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# Before the Flood

By Mark Monroe

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My first  
visual memories are of this  
framed poster above my crib.  
I would stare at it every  
night before I went to bed.  
My father was an underground  
comic distributor.  
He's always been this sort of  
Zelig of the counterculture  
as I like to call him.  
Having painted in  
Warhol's studio,  
being roomies with Lou  
Reed, he knew R. Crumb  
and all these great  
artists of his generation.  
I mean, I was brought up on all  
kinds of wacky visuals as a kid.  
So I would stare at this  
painting over and over:  
The Garden of Earthly Delights  
by Hieronymus Bosch.  
It was painted around 1500.  
And if you look at these  
panels long enough,  
they start to tell a story.  
In the first panel you have Adam  
and Eve in the Garden of Eden.  
Birds flying off  
into the distance,  
elephants and giraffe and a  
lot of religious iconography.  
The second panel is where  
it starts to become  
more interesting.  
The deadly sins start to infuse  
their way into the painting.  
There's overpopulation,  
there's debauchery and excess.  
And the last panel, which  
is the most nightmarish one,  
especially from a young child's  
perspective, is this twisted,

decayed, burnt landscape.  
A paradise that has been  
degraded and destroyed.  
Man may be  
unwittingly changing the world's  
climate through the waste  
products of its civilization...  
The burning of coal, oil and  
wood is releasing carbon dioxide  
into the atmosphere.  
The greenhouse effect has been  
detected and it is changing  
our climate now.  
Guess where the  
temperature goes?  
It goes up.  
Climate change is  
already in our backyards.  
It's official. 2012 was the  
hottest year in the...  
warmest year around the globe  
warmest year on record.  
It is these activities  
that drove mankind  
out of the Garden of Eden.  
- Hi, how are you?  
- Ah, Mr. DiCaprio.  
Pleasure, pleasure.  
Great to, great  
pleasure to see you.  
Here.  
We can move this.  
This can be adjusted.  
Oh wow, this  
is for height control.  
Yeah.  
- Like this, like this.  
- For shorter leaders  
and taller leaders.  
What specific message do you  
think is the most important?  
Climate change is  
coming much, much faster.  
We have seen such, uh,

extraordinary extreme weather patterns.

If you consider this vastness of this universe, this Planet Earth is just a small boat. If this boat is sinking, then I think we will have to all sink together.

I know that he has been a very committed and effective environmentalist and that is why I really count on your leadership and vision. Please welcome newly appointed United Nations Messenger of Peace, Mr. Leonardo DiCaprio.

Thank you Mr. Secretary General, Your Excellencies... I feel incredibly honored that they chose me to be the United Nations Messenger of Peace on climate change. I stand before you, not as an expert, I want to do everything I can to learn more about this issue. See for myself exactly what's going on and what can be done. But it all kinda seems beyond our control.

As an actor, I pretend for a living. I play fictitious characters often solving fictitious problems.

I believe that mankind has looked at climate change in that same way. We keep getting inundated with catastrophic news about the environment every single day,

and the problem seems to be  
getting worse and  
worse and worse.  
Try to have a conversation with  
anyone about climate change,  
people just tune out.  
If the U.N. really knew  
how I feel,  
how pessimistic I am about our  
future, I mean, to be honest,  
they may have picked  
the wrong guy.  
Hundreds of  
thousands took to the streets  
of New York today demonstrating  
for action on climate change.  
Secretary General,  
Ban Ki-Moon called Leo  
a credible voice in the  
environmental movement,  
which is like calling Jeffrey  
Dahmer a credible voice  
for stew.  
Leonardo DiCaprio  
has just naively bought into  
the entire global warming hoax.  
Who better to  
educate world leaders on made up  
climate change in a crisis that  
doesn't exist than an actor  
from Hollywood with zero years  
of scientific training?  
Hi, how are you?  
I'm very good.  
How are you doing,  
it's a pleasure.  
You too.  
Hey!  
Nice to see you, buddy.  
Good to see you.  
So I just started this new film,  
it's set in the Western Frontier  
of the United States  
in the early 1800s.

It's basically the dawn of  
the Industrial Revolution.  
It has a lot to do with men who  
are pillaging the natural world,  
wiping species out, and  
basically destroying cultures  
in the process.  
Those are like buffalo skulls.  
Alejandro!  
Crazy, are these fur-trappers?  
Are these people  
selling the skulls?  
No, these are people  
selling the skulls, yeah.  
What the is this?  
Isn't that embarrassing?  
Man, that's crazy.  
And the fact that  
they never even reflected on it,  
that there's an ending to these  
animals, and we cannot just,  
it's insane.  
If you can put that  
in the movie that would be  
unbelievable.  
How about this, I dare you!  
Ah, okay.  
get to the boat. Come on son.  
I didn't grow up  
around nature at all,  
I grew up near  
downtown Los Angeles.  
And my escape every weekend was  
the Natural History Museum.  
And from a very young age, I  
became fascinated with species  
that had become extinct.  
All these different animals,  
from the dodo to the  
passenger pigeon,  
which was the most  
plentiful bird on earth,  
to the Tasmanian tiger, also  
known as the thylacene

to the great auk, the  
quagga, the moa.  
I remember the  
anger that I felt,  
reading all these stories about  
how explorers and settlers  
would just wipe out an entire  
species, and in the process,  
decimate the ecosystem forever.  
The difference now is we're  
knowingly doing this;  
it's just on a  
much larger scale.  
If we're gonna fight  
climate change effectively,  
we have to start by  
acknowledging that  
most of our economy is  
based on fossil fuels.  
Fossil fuels are coal,  
oil, and natural gas.  
Oil powers most of the  
transportation sector,  
coal and natural gas power  
most of the electricity.  
Now, in the first couple decades  
of the twenty-first century,  
in order to sustain our  
dependence on fossil fuels,  
we're going to very risky,  
very extreme new sources.  
You see this in things like  
mountain top removal for coal,  
fracking for natural gas,  
offshore drilling for oil,  
and the tar sands, which is  
the most devastating form  
of producing fossil fuels.  
They take away massive forests,  
the water in the streams  
and rivers is poisoned.  
It has severe impacts on the  
wildlife, on native communities,  
and it requires a huge amount of

energy simply to get it to  
our fuel tanks.  
There is no such thing  
as clean fossil fuel.  
Headsets are  
hung up at the back,  
but the volume control's right  
above the microphone so...  
The truth is, the more  
I've learned about this issue  
and everything that  
contributes to the problem,  
the more I realize  
how much I don't know.  
How much I don't know  
about this issue.  
The first time I ever heard  
the term global warming,  
which was what it  
was called back then,  
I was in my early twenties.  
I had the opportunity to sit  
down one on one with then  
Vice President, Al Gore  
in the White House.  
And he drew a picture of  
our planet on a chalkboard,  
and then he drew the atmosphere  
around it, and he said,  
this is the most important  
issue of our time.  
I had absolutely no idea  
what he was talking about.  
He said all our modes of  
transportation, boats, trains,  
planes, cars, the way  
we produce our food,  
the way we build our cities,  
almost everything we do releases  
carbon dioxide, CO<sub>2</sub>, and that  
leads to climate change.  
The polar ice caps will melt,  
the seas will start to rise,  
there will be more dangerous



weather patterns, floods,  
droughts, wildfires.  
It sounded like some nightmarish  
science fiction film.  
Except everything  
he said is real  
and it's happening right now.  
Wow.  
Wow.  
Beautiful.  
I just want to know  
how far we've gone,  
how much damage we've done, and  
if there's anything we can do  
to stop it.  
You all set, mate?!  
So it's the 4th of July,  
and we're here in the  
middle of the Arctic.  
Right now we are  
standing on the ocean,  
we are basically  
walking on water.  
This is the northern  
tip of Baffin Island,  
one of the hundreds of islands  
in the High Canadian Arctic.  
We are way above  
the Arctic Circle,  
and if you put your  
hand in the water,  
you would not be able to stand  
it for more than 5 minutes,  
except you who are a badass.  
You hunt and fish here, right?  
Yeah.  
What do you, what do  
you fish and what do you hunt?  
In my territory I  
hunt fish, seal, narwhal,  
and polar bear.  
- Is this polar bear?  
- Yup.  
Oh, well there you go!

And the ice here, since you've been around has it been decreasing?  
We used to have a solid ice, blue. Not light blue like this, blue. Hard, ice. Now we usually have a, kind of ice cream type of ice. It's ice but it's, when it starts to melt, it melts pretty fast. Much faster than before. 2040, you will be able to sail over the North Pole. There's going to be no sea ice left in the Arctic Ocean in the summer. We are burning so many fossil fuels that the ice is melting. The Arctic is like the air conditioning for the Northern Hemisphere. If it goes away, that's going to change currents, that's going to change weather patterns, that's going to make floods and droughts more catastrophic. It's the most dramatic transformation of a large environment ever. Look at this. They're right here! There are about 10,000 to 12,000 narwhals in this region. The numbers are stable here, in other regions are declining. Wow. That's awesome. Yeah, they are waiting for the ice to open up, to swim in, so they

can catch the flounder.  
I can't believe what  
they sound like, it's amazing.  
They're like purring.  
You know, I don't  
want to be in a planet  
without these animals.  
He's the  
chairman of Earth Day 2000,  
Leonardo DiCaprio.  
When I was 25 years old,  
I remember being asked to  
participate in this huge event  
in Washington for Earth Day.  
Temperatures are rising,  
coral reefs are dying,  
and not since a meteor hit the  
earth 65 million years ago,  
have so many species of plant  
and animals become extinct  
in such a short time.  
I even got a chance to  
interview the President  
of the United States.  
Why do you think this issue  
is so constantly overlooked?  
I think it's  
because it takes a long time  
for the climate to change in  
a way that people feel it,  
and because, uh, it seems  
sort of abstract now.  
At the time, it was  
this huge push to get the word  
out on global warming.  
Now a couple degrees' difference  
in today's temperatures  
may not seem like an emergency.  
Back then everyone was focused  
on small, individual actions.  
We all have to, you know, bring  
environmentalism to the American  
consciousness.  
And it boiled down to simple

solutions like changing  
your light bulb.  
It seemed like a positive  
thing at the time, you know.  
Changing your lightbulb.  
But it's pretty clear that we're  
way beyond that point now;  
things have taken a  
massive turn for the worst.  
We keep finding things that  
aren't in the climate models  
that are used to  
project the future.  
So that, that tells me that the  
projections for the future are,  
are really conservative.  
If climate stays at this  
temperature that it's been  
in the last decade, Greenland  
is, is going away.  
Don't walk into the crevasse.  
Oh my God!  
Don't get too close to the edge.  
Look at how violent that is.  
These rapids are going  
so incredibly fast.  
This meltwater is  
making its way to the sea.  
If that's not balanced by  
snowfall then the ice sheet gets  
smaller and sea level rises.  
This is actually our  
proper climate station.  
This is a climate station?  
I was imagining a massive igloo  
with all kinds of scientists  
doing experiments.  
It really does look like  
broken down pool equipment.  
How, what does this connect to?  
Well, this is all melted up now,  
this was a hose that  
went down 30 feet,  
and now it's melted out.

Wait a minute, so this,  
that's lying here used to  
be straight down under ice?  
Yeah, so we made.  
So that's the amount  
of ice that has melted.  
Yeah.  
This is 5 years of melt.  
So this entire length  
is the thickness of ice that has  
melted throughout all of lower  
Greenland in the past 5 years.  
Right.  
That's hundreds of cubic  
kilometers of ice that's now  
no longer stored on land.  
It's gone into  
the sea over here.  
Miami, New Orleans,  
Boston and Long Beach,  
California may be doomed  
to fall victim  
to ever-rising sea levels.  
South Florida as we  
know it could be washed away  
by rising seas.  
When you look at  
places that are the most  
susceptible to sea level rise,  
especially in the United States,  
Florida is the key one.  
And a lot of the, your  
campaign was based on um,  
giving people an understanding  
of what's at risk here.  
We don't have  
the liberty or the time  
to debate climate change.  
If you don't believe  
in it, I always say  
bring your unconverted to  
us and we'll make sure you agree  
that there is a major problem.  
We have this thing called

sunny day flooding.  
Picture a beautiful sunny day,  
all of a sudden you see water  
coming up on the street.  
As the sea level rises,  
the water's coming up,  
backflowing into our  
streets through our drains.  
If the city is underwater,  
there's no future.  
How do you combat that?  
Exactly what's going on as far  
as prevention is concerned?  
We started putting in  
pumps, take a look at this.  
Oh, this is the pump!  
Yup!  
We're in the process of  
building all across the city.  
This street right here used  
to be fully underwater.  
During high tide you  
may need a canoe.  
And now what we did was we  
raised this road and you can see  
the difference, see how that  
area there kind of goes,  
slopes down a little bit.  
So the main investment  
is in these systems right here,  
raising the roads and  
the electric pumps.  
Yeah, this is a  
400-million-dollar project.  
City wide.  
And of course we're paying  
for it by our city revenues.  
I had to raise tax revenue,  
which you can imagine is not  
a very popular thing to  
do as a politician.  
And this construction  
is it going to make  
- a major difference.

- Major difference.

And buy you a  
significant amount of time.  
Absolutely I would  
think about 40, 50 years.

That's it?

Yes.

Now one of the things I always  
say when people ask me this,  
Mayor what about after 50  
years, what's going to happen?

Well what we have to do  
is come up with solutions,  
and unfortunately we have a  
governor and we have a cabinet  
that doesn't believe that  
this is a major issue.

Officials in Florida  
were banned from using the words  
climate change.

This policy began in 2011 after  
Rick Scott came into office.

No one really wants  
to talk about climate change,  
especially our senator  
from Florida, Marco Rubio,  
who doesn't believe that  
we have climate change  
and is not interested in  
assisting our state.

I would hope that he would have  
gone out and grabbed us federal  
funds over the last three years  
to help make our cities viable.

I do not believe that  
human activity is causing  
these dramatic changes to our  
climate the way these scientists  
are portraying it.

Why do you think there  
is such opposition about  
the science?

