



Journey to Planet Earth

Transcript for Episode 12:

PLAN B: MOBILIZING TO SAVE CIVILIZATION

Complete Version

Journey to Planet Earth is produced by

**Screenscope, Inc.
4330 Yuma St, NW
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OPENING TEASE

Matt Damon (Narrator): On this episode of “Journey to Planet Earth,” meet environmental visionary Lester Brown – as he travels from world capital to world capital during a recent press and lecture tour of Asia and Europe.

Lester Brown, Earth Policy Institute: It is clear that Plan A – business as usual is no longer a viable option. We are looking at a race between tipping points – between natural tipping points and political tipping points.

Matt Damon (Narrator): Lester Brown's message has always been clear and unflinching – either confront the realities of climate change or suffer the consequences of lost civilizations and failed states.

Lester Brown, Earth Policy Institute: The question becomes how many failing states before we have a failing global civilization.

Matt Damon (Narrator): With degrees in both agronomy and economics and author of over 50 books in some 40 languages – for over four decades Lester Brown has been sharing ideas with heads-of-state and some of the world's most original and influential thinkers.

Tom Friedman, Author: *Hot, Flat, and Crowded*: If we the original Americans don't redefine in more sustainable terms what it means to be an American we're going to heat up, choke up, smoke up, and devour up this earth.

Tony Janetos, Joint Global Change Research Institute: We are really on the cusp of this fundamental restructuring of the energy system in a way that – and on a scale – that we have never really tried before.

Matt Damon (Narrator): For those seeking a realistic strategy to avoid the growing threat of climate change – please join us on a journey marked by unexpected twists and turns. Though Lester Brown's odyssey will ultimately take us around the world – we begin his story here – on a sound stage in the middle of Washington D.C. I'm Matt Damon. All this and much more – when we return to this special edition of “Journey to Planet Earth.”

UNDERWRITING CREDITS

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PROGRAM INTRODUCTION

Studio Director: Camera One, take your position. Camera Two, start your move. Quiet please. Standby. Roll background effects. Anytime your ready, Lester.

*A Film By
Marilyn & Hal Weiner*

Lester Brown, Earth Policy Institute: Within the environmental community we've been saying for decades now that we need to save the planet. What we're beginning to realize is that the challenge is to save civilization itself.

*Narrated By
Matt Damon*

Lester Brown, Earth Policy Institute: The stresses are building. They're building fast.

*Based on the Book By
Lester R. Brown*

Lester Brown, Earth Policy Institute: Disappearing species, ice melting, rising sea level. Go down the list. We've not turned a single one of those around.

*Plan B
Mobilizing To Save Civilization*

Lester Brown, Earth Policy Institute: It was Einstein who once said – the thinking that got us into the situation we're in is not the thinking that will get us out of the situation. It requires a new mindset, a new approach, a new way of thinking.

DISTRESS SIGNALS FROM 35,000 FEET
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Lester Brown, Earth Policy Institute: Recently I was on a flight from Washington DC to Beijing that took us very close to the North Pole. This meant that much of the flight was spent over the arctic sea. The thing that struck me about this was that wherever I could see the Arctic sea, when there wasn't cloud cover, which was most of the time, I could see fracturing in the ice. It seemed as though it was everywhere – it was in a sense a sign of what's happening and what's going to happen throughout the world. In recent years scientists have issued a flurry of studies about sea ice melting. They reported that in one week an area of Arctic sea ice the size of the United Kingdom had disappeared. They were stunned.

Scott Doney, Woods Hole Oceanographic Institute: The disappearance of sea ice in the arctic is astonishing. The rate is much faster than any of the models had predicted and I think that should be a warning sign to anyone who is interested in the health of the ocean and the climate of the planet.

Lester Brown, Earth Policy Institute: Climate change is not a trivial issue and we don't have to go beyond ice melting to see some of the consequences.

Matt Damon (Narrator): One of the areas where ice is melting fastest in the world is in the mountains of Asia – in the Himalayas and on the Tibetan plateau. This is of particular concern because these are the glaciers whose ice melt sustains the major rivers of Asia during the dry season – the Indus, the Ganges, the Yangtze, and the Yellow River.

Tony Janetos, Joint Global Change Research Institute: One of the challenges of thinking about a region like the Himalayas and sort of downstream of all those glacier fed rivers is the relationship of that water supply to the reduction in glaciers and that can have adverse impacts on actual food production.

Lester Brown, Earth Policy Institute: I've tried to imagine what the Gangetic plain with 407 million people would be like if the Ganges were not flowing or the Yellow River – which is the lifeline of

northern China. These glaciers not only sustain the flow of these rivers, they sustain the irrigation systems that produce much of the wheat and rice in Asia. This is the situation that we find ourselves in – in the early 21st century. It is a new situation. And it was why I was invited to Beijing – to share my concerns about climate change and food security with government officials. Based on my earlier experiences in China– I didn't expect it to be an easy few days – and they weren't.

WHO WILL FEED CHINA?

Matt Damon (Narrator): On the morning of his first day in Beijing – just before delivering a speech to government officials – to the casual observer it may have seemed that Lester Brown was a well-known celebrity. The reality was a bit more complex – not all of the young bureaucrats knew about his long and at times controversial history in China.

Lester Brown, Earth Policy Institute: A decade or so ago I wrote a book entitled Who Will Feed China and it pointed out when densely populated countries industrialize you have to build factories and roads and highways – all of the things that come with modernization – and China was moving in that direction. I then suggested that in the near future China would lose so much farmland to development that unless it imported massive amounts of grain and soybeans it would not be able feed its vast population. Now when this book came out it had an enormous effect in Beijing because I was not fully aware of the psychological effect of the very idea that China might have to import a large share of its food supply.

