



ACTIVIST TOOLKIT

[#SaveTheAnimalsSaveTheEarth](#)

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WELCOME LETTER

Dear fellow grassroots activist with the tenacity and willingness to change the world:

Thank you for considering a key role in this most urgent campaign for the animals and the Earth! We have a narrow window of opportunity to save the world's wildlife and oceans. We're now losing up to 200 species everyday- it's the greatest crisis in the history of the animal welfare movement- and none of us are talking about it. That's where you come in.

Your efforts are going to help build the case to animal protection and rescue organizations that we animal lovers and animal rescuers must lead this fight.

Meat and dairy consumers are the #1 cause of animal cruelty, the #1 cause of global deforestation, rainforest depletion and climate change- and the #1 cause of the mass extinction of species now underway.

Scientists say the single most effective change we can make to mitigate these crises is the transition to a vegan diet. Of course, we cannot depend on government or industry to promote this change. It's on us who care for the animals and the Earth.

We believe the most efficient and effective way to get this urgent conversation started is to encourage animal welfare groups across the country to adopt a public vegan policy. This doesn't mean everyone has to go vegan overnight. It just means that (1) the organization is publicly acknowledging the crises of animal cruelty, climate change, and mass species extinction, and (2) promoting the single most effective, accessible solution, which is the transition a vegan diet.

In this packet, you will find a variety of tools to directly engage animal welfare organizations in this conversation.

1. A copy of our **Change.org Petition** to Animal Welfare Groups (AWGs) asking them to adopt a vegan policy.
2. A sample **Email Template** to send to AWGs about the Campaign challenge.
3. **FAQs, a handy Fact Sheet, and a Case Statement** from Brother Wolf's Executive Director, Paul Berry regarding campaign case claims. This will help you address any questions or concerns you might encounter regarding animal agriculture being the leading cause of animal cruelty, climate change and mass species extinction.

There is also an associated **Organizational Vegan Policy Starter Kit** with a summary of peer-reviewed scientific research in support of veganism as the single most effect strategy for mitigating climate change and mass species extinction; a sample board resolution for instituting a vegan policy; a sample policy statement for their employees/employee handbook; and a sample press release to get the word out to their public. Please attach this associated starter kit to your communications with organizations about our campaign.

Don't forget to sign the petition and join our #SaveTheAnimalsSaveTheEarth Activists' Facebook group to connect with others and help to drive our petition forward!

Thanks again for choosing to take part in the Save the Animals, Save the Earth campaign! By connecting with your local animal welfare and rescue groups and asking them to adopt a public vegan policy for their organizations, you are making a stand for all animals and the Earth!

With great respect and in warm solidarity,

The Brother Wolf Animal Rescue Staff



PETITION SUMMARY

[Following is a summary our Campaign petition on Change.org. Please share on your social media.]

Tell Animal Rescue Groups: Adopt a Vegan Policy for the Animals and the Earth

It's the greatest crisis in the history of the animal welfare movement. And none of us are talking about it.

A mass extinction of species is now underway- up to 200 species are going extinct every day. Scientists are calling it the Sixth Great Mass Extinction of Species on Earth. And it's being caused by us...

It's happening fast. Unlike mass extinction events of the past, which have taken tens of thousands to millions of years, this mass extinction is happening in just decades. According to scientists, we have 10-20 years at most to create meaningful change, or we may be in a fatal "runaway" scenario.

Animal lovers, animal rescuers, and nonprofits organized for animal welfare- together, we have the power to forestall this mass extinction event, but we must act now.

The primary drivers of this mass extinction of species are global deforestation, rainforest depletion, and climate change. As it turns out, the #1 cause of global deforestation, rainforest depletion, and climate change is global animal agriculture. And the sole basis for animal agriculture is meat and dairy consumers.

Of course, animal agriculture is also the leading cause of animal cruelty in the world as well. Each year, trillions of animals are enslaved, raped, tortured, and murdered for nothing more than mere food entertainment for humans- we know we can get far superior nutrition from a vegan diet. The commodification of animals was always a moral travesty, now it's a planetary emergency.

Industry experts are predicting that meat and dairy consumption will increase 135% by the year 2050. Of course, that is beyond unsustainable. But it makes meat and dairy consumers our single greatest hope for change.

In the face of this urgent crisis, we at Brother Wolf Animal Rescue in Asheville, NC, are challenging our fellow animal rescue groups across the country to take what we think is a very reasonable action: adopt a public vegan policy for their organization.

A public vegan policy doesn't mean everyone has to go vegan overnight. Rather, it's a powerful, symbolic act that presents a unique opportunity for animal rescuers to start this urgent conversation with their colleagues, supporters, and public about the impacts of meat and dairy consumption on these escalating crises of animal cruelty, mass species extinction, and climate change.

Adopting a vegan policy is easy. In its simplest form, a vegan policy means that organizations choose not to serve animal products at any events, fundraisers, and functions. They also don't knowingly accept donations from the sale of animal products. On our campaign website for this petition, we have a downloadable Vegan Policy Starter kit with easy templates for creating a board resolution, employee policy, public announcement, and FAQs.

For most animal rescuers, our work for the animals is a way of life for us. We strive to be a force of uncompromised compassion for the animals we work to protect. A recent national poll found that 85% of Americans agree that animal welfare is the most trusted cause in America. That's why we are calling on fellow animal welfare organizations to step up and lead at this crucial time in our history.

On behalf of the tens of thousands of wildlife species now facing imminent extinction; for the over one trillion fish, cows, pigs, chickens, turkeys and other farmed animals subjected to unimaginable cruelty and exploitation every year; for this next generation of humans who will inherit a world in chaos due to burgeoning climate change- the transition to a vegan diet is the single greatest act an individual can take to make an immediate impact on these crises.

Please take action. Sign and share this petition to challenge animal welfare groups across the country to adopt a vegan policy. Then go to the public Facebook group for this petition, "Save the Animals, Save the Earth," and learn how you can get involved in this important campaign for the animals and the Earth.

Thank you for your consideration of this most urgent initiative.

