

The background of the poster is a composite image. On the left, a lush green field of tall grass sits on a gentle slope. A single tree stands at the edge of the field, its left side vibrant green and its right side a mix of brown and red, suggesting autumn or decay. The ground to the right of the tree is cracked and parched. In the foreground, a body of water, likely a flood, is rising, its surface reflecting the sky. The sky is filled with heavy, grey clouds, with a bright light source breaking through in the center, creating a dramatic, high-contrast scene.

From Academy Award® Winners  
**Leonardo DiCaprio** and **Fisher Stevens**

THE SCIENCE IS CLEAR, THE FUTURE IS NOT.

# BEFORE THE FLOOD

Executive Producer **Martin Scorsese**

**IN THEATERS OCTOBER 21**

[@natgeochannel](#)

[#BeforeTheFlood](#)

[www.BeforeTheFlood.com](http://www.BeforeTheFlood.com)

# BEFORE THE FLOOD

## TABLE OF CONTENTS

Introduction	<b>3</b>
Why We're Telling This Story	<b>4</b>
Core Issues Featured in the Film	<b>5</b>
Experts Featured in the Film	<b>11</b>
Promote Your Screening	<b>12</b>
Frequently Asked Questions	<b>14</b>
Take Action: Solutions Do Exist	<b>16</b>
Discussion Questions	<b>17</b>
Statistics and Facts	<b>18</b>
Resources	<b>19</b>
Thank You	<b>22</b>



# BEFORE THE FLOOD

## // INTRODUCTION

From Academy Award®-winning filmmaker Fisher Stevens and Academy Award-winning actor, environmental activist and U.N. Messenger of Peace Leonardo DiCaprio, *Before the Flood* presents a riveting account of the dramatic changes now occurring around the world due to climate change, as well as the actions we as individuals and as a society can take to prevent catastrophic disruption of life on our planet. The film follows DiCaprio as he travels to five continents and the Arctic speaking to scientists, world leaders, activists and local residents to gain a deeper understanding of this complex issue and investigate concrete solutions to the most pressing environmental challenge of our time.

Thank you for your leadership and for stepping up to host a screening of *Before the Flood* in your community. In doing so, you join the ranks of hundreds across the country who have answered the call from our campaign to act on climate and serve alongside Leonardo DiCaprio, United Nations Messenger of Peace. Equally important as his role on the silver screen and on the global stage as a representative of the UN, is your role as a screening host—an Ambassador of Peace—in your own community.

---

**Through this screening, it is YOU who's laying the ground work for local change.**

This Screening Kit includes tips for organizing, promoting, and facilitating a screening that will spark a productive dialogue about our environment and how you and your guests can help to act on climate now.

Thank you for your partnership, your leadership, and your commitment to spread the word about *Before the Flood* and the effects of climate change. Your actions are empowering your community to identify solutions, and ultimately, helping to save our world.

# BEFORE THE FLOOD

## // WHY WE'RE TELLING THIS STORY

In the late winter of 2014, Leonardo DiCaprio called actor and documentarian Fisher Stevens with an idea: he wanted to collaborate on a documentary that would explore the causes and effects of climate change around the world, and the urgent need to transition away from using fossil fuels—and he wanted to get started right away.

“Time is not a luxury we have,” said DiCaprio. “Our natural world is quickly nearing unprecedented, irreversible and catastrophic change that threatens the very future of humankind. I didn’t want the film to scare people, or present them with statistics and facts that they already know, but to focus on what can and must be done immediately so that we can leave our planet a livable home for future generations. We are quickly running out of time.”

DiCaprio and Stevens had known each other for years through acting circles, and then became better acquainted when they both participated in *Mission Blue*, a trip to the Galapagos honoring marine biologist and 2009 TED Prize winner Sylvia Earle.

Stevens had already made several acclaimed documentaries about environmental issues, including 2014’s *Mission Blue* (co-directed with Robert Nixon) about Earle’s campaign to create a global network of protected marine sanctuaries, and last year’s climate change film *Racing Extinction*, which he produced along with Olivia Ahnemann. Probably his best known work is *The Cove*, a documentary he produced that exposed the secretive and brutal practice of dolphin hunting in Japan, for which he shared an Academy Award with director Louie Psihoyos.

Stevens jumped at the chance to team with DiCaprio and reach a broader audience with a new documentary about this vital subject. “There was a great opportunity with Leo because he has such a large following and people are interested in what he’s doing,” says the filmmaker. “I’m proud of all the films I’ve made, but I wanted to make another one that would get out into the zeitgeist so people would really understand the severity of this issue, and that if we don’t act now it’s going to harm us.”

The upcoming national elections in the U.S. also figured into the filmmakers’ decision to make *Before the Flood*, and to complete it by the fall of 2016—even though it would require working around DiCaprio’s demanding shooting schedule for Alejandro Iñárritu’s *The Revenant*.

“With the elections in the United States only a couple of months away, we sought to make sure that voters know this could be the last chance we have before it is too late to elect leaders who believe in science, and who have the courage and understanding to make headway on the environment a real priority,” says DiCaprio. So in April 2014, Stevens and DiCaprio partnered with RatPac Documentary Films and embarked on a two-year production process that took them to Europe, Asia, Africa, North and South America, Australia and the Arctic.