Matt Damon (Narrator): What Lester Brown didn't take into account was that it's difficult for the Chinese to forget the past – the many years of political turmoil and natural disasters that severely limited the availability of food.

Lester Brown, Earth Policy Institute: And what I now know and recognize of course is that all the leaders in Beijing today are survivors of the great famine of 1959, 61 when 30 million people starved to death – so this was a very sensitive issue. When I suggested in my book that China might not be able to feed itself – for a year or so I was sort of persona non grata in China. I had never experienced anything like this before. Later it was published and when I met for the first time Premier Wen Jiabao he said: “you know your book was very useful to us” because it did lead to a rethinking and a restructuring in Chinese agriculture.

Matt Damon (Narrator): Despite China's agricultural success Lester Brown was once again going to deliver a message government officials didn't want to hear – he was going to tell them that what they are most proud of – rapid industrialization – could once more pose a major threat to their food security.

Chinese Official: *[speaking Chinese]*

Lester Brown, Earth Policy Institute: It was with interest yesterday as I was flying from Washington to Beijing via the polar route and we were within 240 miles of the North Pole –

When in Beijing ... one of the things I talked about was the melting of the glaciers on the Tibetan plateau.

Yao Tandong one of the senior glaciologists in this country has said that two thirds of the glaciers on the Tibetan plateau could be gone by 2060. This he says would be an unprecedented catastrophe.

They know about the melting of the glaciers – but I don't think that anyone has yet in the public mind at least – linked the melting of those glaciers – and the effect that will have on the grain harvests. What we're looking at is the need to cut carbon emissions 80% by 2020 if we want to have a chance at saving the major glaciers in the Himalayas and on the Tibetan plateau. We don't have much time. We have to move quickly.

Matt Damon (Narrator): Later that day – as he prepared for an interview on China's English language television station – his warm welcome was about to turn cold.

Moderator: Mr. Brown welcome to Dialogue.

Lester Brown, Earth Policy Institute: I'm delighted to be here.

Moderator: Sir we have been talking about this interesting debate as to whose role it is to help more with the environmental protection, especially to prevent climate change.

Lester Brown, Earth Policy Institute: We're all in this together. We all have a stake in the future of civilization. Most of us have children – some of us have grandchildren we have to think about their world now. And if we don't act to cut carbon emissions quickly – let's say...

Moderator: What about developing and developed countries? There has been a lot of debate between the two camps as to who is responsibility it is to cut first.

Matt Damon (Narrator): Though the interview started cordially enough – it didn't take long before it threatened to become a debate about who should cut CO2 more – the United States or China – the world's two leading sources of greenhouse gases.

Moderator: All of these we have heard– but you know sir – the reality right now is –

Lester Brown, Earth Policy Institute: What we're seeing now is that China and India, the two countries planning to build most of the new coal fired power plants in the world in the years ahead are the two countries whose food security will be most directly affected by rising CO-2 levels, rising temperatures and the melting of those glaciers. So–

Moderator: But you haven't answered my question. Whose responsibility is it?

Lester Brown, Earth Policy Institute: Everyone's and, and it's our generation's particularly because if we do not succeed the next generation is going to say to us why didn't you do something when there was still time.

Moderator: All right the responsibility is everyone's and yet who has the bigger capacity of dealing with this issue

Lester Brown, Earth Policy Institute: It's not either or. We are all in it together. I mean China's food security –

Moderator: So equal responsibility or not?

Lester Brown, Earth Policy Institute: The atmosphere doesn't ask the question are these carbon emissions coming from countries with high per capita or low per capita – climate change is driven by the total amount of carbon emissions.

As hard as I tried – I never could get the moderator to focus on what was most important – that all governments – regardless of their economic goals – needed to share the burden of cutting CO2 emissions. We are tied together now – in ways we never imagined before. It is obvious that the climate system is a shared system. You can't change the climate in one part of the world without it affecting the climate throughout the world.

Bruce Babbitt, Former Secretary of the Interior: The melting of tropical glaciers – of the glaciers in between the temperate zones – that’s in the Himalayas – the Peruvian Andes – and others places in these lower latitudes – is going to be probably the most immediate cause of a lot of human suffering and dislocation and undoubtedly national security conflicts – among regions and borders.

Rajul Pandey-Lorch, International Food Policy Research Institute: The link between economics climate change, food security is probably stronger than ever before in our civilization. What climate change is doing is it’s basically injecting a degree of vulnerability in the global economic system. You have new players today who are more powerful because the economies are stronger and are able to exert more force in the world food markets.

Eugene Linden, Author: *The Winds of Change*: If China wants grain; it has billions and billions of dollars in foreign reserves to buy it. And the question is who gets crowded out and what happens to them. You have a lot of food importing nations that really can’t compete with China. That has enormous implications for the rest of the world.

Lester Brown, Earth Policy Institute: Imagine 1.3 billion Chinese with rapidly rising incomes coming into the U.S. grain market – competing with us for our grain supply – driving up our food prices. Like it or not what happens to the glaciers on the Tibetan plateau and in the Himalayas is going to affect all of us.

A ROAD TRIP

Matt Damon (Narrator): After a short visit to China – Lester Brown's travels took him to Japan, Korea, India, Turkey, and Italy – from world capital to world capital – over a span of twenty-two days. During a series of lectures and press conferences he shared his ideas about the urgency of finding ways to halt global warming.

Lester Brown, Earth Policy Institute: It is clear that Plan A – business as usual is no longer a viable option.

There's a real sense of urgency now developing on the climate front based on solid science.

That will begin to move the economy in a carbon-free direction, which is where we need to go if we're going to stabilize the Earth's climate.

I see my responsibility as trying to look ahead and see what's coming, and then share that information with decision makers.

Matt Damon (Narrator): The trip also gave him a chance to meet with political leaders. During private meetings and off the record conversations he was often able to learn where government officials stood on sensitive environmental issues.

Lester Brown, Earth Policy Institute: For example when in India meeting with prime minister Manmohan Singh who is an economist and has done a great job of getting the Indian economy into gear and begin to raise people out of poverty. When I talked with him about the melting of the glaciers in the Himalayas and the effect it would have on India’s future food security, he knew about that – I mean I was not telling him something he didn’t know. But what he didn’t – couldn’t quite figure out was what to do about it.

Matt Damon (Narrator): When in South Korea, he was invited to meet with the mayor of Seoul, Oh Se-hoon, who was having difficulty coping with the public's reaction to a series of environmental issues. For weeks the city was paralyzed by massive demonstrations.

Lester Brown, Earth Policy Institute: This is a very busy day. So much is happening. You can hear the demonstrators from here.

Oh Se-Hoon: Korea is very, very dynamic

Lester Brown, Earth Policy Institute: Maybe too dynamic sometimes.

Oh Se-Hoon: Too dynamic, yes.

Matt Damon (Narrator): Just outside of the mayor's office thousands were demonstrating against two government environmental policies – the importing of aged beef and the construction of a major – but unneeded – canal. In the evening the crowd swelled to over half a million.

Lester Brown, Earth Policy Institute: What I found interesting wasn't so much the nature of their complaints but rather that a call to action by the environmental community could generate such a huge response. However what really caught my attention was what happened one evening.

Matt Damon (Narrator): As the demonstrators continued their orderly protest – something provoked the crowd. Suddenly a peaceful demonstration turned violent.

Lester Brown, Earth Policy Institute: For me it was – in a sense – a look at the future – what could happen when even more serious environmental challenges – like global food shortages due to climate change – go unanswered. During the course of my road trip it became clear to me that we're now faced with challenges not only on a scale and of an urgency we've not seen before – but challenges with a complexity we could never have imagined.

ANCIENT CIVILIZATIONS

Airport Announcement: Please take the shuttle bus leaving from bus terminal number three.

Lester Brown, Earth Policy Institute: During my tour of Asia and Europe I often had the luxury of time – time to think about the consequences of climate change – and whether it could lead to food shortages on a global scale. However the more that I thought about the future – the more my thoughts turned to the past – to past civilizations that suddenly collapsed. What I finally became convinced of was that most early civilizations that collapsed – did so because of a severe decline in their food supply. It happened thousands of years ago – and it happened as recently as 500 years ago in sub-Saharan Africa.

Matt Damon (Narrator): In a remote part of Zimbabwe there's a site containing the ancient ruins of what was once a thriving medieval city. The Shona tribe called it the Great Zimbabwe. Founded in the 12th century – it's population grew to over 17,000 until it was abandoned in the early 1500s.

Lester Brown, Earth Policy Institute: What really interested me was the story behind the city's collapse – that the Great Zimbabwe was deserted because depleted pastures and dwindling water supplies could not support its exploding population.

Tom Lovejoy, Biodiversity Chair - Heinz Center: Certainly a number of past civilizations have failed because their food supply crashed. Often that was linked to a changing climate or an induced changing climate or just poor agricultural practice, which in the end sort of reduced the ability to produce food.

Andrew Light, Center for Global Ethics - George Mason University: I think in the past when we've looked at failed states we're looking at some series of unintended consequences combined with catastrophes that struck and sort of pushed one civilization or a state or over the edge.

Lester Brown, Earth Policy Institute: I often ask myself – why didn't the leaders of ancient civilizations make those connections before their cultures collapsed. Weren't there early warning signals that could have helped them save their empires? And what about today – surely there must be something we could learn from what happened to the Great Zimbabwe – or other failed civilizations.

Matt Damon (Narrator): The more Lester Brown became convinced of the link between food and lost civilizations – the more he integrated the concept into his prepared remarks.

Lester Brown, Earth Policy Institute: We look at the Sumerians and the build up of salt in their soils as a result of a defect in the design of their irrigation system. As salt levels built up grain yields came down. They switched to barley, which is more salt tolerant, and eventually barley yields went down and with that the civilization went down. We look at the Mayan civilization – the most advanced in the new world – and we see deforestation and soil erosion undermining their cropland productivity. As the soil eroded yields began to decline. As yields declined, the civilization declined and eventually collapsed. And I asked myself – could this happen to us?

Matt Damon (Narrator): His message was quickly picked up by the media – especially in Japan.

Lester Brown, Earth Policy Institute: If we do nothing things are going to get worse and worse and everything will gradually begin to breakdown and we'll join the earlier civilizations that were not able to make the needed course corrections. I have until recently rejected the idea that food could be the weak link in our early 21st century civilization, but I'm now beginning to wonder if food shortages could bring down our civilization.

MEAT... MILK... AND EGGS...

Matt Damon (Narrator): If you were to visit the markets of the world it's hard to imagine that food shortages could bring down civilization. Today more food is available to more people – in more places – than ever before.

Lester Brown, Earth Policy Institute: But what will happen in the future – when there's a growing demand for livestock and poultry products – and on a scale the world has never experienced. There are three or four billion people in the world now whose incomes are rising who want to move up the food chain – who want to consume a lot of livestock products – meat, milk, and eggs – as we do in the United States and the other industrial countries.

Tom Lovejoy, Biodiversity Chair - Heinz Center: As middle class populations grow in countries like India and China and the appetite for meat and eggs and dairy products grows, it basically puts that much more stress on the land. Because you have to produce the food not just for the people but for the animals that produce those other kinds of foods. So it just escalates the food problem.

Lester Brown, Earth Policy Institute: As the world's economies continue to grow – food stalls will begin to offer more popular products like meat – milk – and eggs – that will require massive amounts of grain for feed. It's beginning to happen in India and we've already seen this become a reality in China – which now accounts for over a quarter of the world's consumption of meat.

Tom Friedman, Author: *Hot, Flat, and Crowded*: The big issue on the planet is not just the fact that we're going from 6.7 billion people today to 9.2 billion – that the population in total is increasing. The big problem on the planet is actually the number of Americans who are increasing. That is the number of people living an American life style, eating American sized big Macs living in American sized houses, driving American sized cars, on American sized highways in American sized malls. In some ways it's a wonderful thing that so many more people in China, and India, Russia and Brazil can live an American life style. There's just one problem. With all these carbon copies of Americans, if we the original

Americans don't redefine in more sustainable terms what it means to be an American we're going to heat up, choke up, smoke up, and devour up this earth.

Stephen Pacala, Princeton Environmental Institute: What we're talking about here is a train wreck where it's not clear how we can feed the world with a western diet and also supply energy with western demands and at the same time curb carbon dioxide. Something has to give – in that picture.

Lester Brown, Earth Policy Institute: And now in the last few years we have seen the emergence of a third major claim on the world's grain supplies and that is the conversion of grain into fuel for cars in the form of Ethanol.

Ethanol Commercial #1: Hi. I'm going to talk to you today about something that's really important – Ethanol. Ethanol comes from corn. It's been added to gasoline to make it work better.

Lester Brown, Earth Policy Institute: A series of commercials promoting the conversion of grain to ethanol failed to mention one key fact – it takes a lot of grain to fuel cars. For example the grain required to fill a 25-gallon SUV tank with ethanol is enough to feed one person for a year.

Ethanol Commercial #2: This is crazy. All these cars are burning fossil fuel. But what if we went to America's heartland and we grew a renewable fuel – Ethanol. A fuel made from corn. Let's say 20 percent of these cars used Ethanol – or 50 percent – 75 percent. Hey call me crazy but what if 100 percent of these cars are driving with Ethanol.

Lester Brown, Earth Policy Institute: But with the capacity to convert grain into fuel for cars what we're beginning to see now is an emerging competition between the 800 million people in the world who own automobiles and want to maintain their mobility competing with the three billion poorest people in the world for the same grain. In recent years, one quarter of the U.S. grain harvest has been diverted to the production of ethanol. However America is the world's leading producer and exporter of grain – and when that grain is no longer available for feed or food – we have a global problem.

Rajul Pandya-Lorch, International Food Policy Research Institute: The demand for ethanol presented a problem and that led to the world food crisis. It is one of the key factors that led into this food crisis we had in 2006 – 2008 and that we are still feeling the impact of. The crises we have today is driven by demand for food. Demand for food for consumption and demand for food for fuel or energy.

Eugene Linden, Author: *The Winds of Change*: Somebody's got to produce that food. We have this religious belief that it will be produced but we face a situation where world food stocks are at their lowest point in 45 years – where most arable land is under plow – where irrigation is stagnated – so where is it going to come from? I submit that you need something more than a religious belief that technology will save us to give me confidence that we can deal with this problem.

Lester Brown, Earth Policy Institute: So we have three trends driving the growth in demand for food. Population growth, over 70 million a year, rising affluence 3 or 4 billion people wanting to move up the food chain, consume more meat, milk and eggs. And then thirdly the massive recent diversion of grain to the production of fuel for cars. But what also worries me is that we seem to be making the same mistake of ancient cultures – whose leaders ignored early warning signals or tipping points until it was too late to save their civilizations.

Bob Engelman, Worldwatch Institute: That's typical of the way a lot of population and environment interactions are happening in the world. Things just get gradually a little bit more stressful in an ecosystem or an environment, but people figure they can live with them – things are a little more difficult – a little tougher – but people think they can get by – and then suddenly some kind of tipping point is reached.

Lester Brown, Earth Policy Institute: The question is: have we reached those critical tipping points – those environmental thresholds that could lead to a food crisis. If we have – then surely this will lead to a growing number of failing states. And then the question becomes how many failing states before we have a failing global civilization. We don't know the answer to that question. We've not been here before – but it's one we need to begin thinking about.

FAILING STATES

Matt Damon (Narrator): During Lester Brown's world tour he usually tailored his lecture to suit the background of his audiences. But one theme remained constant – he always tried to convey the urgent need to change by describing the early warning signals the planet was sending us – like the melting of glaciers and the mounting pressures on our food supplies. But of all the early warning signals – none resonated with audiences more than the growing number of failing states.

Lester Brown, Earth Policy Institute: One of the things that I have begun to focus on as a sort of a bottom line indicator of the economic and environmental stresses we're facing in the world is the number of failing states.

Included in this group are the countries like Somalia, the Sudan, the Democratic Republic of the Congo, Chad, Haiti, Afghanistan, and now Pakistan.

Each year that list gets longer. Even the term failing states is fairly new in our vocabulary. Only in the last decade or so have we begun to recognize the failing state phenomenon.

Simply put – a failing state is a country whose government loses control of its territory –

– It's where the capacity of the government to provide personal security – to provide food security – to provide basic social services like education and health care has broken down and in some cases disappeared entirely.

We see this in countries like Afghanistan, Somalia, Democratic Republic of the Congo. One of the best examples of this is Haiti.

Today as Haiti struggles with the aftermath of a major seismic event – it's become – like Katrina – a global symbol for catastrophic disasters. But well before the great earthquake struck – Haiti was already a humanitarian nightmare – a failing state that never should have happened.

Matt Damon (Narrator): Not very long ago 60% of Haiti was covered with trees – today all but 2% of the forests are gone. Once Haiti was self sufficient in food – but as a result of uncontrolled logging and extreme soil erosion – food production could not keep up with demand. Soon Haiti became the poorest nation in the western hemisphere. Millions lived in slums – sanitation and health care were almost non-existent – and local gangs forced residents to pay exorbitant prices for clean water. Eventually political alienation and environmental stresses led to frustration and then anger.

Eugene Linden, Author: *The Winds of Change*: What does Haiti mean? Well, one thing it means is it shows how you get this nexus of forces, this interplay of forces, of environmental degradation, population pressures, and political instability.

Thomas Homer-Dixon, University of Toronto: You have to think of environmental stress as kind of an underlying pressure, almost tectonic stress within the society that increases the likelihood of violence but doesn't necessarily cause it by itself. It has to come with other things such as weak governments,

availability of weapons, and also deep ethnic cleavages within a society that can make violence more likely. And then all of a sudden, you get a dramatic outbreak of riots in the streets.

Lester Brown, Earth Policy Institute: We saw the effect of this when world grain prices tripled in late 2007 – early 2008. Because Haiti could not get enough food – violent protests forced the president to resign. Today – as Haiti tries to recover from a deadly earthquake – the reality is still bleak. No matter how much disaster relief the country receives renewal can only come when Haiti becomes strong enough to address the environmental challenges that still plague the countryside.

Matt Damon (Narrator): In rural parts of Haiti there's a long tradition of burying a baby's umbilical cord under a tree. This ritual has always strengthened a family's sense of belonging – and its attachment to the land. But what will happen when there are no more trees? Will Haitians lose their deep connection to the land?

Lester Brown, Earth Policy Institute: But on a more global scale – what I worry about is that the weaker and poorer countries of the world – all those teetering on the edge of becoming failed states – won't be able to cope with the mounting problems of climate change – water shortages and food shortages.

Bruce Babbitt, Former Secretary of the Interior: One of the great paradoxes of climate change is that the nations that will suffer most are the ones that are already least capable of contending with the change – that is the poorest nations of the earth – in terms of food – resources – water – agriculture – geometrically increasing population. I sort of sense we're about that threshold right now.

Sherri Goodman, Former Deputy Undersecretary of Defense: Climate change is a threat multiplier for instability in fragile regions of the world. If you have tens of millions of people migrating both because of political instability that's exacerbated by either sea level rise or natural disaster you have a situation with millions more people who could be compelled to flee. This is a conundrum of problems that we may face in future years in regions that are key strategic interests to the United States.

Lester Brown, Earth Policy Institute: We see this in many ways today. We see Afghanistan and now Pakistan being a training site for terrorists for example. We see Somalia with a piracy in the oceans, creating extraordinary headaches for the industrial countries trying to figure out how to protect the ships that move through the Indian Ocean and into the Suez Canal.

We are faced with an extraordinary challenge – and I don't think we have yet grasped the full dimensions of it. It raises a fundamental question, which is:

- How many failing states before we have a failing global civilization.
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THE ECONOMIC TRUTH

Lester Brown, Earth Policy Institute: Most of us in the United States remember a corporation called Enron. In the late 1990s it was probably on the cover of more business magazines than any other corporation in the country. Particularly memorable were their television commercials.

Commercial Narrator: We inherit some ideas that are unnecessary. We have to jettison that excess baggage.

Lester Brown, Earth Policy Institute: The spots were designed to promote Enron's creativity in developing new business opportunities.

Commercial Narrator: People who have really creative ideas...

Lester Brown, Earth Policy Institute: Years later it turned out that Enron's creativity was based on a fantasy. In late 2001 some outside auditors began looking at Enron's books and as they worked through the system and completed their audit they realized that Enron, one of the most valuable corporations in the United States, at one point ranked seventh in total value, was actually worthless.

Spokesperson: Today a jury in Houston convicted former Enron executives Kenneth Lay and Jeffrey Skilling on multiple counts of fraud, conspiracy, and related offences. Lay – Skilling and their numerous co-conspirators perpetrated an elaborate scheme to mislead analysts and investors about Enron's true financial picture. At a time when the company was foundering these defendants perpetrated a lie.

Lester Brown, Earth Policy Institute: The officials at Enron had devised some very clever ways of leaving costs off the books so while they were doing that everything looked great but in the end it was bankrupt.

Spokesperson: And as they knew the truth was something very different,

Lester Brown, Earth Policy Institute: And what we are doing is exactly the same thing that Enron did but on a far larger scale. We are leaving costs off the books and like Enron we also run the risk of bankruptcy if we don't correct the system.

Paul Krugman, Nobel Laureate in Economics: What we have now is a situation in which the most pressing problems of the world, which are environmental and ecological, are ones that the market has no incentive to deal with. Basically if I pump CO₂ or other more intense green house gases into the world I pay no price for doing that.

Lester Brown, Earth Policy Institute: But there will be another bill coming. That bill is the cost of climate change.

Matt Damon (Narrator): The Amazon rainforest is a perfect example. Here – rain has always been the key to the rich diversity of life. But now scientists tell us that because of global warming the rains that nourish the Amazon will very likely diminish.

Tom Lovejoy, Biodiversity Chair - Heinz Center: About five years ago there was a very disturbing result in a climate model that showed that at two and a half degrees increase in average global temperature there would be the beginning of Amazon die back. There would be insufficient rainfall – it would dry out – have terrible fires – and ultimately you'd displace about 25 million people.

Matt Damon (Narrator): In the Amazon – we would lose over a billion acres of trees that presently absorb vast amounts of CO₂ from the atmosphere. We would lose almost 20% of all the species on the planet. And with them we would lose the genetic information in plants and animals that could lead to the development of new drugs and cures for diseases.

Tom Friedman, Author: *Hot, Flat, and Crowded*: How important is biodiversity? I don't know. How important is a nest to a bird? Planet Earth and all its biodiversity is our nest. It's what shapes us as human beings.

Stephen Pacala, Princeton Environmental Institute: Losing the Amazon rain forest and the biodiversity that's embedded in it is at the very least a fantastic aesthetic catastrophe. Way worse than burning down the Louvre on purpose.

Scott Doney, Woods Hole Oceanographic Institute: We're making choices that future generations are going to have to live with and I don't really think it's our choice to destroy something that they are never going to get to see.

Lester Brown, Earth Policy Institute: Yet most world leaders argue that the cost of drastically cutting CO2 emissions to save the Amazon rainforest or other regions threatened by climate change is just too expensive. But they forget the cost of inaction.

Paul Krugman, Nobel Laureate in Economics: We need to make a real effort to bring the environmental costs of what we do onto the books. It's not that businesses who don't take account that are engaged in fraud. It's just that we as a society need to get into a mindset where we understand that you cannot treat – you cannot treat the atmosphere as a free good. You can't treat what you do to the environment as something that doesn't belong in your cost accounting.

Lester Brown, Earth Policy Institute: It's quite clear that we are ignoring the true costs associated with environmental trends that are threatening our future. Just go down the list – the increased intensity of tropical storms and floods – deadly heat waves tied to escalating CO2 levels – the devastating consequences of off-shore oil spills – and the growing number of endangered and vanishing species. We've not turned a single one those around. Nature is the timekeeper. It is nature that determines the tipping points beyond which change becomes irreversible. Unfortunately we can't see the clock so we don't know exactly how much time is left.

THE 29TH DAY

Lester Brown, Earth Policy Institute: Many years ago I wrote a book entitled The 29th Day. The title of the book comes from a French riddle that's used to teach school children exponential growth. You have a pond and the first day it has one lily pad in it – the second day two lily pads – and then four – then eight – and each day the lily pads keep doubling. If the pond fills on the 30th day – when is it half full? The 29th day.

Though only a children's riddle – for those who believe there's more than enough time to cope with a rapidly warming planet – let's go back and take another look at the pond – let's say on the 20th day. Everything seems pretty normal – the number of lily pads are barely noticeable. And as the days increase the pond becomes a sanctuary – a place dotted with pretty flowers and with more than enough room for local wildlife. By the time we reach the 29th day there's still plenty of room – the pond is only half filled with lily pads – so maybe we'll make plans to do a bit of fishing the next day. The only problem is – on the next day – the pond is full of lily pads and will soon become a choking mass of dying vegetation – unable to provide a safe haven for wildlife. The question we now have to ask ourselves is simply this: has our planet already reached the 29th day?

Tom Lovejoy, Biodiversity Chair - Heinz Center: I think we've done more than reach the 29th day. I think we are well into it. We're on an accelerating curve of change.

Tom Friedman, Author: *Hot, Flat, and Crowded*: It's always hard with climate change to know exactly where you are and when the next molecule of carbon emitted into the atmosphere will tip the whole system into all kinds of feedbacks that we can't even predict or understand.

Eugene Linden, Author: *The Winds of Change*: The point at which you see change may be too late. The point at which the system has already started to change you may not be able to stop those changes.

Bruce Babbitt, Former Secretary of the Interior: There's clearly a precipice out there – somewhere. The problem is that you don't see it until you've dropped off the edge.

Lester Brown, Earth Policy Institute: The bottom line is that the fossil fuel based automobile centered, throwaway economy is no longer a viable model for us – or anyone else. It's clear that business as usual will not take us much further and the alternative to business as usual is Plan B.

PLAN B

Lester Brown, Earth Policy Institute: Plan B has four components. One is cutting carbon emissions 80% by 2020; two: stabilizing population at no more than 8 billion; three: eradicating poverty; and fourth, restoring the Earth's natural systems – that includes forests, soils, grasslands, aquifers, fisheries, and so forth. These components of Plan B – they're all tightly linked and integrated. In order to achieve one of them we have to achieve the others. We, we can't sort of pick and choose. This is not a menu. This is a comprehensive integrated plan. We have to move forward on all four at the same time.

POVERTY...POPULATION AND THE DIVERSITY OF LIFE

Lester Brown, Earth Policy Institute: The population issue seems to have fallen off the table in recent years. We don't pay that much attention to it. But if we can't stabilize the world's population we're probably not going to be able to stabilize climate.

Eugene Linden, Author: *The Winds of Change*: If we're going to have another two and half billion people in the next 30 to 50 years climate had better be good. Because if it's not it is going to be a Herculean job trying to feed those people and provide them with access to fresh water.

Lester Brown, Earth Policy Institute: To slow population growth – we must also find a way to eradicate poverty.

Thomas Homer-Dixon, University of Toronto: We have to remember that 3 billion on this planet survive on less than \$2.00 a day – somewhere around 1 to 1 1/2 billion survive on less than a dollar a day. It's very easy for the billion or so people in rich countries in rich countries to forget exactly what life is like for the 3 to 4 billion very poor people on this planet.

Lester Brown, Earth Policy Institute: One of the reasons that eradicating poverty is one of the four components of Plan B is that it holds the key to many other things. It holds the key to stabilizing the population. And by eradicating poverty we mean investing in people.

Bob Engelman, Worldwatch Institute: Bangladesh is one of the success stories of the effort that's been going on – really since the 1960s – to make good quality family planning and reproductive healthcare available to everyone who wants it.

Matt Damon (Narrator): What makes Bangladesh's success so remarkable is that it's one of the world's most densely populated countries. It's where 170 million people – over half the population of the United States – are crammed into an area the size of Wisconsin.

Bob Engelman, Worldwatch Institute: When people started working on health in rural communities, in Bangladesh – family size was up around six or seven. Today it's half that and still gradually trending down.

Lester Brown, Earth Policy Institute: That success is also the result of the government's investment in education – especially for girls. In every society for which we have data – as the level of female education rises – the size of families shrinks.

Helene Gayle, Care USA: Women and girls are the ones who are disproportionately impacted by poverty around the world, but also are the ones that can have the greatest impact on catalyzing change within communities.

Matt Damon (Narrator): Throughout Bangladesh trained healthcare workers meet with women in rural villages and urban settings. Their sole purpose is to discuss family planning and encourage mothers to send their children to school.

Helene Gayle, Care USA: If you educate a girl she is more likely to marry later, have fewer children her children are more likely to get an education. And so you really create a virtuous cycle that starts by changing the life of a girl who becomes a woman and having an impact on whole communities.

Lester Brown, Earth Policy Institute: Bangladesh is not the only place where the empowerment of women has made an impact on reducing poverty and stabilizing population.

Matt Damon (Narrator): Istanbul is the thriving commercial and tourist hub of Turkey – yet it has all the contradictions of a modern metropolis – a mega-city with extreme wealth juxtaposed against impoverished immigrant neighborhoods. Until recently the community of Esenyurt was an economic and environmental nightmare. Life was particularly difficult for women. Only 7% held jobs and it was unheard of for a woman to own property.

Bob Engelman, Worldwatch Institute: One of the more exciting development ideas that's had a big impact on women's lives is the idea that banks provide credit to poor and marginalized women. Make them responsible for what they do with the money. Make them responsible for repaying the loans. This is often called micro-credit.

Lester Brown, Earth Policy Institute: For the women of Esenyurt the benefits of micro-credit loans were enormous. It gave Ayse Savas the freedom to start a career. With a \$350 micro-credit loan she opened a cafe. It changed her life forever. Ayse not only owns her own business – she has helped scores of other women get micro-credit loans.

Bob Engelman, Worldwatch Institute: Micro-credit is one of these win-win strategies that actually makes me really hopeful about the future of population and the environment. It tends to have multiple benefits that kind of ripple out – from a woman to her family – to her community – to a nation – to the world as a whole.

Lester Brown, Earth Policy Institute: Eradicating poverty is also one of the keys to protecting the diversity of life on the planet. One of the things we see in Africa – particularly sub Saharan Africa where roughly 800 million people live and where populations are growing very fast – is that there is a growing protein hunger. And because of that people are turning to wildlife as a source of meat in their diets. This is the so-called bush meat trade. It has emerged over the last decade or two as a major threat to virtually all the mammal species in Africa.

Matt Damon (Narrator): Thirty-five years ago Zambia's Luangwa Valley was declared a 3,000 square mile protected sanctuary for over 90,000 elephants. But when drought and famine overwhelmed the local farmers, the elephant population was hunted for food and tusks until their numbers dropped to fewer than 15,000. And as poverty deepened, nothing could stop the slaughter.

Steve Osofsky, Wildlife Conservation Society: In the face of poverty people will tend to utilize whatever they can to survive and that makes perfect sense. Our job as conservationists is to try and create environment where sustainable management is possible where people can see things from a larger scale and learn how to manage things not just at the household level but work collaboratively to manage things at a landscape level.

Matt Damon (Narrator): Villagers were taught modern farming techniques and offered economic incentives. In return they had to stop poaching. But there was one other condition. The farmers had to turn in their snares and guns.

Steve Osofsky, Wildlife Conservation Society: Since we've done this we've had over 30,000 snares turned over. Hundreds of guns have been turned in because farmers have seen that by new ways of managing their agricultural output and new marketing strategies they don't need to poach.

Matt Damon (Narrator): The results are impressive. By bringing a community out of poverty – farmers achieved food security – the elephant population increased – and eco-tourism became a new source of income.

Lester Brown, Earth Policy Institute: If we want developing countries to cooperate in protecting forests and protecting endangered species – all of the things that we need to do to create a sustainable global civilization – we simply have to address the poverty issue. But beyond that the challenge is to stabilize climate before climate change becomes irreversible – where we cannot stop global warming – where it spirals out of control.

REDUCING CO2 EMISSIONS

Lester Brown, Earth Policy Institute: One of the most powerful signs of change is the growing grassroots movement opposing the largest source of CO2 emissions in the world – coal-fired power plants.

Bill McKibben, 350.org: This is the most dangerous thing on Earth. A coal-fired power plant operating just the way it's supposed to operate destroys this planet.

Matt Damon (Narrator): Recently thousands of demonstrators gathered in front of a coal burning power plant located in the heart of Washington D.C. Their goal was to bring public awareness to the link between global warming and the burning of fossil fuels – like coal, oil, and natural gas.

Judy Bonds, Coal River Mountain Watch: We adults told our children to clean up their rooms. But look at the toxic mess we're leaving our children to clean up. Shame on us. Shame on us.

Lester Brown, Earth Policy Institute: The emotional call against coal-fired power plants has turned into a tidal wave of opposition throughout the country.

Newscaster #1: One of Utah's biggest energy projects is dead and it appears largely because concerns and uncertainties about global warming.

Lester Brown, Earth Policy Institute: Since the beginning of 2007 public resistance has grown enormously.

Demonstrator: We don't coal burning plans and we don't want the pollution coming over to Missouri.

Lester Brown, Earth Policy Institute: The bottom line is that in the United States we are very close to a moratorium – a de facto moratorium – on the construction of new coal-fired power plants.

Demonstrator #2: If this plant is built this would be the largest new source of greenhouse gases in the United States and that's absolutely unacceptable.

Lester Brown, Earth Policy Institute: What we're faced with now is a need to dramatically reduce carbon emissions.

TV Anchor: Delegates from around the world gather in Copenhagen for the largest global warming conference in history.

TV Reporter #1: Facing a clock that has ticked down to zero, today 192 nations came together to take on a potential global catastrophe.

TV Reporter #2: At the bargaining table, however, some of the sharpest divisions proved insurmountable for now. Frantic efforts underway but still very much in doubt as to what they'll accomplish.

Matt Damon (Narrator): Though world leaders failed to reach a binding agreement in Copenhagen – most acknowledged the need to cut carbon emissions by 80 percent – but they talked about doing it by 2050. Lester Brown disagrees.

Lester Brown, Earth Policy Institute: They talk about doing it by 2050 because that's what seems to be politically feasible. The question that we asked was how much and how fast we have to cut carbon emissions if we want to save – for example – the larger glaciers in the mountains of Asia. When you ask that question then you get a very different answer. You conclude we have to cut carbon emissions fast and for us that means cutting carbon emissions 80% by 2020 – not by 2050.

Scott Doney, Woods Hole Oceanographic Institute: This is going to be really tough. We're talking about – energy pervades our economy and fossil fuels are basically the lubricant that has led to rapid development around the globe. It's not something simple that we can flip a switch and suddenly no longer emit carbon to the atmosphere. We have to change in many ways the entire way we live as a human society.

Lester Brown, Earth Policy Institute: If I were to pick a single policy instrument that I would want to use to restructure the global economy in order to save civilization, it would be restructuring of the tax system. Lower income taxes and off set that with a rising carbon tax.

Paul Krugman, Nobel Laureate in Economics: You need to have the carbon taxes or you need one way or another to put a price on carbon. If you do that in a way that generates a lot of revenue for the government then we can afford to have lower income taxes.

Tom Friedman, Author: *Hot, Flat, and Crowded*: Unless you price things at their real and true cost, unless you price gasoline at the cost of the troops protecting the oil company from the Persian gulf, the cost of the pollution we are putting in the atmosphere that's turns into childhood asthma – unless you truly price the cost of these dirty fuels you'll never get people to switch to the cleaner fuels.

Paul Krugman, Nobel Laureate in Economics: The main lesson of the economics is we can do this. This is not beyond our means. It doesn't require a radical new version of economics. It doesn't require that we totally rethink how we run ourselves as a society. It just requires that we put prices on these emissions.

Matt Damon (Narrator): Two technologies often mentioned – that could lower CO2 emissions – are nuclear energy and clean coal power plants.

Lester Brown, Earth Policy Institute: The unfortunate reality is that building nuclear power plants has become far too costly to offer meaningful help in the near future. And as for clean coal – we're not even close to having technologies that can economically capture CO-2 emissions from smoke stacks and store them safely in the ground.

Scott Doney, Woods Hole Oceanographic Institute: We're not going to resolve these climate change related issues simply by becoming better at doing the things that we are already doing. We have to – we really do have to – try some fundamentally new and different things.

Lester Brown, Earth Policy Institute: So the challenge now is to replace fossil fuels with other sources of energy. And the one the world is turning to on a large scale is renewable sources of energy.

THE NEW ENERGY ECONOMY

Lester Brown, Earth Policy Institute: We are now seeing the emergence of the new energy economy. Texas – for years the leading oil-producing state – is now also the country's leading generator of electricity from wind. But Texas is not alone.

Matt Damon (Narrator): Denmark gets 20% of its electricity from wind – and it's aiming for 50%. Off the coast of Scotland there is enough harnessable wind energy to supply the United Kingdom with all of its electricity needs. And in China – massive wind complexes are being built that will equal the energy produced by 130 coal-fired power plants. But wind power is not the only renewable energy source available on a large scale. Geothermal heat is a huge source of energy. The easiest places in the world to develop it are areas where there is volcanic activity. In fact the amount of accessible geothermal energy dwarfs the energy in all of the world's oil, coal and natural gas reserves combined. The Philippines gets one fifth of its electricity from geothermal power plants. Iceland is another country rich with this renewable source of energy. Today 90% of its homes are heated with geothermal – virtually eliminating the need for coal.

Lester Brown, Earth Policy Institute: And then of course we have solar energy. Today China is the world's leading producer of solar cells on a large commercial scale. But the extraordinary power of the sun is not limited to the industrialized countries of the world.

Matt Damon (Narrator): The deserts of the Middle East and North Africa have always been rich with oil. But many countries realize they won't be exporting oil forever. