

CITIZEN ACTION

STARTER KIT

for

Climate and Sustainability SOLUTIONS



***Ideal for middle and high school students, home school families,
and citizens of all ages who want to know how to take concrete
actions to be part of the solution!***



NO BOUNDARY LEARNING

Education for a Conscious Society

www.noboundary.org

How to use this packet...

The tools in the packet provide support for a variety of types of actions that citizens of all ages can take to address the challenges of climate change and sustainability. The climate challenge can be daunting, so start small. Share these materials with family members and neighbors, consider collaborating and comparing progress. Every step matters, collectively we can do this...



Source of the tools...

This packet is a small sampling of contents from the DoRight Leadership Corps curricular program. The DoRight program is a comprehensive interdisciplinary project-based curriculum for middle and high school students that focuses on youth empowerment to address sustainability and social issues. The program has a 10 year track record of success in middle schools and has inspired similar models throughout the United States. For more information about DoRight and No Boundary Learning visit: www.noboundary.org or contact Scott Beall at scott@scottbeall.com

Tools in this packet...

1. AUDIT YOUR HOME AND LIFESTYLE:

Use this template to assess the footprint of your home, lifestyle, business or school and find changes that will reduce your impact and save money.

2. CONNECT ACTIONS TO PROBLEMS:

Learn about the problems that are positively impacted by the actions you take.

3. USE THE DEMOCRATIC SYSTEM:

Communicate with elected officials through phone calls and letters to educate them and persuade them to take action on what you have learned and what you care about.

4. WRITE LETTERS TO NEWS MEDIA:

These tips can help you write letters to send to editors of newspapers for publication.

5. COMMUNICATE WITH POWER:

Follow this outline to frame communication that motivates and persuades.

6. UNDERSTAND THE SCIENCE:

Use this reference text to gain a summary understanding of climate science.



ACTION #1: Audit Your Home and Lifestyle

Use this template to gather data about your site (home, school, business, other) in the first column. Then compare how that compares to an "ideal status" in the second column. Note where you can make a change, and list the changes that are manageable for you. Start small, and work toward more ambitious change over time. These changes will lower your carbon emissions and overall ecological footprint (environmental impact--see Action #2).

ENERGY

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Electricity	Source: wind, solar or traditional utility? Price (\$/Kwh): Company name of utility:	<ul style="list-style-type: none"> ■ Renewable energy on site (solar panels, wind, hydro, geothermal, etc.) ■ Purchase percentage of renewable through utility company. Example: Green Mountain Energy https://www.greenmountainenergy.com/ 	
Hot water heater	Temperature setting:	120 degrees	
	Insulation on the heater (is there any?):	Thermal blanket or insulated heater	
	Age of heater and/or Energy Starr rating:	5-10 years, or at least Energy Star rated	
	Type of heater: <ol style="list-style-type: none"> 1. tank 2. tankless (instantaneous) 3. energy source: 	<ul style="list-style-type: none"> ■ Tankless (instantaneous) ■ Thermal solar panels ■ Natural Gas or renewable energy through utility 	
Building heating	Thermostat settings:	<ul style="list-style-type: none"> ■ 68 winter ■ 78 summer ■ Install programmable thermostats 	

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	Energy source for heater (oil, natural gas, electricity)	<ul style="list-style-type: none"> ■ Natural gas or geothermal ■ Utilize natural sunlight (see green building features) 	
	Type and age of heater:	Modern, efficient design, Energy Star rated	
Faucets	Hot water leaks found:	No leaks	
Showers/hoses	Flow level: (high, medium, or low):	Low flow	
Refrigerators	Brand name, age, and rating	<ul style="list-style-type: none"> ■ Energy Starr rated ■ Energy saving features 	
	Condenser coil condition (how clean is it?): Check for leaks and seal on doors.	<ul style="list-style-type: none"> ■ Clean—no dust, grease or lint buildup ■ Doors seal well 	
Other Appliances (computers, electronic devices, clothes washers, dishwashers, air conditioners, etc.)	Brand: Age: Rating: (list more on a separate sheet)	<ul style="list-style-type: none"> ■ Energy Starr rated—high efficiency ■ Line dry linens and clothes ■ Eliminate “vampire” devices 	
Lighting	Bulb types:	<ul style="list-style-type: none"> ■ Light emitting diodes (LED) 	
	Lighting use habits: <ol style="list-style-type: none"> 1. Lights left on at night 2. General awareness of employees: staff policies in place to make employees aware, or no policy 	<ul style="list-style-type: none"> ■ Turn off all lights when not in use ■ Establish employee awareness plan 	
	Use of natural light—shutters and shade positions during the day:	All shades completely open during the day—windows fully utilized to provide light.	

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Vehicles and machinery	Vehicles—number and type used in business: Powerplant (engine) fuel used:	<ul style="list-style-type: none">■ Electric■ Hybrid vehicles■ Biodiesel■ Ethanol■ Minimize vehicle use—carpool, walk, public transportation, bicycles	
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Materials and Products Bought, Sold and/or Consumed

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Food products consumed and/or sold	Source: local or out of state	local	
	Type: organic or conventional	Organic, and “fair trade” products	
	Percentage of food from plant sources vs. animal sources	Minimize consumption of meat and dairy, emphasize plant sources of food.	
	Packaging: amount of individual packaging used as opposed to bulk Recyclability of packaging of products	Offer customers bulk purchasing options	
Paper and plastic products (paper towels, toilet tissue, placemats, menus, literature, etc.)	Material source: recycled fiber (post consumer content) or conventional Types of packaging: bulk, individual, supply chain profile	<ul style="list-style-type: none"> ■ Maximize number of products made from “post consumer content” (previously recycled materials) ■ Reduce use of paper and disposable products ■ All containers reusable--products purchased in bulk 	
Other goods purchased for sale or consumption	On a separate sheet of paper, list 5-10 products the client sells. Include the company brand name and location, size and type of packaging. You might choose several products and do a more thorough supply chain analysis. This section could become a primary focus for your audit.	<ul style="list-style-type: none"> ■ Low embodied energy with recyclable design ■ Locally produced ■ Manufactured from recycled materials ■ Fair trade items ■ Products free of ingredients derived from endangered species 	

Waste Management

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Paper, plastic, metals	<p>Products recycled:</p> <ol style="list-style-type: none"> 1. Paper—cardboard, newspaper, computer paper 2. plastic bottles 3. metals (pure aluminum, tin, etc.) 	<ul style="list-style-type: none"> ■ All materials should be recycled. ■ Bulk packaging and reusable containers should be used to reduce consumption ■ Double side documents, use electronic documents when possible 	
Organic wastes (food)	Method of disposal:	Composting	
Toxic waste products (appliances, batteries, ink cartridges, cell phones, paints/solvents, etc.)	Quantity and type:	Purchase non toxic, reusable or recyclable products	
	Method of disposal:	Recycle or deliver to qualified toxic waste processing facility	
<p><i>If curbside recycling is not available (this is mostly the case for toxic waste products) consult this source:</i> <i>www.earth911.com</i></p>			

Cleaning Chemicals/Soaps

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Janitorial	Floors: Windows/surfaces: Hand soap: Bathrooms:	<ul style="list-style-type: none"> ■ Non chlorine ■ Biodegradable 	
Food preparation	Dishwasher soap—type and quantity:	<ul style="list-style-type: none"> ■ Non chlorine ■ Biodegradable 	
Linens	Laundry detergent brand name and components:	<ul style="list-style-type: none"> ■ Non chlorine ■ Biodegradable 	

Green Building Features

(Note: Many green building features are listed in this checklist under energy, water and landscaping)

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Insulation	Type of insulation R value rating Locations	<ul style="list-style-type: none"> ■ Fiberglass, all walls, ceiling and attic with a high R-value ■ (R-value is a rating for the effectiveness of insulation) 	
Windows and doors	Type of pane: double or single Condition of seals	<ul style="list-style-type: none"> ■ Double pane ■ Install storm doors on outside entries. ■ Fix or replace windows and doors so that seals do not leak 	

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New construction	List any planned reconstruction or building repairs	Refer to the National Association of Home Builders Green Building Guidelines and LEED certifications	
Indoor environmental quality	Air quality Lighting quality “Feel good” ambiance	<ul style="list-style-type: none"> ■ Clean fresh air, no odors ■ Abundance of natural light 	

