and the application of human rights issues to modern American life. This educational module chronicles the democratic movement in the Maldives and the human rights violations for which its longstanding autocratic regime was responsible.

### Human Dignity: Waste Land Film Module

<http://ca.pbslearningmedia.org/resource/ea2e832f-87c8-4beb-9afa-89ac2139f38d/human-dignity-waste-land-film-module/>

Students will watch an excerpt from the film and consider the consequences for individuals and communities whose fundamental human rights are limited or denied, and develop a plan for improving the lives of women in their own community.





# Climate Change and Human Rights

"Climate change, human-induced climate change, is obviously an assault on the ecosystem that we all share, but it also has the added feature of undercutting rights, important rights like the right to health, the right to food, to water and sanitation, to adequate housing, and, in a number of small island States and coastal communities, the very right to self-determination and existence." Flavia Pansieri, United Nations Deputy High Commissioner for Human Rights

## Which human rights are most affected by climate change?

<http://www.ohchr.org/Documents/Issues/ClimateChange/COP21.pdf>

- The right to life
- The right to self-determination
- The right to development
- The right to food
- The right to water and sanitation
- The right to health
- The right to housing
- The right to education
- The right to meaningful and informed participation
- The rights of those most affected by climate change
- The rights of future generations

**Resolution 7/23 (March 2008):** The Council expressed concern that climate change "poses an immediate and far-reaching threat to people and communities around the world" and requested OHCHR to prepare a study on the relationship between climate change and human rights (A/HRC/10/61).

**Resolution 10/4 (March 2009):** The Council noted that "climate change-related impacts have a range of implications, both direct and indirect, for the effective enjoyment of human rights ..." and that such effects "will be felt most acutely by those segments of the population who are already in a vulnerable situation ..."

**Resolution 18/22 (September 2011):** The Council affirmed that human rights obligations, standards, and principles have the potential to inform and strengthen international and national policy-making in the area of climate change, promoting policy coherence, legitimacy, and sustainable outcomes. They called for a seminar to address the adverse impacts of climate change on the full enjoyment of human rights and a summary report of the seminar (A/HRC/20/7).

**Resolution 26/27 (July 2014):** The Council emphasized the need for all States to enhance international dialogue and cooperation to address the adverse impacts of climate change on the enjoyment of human rights including the right to development. It called for dialogue, capacity building, mobilization of financial resources, technology transfer, and other forms of cooperation to facilitate climate change adaptation and mitigation, in order to meet the special needs and circumstances of developing countries.

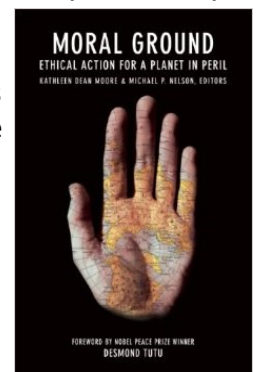
**Resolution 29/15 (July 2015):** The Council emphasized the importance of continuing to address the adverse consequences of climate change for all and called for a panel discussion and analytical study on the impacts of climate change on the enjoyment of the right to health.

## THUMBS Recommended Reading: **Moral Ground: Ethical Action for a Planet in Peril**

<http://moralground.com/>

*Moral Ground* brings together the testimony of over 80 visionaries — theologians and religious leaders, scientists, elected officials, business leaders, naturalists, activists, and writers — to present a diverse and compelling call to honor our individual and collective moral responsibilities to our planet. In the face of environmental degradation and global climate change, scientific knowledge alone does not tell us what we ought to do. The missing premise of the argument and much-needed centerpiece in the debate to date has been the need for ethical values, moral guidance, and principled reasons for doing the right thing for our planet, its animals, its plants, and its people. This book encourages a newly discovered, or rediscovered, commitment to consensus about our ethical obligation to the future and why it's wrong to wreck the world.

**Contributors include:** Terry Tempest Williams, Bill McKibben, bell hooks, Thich Nhat Hanh, Thomas L. Friedman, Dalai Lama, His Holiness Pope Benedict XVI, Barack Obama



# Climate Change and Human Rights

"Climate change threatens our ability to achieve sustainable development, and in some cases, our very survival."--Ban Ki-moon, Secretary General of the United Nations



## Human Rights & Climate Change Animation

<https://www.youtube.com/watch?v=xdiwv8xmQrk>

This animation explains in a simple way what our human rights are and how they are linked to climate change.

## The Change We Need to Make to Achieve a Sustainable Future: Thinking Beyond Issues and Sectors to People

[http://www.huffingtonpost.com/kathy-calvin/the-change-we-need-to-make\\_b\\_12099880.html](http://www.huffingtonpost.com/kathy-calvin/the-change-we-need-to-make_b_12099880.html)

Kathy Calvin: Progress on climate change, gender, development will help everyone. Agendas on development, climate change and gender equality are interconnected and all deserve our attention and efforts, writes United Nations Foundation President and CEO Kathy Calvin. "Our agendas are connected, and lasting progress on any one of them requires progress on all of them," she contends.



Source: Huffington Post



Source: UN OHCHR



## Our Future – Narrated by Morgan Freeman

<https://www.youtube.com/watch?v=8YQlaOldDU8>

Morgan Freeman narrates this hopeful, must-watch short film about the need to solve the climate change problem. Video by the United Nations.



## What has climate change got to do with human rights?

<https://www.amnesty.org/en/latest/campaigns/2015/12/climate-change-human-rights/>

Climate change is one of the greatest human rights challenges of our time, says Savio Carvalho, Senior Advisor on International Development and Human Rights.

## How climate change destroys human rights

<http://www.aljazeera.com/humanrights/2013/12/how-climate-change-destroys-human-rights-20131217174532837148.html>

Increasingly, the two issues - climate change and human rights - are being recognized as inextricably connected. Two major studies published this year reinforce that link, providing sobering evidence that a hotter, increasingly unstable climate is fueling more conflict and human rights violations, and that it is happening sooner rather than later.

## Human Rights and Climate Change

<http://siteresources.worldbank.org/INTLAWJUSTICE/Resources/HumanRightsAndClimateChange.pdf>

This Study explores arguments about the impact of climate change on human rights, examining the international legal frameworks governing human rights and climate change and identifying the relevant synergies and tensions between them.