I think it's politics,  
I think it so has to do with

lobbying and industry and I  
always say one thing, Leo,  
I said uh, the ocean  
is not Republican  
and it's not Democrat,  
all it knows how to do is rise.  
Satellite data show,  
for the last seventeen years,  
there has been no significant  
recorded warming.  
It's supposed  
to be 70 degrees today,  
it's freezing here!  
Speaking of global warming where  
is, we need some global warming!  
It's freezing.  
There's about  
as robust a consensus  
about human-caused climate  
change as there is  
for any matter in science.  
Be it the theory of gravity.  
97 percent of climate scientists  
agree, the globe is warming,  
our climate is changing, it's  
due to fossil fuel burning  
and other human activities.  
Unfortunately we are fighting  
this massive disinformation  
campaign to confuse the public.  
You look at the  
satellite data we actually  
have had no significant warming  
since 1998 actually no warming.  
We have been cooling  
in recent years.  
If you actually believe  
that global warming  
is the biggest problem we face,  
you're the dumbest son  
of a bitch on the planet.  
So yeah, maybe you  
could just talk a little bit  
about your background, the



studies that you've done.  
I was the classic  
science and math geek  
in high school.  
Studied physics in graduate  
school and a decade and half ago  
my co-authors and I started  
to look into climate change  
in the more distant past.  
We published a curve where  
there's this long-term cooling  
trend and then all of  
a sudden this abrupt warming  
that has no precedent  
as far back as you can go and  
it got named the hockey stick  
because it looks like the  
blade of a hockey stick.  
And once we had published  
that graph I had set myself up  
for a completely different life.  
And why is that?  
What did they do  
specifically to?  
I was vilified  
on the editorial pages  
of the Wall Street  
Journal, on Fox News.  
That I was a fraud.  
Other German  
Scientists have called it  
statistical rubbish.  
He's been called a  
statistical charlatan.  
I was being  
attacked by congressmen.  
They threw  
spaghetti up on the wall  
and wherever it stuck is  
what they put in the chart.  
I had death threats  
that were actionable enough that  
the FBI at one point had to come  
to my office to investigate

an envelope that had been sent  
to me that had a white powder.  
I've had threats made  
against my family.  
These folks know they don't have  
to win the legitimate scientific  
debate.  
They just need to  
divide the public,  
and all of that hatred and fear  
is in fact organized and funded  
by a few players.  
Fossil fuel interests, folks  
like the Koch brothers finance  
a very large echo chamber of  
climate change denialism.  
The reality is a  
lot of climatologists believe  
that the science is not settled.  
Global warming is  
illusory were actually going  
through a period  
of global cooling.  
It's easier to  
believe in a benevolent god  
the baby Jesus than it is in  
some kind of theory about  
global warming.  
Websites and news  
outlets and think tanks.  
They find people with fairly  
impressive credentials  
who are willing to sell  
those credentials  
to fossil fuel interests.  
Dr. Fred Singer,  
President of the science  
and environmental  
policy project.  
The weather balloons  
around the world show no warming  
of the atmosphere in  
the last 25 years.  
You have all of

these organizations with lofty  
sounding names like Americans  
for Prosperity  
or The Heartland Institute.  
These are front groups that are  
funded by corporate interests.  
Americans for Prosperity  
is really a front group  
for the Koch brothers.  
That's an organization  
founded by David and Charles  
Koch and good  
morning to you Tim.  
- Good to be here, Bill.  
- Welcome here,  
what are you going  
to get for your money?  
We hope to see policies change.  
Koch Industries is one  
of the largest privately held  
fossil fuel interests  
in the world.  
And they are doing everything  
they can to protect that wealth.  
Would you give up  
all that industrialization,  
would you give up all the  
productivity that it's brought  
us, all the lives that it has  
saved over the last 100 years,  
so that the temperature  
wouldn't rise half a percent  
or a milli percent?  
They've lobbied Congress.  
We keep hearing 2014 has  
been the warmest year on record,  
oh here Mr. President  
catch this. Mhmm.  
James Inhofe is  
probably the most prominent  
congressional climate  
change denier.  
Global warming is the  
greatest hoax ever perpetrated

on the American people.  
He's the chair of the  
Senate Environment Committee.  
There are some people  
who are so arrogant to think  
that they are so powerful that  
they can change a climate.  
Man can't change climate.  
It might not be  
surprising to learn that  
James Inhofe is one of  
the largest recipients  
of fossil fuel money  
in the U.S. Senate.  
Fossil Fuel interests  
have bought our House  
of Representatives and Senate  
Environment Committee.  
We can't get a climate bill  
passed through our Congress  
because it's controlled  
by fossil fuel funded  
climate change deniers who  
are blocking any bills  
that would attempt  
to deal with this problem.  
How they're able to  
discredit scientists who have  
devoted their life to this issue  
is kind of mind boggling to me.  
It sometimes makes  
me want to take a drink right.  
I'm sure.  
If I was a scientist  
I would be absolutely pissed  
every single day of my life.  
These people are, you know,  
engaged in an effort to  
lead us astray in the name  
of short term, you know, fossil  
fuel profits so that we end up  
leaving behind a  
degraded planet.  
What could be more

immoral than that?  
Even now, man may be  
unwittingly changing the world's  
climate through the waste  
products of this civilization.  
Due to our release through  
factories and automobiles  
every year of more than 6  
billion tons of carbon dioxide.  
Our atmosphere seems  
to be getting warmer.  
This is bad?  
Well it's been calculated a few  
degrees rise in the earth's  
temperature would melt  
the polar ice caps.  
Fact is, we've known  
about this problem for decades  
and decades, for  
over half a century.  
Every day I send  
you a thousand times more power  
than you use in a year.  
Anybody working on getting power  
direct from old glow hard here?  
Oh yes but not nearly enough,  
roll 6b! The solar battery.  
Imagine the world right now,  
if we had taken the science of  
climate change seriously  
back then.  
But our engineers  
will have to build efficient  
generators that spread out  
over acres, even square miles.  
To compete with the cheap coal  
and oil still available to us.  
Since then, our  
population has increased  
by almost 5 billion  
people and counting.  
And China has recently surpassed  
the United States as the world's  
number one polluter.

The problem has become even more difficult to solve.  
Oh now we're on the opposite side of the street again. Ok.  
Now we're in a bike lane.  
Air-pocalypse,  
schools have been shut down,  
the toxicity has reached that worst level.  
It's absolutely brilliant,  
you don't allow these companies to operate in the dark.  
Chinese media  
talks about climate change on a regular basis.  
Is there a giant push towards solar and wind here,  
is that the next step?  
China's got some of the biggest wind and solar companies in the world now.  
Even though China has some of the largest challenges,  
like huge population, China's gonna prioritize wind and solar rather than coal.  
If China can do it, then I think the rest of the world can.  
China is still heavily relying on fossil fuels,  
but they seem to be transitioning to renewables much faster than anyone anticipated.  
The question is, can less developed countries with rapidly growing populations make the same transition?  
India is the world's third largest emitter yet the country is struggling with massive power shortages and rolling blackouts.

India has consistently said  
that its biggest priority  
is development and bringing  
people out of poverty.  
We care about climate change.  
But the fact is we are a country  
where energy access is as much  
a challenge as climate change.  
We need to make sure that every  
Indian has access to energy.  
From what I understood  
there are 300 million people  
without power, without  
light here in India.  
Yes, yes.  
That's equivalent to  
the entire population here  
of the United States.  
Today in villages,  
Indian villages you will find  
people take cow dung and  
they make what is known,  
called cow dung cakes  
or uples in Hindi,  
and they burn those.  
And that's their only  
source of cooking energy.  
So they will make  
food now over this.  
Coal is cheap whether  
you and I like it or not,  
coal is cheap.  
You have to think about this  
from this point of view.  
If you created the  
problem in the past,  
we will create it in the future.  
We have 700 million households  
who cook using biomass today,  
700 million households.  
If those households move to coal  
you have that much more use  
of fossil fuels, then the  
entire world is fried.