Water

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Cleaning	Source, quantity and type of use:	Conserve water use	
Bathrooms	Number of bathrooms and toilets: Tank size or flow accommodation:	<ul style="list-style-type: none"> ■ Low water capacity toilet tanks ■ low flow shower heads ■ Waterless urinals 	
Drinking	Source: tap, individual bottles, bulk bottles (delivered), or filtered	<ul style="list-style-type: none"> ■ Filtered from tap (best) 	
Plants/ landscaping	Water source (tap water or reclaimed water) Indoor plants: Outdoor plants:	Reclaimed runoff and/or processed grey water ideal	

Landscaping Chemicals

	Current status at site:	Ideal Status:	Change (check this box if a change should be recommended)
Lawn	Type of fertilizer used: Frequency of use:	<ul style="list-style-type: none"> ■ Organic fertilizers or compost ■ Leave clippings on the lawn ■ Use microbial inoculants 	
	Weed/pest control Herbicide/pesticide used?: Frequency of use:	<ul style="list-style-type: none"> ■ No herbicides ■ Nematodes ■ High mowing ■ Organic corn gluten ■ Pull weeds ■ Any other emerging non toxic alternative method 	
Ornamental plants (indoor and outdoor)	Type of fertilizer used: Frequency of use:	Organic fertilizers or compost	
	Type of pesticide/ herbicide used: Frequency of use:	<ul style="list-style-type: none"> ■ No herbicides ■ Soap sprays 	
















Action #2: Connect Actions To Problems

This is a simplified and abbreviated summary list of climate/sustainability problems that are addressed by a wide variety of actions. Most of these actions are part of the Site Audit Template. This is a valuable resource for outreach and education projects, and provides a launching point for further research and investigation.





Primary problems addressed are marked with 🌳 and problems indirectly impacted are marked with “i”.

	Actions	Problems			
		Climate Change	Ocean Plastic Pollution	Deforestation Species Extinction	Environmental Toxins Human Health
ENERGY	Carpool when traveling by car.	🌳		i	🌳
	Use public transportation as much as possible.	🌳		i	🌳
	Install renewable energy technology in your home (solar panels, geothermal, wind) if possible.	🌳		i	🌳
	When buying a new car, buy an electric or hybrid car. (charge with renewable E if possible)	🌳		i	🌳
	Convert your home electric utility to use renewable sources such as wind or community solar. (Availability varies with geographic location.)	🌳		i	🌳














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Actions	Climate Change	Ocean Plastic Pollution	Deforestation Species Extinction	Environmental Toxins Human Health
Turn thermostats down to 68 degrees in winter, and air conditioning to 78 degrees in summer.			i	
Consider line drying your clothes.			i	
Turn off “vampire” devices when you leave the home (e.g. TV, modems, coffee maker, etc.).			i	
Replace all lighting and appliances with energy efficient versions (LED)			i	
Inspect your home for any leaky water faucets and install low flow shower heads			i	i
Inspect your home for window and door seals that may leak home heat to the outdoors.			i	i
M A T E R I A L				
				















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Actions	Climate Change	Ocean Plastic Pollution	Deforestation Species Extinction	Environmental Toxins Human Health
Buy products made with compostable plastic (cups, utensils, garbage bags, plates, straws, etc.)				
Do not buy plastic products generally (lawn furniture, toys, etc.) whenever possible, buy products made with alternate materials.				
Bring your own reusable bag when going shopping for anything, food, clothes, etc.	i			
Don't subscribe to paper newspapers, read newspapers online				
Avoid using plastic wrap or plastic bags (use reusable containers for food storage, take out lunches, etc.)				
Buy products in bulk and bring your own containers; (avoid individual serving packaging)				
Use certified sustainably grown lumber when buying lumber for home projects				

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Actions	Climate Change	Ocean Plastic Pollution	Deforestation Species Extinction	Environmental Toxins Human Health	
When buying any wood products, seek out products made from alternative materials such as bamboo or other laminates instead of wood. These can include flooring for you house to food utensils.					
When buying any paper product (tissues, computer paper, boxes, napkins, etc.) seek out products made with “post consumer content” (previously recycled paper, not trees).					
Use biodegradable and non toxic cleaning chemicals					
Never use chemical herbicides or non organic fertilizers--compost your organic wastes					
F O O D	Buy all food locally--avoid any imported products as much as possible.		i	i	i
	Become a vegetarian--or eat meat rarely.			i	
	Don't buy any food products that are known to be grown on farms created by deforestation.				