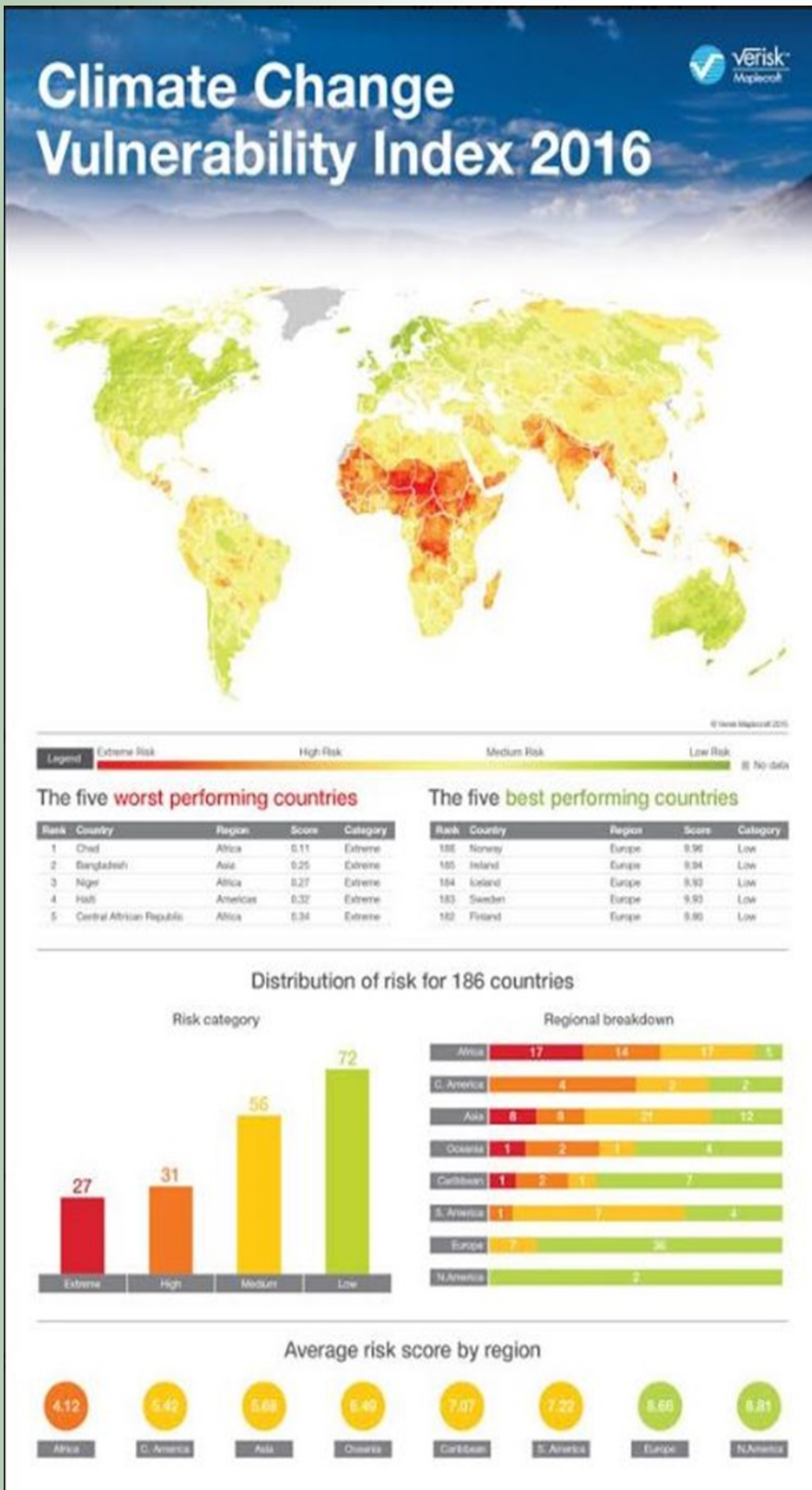


Source: aljazeera.com



# Climate Change, Poverty and Development

"We cannot continue to avoid the injustice faced by the poorest, the most vulnerable, and those on the front line"-- Anote Tong, President, Republic of Kiribati



## Managing the Impacts of Climate Change on Poverty

<https://openknowledge.worldbank.org/bitstream/handle/10986/22787/9781464806735.pdf>  
Ending poverty and addressing climate change are the two defining issues of our time. Both are essential to achieving sustainable global development. But they cannot be considered in isolation.

 **Report shows the disproportionate effects of climate change on the global poor**  
<http://grist.org/climate-energy/report-shows-the-disproportionate-effects-of-climate-change-on-the-global-poor/>  
The report is one of the first to connect climate and poverty at the level of the household. According to the Bank, a warming world will send an additional 100 million people into extreme poverty (living on \$1.90 per day, according to the new standard) by 2030 — and nearly half of those people will live in India.

## Climate Change and Development Policy: Competing Aims?

<https://unu.edu/publications/articles/climate-change-and-development-policy.html>

The climate change crisis and development needs of the world's poor require us to acknowledge the necessity and urgency for both continued growth at the current pace, and rapid greening of this growth strategy. But are the aims of growth and environmental protection

[https://mail.google.com/mail/u/0/?ui=2&ik=d28b36f73d&view=fimg&th=157c4e35ad526b5e&attid=0.1&disp=inline&safe=1&attbid=ANGjdJ9Oe\\_XrfZS2Gb69BB4HUKUV046ABZoLmtVdxZ1J5kX40tc098kqi42iR3rHmDIZXFFuwjmjkH42euwzhzdbb6OMQ2Czs3Tiqv5BRnH0LprpaMwL-ZvS2VTsRnB8&ats=1476824950001&rm=157c4e35ad526b5e&zw&sz=w1280-h909](https://mail.google.com/mail/u/0/?ui=2&ik=d28b36f73d&view=fimg&th=157c4e35ad526b5e&attid=0.1&disp=inline&safe=1&attbid=ANGjdJ9Oe_XrfZS2Gb69BB4HUKUV046ABZoLmtVdxZ1J5kX40tc098kqi42iR3rHmDIZXFFuwjmjkH42euwzhzdbb6OMQ2Czs3Tiqv5BRnH0LprpaMwL-ZvS2VTsRnB8&ats=1476824950001&rm=157c4e35ad526b5e&zw&sz=w1280-h909)



# Climate Change, Poverty and Development

"In extreme cases, food insecurity caused by droughts or floods as a result of climate change has literally paralyzed some developing States, such that human rights gains have been reversed to deplorable levels."  
Elizabeth Mpofu, General Coordinator, La Via Campesina

## Climate change: the poor will suffer most

<https://www.theguardian.com/environment/2014/mar/31/climate-change-poor-suffer-most-un-report>

Pensioners left on their own during a heatwave in industrialised countries. Single mothers in rural areas. Workers who spend most of their days outdoors. Slum dwellers in the megacities of the developing world. These are some of the vulnerable groups who will feel the brunt of climate change as its effects become more pronounced in the coming decades.



## How Climate Change Unfairly Burdens Poorer Countries

<http://time.com/4209510/climate-change-poor-countries/>

Wealthy countries that have contributed the most to climate change tend to be most immune to its effects, according to new research, a finding that has implications for the question of who bears responsibility for addressing the crisis.

## How Climate Policy Hurts the Poor

<http://www.heritage.org/events/2015/09/how-climate-policy-hurts-the-poor>

Experts estimate a significant impact on the cost of electricity to all consumers and businesses. President Obama has kept his promise that "electricity rates would necessarily skyrocket" as a result of his policy. The poorest and most vulnerable members of society will be disproportionately harmed by these impending spikes in energy prices. Europe is already experiencing "energy poverty" where families and the elderly are being forced to choose between eating and heating. Tens of thousands died in the United Kingdom in several recent winters because they are unable to pay their electricity bills and still buy enough food. The world's poorest – the 1.3 billion in developing countries who depend on wood and dried dung as primary cooking and heating fuels, smoke from which kills 4 million and temporarily debilitates hundreds of millions every year – will be condemned to more generations of poverty and its deadly consequences. Instead, developing countries desperately need to replace such primitive and dirty fuels with electricity, the most affordable sources of which are fossil fuels.



Villagers and rescue workers begin the clean-up operation in Tacloban, Philippines, after the typhoon and storm surge in November 2013.  
Photograph: Rolex dela Pena/EPA

## Climate Change Complicates Efforts to End Poverty

<http://www.worldbank.org/en/news/feature/2015/02/06/climate-change-complicates-efforts-end-poverty>

Climate change hits the poorest people the hardest, those living in vulnerable areas with the fewest resources to help them adapt or recover quickly from shocks. As the effects of climate change worsen, escaping poverty becomes more difficult.

## See What Climate Change Means for the World's Poor

<http://news.nationalgeographic.com/2015/-datapoints-climate-change-poverty-agriculture/>

Changes to weather, agriculture, and health disproportionately affect poorer countries and further complicate the Paris climate talks.

"Agriculture is one of the most important economic sectors in many poor countries," says a report from the World Bank. "Unfortunately, it is also one of the most sensitive to climate change given its dependence on weather conditions, both directly and through climate-dependent stressors (pests, epidemics, and sea level rise)."