# BEFORE THE FLOOD

## // CORE ISSUES FEATURED IN THE FILM

*Before the Flood* presents a riveting account of the dramatic changes now occurring around the world due to climate change—the most pressing challenge of our time.

The film follows DiCaprio as he travels to five continents and the Arctic speaking to scientists, world leaders, activists and local residents to gain a deeper understanding of this complex issue. As such, we've broken down the core issues represented in his journey into these categories:

**Fossil Fuels / Methane Gas / Palm Oil / Geopolitical Landscape /  
US Political Landscape**

Further details about each core issue contributing to climate change are listed below.

## FOSSIL FUELS

---

**“If we’re going to fight climate change effectively, we have to realize that most of our economy is based on fossil fuels.”**

—Michael Brune, Sierra Club

Our consumer habits, from the fuel we put in our cars, the soaps we wash with, to the cakes we purchase for holidays, are ruining ecosystems, livelihoods, and dietary sources of billions of living creatures around the world—both on land and in the sea. Due to the increased output of emissions and the increased saturation of CO<sub>2</sub> in the oceans, there is more CO<sub>2</sub> being pumped into the atmosphere than ever before. Furthermore, due to the warming of the oceans and the change in water movement (i.e. the changing patterns of the Gulf Coast Stream) there is less CO<sub>2</sub> being absorbed by the planet’s natural filters, like forests and oceans. The ocean’s ability to absorb carbon dioxide has weakened since 1981, due to increased warmth and carbonic acid buildup. Research published this year shows that forests absorb less carbon due to industrial deforestation and forest death caused by the warming. These factors have led to the destruction of coral reefs around the planet, effectively eliminating primary sources of protein and income for nearly 1 billion people.

# BEFORE THE FLOOD

## Key Facts about Fossil Fuels

- Since 1981 the concentration of carbonic acid and increased temperatures of the oceans has greatly limited the ability for the world's natural filters, such as the ocean, to filter CO<sub>2</sub> from the atmosphere.
- Forests absorb less carbon due to industrial deforestation and forest death caused by global warming.
- The destruction of coral reefs around the planet have effectively eliminated primary sources of protein and income for nearly 1 billion people around the world.

## METHANE GAS

---

**“Cattle in the United States accounts for 10-12% of total emissions”**

—Leonardo DiCaprio

Methane is a greenhouse gas like carbon dioxide (CO<sub>2</sub>). But the negative effect on the climate of Methane is 23 times higher than the effect of CO<sub>2</sub>. Methane accounts for 10-12% of the total emissions and almost all of those emissions are derived from Cattle production.

In short, beef is extremely costly and inefficient on a per calorie basis—beef requires nearly 50x more land compared to other animals! In the United States, 47% of land is used for production of food, of which, 90% is used to simply grow feed for cattle. On the contrary, the things that human beings eat, such as fruit, veggies and nuts take up less than 1% of that land. Not only is cattle expensive in natural resources, the cattle simultaneously release methane gases that slowly eat away our ozone layer, which is a massive factor in pollution as one molecule of Methane is equivalent to 23 molecules of CO<sub>2</sub>, which ultimately accounts for 10-12% of total emissions in the United States. While there is less Methane than CO<sub>2</sub> in the atmosphere, methane is far more hazardous.

Luckily, this information presents a profound opportunity and a change of human behavior would not be insignificant. By simply replacing beef with chicken in your diet, you can reduce your carbon emissions by nearly 80%.

## Key Facts about Methane Gas

- One molecule of Methane is equivalent to 23 molecules of CO<sub>2</sub> making methane emissions 23x worse than that of CO<sub>2</sub>.
- Methane accounts for 10-12% of the total greenhouse emissions and almost all of those emissions are derived from Cattle production.

# BEFORE THE FLOOD

- Beef production requires nearly 50x more land compared to other animals.
- In the United States, 47% of land is used for production of food, of which, 90% is used to simply grow feed for cattle.
- Fruit, veggies and nuts take up less than 1% of that land.
- By simply replacing beef with chicken in your diet, you can reduce your carbon emissions by nearly 80%.

## PALM OIL

---

**“We are standing in the last place on earth that has elephant, rhino, orangutan and tigers live together in the world.”**

**—Farwiza Farhan, Forest, Nature, and Environment of Aceh**

Palm Oil is the world’s most popular type of vegetable oil, and is an ingredient found in over half of all packaged goods in the supermarkets, from soaps to soups. It is derived from the palm fruit, grown on the African oil palm tree which flourishes wherever heat and rainfall are abundant. While palm oil is grown across the world, 85% is produced and exported from Indonesia and Malaysia, often in unsustainable methods. While palm oil itself is not a major harm to the environment, the method of extraction is crippling and is one of the world’s leading causes of rainforest destruction. For plantation owners, burning is a common method for clearing vegetation in natural forests as well as within oil palm plantations so they can plant, and profit, from the production of palm oil. Traditionally, trees act as a canopy to filter CO<sub>2</sub> by absorbing the carbon in their trunks, leaves, etc. By removing these trees, decades of sequestered carbon that was absorbed by the forests, is released quickly into the atmosphere, effectively creating massive “carbon bombs.” From 2001 to 2010, land-use carbon emissions from palm oil in Indonesia averaged 216 to 268 million tons—that’s equivalent to the emissions from 45 to 55 million cars, 56 to 70 coal-fired power plants, or the annual energy use from 20 to 25 million homes. In Indonesia, these fires have led to the destruction of over 80% of their rainforests.