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	Climate Change	Ocean Plastic Pollution	Deforestation Species Extinction	Environmental Toxins Human Health
Eat less or no meat, or at least be sure that the feed for the animals does not come from deforested rainforest.				
Buy local food products, avoid products imported from overseas and South America				
Do not eat any animal products (meat, dairy, fish) where antibiotics were used.				
Buy USDA certified organic food products or products where you know for certain the farmer uses organic practices.	i			
R E C Y C L E	Recycle every plastic product you buy	i		
	Recycle all paper trash			
	Recycle properly all toxic products (batteries, solvents, paints, medicines, etc.)		i	
				

In addition to the above personal actions, citizens can help by supporting (donations or volunteer) organizations that work on the sustainability problems. Listed below are some very good ones. There are many more....

- The Defenders of Wildlife, <https://defenders.org/>
- Natural Resources Defense Council, www.nrdc.org
- World Wildlife Fund, www.worldwildlife.org
- The Wilderness Society, www.wilderness.org

TOOL #3: Use the Democratic System--Write Letters To Politicians

Use the tips listed below to write letters to elected officials.

- **Include your name and address:** Identify yourself as a constituent by including your address when you write to your elected representative/s. Generally, politicians are likely to pay most attention to people who live in their electoral district.
- **Don't worry about the fact that you can't vote.** Politicians know that you talk with your parents and other adults, and that your point of view represents voting citizens.
- **Keep it brief!!!** Letters should be no longer than one page. They can even be one short paragraph, and they should be about one issue only. Be as concise as possible. Politicians receive many letters on many topics every day. Long letters are likely to be put aside to read on a less busy day and that day may never come.
- **Use your own words, not someone else's:** An original letter sent by one single person is more effective than a form letter (or cut and pasted texts) sent by dozens of people. Even if your writing skills are not the best, a letter written in your own words will carry much more weight than regurgitating what some else said.
- **Handwrite, or type and sign, your letter:** A handwritten, or typed and signed, letter is far more effective than photocopied form letters, postcard campaigns or emails. Some politicians regard handwritten letters more highly than typewritten letters (some of these are technologically illiterate, and some find it convenient to claim the sender probably just cut and pasted what someone else said without thinking about the issue themselves). Some, very likely many, regard emails as "second class mail" and some do not even read email.
- **State the topic clearly:** Include a subject line at the beginning of your letter. If it is about a specific piece of legislation (an Act) or a proposed law (a Bill), state the full name of the Act or Bill in the subject line, or at least in the first paragraph.
- **Start with a clear statement of purpose:** For example:
"I am writing to urge your support for / opposition to..."
"I am writing to ask you to support / oppose ..."
- **Ask your representative to take concrete action:** For example, in relation to a proposed law (a Bill), ask them to raise the matter in their party room and seek to have their party oppose the Bill. Point out that the issues are important enough to warrant amendments to the Bill, and/or for the representative to cross the floor and vote against the Bill if their party supports

it.

- **Ask for a response to your letter:** While the response will usually be a form letter, written and authorized by their political party, you will know you have had an impact on their office. A well-written letter can be instrumental in prompting them to take action behind the public scenes to inform and potentially change their political party's position.
- **Personalize your letter:** When possible, include a personal story and/or information on how the issue affects you, your family, your business, or people around you. This can help your representative understand your position and can be very persuasive as he/she forms a position on an issue. The more personal your letter, the more impact it is likely to have.
- **Personalize your relationship:** If your parents have ever voted for the representative, or contributed time or money to their election campaign, or have met them, etc, say so. The closer your representative feels to you, the more effective your letter is likely to be.
- **Be polite:** Be courteous, but don't be afraid to take a firm position. While your representative's job is to represent you, remember that politicians and their staff are people too. Threats, hostile remarks and rude/offensive language are among the fastest ways to alienate people who could otherwise decide to support your position in light of rational and reasoned argument. Your representative could be in elected office for decades, and could be promoted to higher, more influential, office within their party. Avoid creating enemies.
- **Thanks is as important as criticism:** Politicians/political parties need to be able to tell the 'other side' that they have been inundated with calls and letters supporting their position. Write thank you letters to politicians/parties that you know support your position. This will encourage them to stand firm on their position rather than backing down, which has often happened during the passage of proposed laws through Australian parliaments.
- **Keep the irritation factor low:** Avoid accusing/criticizing the wrong politicians/party. Politicians, like anyone else, may become irritated when accused of holding views they do not. If you are not sure of the views of the person or political party you are contacting, either research the matter, ask them, or just inform them of your views and why they should support same.

TOOL #4: Tips for Writing a Letter to the Editor of a Publication

1. Provide your full first and last name, address, phone number and the contact information of your teacher. Most publications will want to call the writer to confirm authenticity: (i.e. that you are using your correct name -- not a phony name -- and that you did in fact write the letter). When they know it is a young person writing they will often call the teacher.
2. Choose an issue you care about. Remember that the public is generally very interested in what young people are thinking—be bold. Make a suggestion for how your issue should be dealt with. Share observations and/or what you have learned--about schools, businesses, politics, or just the behavior of citizens in society.
3. If you are referring to a previously published letter, a news story or column, identify it by its headline and the date it was published (Re: Davenport grinds out a win, Aug. 17). This enables the editor to quickly check the original item to verify any references you have made to it (i.e. quotes, statistics, etc.).
4. Be simple and get to your point quickly. You don't need a long, rambling introduction to your subject. Just focus on one or two key points that you want to make and then get out.
5. Your overall letter can be *very* short if you like, even a couple sentences. Whatever the length, write short, punchy sentences, grouped in two or three paragraphs.
6. Be witty. Let your sense of humor and irony shine through. You can even be a little wicked, as long as you don't cross the line of good taste.
7. Avoid worn out cliches and weak puns (groan).
8. If you are responding to a columnist's views (or any other opinion piece), don't launch a personal attack on the columnist -- attack his/her views. Offer a countervailing opinion. Try to advance the debate so that other readers might join in the discussion in subsequent letters.
9. If you have read a news story or feature article that relates to something you've experienced, respond by putting your own personal twist on the subject.
10. Don't send copies of your letter to a whole host of publications. Make it an original to the publication you really want to publish it. If you don't get a confirmation call within a week to 10 days, then try submitting it elsewhere.

TOOL #5: Construct Persuasive And Motivating Communication

This format can be used for a letter, speech, poster, slide show, film, or any other medium of communication that endeavors to persuade and move the audience to action.

- 1. ATTENTION STEP:** Get the attention of your audience. This can be done with a detailed story, shocking example, dramatic statistic, quote, etc. This is part of your introduction (in addition to stating your thesis, giving a preview of your main points, mentioning your credibility, and telling your audience why the topic is of concern to them).
- 2. NEED STEP:** Show the problem exists, that it is a significant problem, and that it won't go away by itself. Document your statements with statistics, examples, etc.
- 3. SATISFACTION STEP:** Offer solutions for the problem you have shown exists in the Need Step. These are solutions that the government or society as a whole can implement. You must satisfy the need.
- 4. VISUALIZATION STEP:** Tell us what will happen if we don't do something about the problem. Be graphic.
- 5. ACTION STEP:** Offer alternatives to your audience that they can do *personally* to help solve the problem you have shown exists. Again, be very specific and very realistic.
- 6. CONCLUSION:** Motivate us to get out and do something! Wrap up loose ends by giving a review of points and restating your thesis, and then conclude the speech.

REFERENCE: The Science of Climate Change--Summary

Earth's atmosphere is composed of over a dozen elements and compounds and functions to maintain an environment that makes life possible. Atmosphere regulates temperature, oxygen, water distribution, and much more. In addition to being a central component in respiration and photosynthesis, a required compound for all living organisms, CO₂, is an atmospheric gas that plays a central role in temperature regulation of our planet's atmosphere. CO₂ has the physical property of blocking heat transmission, or "trapping" heat. As a result the CO₂ level in our atmosphere (along with a few other key "greenhouse" gasses) traps just the right amount of infrared radiation (heat) from the sun to keep our planet in a livable range. (Some of this heat is reflected back to space and other is absorbed by oceans and land.) This operates much like a greenhouse, hence referred to as the "greenhouse effect." This process has been ongoing for billions of years. So in addition to being essential for photosynthesis and the process of living organisms, CO₂ creates the greenhouse effect which is essential to maintain a livable habitat (environment/atmosphere) for all of life on earth.