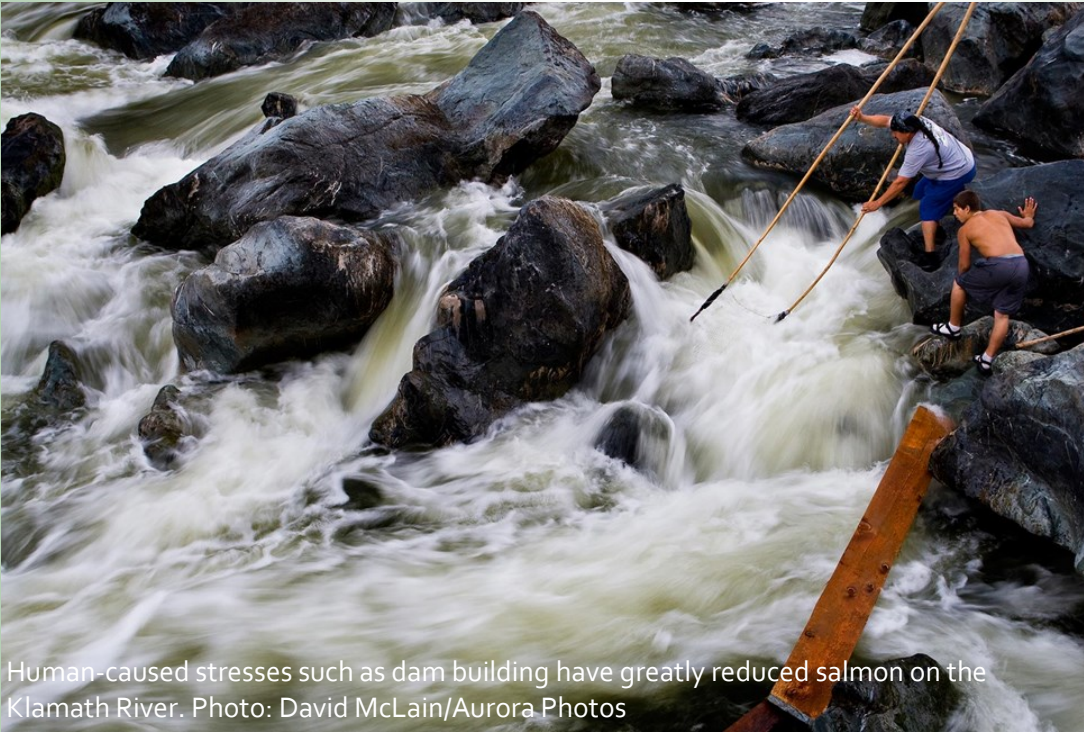


## Managing the Impacts of Climate Change on Poverty

<http://grist.org/climate-energy/report-shows-the-disproportionate-effects-of-climate-change-on-the-global-poor/>

A warming world will send an additional 100 million people into extreme poverty.

# Climate Change and Indigenous Peoples



Human-caused stresses such as dam building have greatly reduced salmon on the Klamath River. Photo: David McLain/Aurora Photos

## Indigenous Peoples and Climate Change

<https://www.culturalsurvival.org/publications/cultural-survival-quarterly/indigenous-peoples-and-climate-change>

Indigenous peoples tend to live close to the land. They are subsistence farmers, herders, fishers, and hunters, with millennia of collective knowledge about the ecology of their surroundings. With that knowledge and experience, even tiny changes in water cycles, wildlife, soil, and weather are readily apparent. An indigenous farmer notices that a

certain insect is slightly less abundant this year or that a particular flower is blooming three days earlier.

Unfortunately, the same closeness to the land that has given indigenous peoples early warning about global warming also means that they suffer the consequences of it to a far greater degree than others. The trends of history and hegemony have left many indigenous peoples living on land that is already marginal, so even relatively small changes in temperature or rainfall have an outsized consequence.

## Indigenous Peoples, Lands, and Resources

<http://nca2014.globalchange.gov/report/sectors/indigenous-peoples>

The peoples, lands, and resources of indigenous communities in the United States, including Alaska and the Pacific Rim, face an array of climate change impacts and vulnerabilities that threaten many Native communities. The consequences of

observed and projected climate change have and will undermine indigenous ways of life that have persisted for thousands of years. Key vulnerabilities include the loss of traditional knowledge in the face of rapidly changing ecological conditions, increased food insecurity due to reduced availability of traditional foods, changing water availability, Arctic sea ice loss, permafrost thaw, and relocation from historic homelands.



Coal plant and fishermen, Navajo Reservation. Photo: Ted Wood Photography



# Case Study: Northwest Kenya

"There are realities where extreme events surpass the ability to adapt...and displacement and migration are the only avenues for survival." Mary Robinson, President, Mary Robinson Foundation – Climate Justice

|                                                                                                          | Negative impact | Positive impact |
|----------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| <b>Very high confidence</b><br>Malaria: contraction and expansion, changes in transmission season        | ←               | →               |
| <b>High confidence</b><br>Increase in malnutrition                                                       | ←               |                 |
| Increase in the number of people suffering from deaths, disease and injuries from extreme weather events | ←               |                 |
| Increase in the frequency of cardio-respiratory diseases from changes in air quality                     | ←               |                 |
| Change in the range of infectious disease vectors                                                        | ←               | →               |
| Reduction of cold-related deaths                                                                         |                 | →               |
| <b>Medium confidence</b><br>Increase in the burden of diarrhoeal diseases                                | ←               |                 |

## Kenya: Climate Change Threatens Rights – Health, Security, Livelihoods at Risk in Turkana Region

<https://www.hrw.org/news/2015/10/15/kenya-climate-change-threatens-rights>

Climate change and regional development projects are threatening the health and livelihood of indigenous peoples in the Turkana region of northwest Kenya, Human Rights Watch said in a report released today. The report and accompanying video were presented to environmental and human rights groups in Nairobi in advance of climate change negotiations in Germany, October 2015.

Source: IPCC, "Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change"



## Kenya: Climate Change Threatens Rights (10 mins)

<https://www.youtube.com/watch?v=oXJjGQFOEJQ>

[v=oXJjGQFOEJQ](https://www.youtube.com/watch?v=oXJjGQFOEJQ)

Climate change and regional development projects are threatening the health and livelihood of indigenous peoples in the Turkana region of northwest Kenya.



CREDIT: Christopher Furlong/Getty Images

## Stunning photos of climate change

<http://www.cbsnews.com/pictures/stunning-photos-of-climate-change/5/>

A young boy from the remote Turkana tribe in Northern Kenya stands on a dried up river bed near Lodwar.



CREDIT: Christopher Furlong/Getty Images

## Stunning photos of climate change: Rivers dried up

<http://www.cbsnews.com/pictures/stunning-photos-of-climate-change/6/>

Over 23 million people across East Africa are facing a critical shortage of water and food, exacerbated by climate change. As a result, communities are being forced to settle near the remaining water sources, overburdening the scarce reserves.



# Case Study: Oceania

"...in dealing with sustainable development issues, unless you deal with the issues of climate change, life, particularly of the most vulnerable, will continue to be threatened and compromised, and life is already compromised and threatened on most island countries..." Enele Sosene Sopoaga, Prime Minister, Tuvalu



## Water is Rising: Music and Dance Amid Climate Change

<https://www.youtube.com/watch?v=8Og1psfnNMU>

Performance and purpose collide in this performance that illuminates the plight of the Pacific Islands. Scientists report the vulnerable coral atolls of Kiribati Tokelau and Tuvalu are already experiencing rising sea levels as result of global warming and climate change. Thirty-six dancers and musicians express their deep connection to nature and their ancestral past through multi-part harmonies, poetry, and gracious movement cascading over dynamic rhythms inspiring us all to be better stewards of our shared planet. Water is Rising harnesses the power of performance art in an impassioned plea for global awareness and social change. Series: "World Festival of Sacred Music"



Source: EO Edu



Source: National Geographic

## Rising Seas Threaten These Pacific Islands but Not Their Culture

<http://ngm.nationalgeographic.com/2015/11/climate-change/kiribati-against-the-tide-text>

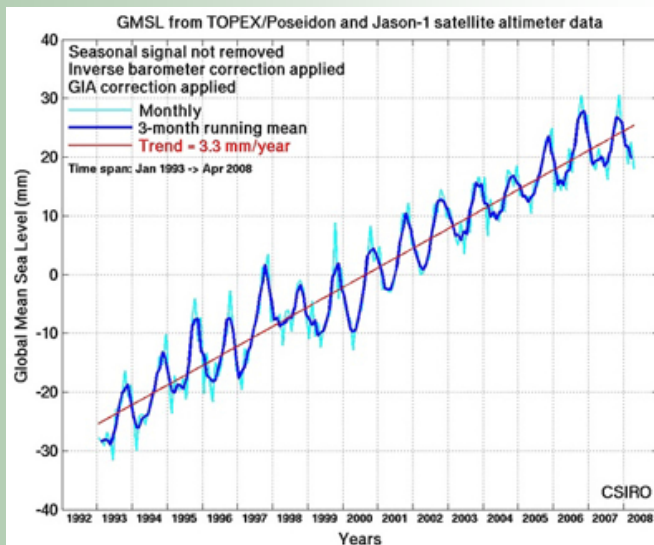
Kiribati islanders draw on centuries of voyaging tradition and the power of cultural pride to confront the challenges coming their way.