SAMPLE E-MAIL TEMPLATE

[For Activists to deliver to Animal Welfare Organizations]

To the animal rescuers, animal lovers, and leadership of [insert name of organization],

I'm writing to alert you about a massive catastrophe for animals happening right now and ask that your organization take immediate and decisive public action. It's easily the most urgent crisis in the history of the animal welfare movement.

A mass extinction of species is now underway- up to 200 species are going extinct every day. That's 1000 to 10,000 times the normal rate of extinction, and none of us in animal welfare are talking about it!

I'm asking you to stand with other organizations across the country to help bring awareness and take immediate action at this most crucial moment for the animals.

Scientists are calling it the Sixth Great Mass Extinction of Species on Earth. And it's happening fast. Unlike mass extinction events of the past, which have taken tens of thousands to millions of years, this mass extinction is happening in just decades. And it is all human caused.

According to scientists, we have 10 to 20 years, at most, to create meaningful change, or we may be in a fatal "runaway" scenario- and then it will be too late.

If enough animal lovers and animal welfare leaders will step up and lead to rally their colleagues and supporters, we have the power to forestall this catastrophe, but we must act now.

The primary drivers of this mass extinction of species are global deforestation, rainforest depletion, and climate change. As it turns out, the #1 cause of global deforestation, rainforest depletion, and climate change is global animal agriculture. And the sole basis for animal agriculture is meat and dairy consumers.

In addition, 99.7% of the animals killed every year in the US are farmed animals. Global Animal Agriculture is the #1 cause of animal cruelty.

Industry experts are predicting that meat and dairy consumption will increase 135% by the year 2050. As experts warn us, that is beyond unsustainable. But it means that meat and dairy consumers are our single greatest hope to mitigate this crisis.

In the face of these impending disasters- Global Animal Agriculture being the leading cause of animal cruelty, climate change, and mass species extinction, I'm asking you to lead your organization in taking a simple, vital action: adopt a public vegan policy for your organization. Then, help spread this urgent message by sharing the news of your new policy with your supporters and public.

A public vegan policy doesn't mean everyone has to go vegan overnight. Rather, it's a powerful, symbolic act that presents a unique opportunity for leaders to start this urgent conversation with their colleagues, supporters, and public about the impacts of meat and dairy consumption on this crises mentioned above.

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Adopting a vegan policy is easy. In its simplest form, a vegan policy means that organizations choose not to serve animal products at any events, fundraisers, and functions. Here is a link to a Starter kit with easy templates for creating a board resolution, employee policy, public announcement, and case statement.

For most animal rescuers, our work for the animals is a way of life for us. Animal rescuers can be fearless advocates, and that's why I'm hoping your organization will step up and lead at this crucial time in our history.

On behalf of the tens of thousands of wildlife species now facing imminent extinction; for the over one trillion fish, cows, pigs, chickens, turkeys and other farmed animals subjected to unimaginable cruelty and exploitation every year; for this next generation of humans who will inherit a world in chaos due to burgeoning climate change- the transition to a vegan diet is the single greatest action an individual can take.

At this urgent moment in history, we animal lovers must help lead our movement through this evolutionary leap in vegan advocacy. If we fail to lead now, we risk all the progress that human society has ever made for the animals- including our dog and cat work. It's exactly that urgent.

Other animal welfare organizations have already adopted a public vegan policy. They were warned by some that such action might brand them 'alarmists,' or that they might lose donors or their volunteers. These groups report that the opposite has happened- that staff and supporters see such a policy as a logical extension of their values, and that they've even won over both new volunteers and donors!

Given the scope and urgency of these crises, your action to adopt a public vegan policy will be the single greatest contribution your organization will ever make for the animals.

Time is of the essence. Please take this action now. If you have any questions or need more information, please write me back. At the very least, please let me know if you intend to lead your organization in establishing a vegan policy.

I hope that you will take action during this most critical time in human history. The animals, our planet, and our future depend on it.

To a bright and sustainable future,

Your Name

If claims related to species extinction, climate change or veganism are challenged, it's important to respond with factual evidence in a calm, respectful demeanor.

This document is intended to aid in the conversations and interactions you will conduct with those interested in and/or questioning our campaign claims.

Below are several questions we're anticipating, and our responses. As always, if you have any issues or questions throughout the course of the campaign, you can reach out to your fellow activists or directly message our support team [via the campaign Facebook page](#).

Frequently Asked Questions (FAQs):

1. *Don't we need to eat animals to be healthy?*

There is no scientific evidence to support the claim that human beings need to eat other animals in order to be healthy. Humans can meet all of their nutritional needs with a vegan diet. According to the American Dietetic Association, "appropriately planned vegan diets, are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases. Well-planned vegan diets are appropriate for individuals during all stages of the life cycle, including pregnancy, lactation, infancy, childhood, and adolescence, and for athletes."

There are some who may claim that certain human beings require animal products depending on blood type or other physical and physiological differences, but there is no scientific evidence to support such claims. To quote nutritional epidemiologist Micaela Karlsen, "Human beings are one species; we are all the same animal, with the same digestive physiology. And, as is true of all species, we do not require personalized nutritional programs unless we are dealing with a specific disease or some other very unusual condition... Where nutrition is concerned, it's helpful to ask yourself, "Where in nature can I find an example of this?" And in this example of a very wide variation of nutrient intake, the answer is "nowhere."

2. *Isn't "local" meat, "grass-fed beef" or medium to small scale animal agriculture more sustainable than "factory farmed" meat and dairy?*

Actually, no. Grass-fed beef is even less sustainable than factory farming, as grass-fed cows require more land and resources. See this recent study from the Environmental Change Institute, University of Oxford.

It's a widely accepted fact that farmed animals require more food than they produce. The level of resource consumption, waste production, and greenhouse gas impact per unit of animal products created is going to be in the same catastrophic range regardless of whether an animal is raised in a factory farm or in a pasture.

Simply put, growing vegetables requires far less resources than growing mammals. To suggest that any meat-based diet is lower impact than the choice to eat predominantly locally, organically grown plant-foods is simply incorrect. It is not just factory farmed animals, but all farmed animals, that contribute to deforestation, soil degradation and water scarcity.

3. *Don't we need animal manure to grow food?*

Vegetables, grains, fruits, and mushrooms can be grown without any animal inputs such as manure, bone, blood, or scales. Nitrogen and other vital nutrients can be obtained by utilizing "veganic" growing techniques that employ (continued on next page) processes such as composting, green manure, and mulching. Veganic agriculture is the lowest impact, most environmentally sustainable method of farming. You can click here to learn more about veganic agriculture.

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4. *Don't we need animals to build topsoil?*

There are some who claim we need livestock to build healthy topsoil. Most folks making these claims site Allan Savory's argument that we need to increase the amount of grazing domesticated animals in order to rehabilitate eroded lands. Savory is a man who virtually stands alone in the scientific community by claiming that adding MORE domesticated animals to deforested and desertified land will somehow rehabilitate land!

It's quite clear that deforestation and desertification are happening almost single-handedly BECAUSE of animal agriculture. Dr. Richard Oppenlander, author of *Food Choice and Sustainability: Why Buying Local, Eating Less Meat, and Taking Baby Steps Won't Work*, published an excellent article debunking Savory's arguments.

5. *Shouldn't we be worrying about nuclear energy, other dirty energy forms, and the transportation sector before worrying about animal agriculture?*

According to a 2009 WorldWatch Institute report, animal agriculture is responsible for emitting at least 51% of all greenhouse gases. This places animal agriculture at the top of the list in terms of addressing concerns and making steps towards reversing climate change. This isn't to say that other contributors to global warming and mass species extinction aren't important. Indeed, we should move to sustainable energies with haste.

However, the transition to a vegan diet achieves immediate gains by both reducing methane emissions from farmed animals in the short-term, and by freeing up land now used for grazing and feed-crops to be reforested for long-term sequestration of CO2.

FACT SHEET

Save the Animals, Save the Earth: The Case for Urgent Transition to a Vegan Diet

A mass extinction of species is now underway- up to 200 species are going extinct every day.

[Gerardo Ceballos et al., Proc Natl Acad Sci U S A, 2017]

According to WWF Living Planet Index (LPI) data projections, world wildlife population decline of the LPI approaches 90% by 2025.

[WWF. 2016. Living Planet Report 2016]

The primary drivers of this mass extinction of species are global deforestation, rainforest depletion, and climate change.

[Gerardo Ceballos et al., Proc Natl Acad Sci U S A, 2017]

The leading cause of global deforestation and rainforest depletion is global animal agriculture.

[Smith, Bustamante, IPCC AR5 Ch. 11 AFOLU 2009]

In a 20-year timeframe, the leading cause of global greenhouse emissions and climate change is global animal agriculture.

[Goodland, R. & Anhang, J. World Watch 22, 10-19 (2009)]

Animal Agriculture Industry experts are predicting that meat and dairy consumption will increase 135% by the year 2050.

[Thomas E. Elam, Center for Global Food Issues, 2005]

The transition to a vegan diet is the single most effective change we can make to forestall the dual crises of mass species extinction and climate change.

[Rao; Jain, University of Illinois; AGU 2015]

"A well-planned vegan diet is appropriate for all stages of the life-cycle including during pregnancy, lactation, infancy, childhood, and adolescence."

[J Am Diet Assoc. 2009 Jul;109(7):1266-82.]

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**The Case for
Urgent Transition to
Organizational Vegan Policy**



It's the Greatest Crisis in the History of the Animal Welfare Movement

The Case for Urgent Transition to Organizational Vegan Policy

by: Paul Berry, Executive Director, Brother Wolf Animal Rescue, Asheville, NC, USA

A mass extinction of species is now underway– we're now losing up to 200 species every day¹. Scientists say it's the 6th Great Mass Extinction of Species on Earth².

It's happening faster than any mass extinction event in Earth's history³. Where previous mass extinctions happened over thousands to millions of years, according to the fossil record, this current mass extinction is happening over just decades. And it's being caused by us...

According to the World Wildlife Fund's Living Planet Index (LPI), the most widely accepted measure of trends in world wildlife populations: between 1970 and 2012, world wildlife populations declined by 58%⁴.

Scientists agree that if global impacts to wildlife continue unabated, rates of decline in wildlife populations will continue to escalate toward a "great dying" of species unparalleled in Earth's history⁵.

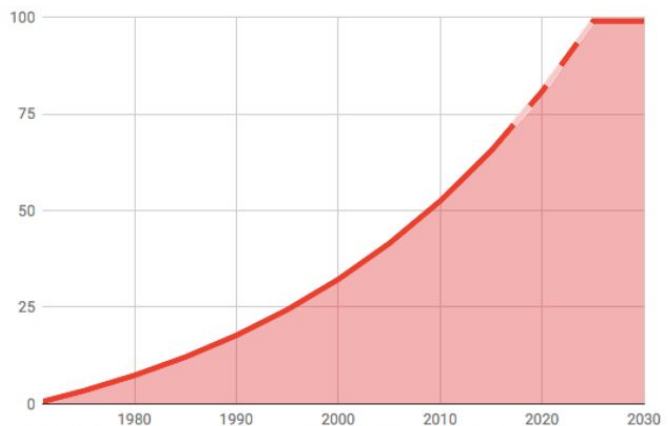
The LPI database contains about 18,000 population trends for more than 3,600 representative mammal, amphibian, bird, reptile and fish species. Using an exponential model equation²⁷ to extend the current trend of wildlife decline reflected in the LPI data above, and assuming global impacts to wildlife continue unabated, an extrapolation of the LPI data reveals that **world wildlife population decline of the LPI approaches 90% by 2025**.

That's just eight years from now.

This global trend suggests that natural ecosystems are collapsing at a rate unprecedented in all of human history⁶. Indeed, it is easily the greatest crisis in the history of the Animal Welfare Movement– *and none of us are talking about it.*

LPI WILDLIFE POPULATIONS PERCENT DECLINE SINCE 1970*

[Percent LPI decline since 1970 = $18.52 * (\exp(\text{#of years since 1970} * 0.0336) - 1)$]



*Data Source: McClellan, R, ed., 2014: *The Living Planet Report 2014*, World Wildlife Fund.

FIGURE 1



What Are We Saving Them For?

At Brother Wolf Animal Rescue, we only learned about the extent of this extinction crisis ourselves earlier this year, while doing budget planning for our “Rapid Response” work.

Brother Wolf is a traditional “No Kill” animal rescue group, which means that our routine work is in collaboration with citizens, animal control, and other animal welfare groups in the communities we serve, to rescue dogs and cats at risk in the local municipal shelters. What we refer to as “rapid response work” typically involves non-routine, mass animal rescue in response to unpredictable events such as the apprehension of a “puppy mill”, “animal hoarder”, or “dog-fighting ring”.

Such events can potentially overwhelm a local municipal shelter system and lead to increased kill rates of placeable dogs and cats there. So this rapid response work is consistent with Brother Wolf’s mission to “organize the resources and life saving programs to help build No Kill communities.”

Over the past five years or so, we’re finding that more and more of our rapid response work involves animal search-and-rescue in response to natural disasters, such as major floods and wildfires. These events are very disruptive to our routine rescue work and can be massive in scale, potentially undoing years of progress on No Kill in a matter of just days or weeks. As a small regional non-profit in the deep southeast U.S., we receive no government funding for any of our rescue work, so such catastrophic events are quite burdensome on our financial readiness as well.

Over the past few years, the frequency and scale of floods and wildfires have increased exponentially in our service areas. Ten years ago, such events were rare, maybe one major event every few years at most. Now we are seeing two to four major floods and/or wildfires every year. For example, over the past two years, our Rapid Response team has provided search-and-rescue support in four major floods and four major wildfires in our service region.

So it was with sound fiduciary oversight that Brother Wolf’s Board of Directors asked our management to investigate trends and contributors to these escalating natural disasters, to better predict their impacts on our operations and mission. We first sought guidance from a few science experts among our constituency to help answer key questions such as: are these natural disasters increasing in scope and frequency; will they peak, and if so, when?

Our initial research revealed that these natural disasters will continue to escalate for the remainder of the century- and that the root causes of these disasters are also the primary drivers of the mass extinction of species now underway. The findings were so concerning, we sought secondary input from proper experts in the environmental sciences to double-check our conclusions. This paper is the summary report of those findings.



The results of this research have compelled us to expand upon our advocacy for dogs and cats, to also account for the root causes of this escalating planetary crisis. Otherwise, what are we saving them for?

As one staff member commented during our research phase: knowing what we know now, if we don't alert our constituents to this burgeoning crisis; "if we just continue our dog and cat rescue work business-as-usual, it's like adjusting the thermostat while the house is burning down around us."

Indeed, the evidence we've found that predicts continued escalation of catastrophic natural disasters is alarming. In consultation with colleagues and supporters on this project, we've been warned repeatedly that we risk being branded as "alarmists" and/or losing donors if we pursue this advocacy about climate change and the mass extinction crisis.

Of course they are right about the risks, but it's precisely such fear-based leadership that has gotten us into this global state of emergency. There is just no gentle way to frame it, and at this late stage, what would be the point? We're out of time.

However, as the research has revealed to us, while there is great urgency and seemingly impossible odds for its remedy, *there is also great hope.*

Scattered among the science and rarely discussed by corporate media or industry-funded research, are viable, very achievable solutions to these crises. If enough of us animal lovers and animal rescuers can unite with urgency around common solutions; if leaders in our movement can lead with courage and conviction— with *faith* in the integrity of our supporters, rather than *fear* of losing their financial support— our industry of animal welfare has a real chance to inspire mass public action that could forestall this impending global catastrophe.

We have the opportunity to initiate a movement to save our wildlife, save our oceans and forests, and ultimately save our own species (where are humans on that extinction curve?).

So it is with faith in our colleagues and constituents, with great humility and utmost urgency that we present our findings and proposals herein. In honor of the animals we are organized to protect, and the donors who entrust us with their support, we'll accept the brand of "alarmists" on their behalf.

As a cranky old activist once said, "nobody complains about the 'alarmist' whose cries have saved those from their burning home."



Superstorms, Wildfires, and Climate Change

Just last month (SEPT/2017), our Rapid Response team provided search-and-rescue support in back to back hurricanes, Harvey in Texas and Irma in Florida. These hurricanes were both branded “superstorms,” because each set historical records. Irma sustained winds of 185 mph for 37 hours, the longest any hurricane on record has maintained such intensity. And Irma’s 185 mph winds were also the highest ever on record for a storm in the Atlantic Ocean⁷.

Hurricane Harvey dumped more rain (up to 61”) on US land than any other hurricane in US history⁸. And Harvey’s trek into Texas crossed the Gulf of Mexico where, for the first time on record, gulf waters over the entire winter season never dropped below 73F⁹.

Hurricanes Harvey and Irma happened within a matter of days of each other, and each broke all-time records on the two key record indicators for hurricanes, wind speed and rainfall. What are the odds?

The Union of Concerned Scientists, a science-based nonprofit that focuses on independent scientific research, published a recent report¹⁰ which surveyed 28 different peer-reviewed research papers about the increased frequency and intensity of hurricanes in the North Atlantic Ocean. The report confirms that “the destructive power, or intensity, of hurricanes in the North Atlantic has been growing since the 1970s,” and **predicts “a doubling or more in the frequency of category 4 and 5 storms”** through the end of the century, “due to climate change.”

Another peer-reviewed research paper¹¹ published in the journal of the National Academy of Sciences, found similar results for hurricanes in the Pacific Ocean. Using forecasted trends for global warming, this research model predicts that Pacific hurricanes will continue to increase in frequency and intensity for the foreseeable future.

There is similar significant consensus among scientists regarding climate change driving wildfires. A peer-reviewed paper published in the National Academy of Sciences has determined¹² that climate change is causing significant “warming and drying” of forests. The researchers claim that **between 2000-2015, 75% more forest land has been exposed to fire susceptibility** due to climate change. The researchers conclude that “climate change will continue to chronically enhance the potential for forest fire activity” for the foreseeable future.

Further, scientists such as Brandon Collins of the U.C. Berkeley Center for Fire Research and Outreach claim¹³ that increased forest fires due to climate change create a feedback loop that contributes to further climate change: “..the fires we’re seeing now [are] killing a lot more trees than they ever were historically. To make things worse, very intense fires can make it difficult for forests to re-seed themselves. With fewer trees to store carbon, climate change will likely get worse, and that puts forests at even greater risk.”



So, the broad scientific consensus is that catastrophic hurricanes and wildfires will both continue to increase in intensity and frequency over the next several decades. And there is broad scientific consensus that these increases are driven primarily by “human-caused climate change”.

But what exactly is causing “human-caused” climate change?

The Greenhouse Effect, the Carbon Cycle and Climate Change

Both sides of the political debate about climate change have gotten insular and convoluted. So, we found it necessary to review the basics of climate change theory, in order to minimize confusion at the onset. We were all surprised (and frankly a bit embarrassed!) at how little we understood the dynamics of climate change, especially given that it’s the greatest threat our species has ever faced.

So, we asked a local physicist to give us the basics. Here’s how she explained it.

[If you want to skip this primer on climate change, just skip to the next section, “Mass Species Extinction, Climate Change and Us.” But, please come back and read the primer when you have time, as both sides of the popular political debate on climate change are getting it way wrong.]

The three most important concepts about climate change you need to understand are—

- (1) The Greenhouse Effect,
- (2) Greenhouse Gas Emissions, and
- (3) Greenhouse Gas Sequestration (big word, easy concept):

The Greenhouse Effect

Most of us learned about the Greenhouse Effect in Earth Science class in high school: sunlight warms the water and land masses of the Earth, and as the water and land masses radiate heat back into the atmosphere, some heat gets absorbed by certain gases in the lower atmosphere. These heat-absorbing gases are referred to as greenhouse gases (GHGs).

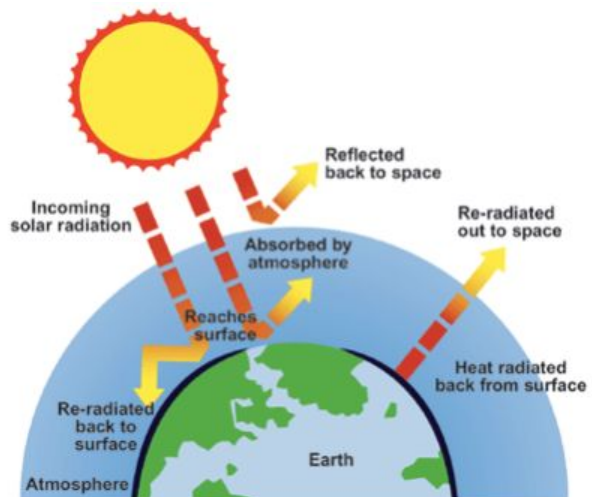


FIGURE 2: The Greenhouse Effect



Ongoing, GHGs radiate much of the heat they absorb back toward Earth, sort of like an electric blanket covering the planet. This natural process of global warming by GHGs is what's referred to as the Greenhouse Effect.

Under normal conditions, when GHG emissions are in natural balance (as they have been for the past 650,000 years or so), the Greenhouse Effect keeps the Earth habitable and comfortable, at an average global temperature of about 60F. Without the atmosphere and this ongoing Greenhouse Effect, the Earth would be uninhabitable, similar to the moon, with daytime temperatures soaring to 200F and nighttime temps plummeting to 350F below zero!

Greenhouse Gas (GHG) Emissions

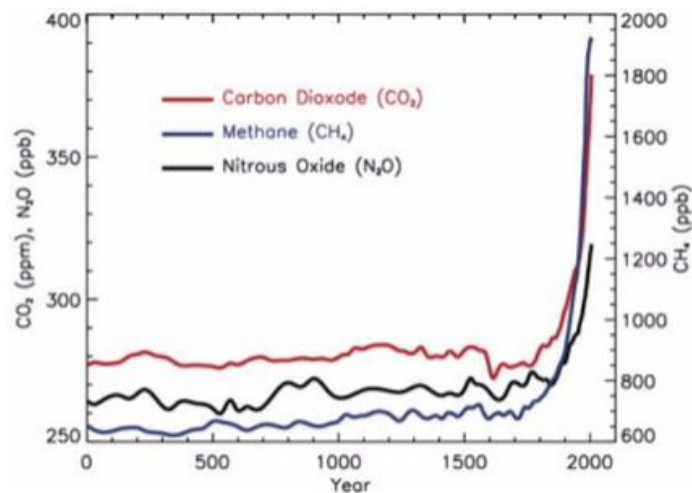
The most prevalent GHGs are Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (NO₂). All three occur naturally in Earth's atmosphere. The atmosphere (aka "air") is about 79% Nitrogen and about 20% Oxygen. So GHGs only make up less than 1% of total gases in the atmosphere. Because their relative amounts in the atmosphere are so small, GHGs are typically measured at the molecular level as: the number of molecules of a GHG per million molecules of air, designated as parts per million or "ppm" (or sometimes parts per billion or "ppb").

GHGs differ from one another in three key ways: their relative concentrations in the atmosphere, the amount of time they stay in the atmosphere, and their capacity to store (and thus radiate) heat while in the atmosphere:

GHG Concentrations

In the pre-industrial era (before 1800, all the way back some 650,000 years), concentrations of CO₂ in the atmosphere never exceeded 280 ppm; CH₄ never exceeded 790 ppb; and NO₂ never exceeded 270 ppb.

Scientists make these historical estimates by measuring gases trapped in ice core samples from ice at the poles that formed over the past few million years.



Source: FAQ 2.1 IPCC Fourth Assessment Report (2007), Ch 2

FIGURE 3

Today, concentrations of CO₂ are about 400 ppm; CH₄ levels at about 1,800 ppb; and NO₂ at about 320 ppb. All three of these GHGs are at much higher concentrations today than before the industrial era (see Figure 3).



Lifetime of GHGs in the Atmosphere

The “Atmospheric Lifetime” of a GHG refers to the amount of time the gas spends in the atmosphere radiating heat to Earth before being converted into another, less harmful chemical compound, or “sequestered” (drawn) from the atmosphere into natural GHG “sinks” such as the oceans, forests, and soils.

The Atmospheric Lifetime values of the the three major GHGs are: 100-300 years for CO₂; 10-14 years for CH₄; and 114 years for NO₂.

Global Warming Potential of GHGs

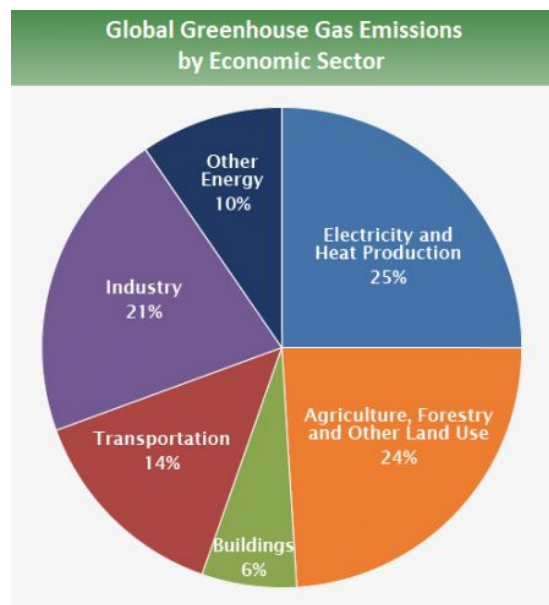
Since GHGs remain in the atmosphere for different periods of time, and each GHG has a different capacity for storing heat, scientists have devised a common unit of measure called Global Warming Potential (GWP) to make it easier to compare impacts of GHGs on global warming.

GWP is a measure of how much heat a volume of GHG will absorb over a given period of time, relative to the same amount of CO₂ (the baseline GHG) over the same timeframe. The larger the GWP, the more the gas warms the Earth compared to CO₂ over the specified time period.

For example, CH₄ has a much shorter lifetime in the atmosphere (10-14yrs) compared to CO₂ (100-300yrs), but CH₄ has a much higher capacity for storing heat than CO₂. Over a 100-year time frame, CH₄ has a GWP value of 30 (or 30 times the warming potential of CO₂). But over a 20 year time frame, CH₄ has a GWP value of 80 (or 80 times the warming potential of CO₂)¹⁴. E.g., in a 20 year timeframe, 1 ton of CH₄ has the equivalent GWP of 80 tons of CO₂.

As mentioned above, **concentrations of GHGs in the atmosphere have increased exponentially since the pre-industrial era** (see Figure 3). The increased concentrations of GHGs are due to increased GHG emissions caused by various sectors of human activity (see graph at right; [source: IPCC](#)).

Greater concentrations of each GHG intensifies the Greenhouse Effect according to its GWP, causing continual increases in average global temperature. It's this global warming that is causing the increases in frequency and intensity of the hurricanes and wildfires mentioned above; i.e., climate change.



Greenhouse Gas (GHG) Sequestration

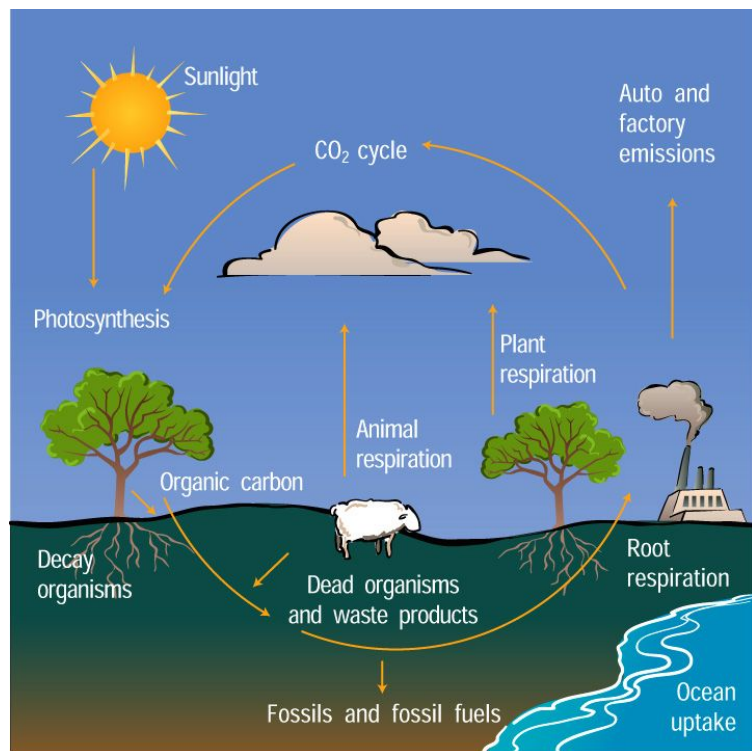
In terms of GWP, CO₂ is the weakest GHG of the big three, but it has the longest lifetime in the atmosphere. By volume, CO₂ is also the #1 GHG pollutant, making up about 80% of total annual GHG emissions caused by human activity. So popular political debate about specific GHG emissions is focused primarily on CO₂ emissions.

But GHG emissions including CO₂ emissions are just half the story. **Equally important in the climate change system is GHG Sequestration**, also referred to as Carbon Sequestration.

Carbon Sequestration is the process whereby CO₂ is removed from the atmosphere by the natural ongoing Carbon Cycle of the Earth.

The Carbon Cycle transforms carbon compounds through various natural processes- some of these processes put carbon into the atmosphere and some take it out (see figure at right).

For example, forests use photosynthesis to convert vast amounts of CO₂ into energy for growth. The oceans absorb vast amounts of CO₂ through the natural process of ocean acidification. In healthy soils, vast amounts of carbon are absorbed by minerals and bacteria in the soil.



Forests, oceans and soils are referred to as natural “carbon sinks” because in natural conditions, their net contribution to the carbon cycle is to sequester (or store) more carbon than they produce. Conversely, mammals like humans and cows store carbon in their bodies, but produce much more through respiration of CO₂, lifestyle impacts, and waste, etc.

To appreciate the vast potential of carbon sequestration by these natural carbon sinks, consider the findings of the 2015 research paper¹⁵, “The Lifestyle Carbon Dividend: Assessment of the Carbon Sequestration Potential of Grasslands and Pasturelands Reverted to Native Forests.” co-authored by Drs. Sailesh Rao and Atul Jain. Dr. Jain is a land carbon expert and a principal contributor to the Intergovernmental Panel on Climate Change (IPCC)¹⁶. Dr. Jain is also the originator of the Integrated Science Assessment Model (ISAM), which calculates carbon

sources and sinks due to land use change activities, such as reforestation (restoring deforested lands to original forest).

The researchers used ISAM to calculate the carbon sequestration potential of lands that were once native forest and are now being used for livestock production (including lands for livestock grazing and growing livestock feed). Their research revealed that if just 41% of such lands were reverted back to original forest, the new forests would sequester 265 GtC (gigatons of carbon). For reference, **that's more carbon sequestration potential than the entire estimated 240 GtC that humans have added to the atmosphere over the past 200 years!**

Similarly, a report on soil sequestration published in the journal *Nature*¹⁷ demonstrates that soils sequester more carbon (2,500 billion tons) than the atmosphere (800 billion tons) and all plant and animal life (560 billion tons) combined. But through soil degradation due to human activities¹⁸, the world's cultivated soils have lost about 70 percent of their original carbon, much of which has contributed to global CO2 emissions.

Another report¹⁹ determined that the restoration of soils that have been degraded by human activities (such as cattle grazing and mono-agriculture of feed crops) has the potential to sequester up to an additional 3 billion tons of carbon annually. This is roughly equivalent to sequestering an additional 11 billion tons of annual CO2 emissions, which could offset about one third of total annual global CO2 emissions from fossil fuels (~32 billion tons).

The massive losses in sequestration potential of the Earth's forests and soils since industrialization have greatly impacted the natural carbon cycle balance: as forests and soils have been depleted, the third major carbon sink, the oceans, has suffered the imbalance. Ocean acidification has increased exponentially. Recent research has determined that oceans are now 30% more acidic than pre-industrial levels²⁰ and now, ocean acidification is increasing at the fastest rates in history due to increased concentrations of CO2 in the atmosphere and warming ocean waters caused by Climate Change²¹.



Coral Reefs Dying Due to Ocean Acidification & Warming Waters;

The impacts of acidification and warming ocean waters due to climate change are most evident in the world's coral reefs. Coral reefs are considered the "rainforests of the oceans," supporting about 25% of all marine life. For the past three years, coral reefs around the world have suffered record [coral bleaching](#), following three decades of record high temperatures in ocean waters.

It's now clear that coral reefs cannot survive ocean acidification and warming waters brought about by climate change.

Over the past few years, the Great Barrier Reef in Australia has suffered its worst losses in recorded history where [about half of its coral has been killed](#) due to record warm waters. About 85% of the coral in the Christmas Island Reef in the Indian Ocean has died. Scientists report that the barrier reef in Florida, which is the only barrier reef in the continental U.S., has now suffered an “unprecedented” collapse. Scientists previously predicted that Florida’s reef wouldn’t start to die until around 2050. But recent analysis shows the process is already well under way.²²

Mass Species Extinction, Climate Change and Us

During our research into hurricanes and wildfires, it was this news about the impending collapse of coral reefs around the world that first alerted us to the mass extinction of species now underway.

The escalating intensity of hurricanes and wildfires that impacts our operations and mission, and this mass extinction event that threatens all life on Earth are primarily due to climate change. And climate change is primarily caused by human activities. As always, the burning question for us animal lovers and animal rescuers in the animal welfare movement is: what is the most significant impact we can make today to save the most animals whose lives now are most imperiled?

Mainstream political debate about climate change is confusing and convoluted- on both sides of the debate. The professional “climate deniers” who work for industries that are driving climate change have been successful over the past few decades in distracting from an authentic debate about the true urgency of this moment in history.

But the “climate activists,” who typically contend with these climate deniers in popular debate have contributed equally to the confusion and distraction. What’s going on?

Mainstream political debate about climate change is primarily focused on carbon dioxide (CO₂) emissions. We rarely hear any substantive debate about mitigating the other two major greenhouse gas (GHG) emissions, methane (CH₄) or nitrous oxide (NO₂), even though their global warming potential (GWP) is 80 to 170 times more potent than CO₂.

Nor do we ever hear substantive debate about the equally important massive losses in GHG sequestration potential of our forests and soils.



As highlighted above, the research of Drs. Rao and Jain proved that the reforestation of just under half the land now used for livestock production could sequester (draw) more CO₂ from the atmosphere than has been added by humans over the past 200 years.

The annual international Climate Change Conferences organized by the United Nations, and the Intergovernmental Panel on Climate Change (IPCC) that advises data on those conferences, focus almost exclusively on CO₂ emissions targets. Even Al Gore's popular documentary, "An Inconvenient Truth," focuses almost exclusively on CO₂ emissions from the energy sector. The other major GHGs and massive losses of carbon sequestration in forests and soils receive no serious mention.

The latest official goal of these international CO₂ targets is to keep global warming under 2 °C (3.6 °F) by 2100. And what is totally left out of the talks is that the **coral reefs and marine life, and most all wildlife populations on Earth are already proving they will not survive that goal- not even close.** Further, the continued, unabated increases in intensity and frequency of hurricanes and wildfires bring into question the prospects of our own survival.

That 2 °C goal was adjusted up from the original goal of 1.5 °C, because when scientists and policymakers could finally agree on the goal of 1.5 °C, the "popular consensus" was that we had time for action. The "popular consensus" got it wrong then, and they are wrong now.

Scientists and policymakers are wrong to avoid serious negotiations about immediate abatement to current GHG emissions which could help mitigate the mass extinction of species and these escalating natural disasters near term. It's deceptive, irresponsible and immoral.

Our Governments and Industry Have Failed Us

Of course, any sane, rational person would agree that global society needs to transition away from fossil fuels to renewable energies with utmost urgency. And savvy citizens know this debate is being intentionally stalled by the powerful fossil fuel industry to protect their profits.

But Al Gore's solar panels and windmills will not save our wildlife from the mass extinction event now underway, nor will they mitigate the catastrophic threats of intensifying hurricanes and wildfires through the end of the century. Even if renewable energies were fully deployed in 20 years, which is the generally accepted very-best-case scenario, the real "inconvenient truth" is that their impacts to mitigate CO₂ emissions would not be felt on Earth for a century or more. Scientists know this, policymakers know this, and Al Gore knows this, but no one will discuss it.

That's where we come in. Animal Welfare advocates and activists are not afraid of exposing ignorance and deception.



As activists, **it is our job– our moral imperative– to challenge “popular consensus” when it violates truth and threatens those we are organized to protect.**

The truth is we don't have till the end of the century to save our oceans and wildlife. According to trends in the LPI data mentioned above, we have 10 to 20 years at best.

The truth is that after 35+ years of climate change “talks” that have achieved nothing discernible to abate climate change, we must now accept that we cannot depend on our governments or industry to save us from ourselves.

The truth is we do have the immediate means to directly abate these crises if we unite now to ignite a consumer revolution among our constituents and colleagues.

As Drs. Rao and Jain demonstrated in their 2015 research on reforestation, if we reforest just 41% of the lands currently used for global livestock production, the new forests could sequester more CO₂ than has been emitted by humans over all of the past 200 years. And unlike solar panels and windmills, it won't take centuries: **80% of CO₂ sequestration from reforestation will happen within the first 20 years of new forest growth²³!**

Further, what is not immediately apparent in the research findings of Drs. Rao and Jain is that the means by which we consumers can force that reforestation scenario would also impact short term reductions in Methane (CH₄). As mentioned above in the primer on Climate Change, CH₄ is the gas that burns hottest, quickest: it dissipates from the atmosphere within only 10-14 years, but while there, it radiates up to 80 times more heat than CO₂. Therefore, immediate reductions in CH₄ emissions would be felt by Earth within 10 to 20 years.

Those are permanent impacts to long-term CO₂ emissions and short-term CH₄ emissions that are both well within our near-term reach. **No other proposals introduced in any of the official United Nations talks on climate change even come close to those gains.**

How We Save the Animals and the Earth

The leading cause of CH₄ emissions is livestock production. And the #1 way to reduce these emissions– and advance the case for reforestation– is to transition to a vegan diet that avoids all livestock products, especially beef and dairy. That's where the consumer revolution absolutely must come in.

Global animal agriculture is the leading cause of global deforestation and rainforest depletion²⁴. In a 20-year timeframe, animal agriculture is also the leading cause of climate change²⁵. And because global deforestation, rainforest depletion and climate change are the primary drivers of mass species extinction, that makes global animal agriculture the leading cause of this mass extinction crisis.



But the term “animal agriculture” is elusive, isn’t it? It’s actually the customers of animal agriculture who perpetuate that destruction. Therefore, **meat and dairy consumers are the #1 cause of the 6th Great Mass Extinction of Species now underway.**

In addition to causing this mass extinction crisis, meat and dairy consumers eat over one trillion fish, cows, chickens, turkeys, sheep, goats, and pigs every year- causing a literal hell of incomprehensible cruelty and suffering.

Those facts are the truth. They’re not meant to invoke anger, denial or despair, but clarity and hope for us in the work to save the animals and the Earth. Because meat and dairy consumers who take immediate action are **our single greatest hope** to save our wildlife and oceans, and end a litany of endless suffering

The meat and dairy industry projects 135% growth in consumer demand for meat by mid century²⁶. Current meat and dairy production is already way past unsustainable. And if methane emissions grow even by half that same rate over the next few decades, we will have surpassed any hope for meaningful climate change mitigation. Which makes meat and dairy consumers the single greatest threat to the future of all species, including us.

As animal advocates and activists, we have direct access to animal lovers across the country and world, particularly in the developed countries where most all the consumers of livestock production reside. Those of us in the business of animal welfare know that most all our constituents eat meat and dairy. Most all of these folks are likely as uninformed to the mass extinction of species underway as we have been. But, most all the folks who support our work for the animals will at least be receptive to and hopefully seriously consider our case for the animals, for humans, and the Earth.

We don’t all have to go vegan, and those who would, do not all have to go vegan overnight to effect the changes needed. But what we must do, at the very least, is unite around the core proposition that **the transition to a vegan diet is the single most effective personal action we can take to mitigate climate change, save our wildlife and oceans, and save our Earth.**

The First Step is to Lead

Our proposal is very simple: we challenge all nonprofits that are organized for the welfare of animals to, at the very least, adopt a public vegan policy for your organization, which prohibits meat and dairy products at all organizational functions. This new policy doesn’t mean everyone has to go vegan overnight; rather it’s a symbolic act that presents the opportunity for you to start this urgent conversation with your staff, volunteers, supporters, and public about the impacts of meat and dairy consumption on the dual crises of climate change and this mass extinction crisis now underway.



Especially if you are just focused on cat and dog rescue, this conversation with your supporters matters most. Four years ago, Brother Wolf adopted such a vegan policy for our organizational events. By and large, it was well received by our staff, volunteers and supporters as a natural, rational extension of our values, to extend our circle of compassion to all animals. It is fully consistent with our values as animal welfare advocates.

[We have launched a Change.org petition](#), where we are asking all those who care about this present crisis for the animals and the Earth to sign on and encourage all animal welfare organizations to adopt a public vegan policy and begin this urgent conversation with their public.

We have also started a public [Facebook group](#) that provides campaign fact sheets, a database of animal welfare organizations in the US, an activist tool kit for online activists to use in engagement with animal welfare groups on this campaign, and a starter kit for organizations to use for adopting a vegan policy and presenting it to their staff, volunteers and public.

We are engaging with other like-minded organizations, individuals, scientists, politicians and celebrities to promote this campaign to #SaveTheAnimalsSaveTheEarth. If you would like to bring ideas and opportunities for collaboration, please message the campaign team on our Facebook page.

After all our research the past several months, vetting data, assumptions, concerns and ideas, and in light of the very limited time we have left to take meaningful action on these crises, we are convinced we've got one good chance to change course, and this it.

For the animals and the Earth, thank you for your consideration of this most urgent initiative.