If anyone gives you this very  
cute stuff and tells you,  
Oh the world's poor  
should move to solar, and,  
Why do they have to make the  
mistakes that we have made?  
I hear this all the time  
from American engineers.  
And I'm like, wow!  
You know, I mean, if it was that  
easy I would have really liked  
the U.S. to move towards solar,  
but you haven't.  
Let's put our money  
where our mouth is.  
We have to  
practice what we preach.  
Absolutely.  
I am sorry to say this,  
I know you're an American,  
and please don't  
take this amiss,  
but your consumption is going to  
really put a hole in the planet.  
And I think that's the  
conversation we need to have.  
I'll show you charts  
from this perspective,  
electricity consumed by one  
American at home is equivalent  
to 1.5 citizens of France,  
2.2 citizens of Japan,  
and 10 citizens of China,  
34 of India, 61 of Nigeria.  
Why?  
Because you're building  
bigger, you're building more  
and using much more than before.  
The fact is that we need to  
put the issue of lifestyle  
and consumption at the center  
of climate negotiations.  
Look I, there is no  
way I don't agree with you,



how can you argue that?  
You're absolutely  
correct and I think yes,  
it's a very difficult argument  
to present to Americans  
that we need to change our  
lifestyle and I would also  
argue that it's probably  
not going to happen.  
So we are dependent, if we want  
to solve the climate crisis,  
on the fact that hopefully  
renewables like solar and wind  
will become cheaper and cheaper  
and cheaper the more money  
we funnel into them, the more we  
invest into them and ultimately  
it will solve that problem.  
But I, you're shaking  
your head obviously.  
I'm shaking my head  
Indian style which means no.  
Right.  
Who will invest, Leo?  
Let's be real about this,  
who will invest and how  
will you invest in it?  
We are doing more  
investment in solar today,  
China is doing much more  
investment in solar today  
than the U.S. is.  
What is the U.S. doing  
which the rest of the world  
can learn from?  
You're a fossil-addicted  
country,  
but if you are seriously  
disengaging it's something  
for us to learn from.  
And it will be leadership  
that we can all hold up  
to our government and say  
listen if the U.S. can do it

and the U.S. is doing it,  
in spite of all their pressures,  
we can do it as well.  
The sad part of it is,  
it's just not happening.  
And people like me, we are  
rich enough to withstand  
the first hit of climate change  
but it's the poor of India,  
it's the poor of Africa,  
it's the poor of Bangladesh,  
who are impacted today by what  
I believe is the first signs  
of climate change.  
So February and March,  
which is when the crops  
are standing, they got  
half the year's rainfall  
in just five hours.  
Half the year's  
rainfall in five hours?  
So these crops  
are all destroyed?  
Yeah destroyed.  
Your back is breaking doing this  
and then you get one unseasonal  
rainfall, it's absolutely  
like the last straw  
on the camel's back.  
And we need countries to believe  
that climate change is real  
and urgent.  
It's not a figment  
of their imagination.  
The U.S. has been the  
biggest emitter of greenhouse  
gases in history, and there's no  
doubt that we've all benefited  
from fossil fuels.  
I know I have.  
My footprint is probably a lot  
bigger than most people's,  
and there are times  
when I question,

what is the right thing to do?  
What actions should  
we be taking?  
There are over a billion people  
out there without electricity,  
and they want lights,  
they want heat,  
they want the lifestyle that  
we've had in the United States  
for the last hundred years.  
If we're gonna  
solve this problem,  
we all have a responsibility  
to set an example,  
and more than that, help the  
developing world transition  
before it's too late.  
We are seeing events that  
we did not see in the past.  
It's not about when the entire  
islands are underwater.  
It's well before then is  
going to be the crisis.  
And it's already happening.  
What we are facing at the  
moment is severe flooding.  
It's gone into the fresh water  
ponds and that's how people  
get their drinking water.  
Have you spoken  
with people in the scientific  
community that have given you  
some sort of a time frame?  
Given the scenarios and  
the projections put forward  
by the science, our  
islands will be underwater,  
and so the question is,  
what do we do about it?  
At the moment, internally, we  
are relocating our communities  
from certain parts of the  
island to where the water  
has not come up.

But our long-term strategy  
is something that I've been  
discussing internationally,  
because we,  
we have to come to accept the  
reality that we may not be able  
to accommodate  
all of our people.  
We have adopted a policy  
of migration with dignity.  
We bought a piece  
of land in Fiji,  
so that if our people choose to  
migrate today, they can do it.  
Hmm.

They must do it  
as a matter of choice.  
I've got grandchildren.  
I've got 12 grandchildren.  
I'd like to be able to,  
to go away knowing that  
they will continue  
to have a home.

Islands in the Pacific,  
we're a paradise in peril.  
Throughout Palau we have  
sea level rise coming  
into the farmlands,  
coming into the homes.  
This is unbelievable.  
When was this an intact  
island with homes on it?  
How long ago?

12 years ago, when you came,  
there were people living here.  
So, within the 12-year  
period this is the result.

It's just a small  
picture of one place.  
The small island nations  
who contribute the least  
to the causes of climate change,  
are actually going to feel  
the worst uh, impacts.

The worst scenarios  
because of global warming.  
What we've done to  
the rest of the world is just,  
it's criminal.  
It's not just sea level rise.  
We've taken these coastal  
ecosystems that used to be  
dominated by incredibly  
abundant fish,  
and we've knocked the whole  
system down reversing  
half a billion  
years of evolution.  
One billion people depend on  
fisheries from coral reefs  
for virtually all of  
their protein.  
One billion people.  
Here we are, we're on what was  
a pretty healthy coral reef.  
What's missing?  
You see almost nothing  
swimming around.  
Is this a dying coral reef?  
I think this reef has had it.  
We're pushing the system really  
hard and that is a serious enemy  
to the health of corals  
and their ability to grow.  
Mhm.  
It's causing loss  
of people's livelihoods.  
It's causing starvation.  
This is happening all over.  
Oh yeah, absolutely.  
I think reefs as we know them  
are gonna virtually disappear.  
The oceans are like this big  
buffer because they absorb  
carbon dioxide.  
They take up about a third  
of the CO<sub>2</sub> that we dump  
into the atmosphere.

So because of that, they are a  
stabilizing force in climate.  
The problem is the ocean can't  
do its job fast enough  
with this absurd rate of  
carbon dioxide emissions.  
You know, life isn't gonna  
disappear in the ocean.  
There will always be  
life in the ocean,  
but it's not gonna be  
necessarily the kind of life  
we want.  
We could go back to 3 billion  
years ago and have just  
a whole lot of slime.  
We're taking away the  
ecosystems that normally help us  
to restabilize the climate.  
Like oceans, rainforests absorb  
carbon from our atmosphere.  
Decades and decades of the  
forests breathing in the carbon,  
storing it in the trunks and the  
leaves and the organic matter.  
Those carbon emissions are  
being held safe for us.  
Until we clear them,  
and light them on fire.  
It acts like a carbon bomb  
and releases massive carbon  
emissions back into  
the atmosphere.  
Wow, this haze  
is intense isn't it?  
You can't see anything here!  
This is scary.  
This isn't natural?  
This is all fire?  
This is not natural at all.  
I've never  
seen anything like this.  
There are three big  
tropical rainforest areas

left in the world.

The Amazon in South America,  
the Congo Basin in Africa,  
and the South East Asian  
rainforest which spans  
Indonesia.

In Indonesia, we're seeing  
fires being intentionally set  
in order to create palm  
oil plantations,  
which grow the cheapest  
vegetable oil in the world.

It's in cooking oils,  
in processed foods,  
in your cosmetics,  
in your detergents.

This really cheap commodity is  
making companies tremendous  
profits.

Just as far as you can see.

Rows of palm oil.

They have destroyed so much of  
this forest, it's unbelievable.

What a beauty!

I can't even  
comprehend what these forests  
must have looked like.

Forests where rhino and elephant  
and orangutan would be populated  
into the thousands.

These guys are  
a byproduct of the forest lost  
because of the  
palm oil industry.

You know, they're effectively  
refugees from forests  
that no longer exist.

Wow, that's a good grip.

Yeah!

Strong.

Hey, I'm gonna get you some  
fruit, don't be scared.

The carrot or the fruit?

Definitely the fruit, that's

what you guys are after, huh?  
There you go.  
Do you like carrots?  
Or, not so much?  
Oh my God.  
These are amazing.  
Aw.  
I always  
remind people when they go,  
Aw, the poor thing, you know,  
these are the lucky survivors.  
What happens to  
all the other orangutan?  
You know,  
all the others are dead.  
And the reason people are  
chopping down the forest  
to plant palm oil plantations  
is because people keep buying  
the stuff.  
People have to realize that what  
they do in their supermarket,  
the decisions they make  
in their daily lives,  
are affecting places like  
the Leuser ecosystem.  
If palm oil is in  
almost everything we buy,  
how are consumers  
supposed to avoid this?  
If these products have  
such a devastating impact,  
why aren't governments setting  
restrictions to prevent  
these big corporations  
from destroying the planet  
just so they can save money?  
If you want something  
that you can do without  
appealing to any  
higher authorities,  
such as government or whatever,  
I can't think of an easier, um,  
out, than changing your diet.



You can start tonight.  
So you're a scientist  
who studies the effects  
of agriculture on climate, but  
you grew up raising cattle  
and taking them to  
slaughter, right?  
I'm a scientist, that's  
the most important thing.  
So, of all the reasons for  
tropical deforestation,  
the foremost is beef.  
And beef is one of the most  
inefficient uses of resources  
on the planet.  
In the U.S., 47 percent of land  
is used for food production,  
and of that, the lion's share is  
just to grow feed for cattle.  
The things that we actually eat,  
like fruit, vegetable, nuts,  
it's a percent.  
Most importantly,  
cows produce methane,  
and methane is a  
powerful greenhouse gas.  
The way cows produce methane is  
they eat as much as they can,  
and when they are chewing, a  
whole bunch of methane is burped  
through the mouth uh,  
into the atmosphere.  
The atmosphere has  
much more CO<sub>2</sub> in it.  
But Methane is far  
more impactful.  
Every molecule of methane is  
equivalent to 23 molecules  
of CO<sub>2</sub>.  
And of the methane  
in the atmosphere,  
nearly all of it is  
due to livestock.  
In comparison to

emissions from other sources,  
what kind of percentage  
are we talking about come from  
the consumption of beef?  
About 10, 12  
percent of the total U.S.  
emissions is due to beef.  
It's staggering.  
But it's very easy to  
envision a dietary shift,  
even as minor as  
switching, let's say,  
from beef to an alternative.  
Let's say even chicken.  
The chicken will require  
20 percent of the land,  
and 10 percent of the  
greenhouse gas emissions.  
And if you compare, rice,  
or potato, or wheat,  
beef requires 50  
times as much land.  
So even cutting the  
amount of beef that you eat  
in half, or by a quarter, could  
make a significant difference.  
It, very significant.  
Do you, do you at  
all think that that's even  
a possibility considering  
that beef is so a part  
of our culture?  
Maybe not everybody's  
ready to eat tofu, you know,  
24/7.  
I get that.  
But even if you just have to  
have some flesh between  
your teeth, if you  
switch to chicken,  
you will have eliminated 80  
percent of you what you emit,  
depending on where  
you are coming from.

Let's face it, it's fairly  
easy to switch your diet  
from one choice to another.  
While working on the Revenant,  
which is about man's  
struggle with the elements,  
we shot on location in  
the Canadian snow belt.  
The irony was we were hit  
in with record temperatures  
that completely melted our set.  
In order to finish  
making the movie,  
we had to relocate halfway  
around the world just to find  
snow.  
The fact that we have to come,  
200 people in the  
middle of the summer,  
to the winter in  
Southern Ushuaia,  
9000 miles from where we're  
supposed to be shooting  
this three months ago, chasing  
ice, is because it's melting.  
It was a very, very warm winter.  
We came down to the  
southern tip of our continent  
besides the South Pole, to  
film this, cause this is where  
this, this, the last  
snow is left.  
I think that, my  
point of view I was saying  
to my, to my son, I said,  
you know, it's funny that,  
it's very sad but  
probably for you kids,  
to see snow will be a  
super eccentric adventure.  
A few people will be able  
to see snow in the future.  
I feel like I'm in  
some weird, surreal movie.

I honestly look around, and I think, when I have children, everything that we now take for granted, our planet and all of its biodiversity and beauty. Everything in the future is gonna be different. Every single light that you see has to be completely different. It has to come from a different power source. We need to build all those things differently, all the cars that are on the road need to be different. And this is one city, and if you zoom out onto a large map of planet earth at night, you see electrification all over the world. And we're fighting powerful fossil fuel interests that basically want to keep doing business as usual. How can we possibly turn this all around? The fossil fuel industry is the biggest industry in the world. They have more money and more influence than any other sector, so I mean, the more that there can be sort of popular uprising against that, the better. But I think the scientific fact of the matter is, we are unavoidably headed towards some level of, of harm. So, the sooner we can take action, the less harm will result. Wow. Holy crap. That's a good robot.

Whoa!  
What is your grand  
vision for all of this?  
The point of the  
Gigafactory is to get the cost  
of batteries down to the  
point where it's affordable.  
Right.  
Batteries are critical to  
the sustainable energy future.  
The sun doesn't shine  
all the time, so,  
you've got to store  
it in a battery.  
How is this gonna  
help developing nations that  
have massive populations  
that need to have power?  
So, the advantage of  
solar and batteries is that  
you can avoid building  
electricity plants at all.  
So you could be in a remote  
village and have solar panels  
that charge a battery pack, that  
then supplies power to the,  
to the whole village,  
without ever having to run  
thousands of miles of high  
voltage cable over the place.  
It's like, what happened with  
landline phones versus  
cellular phones,  
in a lot of developed  
countries they just didn't do  
the landline phones, they just  
went straight to cellular.  
And we actually did the  
calculations today, like,  
what would it take to transition  
the whole world to, uh,  
sustainable energy.  
What kind of throughput  
would you actually need?

Um, and you'd need  
100 gigafactories. So.  
100 of these?  
100 of these, yes.  
That would  
make the United States.  
No, the whole world.  
The whole world?  
The whole world.  
All energy.  
- That's it?!  
- Yeah.  
That sounds, that doesn't sound.  
It's manageable.  
That sounds manageable.  
Yeah.  
The Gigafactory,  
when it's complete,  
will have the largest footprint  
of any building in the world.  
Counting multiple levels, it  
could be as much as 15 million  
square feet.  
So, Tesla can't build  
100 gigafactories.  
The thing that's really gonna  
make a difference is if  
companies that are much bigger  
than Tesla do the same thing.  
If the big industrial companies  
in China, and U.S., and Europe,  
the big car companies,  
if they also do this,  
then collectively we can  
accelerate the transition  
to sustainable energy.  
And if government sets the rules  
to favor sustainable energy,  
we can get there really quickly.  
But it's really fundamental.  
Unless there's a  
price put on carbon.  
We're never gonna be  
able to make the transition

that we need to in time.

Correct?

Yeah.

And the only way to do that is basically with a carbon tax.

Okay, now walk

me through a carbon tax, which is what you're saying, is the silver bullet for climate change.

Well the carbon tax would be basically a tax on any kind of activity that put carbon into the atmosphere.

So when you tax something, you raise the price, people are gonna tend to consume less of it.

In fact that's sort of lesson number one of economics.

So you're teaching economics at Harvard, and you literally wrote the book on contemporary economics, right?

Well if I'm teaching the course for many years, I might as well write the textbook to go with it.

So just to be clear, you've worked with a lot of Republican heavyweights, John McCain, Mitt Romney, and you worked for George Bush when he became president.

I was chairman of the council of economic advisors.

So how come we don't have a carbon tax already?

Politicians don't always do what professors want them to do.

So the basic idea is that we wanna tax bad activities

that have negative side effects on other people in society. So we'd raise the price of cigarettes by putting a tax on cigarettes, people are gonna consume fewer cigarettes. Climate change involves a variety of negative side effects and costs.

A carbon tax forces people to take account of those costs. I think trying to appeal to people's social responsibility is really very, very hard, because people have complicated lives and they have lots of things to worry about, they don't want to have to think about climate change every time they do every decision. They can't.

And every time you turn on your car, are you supposed to think, Uh oh, what am I doing to the climate?

What the carbon tax does is it nudges them in the direction of doing the right thing.

So lemme get this straight.

You're a Republican, who wants more taxes?

Well, one of the important things to keep in mind is that if you

have a carbon tax, you can turn around and cut other taxes in response.

For example, payroll taxes. This is a tax shift rather than a tax increase.

So is it possible to ever pass a carbon tax now, given the current political situation?



I mean, half the people in office still don't believe in climate change.

Yes we can!

During the campaign, President Obama didn't wanna say the word carbon tax, because it would poll terribly.

If we wanna change the president's view of carbon taxes, we need to change the public's view of carbon taxes.

Think of gay marriage.

Remember Barack Obama ran against gay marriage.

I, uh, am not a supporter of gay marriage.

When did he switch?

When the polls started switching.

I think same-sex couples should be able to get married.

Politicians, whether we call them our elected leaders, are really our elected followers.

They do what the people want them to do.

We need to preach to the American people.

Once the American people are convinced, the politicians will fall in line very quickly.

President Obama and representatives from nearly 200 other countries are trying to reach an agreement to keep global warming in check.

In December, the world will come together at the U.N. Climate Conference in Paris, and we will see whether or not

we can muster the collective political will to reach an ambitious, comprehensive agreement.

This is a critical year.

Leo. How you doing, man?

Thank you for your time, I really appreciate it.

Last time we had a hug everybody had a, did you see, it was all over the thing? It was pretty dangerous.

Oh, really?

Oh, yes I remember that. I forgot about that!

Good to see you, Secretary.

So, after decades of failed negotiations, what makes this negotiation different from all the rest? I remember the footage of George Bush Sr. saying we've just learned about this thing called global warming.

We come to Rio proud of what we've accomplished and committed to extending the record on American leadership on the environment.

I mean, we had climate summit after climate summit, and we've seen so little action.

Well, let me tell you why this is different, and it really is different.

Last year President Obama was able to stand up in Beijing with the Chinese President Shi and announce intended reductions in emissions for Paris.

Well guess what, when the two largest economies in the world and the two largest emitters in the world stand up

and make a statement like that,  
that's created a momentum  
that never existed before.  
A lot of things  
are coming together.  
Tragically, the full measure  
of the negative impact  
of climate change is  
coming together too.  
What's happening now is that  
you have mass populations  
that are moving as a  
result of climate.  
Or you have  
huge fights over water,  
which could erupt into wars.  
And any extremist  
philosophy could appeal  
to people if they have nowhere  
to live, no way to live,  
and that's when  
people are vulnerable.  
If anybody thinks  
I'm kidding about that,  
it's happening today.  
And the greatest fear about all  
of this is leaving this planet  
in better shape than we were  
given it and that's not  
what we're doing today.  
Today I spend  
most of my time on understanding  
how can we secure a prosperous  
future for humanity  
in a situation where we're  
starting to hit the ceiling  
of what the planet  
can cope with.  
And I have the privilege of  
chairing something called  
the Earth League, which is a  
network of leading earth system  
scientists, try and gather  
really all the knowledge we have

on understanding our  
future on, on earth.  
We are on average moving  
towards a four degrees warming  
this century.  
And we haven't been in a  
four-degree warmer world, um,  
for the past four million years.  
So it's not as if it's a  
place we know very well.  
So give me one, sort  
of picture of what the world  
may look like if we do  
not take action.  
To begin with, for  
the past twelve thousand years,  
temperatures are almost  
miraculously stable.  
In fact, average temperatures  
vary within only plus minus  
one degrees Celsius during  
this entire period.  
This perfect planet  
with this perfect atmosphere.  
Yeah. Exactly.  
And so, let us then move  
upwards in temperature.  
Where are we right now?  
Well, today we're  
approaching one degree Celsius.  
Already it just, 0.85 degrees,  
we're seeing faster  
than predicted impacts.  
This storm is so big, so vast,  
60 million Americans  
will feel its power.  
We're in a historic drought.  
The world's coral  
reefs begin to collapse  
even before two degrees.  
And we're predicted  
to hit 1.5, to 2 degrees. So.  
Already now. So.  
That's already

probably gonna happen.  
That's already  
probably gonna happen.  
At 3, 4 degrees, we will have  
heat waves which makes  
many regions in the world  
not livable any longer.  
Agriculture will be collapsing  
around the equator.  
That would take us beyond  
being able to responsibly  
feed humanity.  
What makes scientists so nervous  
is that we can reach a point  
where earth takes over and  
starts reinforcing warming.  
This is what we  
call tipping points,  
and the most obvious  
one is Greenland.  
Greenland, for the first time,  
is melting on its entire surface  
to a point where, instead  
of being a white surface,  
becomes a dark surface, and  
suddenly instead of becoming  
a cooler, becomes a self-heater.  
Because, because of  
the fact the ice can no longer  
reflect back.  
Just the color change.  
Just the  
color change of the ice.  
Suddenly, all these  
feedbacks start kicking in.  
Methane stuck under frozen  
permafrost thaws to a point  
where it starts  
getting released.  
And that in turn  
warms the planet even more,  
which releases more methane.  
Correct.  
That's if we don't

take immediate action.

Yes.

That's business as usual.

But the Paris Climate Summit  
that we are soon approaching  
in December, if world leaders  
come together properly,  
the window is open,  
but barely open,  
to transition back  
into a stable planet.

Last time we had  
our climate summit,  
you couldn't say that we could  
go to scale on high tech,  
clean energy solutions.

But now in Paris, we can say so.

We actually have the proof.

You know you wake up in  
Germany Saturday morning,  
you're likely to get 30  
percent of your electricity  
from solar and wind, and not  
from a few energy utilities,  
but from over 2 million  
citizens delivering to a grid.  
Denmark today produces over  
100 percent, some days,  
of its electricity  
needs from wind.

100 percent.

It's totally renewable.

And remember that, once you've  
invested in wind and solar,  
you actually have  
free energy forever.

In countries like  
my own, in Sweden,  
there was an enormous  
uprising among people.

You know, from youth groups to  
citizen side organizations,  
to the point that the prime  
minister announced three weeks

back that Sweden will now  
become the world's first  
fossil fuel-free nation.  
- Congratulations.  
- I was shocked  
at the way that it propelled  
itself from below.  
I think we have tipped the world  
toward a sustainable future.  
The fear is are we  
doing it too slowly?  
Ladies and gentleman,  
you are here today to write  
the script for a new future.  
The fate of our planet  
is in your hands.  
I am a small island girl  
with big dreams from the Island  
of Majuro in the  
Marshall Islands.  
Back when I was six or seven,  
my grandpa told me about how  
the ice in the North Pole  
and the South Pole  
will melt away,  
and as they melt, the water will  
rise and soon flood our islands.  
This agreement is for  
those of us whose identity,  
whose culture, whose ancestors,  
whose whole being is bound  
to their lands.  
This agreement will  
help the world prepare  
for the impacts of climate  
change that are already here,  
and also, for those we know are  
now headed our way inevitably.  
Nearly a quarter of a  
century of global climate talks  
have come to this  
pivotal moment in Paris.  
195 countries saying they'll do  
everything in their power

to change.