## What Climate Change Will Mean for the People of Oceania

<http://www.smithsonianmag.com/smithsonian-institution/what-climate-change-means-for-people-of-oceania-180954775/?no-ist>

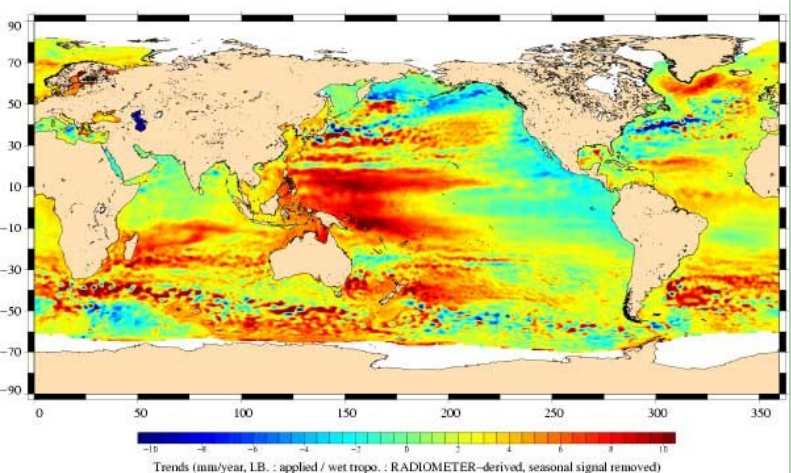
There is one "continent" that will participate hardly at all in Earth Hour, yet it is arguably the one continent most directly affected by

climate change, and which will, in turn, affect the climate on the rest of the planet. It has the highest mountains, the deepest valleys, and the vastest plains. It is inhabited by an unfathomable numbers of species, plant and animal. It has a total area of 155.557 million square kilometers, including an estimated 157,000 kilometers of coastline. It is the largest continent—larger than all the landmass in Earth put together. Oceania—the "Liquid Continent."



Source: EO Edu

Multi-Mission Sea Level Trends (period : Oct-1992 to Jan-2008)



Source: EO Edu



# Case Study: Bangladesh

"There's one issue that will define the contours of this century more dramatically than any other, and that is the urgent threat of a changing climate" Barack Obama, President of the United States of America



## Climate Crisis in Bangladesh

<http://thediplomat.com/2015/10/climate-crisis-in-bangladesh/?img=1#postImage>

Of all the countries in the world, Bangladesh is one of the most vulnerable to the effects of climate change. The regular and severe natural hazards that already batter the country – tropical cyclones, river erosion, flood, landslides and drought – are all set to increase in intensity and frequency as a result of climate change. Rising sea levels will increasingly inundate Bangladesh's coast, and dramatic coastal and river erosion will destroy land and homes. These and the many other adverse effects of climate change will have profound repercussions for the economy and development of the country.



Source: The Diplomat

## Borrowed Time on Disappearing Land: Facing Rising Seas, Bangladesh Confronts the Consequences of Climate Change

[http://www.nytimes.com/2014/03/29/world/asia/facing-rising-seas-bangladesh-confronts-the-consequences-of-climate-change.html?\\_r=0](http://www.nytimes.com/2014/03/29/world/asia/facing-rising-seas-bangladesh-confronts-the-consequences-of-climate-change.html?_r=0)



Source: nytimes

[http://www.nytimes.com/2014/03/29/world/asia/facing-rising-seas-bangladesh-confronts-the-consequences-of-climate-change.html?\\_r=0](http://www.nytimes.com/2014/03/29/world/asia/facing-rising-seas-bangladesh-confronts-the-consequences-of-climate-change.html?_r=0)

DAKOPE, Bangladesh — When a powerful storm destroyed her riverside home in 2009, Jahanara Khatun lost more than the modest roof over her head. In the aftermath, her husband died and she became so destitute that she sold her son and daughter into bonded servitude. And she may lose yet more.

## Climate Change & its Impacts on Bangladesh

<https://www.ncdo.nl/artikel/climate-change-its-impacts-bangladesh>

Bangladesh is one of the largest deltas in the world which is highly vulnerable to Natural Disasters because of its Geographical location,

Flat and low-lying landscape, Population density, Poverty, Illiteracy, Lack of Institutional setup etc. In other words, the Physical, Social as well as Economic conditions of Bangladesh are very typical to any of the most vulnerable countries to Natural Disasters in the world.



## Adaptation—If you can't stand the heat

<http://www.economist.com/news/special-report/21678962-how-farmers-poor-countries-are-responding-climate-change-if-you-cant-stand-heat>

IN THE BRACKISH coastal districts of southern Bangladesh, weather can be measured in centimetres. Women in Bujbunia, 140km (about 90 miles) south of Dhaka, hold their hands at knee height to show how deeply the village flooded during the most recent big cyclonic storm. Aila swept northward through the Bay of Bengal and hit Bangladesh in May 2009. The country had seen much bigger weather events; in 1991 a huge cyclone killed about 140,000 people. Still, Aila's storm surge brought enough seawater to inundate villages and wipe out rice crops. The inhabitants of Bujbunia still wince when they recall how hungry they were afterwards.



Source: Economist

Demotix



## Bangladesh Documentary Climate Change

<https://www.youtube.com/watch?v=RMcEF-6Aof0>

# Climate Justice

"Climate justice requires that States look beyond their responsibility to their own people, to accept their responsibility to those living beyond their shores, who are particularly vulnerable to climate change. And also, to the generations to come." Mary Robinson, President, Mary Robinson Foundation



**Intro to Climate Justice (Thumbs, 3 minute video)**

<https://www.youtube.com/watch?v=5PQKYt6H4Fw&feature=youtu.be>

A brief introduction to Climate Justice and Climate Injustice.

## Principles of Climate Justice

<http://www.mrfcj.org/principles-of-climate-justice/>

Climate justice links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly. Climate justice is informed by science, responds to science and acknowledges the need for equitable stewardship of the world's resources. Guided by core principles the Mary Robinson Foundation – Climate Justice dedicates itself to action in order to realize its vision of a world engaged in the advancing of climate justice.

## Climate Wrongs and Human Rights: Putting people at the heart of climate-change policy

<https://www.oxfam.org/sites/www.oxfam.org/files/bp117-climate-wrongs-human-rights-summary-o809.pdf>

In failing to tackle climate change with urgency, rich countries are effectively violating the human rights of millions of the world's poorest people. Excessive greenhouse-gas emissions are – with scientific certainty – leading to floods, droughts, hurricanes, sea-level rise, and seasonal unpredictability. These impacts are undermining millions of people's rights to life, security, food, water, health, shelter and culture. Such human-rights violations could never truly be remedied in courts of law. Human-rights principles must be put at the heart of international climate change policy making now, in order to stop this irreversible damage to humanity's future.

## Climate Justice: Equity and Justice Informing a New Climate Agreement

[http://www.wri.org/sites/default/files/climate\\_justice\\_equity\\_and\\_justice\\_informing\\_a\\_new\\_climate\\_agreement.pdf](http://www.wri.org/sites/default/files/climate_justice_equity_and_justice_informing_a_new_climate_agreement.pdf)

This paper explores the role of equity in the climate negotiations. It establishes why climate change is an issue of injustice by examining the environmental challenges posed by climate change and links those challenges to socio-ecological and economic systems that undermine the rights of people, especially the poor, marginalized, and vulnerable.