### Key Facts about Palm Oil

- Palm oil is found in an estimated 50% of all packaged goods, including: Lipstick, Chocolate, Instant Noodles, Soaps / Body Wash, Toothpaste, Ice Cream, Shortenings / Margarines, Cooking oil (hot climate), Cookies, Crackers, Cake mixes, Icing, Non-dairy creamer, Biscuits, and more.
- From 2001 to 2010, land-use carbon emissions from palm oil in Indonesia averaged 216 to 268 million tons—that’s equivalent to the emissions from 45 to 55 million cars, 56 to 70 coal-fired power plants, or the annual energy use from 20 to 25 million homes.

# BEFORE THE FLOOD

- 85% of all palm oil is produced and exported from Indonesia and Malaysia.
- As a result of the palm oil industry, threatened animals are seeing rapid destruction of their habitats, including: Asian elephants, orangutans, sumatran rhinoceros, and tigers.

## GEOPOLITICAL LANDSCAPE

---

**“All the polluting countries in the world are guilty of reaping the benefits of fossil fuels.”**

—Leonardo DiCaprio

We didn't get to this point by the actions of one nation, rather it's been a combined effort by the industrialized nations around the world. Despite nation's like the United States and China being the leading contributors of greenhouse gasses, the outcomes and immediate impacts disproportionately affect the smallest contributors. In *Before The Flood*, we saw the displacement of Pacific Islanders from island nations like Vanuatu, Micronesia, and Kiribati, as their homes have quite literally been washed away by rising sea levels, and will disappear within the next 50 years. We saw that one unseasonal rainfall in the poorest parts of India can eliminate an entire season's worth of crops. We saw an entire populace in China feel the harmful effects of polluted air as they are forced to wear masks every time they step outside. But it is important to realize that in climate change, not everyone is treated equally.

In India today, there are still 300M people that are without power, and in total, 700M are using bio-fuel (dried cow dung) as their main source of heat for cooking. At the same time, they are one of the most coal rich nations in the world and are seeking a cost-effective energy solution for their citizenry. If the world doesn't come together and lead by example, India's coal use could fry the entire planet. While the United States is one of the largest per capita emitter of greenhouse gases, it is neither affected by nor leading the charge on addressing climate change.

Fortunately, China, the world's largest emitter of greenhouse gases, has already made strides in reducing emissions and is setting a global precedent. By monitoring the emissions output of all of their factories—information that is publicly reported hourly—they have empowered the public and the media to hold the chief contributors accountable, particularly in Beijing where their coal consumption eclipses that of the entire United States.



# BEFORE THE FLOOD

## Key Facts about the Geopolitical Landscape

- Beijing's coal consumption eclipses that of the entire United States
- Five Islands will disappear in 2015 and six will disappear in 2016
- The Five Largest Emitters of Greenhouse Gases (total, as of 2011)
  - China
  - United States
  - Russia
  - India
  - Japan
- 5 Largest Consumers of Energy (Per Capita, as of 2011)
  - United States
  - Russia
  - France
  - Germany
  - Japan

## U.S. POLITICS

---

**“The ocean is not Republican. It is not Democrat. All it knows how to do is rise.”**

**—Miami Mayor Philip Levine**

Despite the clear indications, like “Sunny Day Flooding” in Florida and industry-wide agreement that climate change is real (an overwhelming 97% of scientist agree that climate change is real and due to human activity!), the issue remains politically divisive in the United States. On the local level, Mayors are leading the charge in addressing issues of climate change. They do not have time for political games are forced to address the immediate impacts of climate change, rather than benefit from long-term prevention measures that should be happening on a macro-level. This is forcing city executives, such as Mayor Levine of Miami Beach, to spend \$400M on infrastructure that only results in a short-term solution, rather than investing the same money in efforts that could start to curb emissions.

The countermovement, labeled as a “misinformation campaign” is being spearheaded by Big Oil and the industries that are profiting from fossil fuels. Their efforts are drastically preventing Congress from making significant steps to address climate change. While ultimately fueled by the ExxonMobils and Shells of the world, they disseminate their information through Political Action Committees (PACs) with noble names, such as Americans for Tax Reform, Americans for Prosperity, Institute for Energy Institute, and the Institute for Justice. Perhaps most notably, American's for Prosperity is in fact funded by Koch Industries, the largest privately held profiter from fossil fuels. These organizations find scientists that are willing to “sell” their credentials and speak on

# BEFORE THE FLOOD

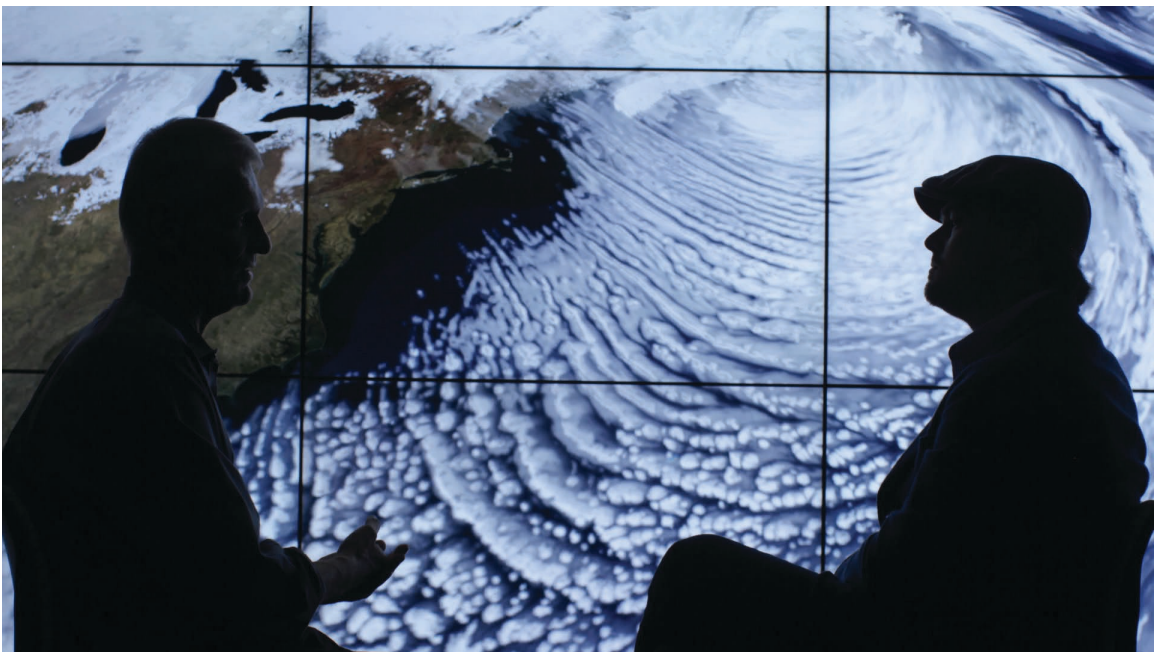
behalf of the organizations, to not only discredit the movement working to act on climate, but to also persuade elected officials to stymie proactive efforts.

Furthermore, these organizations are not just disseminating information, but they are buying members of Congress, too. Perhaps the most stark and consequential example is Senator James Inhofe (R-OK), the Chairman of the U.S. Senate Committee on Environment and Public Works, who has received nearly \$2M dollars in his career from the Oil & Gas industry.

So long as profits come before environment and we allow industries to buy our government, we will be fighting an uphill battle to make significant change.

## Key Facts about U.S. Politics

- 97% of scientist agree that climate change is real and accelerated by human contribution
- James Inhofe (R-OK), the Chairman of the U.S. Senate Committee on Environment and Public Works, has received nearly \$2M dollars in his career from the Oil & Gas industry
- American's for Prosperity is funded by Koch Industries, the largest privately held profiler from fossil fuels.



# BEFORE THE FLOOD

## // EXPERTS FEATURED IN THE FILM

### **Lindsey Allen, Executive Director, Rainforest Action Network (RAN)**

Lindsey Allen, Executive Director of Rainforest Action Network, is a world-class campaigner with more than a decade of experience and an unmatched track record pressuring and inspiring some of the world's largest corporations to protect rainforests.

### **Michael Brune, Executive Director, Sierra Club**

Michael Brune is Executive director of the Sierra Club, America's largest and most influential grassroots environmental organization.

### **Gidon Eshel, Research Prof. of Environmental Physics, Bard College**

Gidon Eshel is a statistician who grew up working on a dairy farm on an Israeli Kibbutz, a combination that's led to a deep knowledge of how what we eat affects our planet.

### **Jeremy Jackson, PhD., Marine Ecologist**

Jeremy Jackson is the Ritter Professor of Oceanography and Director of the Center for Marine Biodiversity and Conservation at the Scripps Institution of Oceanography. Painting pictures of changing marine environments, particularly coral reefs and the Isthmus of Panama, Jackson's research captures the extreme environmental decline of the oceans that has accelerated in the past 200 years.

### **Philip Levine, Mayor of Miami Beach**

As Mayor of Miami Beach, Philip Levine has seen the effects of climate change first hand. Through a \$400 million project that includes installing pumps throughout the city and rebuilding local roads, Levine hopes to create an infrastructure that can protect residents from issues such as sea level rise and flooding.

### **Gregory Mankiw, Professor of Economics, Harvard University**

Nicholas Gregory Mankiw is an American macroeconomist and the Robert M. Beren Professor of Economics at Harvard University. Mankiw is best known in academia for his work on New Keynesian economics and is an advocate for a carbon tax.

### **Dr. Michael Mann, Distinguished Professor of Atmospheric Science, Penn State University**

Dr. Mann received his undergraduate degrees in Physics and Applied Math from the University of California at Berkeley, an M.S. degree in Physics from Yale University, and a Ph.D. in Geology & Geophysics from Yale University. His research involves the use of theoretical models and observational data to better understand Earth's climate system.

# BEFORE THE FLOOD

## **Dr. Enric Sala, National Geographic Explorer-in-Residence**

Dr. Enric Sala is a National Geographic Explorer-in-Residence actively engaged in exploration, research and communications to advance ocean policy and conservation. His more than 100 scientific publications are widely recognized and used for real-world conservation efforts such as the creation of marine reserves.

## **Dr. Piers Sellers, Astronaut Director, Earth Sciences Division, NASA/GSFC**

Piers Sellers is currently Deputy Director of the Sciences and Exploration Directorate and Acting Director of the Earth Sciences Division at NASA/GSFC. From 1982 to 1996, he worked on global climate problems, particularly those involving interactions between the biosphere and the atmosphere, and was involved in constructing computer models of the global climate system, satellite data interpretation and conducting large-scale field experiments in the USA, Canada, Africa, and Brazil. He served as project scientist for the first large Earth Observing System platform, Terra, launched in 1998. His research is focused on the role of science in the future development of our society, particularly with regard to global environmental issues, and associated economic and political issues.

## **// PROMOTE YOUR SCREENING**

**Once you've invited guests, continue to promote your event across social media and ask allies in your community to help you spread the word too. Here are some sample messages that you can use across social media.**

### **Twitter**

- The time to act on **#ClimateChange** is now. **@LeoDiCaprio** explains why in his newest film **#BeforeTheFlood**.
- **#ClimateChange** is more than rising temperatures. It's a **#NationalSecurity** threat. Learn more in **@LeoDiCaprio's #BeforeTheFlood**.
- If we don't act on **#ClimateChange** now, it can cost taxpayers up to \$44 trillion by 2060. Learn what you can do now in **#BeforeTheFlood**.
- Join us for a preview screening of **@LeoDiCaprio's @NatGeoChannel's** newest film **#BeforeTheFlood** and learn why we must act now on **#ClimateChange!**
- Power is in the hands of the people to fight **#ClimateChange** this election. Watch **#BeforeTheFlood** to be informed at the polls this November
- Want a sneak peak of **@LeoDiCaprio's** latest film? Check out our screening [Date/Time/Location] before it airs on **@NatGeoChannel 10/30**.
- Our survival depends on addressing **#ClimateChange**. **@LeoDiCaprio** explains why in **@NatGeoChannel's #BeforeTheFlood**: [www.beforetheflood.com](http://www.beforetheflood.com)

# BEFORE THE FLOOD

- The science is clear, but the future is not. Learn more from @NatGeoChannel + @LeoDiCaprio in #BeforeTheFlood. [www.beforetheflood.com](http://www.beforetheflood.com)
- We must #ActOnClimate NOW. See why in #BeforeTheFlood on @NatGeoChannel Oct 30.
- 5 islands disappeared in 2015. 6 more will disappear in 2016. We must stop #ClimateChange. Learn more in @NatGeoChannel's #BeforeTheFlood.
- The 6th #MassExtinction is upon us & this time it's due to human consumption. But solutions do exist. See @NatGeoChannel's #BeforeTheFlood
- In as little as 250 years, extinction rates could rival the event that killed the dinosaurs. Learn why in @NatGeoChannel's #BeforeTheFlood.
- The US is a top contributor to #ClimateChange. We must elect Reps in NOV who will fight it. Learn more in @NatGeoChannel's #BeforeTheFlood
- Follow @LeoDiCaprio's journey across 5 continents & see how he plans to #ActOnClimate in @NatGeoChannel's #BeforeTheFlood.
- Why is palm oil a problem? It's extraction leads to extinction. Learn more in @NatGeoChannel's #BeforeTheFlood.
- Watch @NatGeoChannel's #BeforeTheFlood to learn why you should reduce your #CarbonFootprint. Then follow @fisherstevensbk to learn how.
- By 2060 #ClimateChange will cost taxpayers \$44 trillion. However, solutions do exist. @NatGeoChannel explains more in #BeforeTheFlood!
- Did you know #ThePentagon declared #ClimateChange a national security threat? Learn why in @NatGeoChannel's #BeforeTheFlood.
- "We are quickly running out of time" -@LeoDiCaprio in @NatGeoChannel's #BeforeTheFlood #ActOnClimate #OurOcean

## Facebook

- We agree with @Leonadro DiCaprio and @NatGeoChannel that the time to act on #ClimateChange is now. Join us on [DATE] to see what damage is already done and learn how we stop it from getting worse when we watch his newest film #BeforeTheFlood. Learn more at [LINK]!
- 97% of scientists agree that #ClimateChange is real and accelerated by human contribution. We agree with the science. Join us on [DATE] for a preview screening of @Leonardo DiCaprio's newest film #BeforeTheFlood. Learn more as [LINK]!
- Here's your chance to see @LeoDiCaprio's latest film before it hits theaters. @NatGeoChannel is hosting an advance screening of #BeforeTheFlood on [DATE/TIME] at LOCATION]



# BEFORE THE FLOOD

## // FREQUENTLY ASKED QUESTIONS

---

### **What is the Sixth Mass Extinction?**

Climate change is accelerating species loss on Earth, and by the end of this century, as many as one in six species could be at risk of extinction. To put that into perspective, mammal species are disappearing 20 to 100 faster now than the rate of the past. Not since the meteorites that killed the dinosaurs have we seen such wide-spread mass extinction. The planet is experiencing a new wave of die-offs, courtesy of human activity, that has resulted in increased habitat loss, the introduction of exotic invaders and rapid changes to our climate. Such cataclysmic events have only occurred 5 times in the history of Planet Earth—this is the first time it is caused by humans. In an effort to combat the declines, scientists have been racing to make predictions and generate models, but with every passing day, there are new discoveries that don't fit in any current model only leading one to assume that we are greatly underestimating the potential effects of Climate Change. If we continue at the rate we are going, the ice caps in the North Pole and Greenland could disappear within the century, ultimately wiping out coastal cities around the world and spark the end of humanity as we know it today.

---

### **What is the Difference between Carbon Dioxide and Methane Greenhouse Gas?**

Methane is a greenhouse gas like carbon dioxide (CO<sub>2</sub>), but the negative effect on the climate of Methane is 23 times higher than the effect of CO<sub>2</sub>. Methane accounts for 10-12% of the total human-driven emissions worldwide and almost all of those emissions are derived from Cattle production.

---

### **What is Carbon Tax?**

Not only are solutions for combatting climate change expensive, but actions speak louder than words, and without proper accountability, we cannot trust that words will turn into the necessary actions. Thus, it is in our best interest to implement a Carbon Tax which places a cost on carbon emissions. Basic economic theory says when a price goes up, consumption goes down, similar to how cigarette smoking has declined on the back of an increased tobacco tax. Traditionally, taxes are politically divisive, however, in this case, the idea is championed by renowned economist, Professor Greg Mankiw, the author of Contemporary Economics, a Professor at Harvard University, and served as the Chairman of the Council of Economic Advisors under President Bush. And furthermore, this needn't be a tax increase, rather a tax shift accounted for by way of reducing the Payroll Tax. However, perhaps the largest challenge is appealing to people's social responsibility.

# BEFORE THE FLOOD

---

## **What's the Problem with Palm Oil?**

Palm Oil is the world's most popular type of vegetable oil, and is an ingredient found in over half of all packaged goods in the supermarkets, from soaps to soups. It is derived from the palm fruit, grown on the African oil palm tree which flourishes wherever heat and rainfall are abundant. While palm oil is grown across the world, 85% is produced and exported from Indonesia and Malaysia, often in unsustainable methods. Palm oil itself is not a major harm to the environment, but the method of extraction is. It's one of the world's leading causes of rainforest destruction. For plantation owners, burning is a common method for clearing vegetation in natural forests as well as within oil palm plantations so they can plant, and profit, from the production of palm oil. Traditionally, trees act as a canopy to filter CO<sub>2</sub> by absorbing the carbon in their trunks, leaves, etc. By removing these trees, decades of sequestered carbon that was absorbed by the forests, is released quickly into the atmosphere, effectively creating massive "carbon bombs." From 2001 to 2010, land-use carbon emissions from palm oil in Indonesia averaged 216 to 268 million tons—that's equivalent to the emissions from 45 to 55 million cars, 56 to 70 coal-fired power plants, or the annual energy use from 20 to 25 million homes. In Indonesia, these fires have led to the destruction of over 80% of their rainforests.

---

## **How can Municipalities Play a Leading Role?**

On the local level, Mayors do not have time for political games are are forced to address the immediate impacts of climate change—such as "sunny day flooding"—rather than benefit from long-term prevention measures that should be happening on a macro-level. This is forcing city executives like Mayor Levine, Miami Beach, to spend \$400M on infrastructure that only results in a short-term solution, rather than investing the same money in research that could start to curb our emissions.

---

## **How Can I Figure Out My Carbon Footprint?**

If you're inspired by the message of the film and interested in learning more about how to offset your own carbon footprint, you will soon be able to using the Carbotax app. The program, designed by Daniel Nadler and Karl Burkhart, asks a series of questions about an individual's travel, commuting, eating, and other habits to calculate an appropriate annual contribution.

The app will be live on October 20. It's kind of like filling out a tax form and the tax of one's carbon footprint will then go to reforestation and the individual will be able to pick a certain area to reforest. That tax will also be tax deductible because it goes towards a 503C1 charity.

# BEFORE THE FLOOD

## // TAKE ACTION: SOLUTIONS DO EXIST

---

**“This is our last chance at combatting climate change as we can no longer reverse the clock, but we can prevent it from getting worse. It is up to us whether we get lauded or vilified by the next generations.”**

—Leonardo DiCaprio

There’s no doubt that climate change is an overwhelming problem, which is why, as a local Ambassador for Peace, it is so important to offer clear, meaningful tips that are both doable and impactful. Also, acknowledging that it is overwhelming can be comforting to audiences. Let them know that while it is overwhelming, there is still so much we can do. Starting with small steps leads to bigger ones: If you start changing your light bulb and using reusable bags, you are much more likely to do more, such as buy energy efficient appliances, take public transportation instead of always driving a car. We don’t want audiences to move from denial to despair—audiences should leave the film feeling hopeful, confident that their actions will have an impact.

### Here are a few things that viewers can do:

- 1.** SPREAD THE WORD about Before the Flood using the hashtag #BeforeTheFlood on social media and asking friends and family to visit our website ([www.beforetheflood.com](http://www.beforetheflood.com)) and see the film.
- 2.** Invite friends, colleagues, and neighbors to SEE THE FILM in theaters on October 21 and on National Geographic starting on October 30.
- 3.** Become a Before the Flood Ambassador of Peace and sign up to HOST A SCREENING of the film.
- 4.** Use your right to VOTE and elect officials who are working to combat climate change.
- 5.** Incentivize industry and consumers to consume less by paying a CARBON TAX and placing a cost on carbon emissions. Once the price goes up, consumption will start to go down.
- 6.** CHANGE THE WAY YOU CONSUME. Eat less beef, take public transportation instead of driving a car, don’t buy products made with palm oil, or use renewable energy. Tweet us at @natgeochannel and use the hashtag #BeforeTheFlood to let us know what consumption habit you’re changing.

# BEFORE THE FLOOD

## // DISCUSSION QUESTIONS

**Climate change is the most fundamental threat facing our planet. We must work together as a global, collective voice to demand major action now, as our very survival depends on it.**

**We've provided some Ambassador questions below to help you guide a powerful conversation with the audience following a community screening of Before the Flood.**

1. As evidenced in the film, every decision we make can have an environmental impact. What changes are you going to make in your day-to-day life to reduce your carbon footprint? How will you keep yourself accountable?
2. In Before the Flood, we saw countless ways that our consumption is ruining the environment. What outcomes were most shocking to you? What solutions provided you with the most optimism for the future?
3. Every November, we have a chance to elect representatives with our best interests in mind, whether that is locally or in Washington, D.C. If you were elected to office, what actions would you take to ensure a sustainable future for future generations?
4. This November, we are voting not only for a new leader of the Free World, but an individual that has the power to set us on a new course. What issues are most important to you this fall? And what can we do to better elevate the importance of the environment among our candidates?
5. The debate about climate change has been labeled as a misinformation campaign. What arguments have you heard on either side of the debate that have been most impactful in creating your views? Have any of these ideas been changed because of this film?
6. Are you optimistic or pessimistic about the future of our planet? Why?
7. This film has an incredible power to change minds and expand the common knowledge about the impact of Climate Change. Who do you think needs to see this film? Why should they see and what can you do to make sure that happens?
8. While it would be great to assume that everyone will make environmentally conscious decisions all the time, we cannot expect everyone to give up their cars and put solar panels on their homes. What tools (apps, incentives, resources, etc.) would help you and your community become more environmentally conscious?
9. The film was filled with powerful imagery, eye-popping statistics, and a myriad of ideas of how to live a greener lifestyle. What was most powerful and inspiring to you? What will you tell your peers about this film?
10. From the streets of Miami to the islands dotted across the Pacific, people are being affected by Climate Change everyday. Have you had any first-hand experiences with Climate Change? What was that like and what changes did you make as a result of that experience?

# BEFORE THE FLOOD

## // STATISTICS & FACTS

Before the Flood provides a wakeup call about the inevitable fate of our planet should we fail to act to reduce the effects of climate change. The film explores the symptoms and solutions of climate change before the information is distorted, as it often is, by those with a financial interest in fossil fuel production. Listed below are some key statistics regarding the core issues featured in the film.

### **Climate Change**

- It is estimated that by 2060, Climate Change will cost US taxpayers \$44 trillion
- Methane is a greenhouse gas like carbon dioxide (CO<sub>2</sub>). But the negative effect on the climate of Methane is 23 times higher than the effect of CO<sub>2</sub>.
- The Pentagon has said that Climate Change is a national security issue and people need to worry
- In 5 years, 30' worth of ice has melted off the surface of Greenland. That is 100 cubic kilometers of ice that is no longer stored on land, but at sea
- 97% of scientist agree that Climate Change is real and accelerated by human contribution
- 5 Islands disappeared in 2015 and 6 will disappear in 2016
- It would require only 100 gigafactories (Tesla's battery plants) to provide energy to the entire planet

### **Mass Extinction**

- By 2100, 1 in 6 species could go extinct if we don't act now.
- We are facing the largest mass extinction since the disappearance of the Dinosaurs. Such events have only occurred 5 times in the last 500 million years!
- Mammals are going extinct at a rate 20-100x greater than witnessed in history

### **Palm Oil**

- Palm oil is responsible for mass deforestation and excessive carbon emissions
- Palm oil is found in an estimated 50% of all packaged goods<sup>2</sup>
- 85% of Palm Oil is produced in Malaysia and Indonesia
- The extraction of Palm Oil is leading us to the near elimination of Elephants, Orangutans, Tigers and Rhinos that are native to the area<sup>6</sup>

### **Carbon Tax**

- It is estimated that by 2060, Climate Change will cost US taxpayers \$44 trillion



# BEFORE THE FLOOD

## // RESOURCES

The following organizations and articles will provide you with additional information about the issues addressed in *Before the Flood*. In addition to these resources, be sure to check the Google Play and App Store on Oct. 20th for Carbotax, a program designed by Daniel Nadler and Karl Burkhart, that asks a series of questions about your travel, commuting, eating and other habits to calculate an appropriate annual contribution that can be donated to non-profit to protect the environment.

### Fossil Fuels

- 350: Find a local climate activist group, or start your own, to educate your community and create solutions.
- NRDC: Help protect our environment and advocate for solutions for climate change.
- Greenpeace: Learn how replacing fossil fuels with renewable energy is better for both the environment and the economy.
- Sierra Club: Read up on the progress the US has made on eliminating fossil fuels.

### Mass Extinction

- Center for Biological Diversity: Sign up for their e-network, volunteer, or take part in current action campaigns for endangered species and wild places.
- Defenders of Wildlife: Stay updated on news and action alerts, advocate on behalf of wildlife, or symbolically adopt an animal.
- The Humane Society of the US: Volunteer directly with animals at HSUS's care center and rescue teams or indirectly with grassroots outreach and organizing events.
- Seafood Watch: Sign up for the e-newsletter and read up on how to choose sustainable seafood when you shop.
- Wildlife Conservation Society: Fight to protect wildlife through petitions and campaigns.
- Center for Biological Diversity: Learn what species are heading towards extinction and why it's so destructive for the world.
- The Humane Society of the US: Read up on why it's important to protect animals from cruelty ranging from the wildlife trade to puppy mills.

# BEFORE THE FLOOD

## **Methane Gas**

- EPA: Learn more about emissions and removals of the main greenhouse gases to and from the atmosphere.
- Environmental Defense Fund: Read about the impact of methane gas on our climate.

## **Palm Oil**

- Say No To Palm Oil: Read up on how producing and exporting palm oil leads to deforestation of rainforests, taking the land from the animals and people that live there.
- Rainforest Action Network: Learn how exporting palm oil, which can be found in half of packaged products, is one of the leading causes of rainforest destruction.
- World Wildlife Fund: Learn more about what palm oil is and how it affects our environment.
- Live Deforestation Free
- Ask Pepsi to take the Palm Oil Challenge
- Tell Starbucks to Have a Sustainable Palm Oil Plan
- SF20: Cut Palm Oil, Not Rainforests

## **Geopolitical Landscape**

- <http://www.c2es.org/international/key-country-policies/china>
- Roadmap for U.S.-China Cooperation on Energy and Climate Change
- Climate Change Mitigation Measures in China
- China's National Climate Change Program

## **US Political Landscape**

- Greenpeace: Join other activists in volunteering, starting groups, and running campaigns.
- Moms Clean Air Force: Urge your representatives to take a stand on climate change.
- Open Secrets: Learn how big oil is influencing our elections. See who is spending the the most money and which elected officials are benefitting from it.

## **Renewable Energy**

- Moms Clean Air Force: Read how coal contributes to air pollution and endangers our health.
- Moms Clean Air Force: Learn about the importance of clean energy.
- ACORE is a national non-profit organization dedicated to advancing the renewable energy sector through market development, policy changes, and financial innovation.
- Defenders of Wildlife: Learn about clean energy, climate change, and conservation issues.

## **Batteries**

- Tesla Energy: Read how Tesla's batteries are helping the world make the switch from fossil fuels to clean energy.
- ChargePoint brings electric vehicle (EV) charging to more people and places than ever before.
- ChargePoint—Request a charging station for Electric Vehicles near you.

# BEFORE THE FLOOD

## Carbon Tax

- Carbon Tax Center—The CTC was Launched in January 2007 to give voice to Americans who believe that taxing emissions of carbon dioxide—along with commensurate taxes on methane and other greenhouse gases—is imperative to reduce global warming.
- Effective Carbon Prices—OECD Economic textbooks predict that taxes and emission trading systems are the cheapest way for societies to reduce emissions of CO<sub>2</sub>. This book shows that this is also the case in the real world.

## Global Political Solutions

- Conservation International: Learn about international efforts to work with government and companies to protect our natural wealth.
- The Paris Agreement: At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal.
- Pope Francis' Encyclical Letter On Care for Our Common Home

## Additional Environmental Resources

- Mission Blue: Donate or help protect the oceans with Hope Spots, places in the ocean that are vital for its health.
- Oceana: Sign up for the newsletter and add your name to petitions to protect marine life.
- Seafood Watch: Learn how many fishing methods are harming the ocean and its wildlife.
- Waterkeeper Alliance: Engage in a variety of ways to protect “swimmable, drinkable, fishable” water.
- Jane Goodall Institute: Get involved from signing a petition to attending a Roots & Shoots event.
- The Nature Conservancy: Get involved by calculating your carbon footprint, planting trees, volunteering, and more.
- Mission Blue: Learn more about Hope Spots and why it's critical to protect the ocean.
- Save Our Seas: Read up on current projects that research and protect marine life around the world.
- US Climate Network
- WildAid

# BEFORE THE FLOOD

## THANK YOU

---

**“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.”**

**—Margaret Mead**

Thank you for your leadership and for standing with us as an Ambassador of Peace in your own community. It is your action and commitment to raise awareness, spur constructive conversation, and empower your community with solutions that will leave our planet a liable home for future generations.



Please take a few minutes to provide feedback about the screening and share your thoughts with us in this post-screening survey:

<https://www.surveymonkey.com/r/SKPNDW7>