There's no doubt that  
this agreement is a massive step  
forward.

But does it go far enough?

The Paris Agreement  
calls for keeping climate  
warming to well below  
two degrees Celsius,  
while striving for 1.5.

There's no  
mention of a carbon tax,  
there's no mention  
of any penalties.

There are no  
enforcement provisions.

We just have to take  
it on faith that all these  
countries are gonna follow  
through with what they say.

How likely is that?

This is an  
unattainable deal that Congress  
has already voted to reject.

The fact that we're  
going to have a 26-28 percent  
reduction in CO2 emissions,  
that isn't gonna happen.

I chair the committee  
that has jurisdiction  
over the Environmental  
Protection Agency.

Hey man.

Good to see ya.

- Thank you so much.

- You doing alright?

Absolutely.

Alright. C'mon.

The Paris Agreement ended up  
being a historic agreement,  
not because it gets us to where  
we need to be eventually,  
but for the first time, locking  
in all countries into verifiable



steps and targets that they're gonna take. It creates the architecture that allows us to finally start dealing with this problem in a serious way. So you were happy with what came of it? I, I, I was happy that we put the architecture in place. The, the targets that have been set in Paris are nowhere near enough for what the scientists tell us we have to do eventually to solve this problem. But if we can use the next 20 years to apply existing technologies to reduce carbon emissions, and then start slowly turning up the dials as new technologies come on line, so that we have more and more ambitious targets each year, then, we're not gonna completely reverse the warming that now is inevitable, but we can stop it before it becomes catastrophic. And it's no secret that you've been under great opposition to try to implement some of your climate change initiatives. And. We've got some folks on the other side. Yeah. So someone that comes into office that does not believe in the science of climate change, do they have the capacity and the power to dismantle everything that you've already worked for?

Even if somebody  
came in, campaigning on denying  
climate science, reality has  
a way of, you know,  
hitting you in the nose if  
you're not paying attention.  
And I think that the public is  
starting to realize the science,  
in part because  
it's indisputable.

Admire your optimism.

- Yeah.

- But

you start to look at  
the science,  
look at what's going on  
in the Antarctic and,  
and scientists saying that  
there are sections of ice that  
guarantee four to six  
meters of ocean level rise,  
which will be catastrophic  
for the future.

You are the leader  
of the Free World.

You have access to information  
that most people do not.

What makes you terrified  
for the future?

Uh, a huge portion  
of the world's population

- lives near oceans.

- Mhm.

If they start  
moving, then you start seeing,  
um, scarce resources.

The subject of competition  
between populations.

This is the reason why  
the Pentagon has said,  
this is a national  
security issue.

This isn't just an  
environmental issue.

This is a national security issue.

You know, in addition to just the sadness that I would feel if my kids can never see a glacier, the way I saw when I went up to Alaska, uh, you know, that's the romantic side of it. That's the side that takes a walk with my daughters and I wanna be able to, them to see, or my grandkids, I want them to see the same things as I saw as I was growing up.

Even if you were unsentimental about that, in very hard-headed terms, you've gotta worry about the national security implications of this, and the capacity for the existing world order as we understand it to survive the kinds of strains that the scientists are predicting without action.

This is why we have to take action now.

If we keep pushing keep prodding and most importantly keep educating the public there's no reason why, uh, we can't solve this problem in time.

Thank you for your time, Mr. President.

You bet.

Thanks for the good work you're doing.

- Thank you so much.
- Alright. Good?

I have realized that as a science community we have not

done the best job, frankly,  
of communicating this threat  
to the public.  
But when you go up there and  
see it with your own eye,  
how thin the world's  
atmosphere is,  
tiny little onion  
skin around the earth.  
That's all the oxygen that  
we breathe, that's the CO2,  
everything we burn goes into it.  
It's an astonishingly  
fragile film.  
You know, I knew intellectually  
how the earth's system works,  
'cause that's what I've  
been doing for 20 years.  
To see how the  
atmosphere and the ocean,  
all the elements in the  
system work together.  
So I understood it  
intellectually.  
Mhm.  
But it's like being  
an ant trying to understand  
what an elephant looks like by  
crawling all over the elephant.  
But when you're  
up there in orbit,  
and you can see 1200 miles  
in any direction, I mean,  
let me tell you.  
It's kind of a revelation.  
Seeing all the cities at night,  
millions of people all working  
away, doing something.  
Come around the day  
side of the world,  
seeing the natural systems.  
The hurricanes, huge,  
great big wheels, you know,  
over the oceans.

Saw the Amazon River  
go between my feet.  
For like five minutes, you know,  
I have a whole green carpet  
either side.  
Just beautiful, all  
the way out to the sea.  
And you know there was the sun  
coming up over the Amazon,  
the whole forest waking up, and  
doing what it does every day,  
you know. Breathing  
in and breathing out.  
So I, I, you know, at the end  
of all that I became immensely  
fond, more fond of  
the planet. You know?  
Which I never thought about  
when I actually just live  
on the surface.  
I'm also kind of fond of  
the people on there, too.  
It's like being taken away from  
your family and coming back.  
And um, you know,  
I wish it all well.  
I, uh, just before Christmas  
I got told I got pancreatic  
cancer.  
Stage 4, so it's also elsewhere  
in me, not just in one place.  
So um, you know, the, the odds  
are I won't be around  
for very long.  
You know, it's a very  
small chance of survival.  
So, uh, that's really  
motivated me to think about  
what's important to do, and what  
can I contribute in the time  
I have left.  
So this is a model  
simulation of the earth, now,  
we have about 20 satellites

that are dedicated to looking  
at the earth, every day.  
One looks at clouds, one looks  
at the sea surface temperature,  
Okó looks at carbon dioxide  
in the atmosphere.  
All this information comes in,  
and this is the tool we use  
to do climate simulation.  
Here's an example of one thing

**we could see:**

ocean surface temperature,  
as measured from space.  
This is the whole world's  
surface temperature.  
You can see the  
poles melting, there.  
Wow.  
- Yeah.  
- It's amazing.  
This is the way to do it man.  
This is the way to really  
see what's going on.  
Here's the Gulf  
Stream, look at this.  
It's like a motion of the ocean.  
This is like  
a great piece of art.  
It is, isn't it?  
Biggest impact would be here.  
- In the Gulf Stream.  
- Yeah.  
This current here, see it?  
The dumping of ice  
off melting Greenland,  
would stop this conveyor belt,  
and the Gulf Stream would slow  
down, stopping the transport  
of heat from here, to there.  
And then Europe  
would get cold toes.  
Because there's a lot of heat  
transport from the Tropics,

across the North Atlantic,  
that keeps Europe warm. I mean.  
So Europe would get colder?  
Yeah.

Cause that's the  
big misconception about  
climate change, is that  
everything gets warmer.

- Yeah.

- Wow.

And here's the most  
advanced precipitation satellite  
in the world.

This is very important, cause we  
think the biggest impact from  
climate change is the moving of  
the precipitation belts.

From the equator  
they'll go further out,  
so we're already seeing  
signs of a system drought.

So that causes more  
drought in places

- that are already too hot.

- Yes.

And there's a lot of papers  
written in the State Department  
and elsewhere, how that  
sustained drought has helped  
fuel the conflict of the Syrian  
civil war, Darfur, Sudan,  
all these places that are  
short of water, short of food.

Is this throughout the  
entire planet or is it just this  
- particular region right here?

- Nope.

We expect the whole world.

We expect bits of India we  
expect in the U.S., Oklahoma.

You know the dust bowl region,  
we expect that to get  
much, much drier over the  
next few decades.

Oh my God, and  
what about my home state  
of California here?  
Um, not looking  
great, I'm afraid.  
Now predicted persistent drought  
in the dust bowl, and here,  
for fifty years from now.  
But we're just seeing the  
worst drought in 900 years  
here right now.  
So it's coming a bit  
earlier than we thought.  
We're talking about this  
happening over a period  
of a few decades.  
It's just  
consistent not great news.  
No.  
But a lot of people now kinda  
confused about the issue.  
You know, the facts  
are crystal clear.  
The ice is melting,  
the earth is warming,  
the sea level is rising.  
Those are facts.  
Rather than feeling, oh my  
God it's hopeless, say, okay,  
this is the problem.  
Let's be realistic.  
Let's find a way out of it.  
And there are ways out of it.  
You know, if we stopped  
burning fossil fuel right now,  
the planet would still keep  
warming for a little while  
before cooling off again.  
So you're saying  
that if we do the right thing,  
we're gonna heat  
up, or we're gonna.  
It'll turn off,  
then it'll start cooling again.



Would that Arctic ice  
sheet start to then increase  
again?  
Once the cooling started, yeah.  
So there really is  
a possibility to repair  
- this trajectory that we're on?  
- Absolutely.  
- Interesting.  
- Yeah. So there's hope.  
You seem to have an  
incredibly positive attitude,  
just about everything though.  
It's amazing.  
Yeah, I, I do, I'm  
actually basically an optimistic  
kind of person.  
I have faith in people.  
I, I really do have  
faith in people.  
And I think that once people  
come out of the fog of confusion  
or an issue, or initial  
uncertainty on an issue,  
and realistically appreciate  
it at some level, the threat,  
and they're informed of what the  
best action is to deal with it,  
they got on and did it.  
And what seemed like almost  
impossible to deal with,  
you know, became possible.  
I still think a lot  
about that picture that used  
to hang over above my crib.  
The story of The Garden of  
Earthly Delights actually begins  
on the outside of the painting,  
where. Bosch painted a view  
of our Earth on the third day  
of creation.  
It's almost as if he wanted to  
show the fragility of our  
planet by depicting the earth

and its atmosphere enclosed  
in glass.

Pope Francis  
has officially released  
his encyclical on the  
environment.

The document is both a call  
for immediate action to stop  
global warming, and a  
cry for justice for the poor.  
Our common home has  
fallen into serious disrepair.  
Hope would have us recognize  
that there is always a way out.  
That we can always  
redirect our steps,  
that we can always do something  
to solve our problems.  
Still, we can see signs that  
things are now reaching  
a breaking point.

This is a direct message from  
the pope, it's a huge deal.  
One of the most important  
spiritual leader's  
on the planet.

DiCaprio.

He has now called upon  
the world community to accept  
the modern science  
of climate change.

A pope has never done anything  
like this in history.  
Being able to spend  
time and sit with the pope  
was a pretty  
profound experience.

This is a book,  
Hieronimus Bosch's.

Uh, it was hanging above  
my crib, as a young boy.

Thank you.

There was definitely an  
urgency in his voice.

He said that as far as the Paris conference is concerned, he, he felt was a step in the right direction, but certainly not enough. He feels we all need to keep speaking out about this issue as loud as we can, and that we must immediately take action. But more than anything, he said to pray for the human race. After everything I've seen, it's become pretty obvious that we're no longer living in that first, unspoiled depiction of Eden. We're in that second panel. What Bosch called, Human Kind Before the Flood. And what haunts me the most is that last panel. The one with the charred, blackened skies. A planet that we collectively have left to ruin. The question is, can we change our course in time? Now if this was a movie we could write the ending of this script, and we could figure a way out of this mess. But real life doesn't work like that, and we can't pretend that we know how this is gonna end. The only thing that we can do is control what we do next, how we live our lives, what we consume, how we get involved, and how we use our vote to tell our leaders that we know the truth about climate change. The last speaker for this signing ceremony is

the Academy Award Best Actor,  
and the United Nations Messenger  
of Peace, Mr. Leonardo DiCaprio.  
Thank you Mr.

Secretary General for  
the honor to address this body,  
and thanks to the distinguished  
climate leaders assembled  
here today who are ready  
to take action.

As a U.N. Messenger of Peace I  
have traveled all over the world  
for the last two years, I have  
seen cities like Beijing choked  
by industrial pollution, ancient  
boreal forests in Canada  
that have been clear cut, and  
rainforests in Indonesia  
that have been incinerated.  
In India I met farmers whose  
crops have been literally  
washed away.

In America I've witnessed sea  
level rise flooding the streets  
of Miami.

In Greenland and in the Arctic  
I was astonished to see  
that ancient glaciers are  
rapidly disappearing,  
well ahead of  
scientific predictions.

All that I have seen and learned  
on my journey has absolutely  
terrified me.

Now think about the shame that  
each of us will carry when our  
children and grandchildren look  
back and realize that we had  
the means of stopping this  
devastation but simply lacked  
the political will to do so.

Yes, we have achieved  
the Paris Agreement.

More countries have come

together here to sign  
this agreement today than for  
any other cause in the history  
of humankind, and that  
is reason for hope.  
But unfortunately the evidence  
shows us that it will not  
be enough.  
A massive change is  
required right now.  
One that leads to a new  
collective consciousness.  
A new collective evolution  
of the human race,  
inspired and enabled by a sense  
of urgency from all of you.  
We can congratulate  
each other today,  
but it will mean absolutely  
nothing if you return  
to your countries and fail  
to push beyond the promises  
of this historic agreement.  
After 21 years of  
debates and conferences,  
it is time to declare no  
more talk, no more excuses,  
no more ten-year studies, no  
more allowing the fossil fuel  
companies to manipulate and  
dictate the science and policies  
that affect our future.  
The world is now watching.  
You'll either be lauded  
by future generations,  
or vilified by them.  
You are the last  
best hope of Earth.  
We ask you to protect it,  
or we, and all living things  
we cherish, are history.  
We wait  
We pray for the rain  
For the rain

For a rain  
To wash away  
We try  
Deny  
To believe to believe  
to believe  
We can't believe  
In anything  
I don't want to say goodbye  
I don't want to say goodbye  
Stars falling from the sky  
Stars falling from the sky  
We will all be judged  
By what we leave behind  
I don't want to say goodbye  
Hey  
Too late  
To look you in the eye  
In your eyes  
In your eyes  
And realize  
We find.  
In time we're the same  
We're the same  
All to blame  
I don't want to say goodbye  
I don't want to say goodbye  
Stars falling from the sky  
Stars falling from the sky  
We will all be judged  
By what we leave behind  
I don't want to say goodbye  
no, no, no, no...  
no, no, no, no, no, no,  
no, no, no, no, no, no  
no, no, no, no, no, no,  
no, no, no, no, no, no  
no, no, no, no, no, no,  
no, no, no, no, no, no  
I just need a  
minute to breathe  
I just need a  
minute to breathe  
I just need a

minute to breathe

I just need...

...a minute to breathe