## Lesson Plans

### Climate Justice in BC: Lessons for Transformation

<http://teachclimatejustice.ca/>

The Canadian Centre for Policy Alternatives and the BC Teachers' Federation have teamed up to create free classroom-ready materials that help students engage with the two great inconvenient truths of our time: climate change and rising inequality. Climate Justice looks to how we can re-imagine the systems around us to make a better life for everyone. Consisting of eight modules designed for students in grades 8 to 12 (adaptable for intermediate), the package explores climate justice within the context of BC's communities, history, economy and ecology.



#### Module 1: Introduction to Climate Justice

<http://teachclimatejustice.ca/the-lessons/module-1-introduction-to-climate-justice/>

This module explores the concept of climate justice, linking global climate change to local actions, and looking at who benefits and who pays the costs from burning fossil fuels. This section also asks students to reflect on their feelings about climate change, which may be dismissive, despairing, angry or hopeful. Climate change is a heavy topic – being able to discuss emotional responses openly and honestly is important.

**OBJECTIVES:** Students will review what climate change is, and then develop an understanding of the concept of climate justice. Students will consider who benefits from using fossil fuels and who pays the costs of climate change. Students will consider what climate justice means in the BC context.





# Human Rights: Classroom Activities and Lesson Plans



## Everybody—We Are All Born Free

[https://www.youtube.com/watch?v=xg\\_lvXFEyJo](https://www.youtube.com/watch?v=xg_lvXFEyJo)



## Activity—We are All Born Free

[https://www.amnesty.org.uk/sites/default/files/activity\\_6\\_1.pdf](https://www.amnesty.org.uk/sites/default/files/activity_6_1.pdf)

This activity is aimed to introduce children to the Universal Declaration of Human Rights (UDHR). Through creative writing and story-telling, children familiarize themselves with some fundamental human rights and their meanings.



## Human Rights Activities Education Activities:

These activities are part of an educational resource designed to help to promote human rights, nondiscrimination, and peaceful conflict resolution. The activities in this section support the integration of human rights values into the attitudes and behaviors of students.

For Grades K-2: [https://humanrights.ca/sites/default/files/media/act\\_k-2\\_en\\_cmhr.pdf](https://humanrights.ca/sites/default/files/media/act_k-2_en_cmhr.pdf)

For Grades 3-4: [https://humanrights.ca/sites/default/files/media/act\\_3-4\\_en\\_cmhr.pdf](https://humanrights.ca/sites/default/files/media/act_3-4_en_cmhr.pdf)

For Grades 5-6: [https://humanrights.ca/sites/default/files/media/act\\_5-6\\_en\\_cmhr.pdf](https://humanrights.ca/sites/default/files/media/act_5-6_en_cmhr.pdf)

For Grades 7-9: [https://humanrights.ca/sites/default/files/media/act\\_7-9\\_en\\_cmhr.pdf](https://humanrights.ca/sites/default/files/media/act_7-9_en_cmhr.pdf)

For Grades 10-12: [https://humanrights.ca/sites/default/files/media/act\\_10-12\\_en\\_cmhr.pdf](https://humanrights.ca/sites/default/files/media/act_10-12_en_cmhr.pdf)



## Human Beings / Human Rights

<http://hrlibrary.umn.edu/edumat/hreduseries/hereandnow/Part-3/Activity1.htm>

Through brainstorming and discussion, this activity leads participants to define what it means to be human and to relate human rights to human needs.



## Activity—Right Up Your Street

[https://www.amnesty.org.uk/sites/default/files/activity\\_7.pdf](https://www.amnesty.org.uk/sites/default/files/activity_7.pdf)

To investigate and understand how rights apply to everyday life, by examining a street scene showing human rights in practice. Through group and class discussion children familiarise themselves with the rights set out in the Universal Declaration of Human Rights (UDHR) and their meaning, and identify rights being enjoyed, denied and demanded.



## Lesson Plans:

### The Green Belt Movement: Evaluating Citizen Action and Environmental Change Strategies

<http://www.pbs.org/independentlens/takingroot/classroom.html>

In this lesson, students examine the community organizing/civic action steps that the Green Belt Movement took to address Kenya's deforestation and investigate the strategies that other "change makers" and organizations use to address specific issues—leading them to research two activist organizations of their choice. (includes 2 film modules)

### Teacher's Toolbox: Resources for Teachers

From the Atmospheric Radiation Measurement Program

<http://www.arm.gov/education/teacher-tools>

The Atmospheric Radiation Measurement Program's educational outreach is involved in climate change outreach in the communities and regions hosting ARM's data-gathering field sites. The goal of the education and outreach program is to develop basic science awareness and increase critical thinking skills focusing on environmental science and climate change for K-12 students. In addition, the program supports relationship building between teachers, students, scientists, and the community.

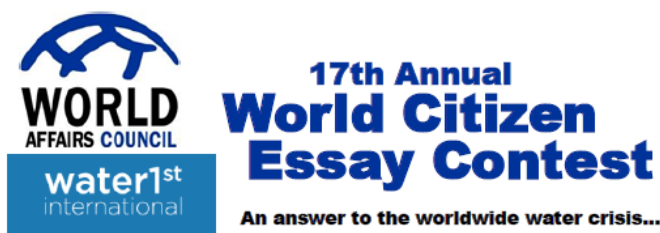


### Green Education Foundation – Sustainability Lesson Plans:

<http://www.greeneducationfoundation.org/institute/lesson-clearinghouse.html>

A variety of lesson plans on sustainability for varying levels of educations from K-12, as well as different subject courses such as Math, Social Studies and Language Arts.

# Assignment: Global Classroom's 2016 World Citizen Essay Contest (Grades 3-12)



## Essay Question

*Worldwide water crises are among the most critical concerns of this century. You have successfully applied for a large grant from the Gates Foundation to address a pressing global water issue. What is the main issue that you will address with the grant and why?*

## Awards

Winners will receive cash prizes and recognition at an awards ceremony in May

## Contest Deadline

Essays are due  
Monday, March 28 2016

## Essay Submission

Essays and completed cover forms can be submitted via email to:

[essaycontest@world-affairs.org](mailto:essaycontest@world-affairs.org)

When submitting via email, please use "Essay Contest 2016 'First and Last Name'" as the subject line. Alternatively, entries can be submitted via postal mail to World Affairs Council Attn: Essay Contest 2016, 2200 Alaskan Way, Suite 450, Seattle, WA 98121.

## Get Started

Visit the World Citizen Essay Contest webpage at: [world-affairs.org/essaycontest](http://world-affairs.org/essaycontest)

Contest Rules  
Judging Rubric  
Resource Guide  
Getting Started Guide  
Essay Submission Form

World Affairs Council 2200 Alaskan Way, Suite 450, Seattle WA 98121 206.441.5910 [www.world-affairs.org](http://www.world-affairs.org)

## Global Classroom's Annual World Citizen Essay Contest

The goal of the World Citizen Essay Contest is to promote discussion among students, teachers, families, and community members about the ways that individuals can effect positive change in the global community.

In the 2015-2016 school year, the World Affairs Council partnered with Water1st International; our prompt asked students to think critically and be engaged as global citizens by addressing one of the most critical issues of our time: The worldwide water crisis.

## The Prompt:

**Worldwide water crises are among the most critical concerns of this century. You have successfully applied for a large grant from the Gates Foundation to address a pressing global water issue. What is the main issue that you will address with the grant and why?**

**Q: Who can participate?**

A: Any 3rd-12th grade student

**Q: How long the essay should be?**

A: Essays are about 1,000 words

**Q: Is there any prize for winner?**

A: There is cash prizes and recognition at a public awards ceremony.

For information about our annual World Citizen Essay Contest, [sign up for our newsletter](#)

Or email

[gcstaff@world-affairs.org](mailto:gcstaff@world-affairs.org) directly!



Above: The winners of the 2016 World Citizen Essay Contest, pictured with Jeff Raikes (former CEO of the Bill & Melinda Gates Foundation, Founder of the Raikes Foundation), Marla Smith-Nilson (President and CEO of Water1st International), and Jacqueline Miller (President and CEO of the World Affairs Council).



# The Worldwide Water Crisis

## Water Crisis: Fast Facts

**663 Million**

People still do not have access to improved drinking water—meaning a water source protected from contamination

**530 Million**

Children live in areas with extremely high risks of flooding—the vast majority of them in Asia

**800 Children**

Under five years of age die every day from diarrhea due to lack of safe water, sanitation, and basic hygiene

**160 Million**

Children live in areas at extreme risk of <http://water.org/water-crisis/water-sanitation-facts/> drought

<https://blogs.unicef.org/blog/5-facts-about-water/>



**200 million hours** are consumed in just **one day** by **women** in collecting water.

<http://www.rideforadrop.com/the-water-crisis/>

**'Demand up. Supply getting scarce. Need to do more with what we have.'**

<http://www.acquainnovations.com/corporate/>

**1 in 10 people lack access to safe water.**

**1 in 3 people lack access to a toilet.**

## Water for a Sustainable World

<http://unesdoc.unesco.org/images/0023/002318/231823E.pdf>

A 2012 estimate suggests that cutting just 15 minutes off the walking time to a water source could reduce under-five child mortality by 11% and the prevalence of nutrition-depleting diarrhea by 41%.

In Ghana, a 15-minute reduction in water collection time increased girls' school attendance from 8% to 12%.

A Bangladesh school sanitation project that provided separate facilities for boys and girls boosted girls' school attendance by an annual average of 11%.

### DID YOU KNOW?

**48**

**Countries**

"Within 15 years, 48 Countries will be unable to meet their basic water requirements"

- CNBC "Liquid Assets: The Big Business Of Water"

**50%**

**of the world's population**

Currently, 11 countries totaling almost 1/2 the world's population (including the U.S., India and China) have a negative groundwater balance; meaning they use more water than is naturally replenished.

**66%**

**of the world's population**

It is estimated that by 2025, two-thirds of the world's population will face water scarcity

**40%**

**Increase in water demand**

In February 2012, the U.S. Intelligence Community Assessment of Global Water Security predicted that by 2030 annual global water requirements will exceed current sustainable water supplies by 40%.

**9**

**Countries in Europe**

Nine countries in Europe are in the beginning stages of a water shortfall



**water1<sup>st</sup>**  
international

# The Worldwide Water Crisis

## Getting Started Resource Guide



### THE SCOPE OF THE ISSUE

#### Water for Life

<http://www.un.org/waterforlifedecade/background.shtml>

- According to the UN World Water Development Report, by 2050, at least one in four people is likely to live in a country affected by chronic or recurring shortages of freshwater.
- According to the World Health Organization, each and every day some 3,900 children die because of dirty water or poor hygiene; diseases transmitted through water or human excrement are the second-leading cause of death among children worldwide.
- Water scarcity, poor water quality, and inadequate sanitation negatively impact food security, livelihood choices, and educational opportunities for poor families across the world.
- Water-related natural disasters such as floods, tropical storms and tsunamis exert a heavy toll in human life and suffering. And all too regularly, drought afflicts some of the world's poorest countries, exacerbating hunger and malnutrition.

**1 in 10 people lack access to safe water.**

**1 in 3 people lack access to a toilet.**

<http://water.org/water-crisis/water-sanitation-facts/>

#### Statistics of the water crisis

[https://thewaterproject.org/water\\_stats](https://thewaterproject.org/water_stats)

- 783 million people do not have access to clean and safe water. 37% of those people live in Sub-Saharan Africa
- 443 million school days are lost each year due to water-related diseases.
- In developing countries, as much as 80% of illnesses are linked to poor water and sanitation conditions.
- Girls under the age of 15 are twice as likely as boys to be the family member responsible for fetching water.
- By investing in clean water alone, young children around the world can gain more than 413 million days of health

**'Demand up. Supply getting scarce. Need to do more with what we have.'**

<http://www.aquainnovations.com/corporate/>

#### DID YOU KNOW?

**48**

**Countries**

"Within 15 years, 48 Countries will be unable to meet their basic water requirements"

- CNBC "Liquid Assets: The Big Business Of Water"

**50%**

**of the world's population**

Currently, 11 countries totaling almost 1/2 the world's population (including the U.S., India and China) have a negative groundwater balance; meaning they use more water than is naturally replenished.

**66%**

**of the world's population**

It is estimated that by 2025, two-thirds of the world's population will face water scarcity

**40%**

**Increase in water demand**

In February 2012, the U.S. Intelligence Community Assessment of Global Water Security predicted that by 2030 annual global water requirements will exceed current sustainable water supplies by 40%.

**9**

**Countries in Europe**

Nine countries in Europe are in the beginning stages of a water shortfall

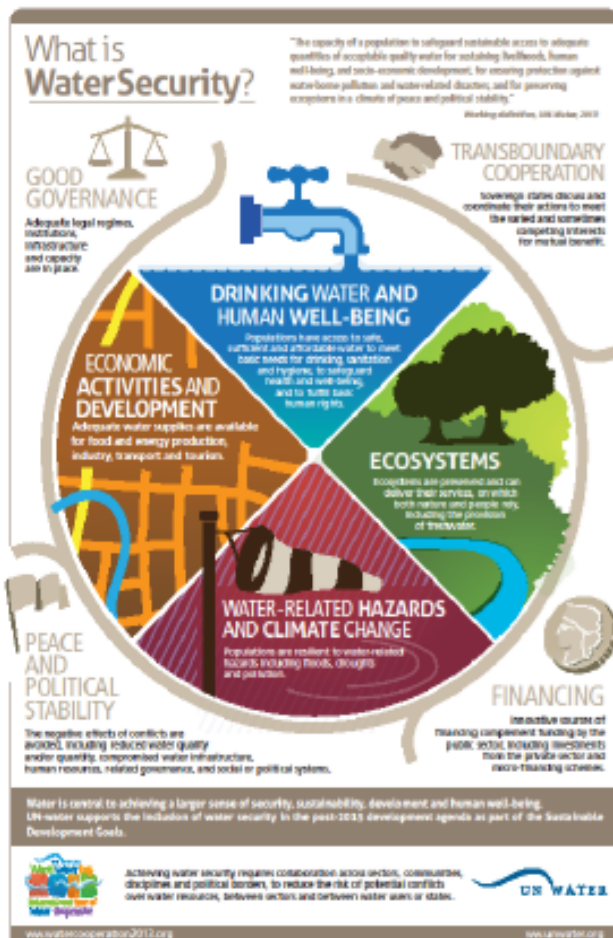


# The Worldwide Water Crisis

## Getting Started Resource Guide



### THE SCOPE OF THE ISSUE



### 'UN Report Warns of Serious Water Shortages Within 15 Years'

<http://time.com/3752643/un-water-shortage-2030/>

A 2015 UN Report warns that if we continue on our current trajectory, we'll only have 60% of the water we need in 2030.

### Freshwater Crisis

<http://environment.nationalgeographic.com/environment/freshwater/freshwater-crisis/>

While the amount of freshwater on the planet has remained fairly constant over time—continually recycled through the atmosphere and back into our cups—the population has exploded. This means that every year competition for a clean, copious supply of water for drinking, cooking, bathing, and sustaining life intensifies.

### Water Security

<http://www.unwater.org/topics/water-security/en/>

**WATER SECURITY** is defined as the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability.

## UN Sustainable Development Goals: Goal Number 6

<https://sustainabledevelopment.un.org/?menu=1300>



Ensure availability and sustainable management of water and sanitation for all



The UN has some great **TEACHER RESOURCES** that can be found and accessed through: <http://www.unwater.org/topics/teaching-water/en/>

Includes: videos, curriculum, power points, and quizzes

# The Worldwide Water Crisis



## Getting Started Resource Guide

### THE SCOPE OF THE ISSUE

#### Water and Climate Change

<http://water.worldbank.org/topics/water-resources-management/water-and-climate-change>

- Climate change is expected to reintroduce water scarcity to areas that have had reliable water sources for centuries
- "Currently 1.6 billion people live in countries and regions with absolute water scarcity and the number is expected to rise to 2.8 billion people by 2025."
- Water scarcity will not only impact drinking water but also result in "accelerated glacier melt, altered precipitation, runoff, groundwater recharge patterns, extreme droughts and floods, water quality changes, saltwater intrusion in coastal aquifers and changes in water use."

#### Shortage of Water Has Serious Health Consequences

<https://www.globalenvision.org/library/9/1535>

Flooding and droughts are becoming more frequent and severe, leading to more stagnant bodies of water which act as ideal grounds for mosquito breeding. This leads to increase risk of malaria, schistosomiasis, yellow fever, dengue, and other mosquito borne diseases.

Using unsafe water for basic hygiene can transmit food-borne and water-borne diseases, including Cholera, Typhoid fever, Salmonella, and dysentery.



**1 of every 8 people on Earth**  
**lack access** to clean drinking water.

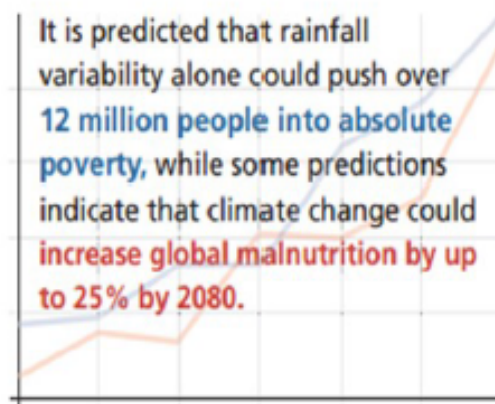


**1.5 million children DIE**  
**each year** from water-borne diseases.

<http://www.rideforadrop.com/the-water-crisis/>

#### Rainfall to affect poverty figures

It is predicted that rainfall variability alone could push over **12 million people into absolute poverty**, while some predictions indicate that climate change could **increase global malnutrition by up to 25% by 2080.**



Source: United Nations Environment Programme (UNEP)

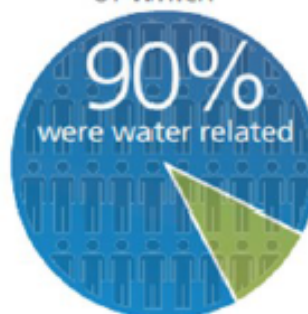
#### Water for a Sustainable World

<http://unesdoc.unesco.org/images/0023/002318/231823E.pdf>

Water-related disasters, the most economically and socially destructive of all natural disasters, are likely to increase with climate change. Planning, preparedness and coordinated responses— including floodplain management, early warning systems and increased public awareness of risk greatly improve the resilience of communities.

#### High percentage of water-related disasters

Between 1991 and 2000 over 665,000 people died in 2,557 natural disasters of which



Source: WVI/DR, 2012



# The Worldwide Water Crisis

## Getting Started Resource Guide



### THE SCOPE OF THE ISSUE

#### Water for a Sustainable World

<http://unesdoc.unesco.org/images/0023/002318/231823E.pdf>

Most problems related to water quality are caused by intensive agriculture, industrial production, mining and untreated urban runoff and wastewater.

Many other human activities, such as deforestation and other land-use changes, soil degradation, withdrawals for agricultural and industrial use, and water contamination have a profound and often negative impact on the availability and quality of water resources.

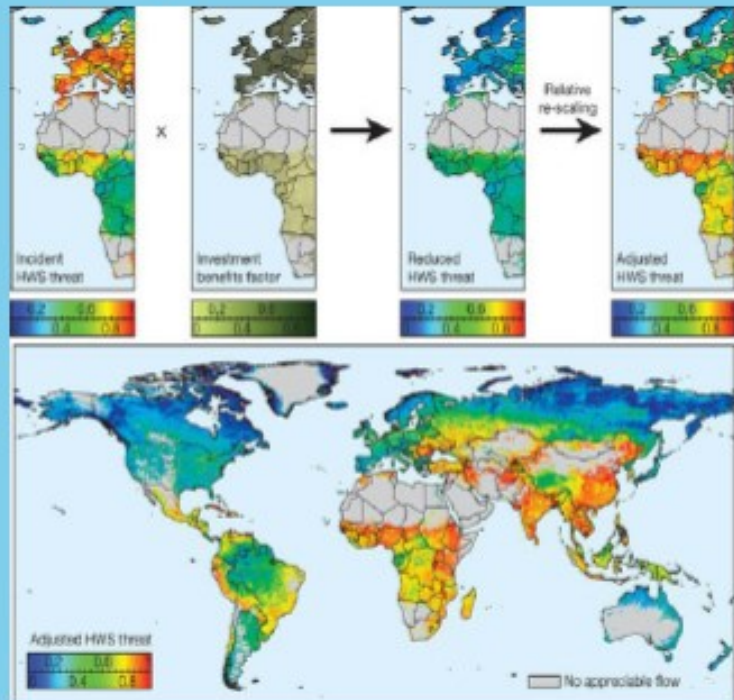
#### Human Impact on the World's Rivers 'Threatens Water Security of 5 Billion'

<http://www.theguardian.com/environment/2010/sep/29/human-impact-world-rivers-water-security>

A study lead by Prof Peter McIntyre looked at the consequences of 23 different human interventions (such as dams and pollution) and their effects on water security. Results showed that over 30 of the 47 largest rivers showed threats to water security.

#### Global Threats to Human Water Security and River Biodiversity

<http://www.nature.com/nature/journal/v467/n7235/full/nature09440.html>



#### Global Water Security

<http://web.mit.edu/12.000/www/m2017/>



# The Worldwide Water Crisis



## VULNERABILITY

### Getting Started Resource Guide

#### Water for a Sustainable World

<http://unesdoc.unesco.org/images/0023/002318/231823E.pdf>

Marginalized and vulnerable people are "the biggest losers in the competition for water."

#### Water for Life: Community Water Security

[http://www.unwater.org/downloads/Water\\_EN.pdf](http://www.unwater.org/downloads/Water_EN.pdf)

Women and youth are disproportionately impacted both by water scarcity and the lack of safe drinking water, increasing the vulnerability associated with persistent poverty. Water policies are often based on generalized perspectives that lack gender perspectives and local knowledge.



<http://web.mit.edu/12.000/www/m2017/>

#### Water for Life: Community Water Security

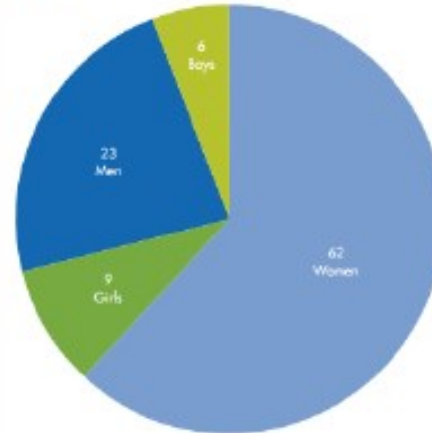
[http://www.unwater.org/downloads/Water\\_EN.pdf](http://www.unwater.org/downloads/Water_EN.pdf)



*In raising community awareness, it is important to understand the root causes of problems. Many illnesses related to water security come from poverty and exploitation.*

#### Women bear the main burden for collecting water

Distribution of the water collection burden among women, children under age 15 and men, in households without piped water on premises, sub-Saharan Africa, based on population-weighted averages from 25 countries, 2006/2009 (Percentage)



**200 million hours** are consumed in just **one day** by **women** in collecting water.

<http://www.rideforadrop.com/the-water-crisis/>

#### Progress Towards Meeting the MDGs for Women and Girls

<http://www.unwomen.org/en/news/in-focus/mdg-momentum>

- Girls carry burden of fetching water reducing ability to go to school
- Women carry burden of sanitation
- Women carry household burdens such as cooking and agriculture—activities which depend on water



# The Worldwide Water Crisis

## Getting Started Resource Guide



### ALLOCATION & ACCESS

#### Water for a Sustainable World

<http://unesdoc.unesco.org/images/0023/002318/231823E.pdf>

A 2012 estimate suggests that cutting just 15 minutes off the walking time to a water source could reduce under-five child mortality by 11% and the prevalence of nutrition-depleting diarrhea by 41%.

In Ghana, a 15-minute reduction in water collection time increased girls' school attendance from 8% to 12%.

A Bangladesh school sanitation project that provided separate facilities for boys and girls boosted girls' school attendance by an annual average of 11%.

#### Water Scarcity & the Importance of Water

<https://thewaterproject.org/water-scarcity>

Clean, safe drinking water is scarce. Today, nearly 1 billion people in the developing world don't have access to it. Yet, we take it for granted, we waste it, and we even pay too much to drink it from little plastic bottles.

#### Water Security & the Global Water Agenda

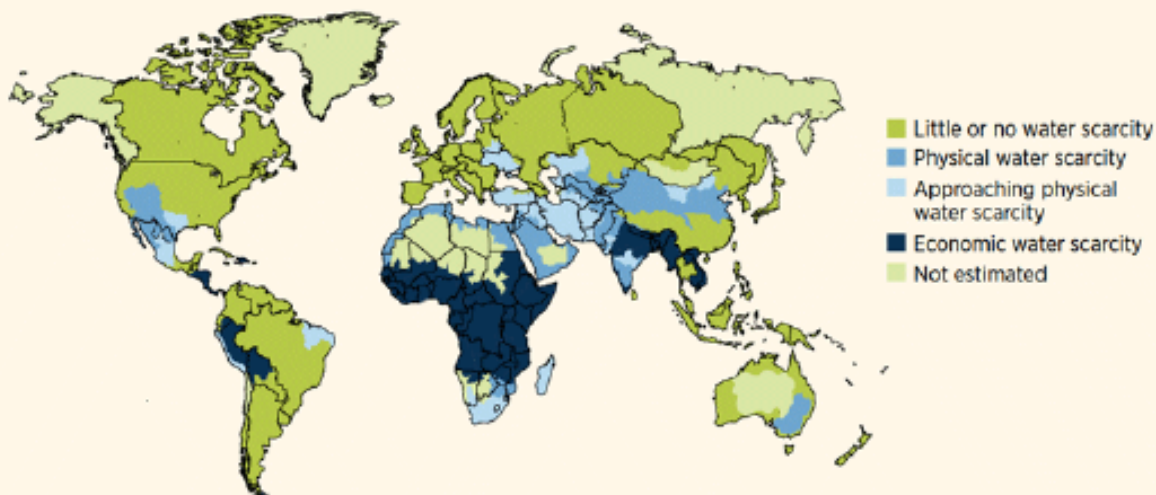
[http://www.unwater.org/downloads/watersecurity\\_analyticalbrief.pdf](http://www.unwater.org/downloads/watersecurity_analyticalbrief.pdf)

- "Water security will differ regionally and will depend on a number of factors, including geographic location and features, conditions of water availability and utilization, demographic changes, existing management and allocation systems, legal frameworks for water management, existing governance structures and institutions, and the resilience of ecosystems" (16).
- Insecurities over water "may aggravate existing social fragility, tensions, violence, and conflict" (8).
- Conflict may occur through the attempt at "profiteering through private uncontrolled sales of water" (8).

#### Managing Water Under Uncertainty and Risk

Global physical and economic water scarcity

[http://www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer\\_Onu?id=71](http://www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=71)



# The Worldwide Water Crisis

## Getting Started Resource Guide



### CURRENT EFFORTS & SOLUTIONS

#### Global Water Security

<https://fas.org/irp/nic/water.pdf>

- By 2040 there may be improved water management methods in place such as pricing, allocations, and "virtual water" trade that will afford best solutions for water problems. Agriculture uses about 70 percent of the fresh water supply so a potential water relief could come from engineering agriculture to demand less water.

Many organizations are working to provide sustainable water security projects in different communities. To name a few:

- Water1st International
- UN Water
- Bill and Melinda Gates Foundation
- End Water Poverty
- Global Water

#### Social and Economic Value of Water

<http://www.qwp.org/en/ToolBox/ABOUT/IWRM-Plans/IWRM-Principles/Social-and-economic-value-of-water/>

- It is vital to recognize first the **basic right of all human beings** to have access to clean water and sanitation at an affordable price.
- Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.
- Charging (or not charging) for water is applying an economic instrument to support disadvantaged groups, affect behavior towards conservation and efficient water usage, provide incentives for demand management, ensure cost recovery and signal consumers willingness to pay for additional investments in water services.

#### Water for a Sustainable World

<http://unesdoc.unesco.org/images/0023/002318/231823E.pdf>

Increased access to safe water, basic sanitation and better hygiene is one of the most effective ways to improve health and reduce poverty. From an economic perspective it is a highly attractive investment since the rate of return is in excess of those found in many so-called productive uses.

#### Role of Women

<http://www.qwp.org/en/The-Challenge/What-is-IWRM/IWRM-Principles/Role-of-women/>

"Women play a key role in the collection and safeguarding of water for domestic purposes and...agricultural use. At the same time, women play a less powerful role than men in the management, problem analysis and decision making related to water."

#### Water For Life

<http://www.un.org/waterforlifedecade/waterforlifevoices.shtml>

Increased access to safe water, basic sanitation and better hygiene is one of the most effective ways to improve health and reduce poverty. From an economic perspective it is a highly attractive investment since the rate of return is in excess of those found in many so-called productive uses.



#### Water for the ages

<http://waterfortheages.org/writings-of-water-books-poetry-etc/>

Interested in further research? At this site, you'll find around 55 books written about global water and sanitation issues.



#### Water.org

<http://water.org/news/resources/>

Resource links, including photos, stories, and videos, created specifically with students in mind!



# Take Action: Climate Change and Human Rights

"Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided."

Principle 10, 1992 Rio Declaration on Environment and Development

## Individual action: what you can do about climate change

<http://www.greenpeace.org/international/en/campaigns/climate-change/Solutions/What-you-can-do/>

Climate change is a global problem, but there's a lot you can do about it in your daily life. Choose your own set of solutions to suit your lifestyle. You'll save energy and money, and make your life and home more healthy, convenient and comfortable. Saving energy gets easier all the time thanks to new apps, devices and transport solutions.

## What You Can Do about Climate Change

<https://www.epa.gov/climatechange/what-you-can-do-about-climate-change>

This site provides more than 25 easy steps you can take at Home, School, the Office, and On the Road to protect the climate, reduce greenhouse gas pollution, and save money. Take action today! Small steps add up, if we all do our part.

## Earth Hour

<https://www.earthhour.org/cop21-and-beyond>

On Saturday, 19 March 2016, as WWF's Earth Hour rolled across the world from Samoa to Santiago, millions came together to shine a light on the climate action our planet needs. In addition to the 1.23 million individual actions taken to raise greater awareness on the fight against climate change, the tenth edition of the movement's signature lights out event saw individuals, communities, organizations and landmarks in an unprecedented 178 countries and territories switch off in solidarity with global efforts to change climate change!

## What can we do to help?

<http://climatekids.nasa.gov/how-to-help/>

Yes! We can all take notice of our environment. We can learn how our planet works. We can learn how to live on it without making a mess of it. We can help to keep it magnificent for ourselves, our children and grandchildren, and other living things besides us.



## Climate Visuals

<http://www.climatevisuals.org/>

Climate Visuals is an evidence-based resource for climate change communication. The website centres on seven key principles for visual climate change communication, and contains a growing, interactive library of images to provide inspiration and guidance for journalists, campaigners, bloggers and anyone else using imagery to communicate about climate change.



## Classroom Activities from the New York Times Design and propose Solutions

[http://learning.blogs.nytimes.com/2014/04/02/teaching-about-climate-change-with-the-new-york-times/?\\_r=0](http://learning.blogs.nytimes.com/2014/04/02/teaching-about-climate-change-with-the-new-york-times/?_r=0)

Climate change is happening right now, and many experts say now is the time for people to prepare for how it might affect communities across the United States and around the globe. Have students propose ways to prepare for the projected effects of climate change, from increased droughts and wildfires to the greater spread of insect-borne diseases. Find out if your state is part of the Centers for Disease Control Climate-Ready States and Cities Initiative and consider some of the strategies different municipalities are adopting. Students also might form teams to take on the Coastal Vulnerability Innovation Challenge and propose tools to help members of your community better understand how climate change, and its associated coastal flooding, might affect you.