Today, in the year 2019, CO₂ levels in our atmosphere are 410 ppm (parts per million) and rising. Extensive long term studies of ice core samples, dendrochronology (tree rings), and various other data sources confirm that over the past 800,000 years the level of CO₂ has never risen above 280 ppm.

Why are current levels of CO₂ so much higher than historic levels? The current rise to 410 ppm began recently with the advent of the industrial revolution (large scale burning of fossil fuels that release CO₂) and mass deforestation (global forests have decreased by 50% over the past several hundred years.) Forests act as a "sink" for carbon dioxide, removing it from the air. Consequently, modern civilization has been contributing to CO₂ rise on two fronts--pumping vast amounts of CO₂ and other greenhouse gasses into the atmosphere while simultaneously reducing the planet's ability to remove CO₂.

The fact that the carbon increase correlates historically to the large scale burning of fossil fuels is not the only indicator that human activity is responsible for the CO₂ increase. Analysis of the molecular structure of the carbon in today's atmosphere provides more concrete evidence. Ancient carbon (from oil and coal formed millions of years ago) has a slightly different molecular structure than carbon in our current carbon cycle. Analysis shows that a significant amount of the current carbon in our atmosphere is ancient carbon, confirming the burning of fossil fuels to be responsible for a major component of the CO₂ increase.

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So where does temperature come in? The 800,000 year history studies have also revealed an important correlation between CO2 concentrations and global temperature. Placed side by side, graphs of global temperature and CO2 reveal a near perfect correlation--high CO2 correlates to high temperature, low CO2 correlates to lower temperature consistently over the 800,000 year period. This temperature/CO2 correlation is manifest in our current era. Along with our spiking CO2 levels, over the past century our planet has undergone substantive global average *temperature increase* ("global warming") of about 0.7 degrees centigrade. (Note: For perspective, the global average temperature difference between today and the ice age is about 5 degrees centigrade). Additionally, this temperature increase has occurred more rapidly than any increase in the 800,000 year history.

The increased global average temperature (referred to as "global warming") has altered the behavior of weather events in type and intensity--hurricanes, droughts, floods, and more. As these more extreme events have persisted, they alter the broader climate profiles of regions. (Note: "weather" refers to specific atmosphere events, while "climate" is the average and consistent pattern of weather events over time). Thus, "global warming" is the driver of what we are currently experiencing in the form of "climate change" around the world. Increased CO2 from fossil fuel use, industrial agriculture and other industrial activities that increase greenhouse gas emissions, combined with deforestation, will only accelerate and worsen this trend to potentially catastrophic levels by mid century.

Solutions to the climate change problem currently exist and are operational. The practices and technologies for climate solutions are actually drivers of economic growth, contrary to much propaganda one gets from media, certain politicians, oil companies, etc. Consequently, the solution to the climate change problem lies in human will, not in the lack of knowledge or technical capacity.

Solutions:

1. Reduce/eliminate the use of fossil fuels.
2. Reduce and reverse the trend of deforestation.
3. Change and redesign any practices that cause other greenhouse gasses (methane in particular) to be emitted (e.g. industrial meat production).

Drawdown is an organization that has mathematically calculated how to reduce greenhouse gas emissions to zero by 2050 through the scaling of 100 practices and technologies. 80 of these technologies/practices are currently operational and being implemented around the world.

Visit: www.drawdown.org

Addendum:

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Another large problem created by the increase of CO₂ is the increase in absorption by the oceans (oceans, along with forests, are sinks for carbon) This in turn has lowered the Ph (increased acidity) of the oceans by about 35%, a critical factor in how shellfish can create calcium carbonate for their shells (coral reefs and many shellfish, key players in the interdependent ocean ecosystem are threatened as result).

Information sources for this summary:

This summary is not a "scientific paper" or study. It is a summary of scientific findings, written by a teacher who has been teaching for nearly 30 years, following, studying and teaching the scientific developments in this area. It *summarizes* key elements of the results of focused scientific studies from over 5 decades, with some dating back over a hundred years. Today, 98% of all publishing reputable scientists from 200 nations and 100% of all scientific academies worldwide are in consensus on the summary stated above.

Specific sources for this summary include but are not limited to the following:

<https://climate.nasa.gov/>

https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

<https://scottbeall.com/2018/wp-content/uploads/2018/09/CaseforYoungPeople31.pdf>

<http://dels.nas.edu/resources/static-assets/exec-office-other/climate-change-full.pdf>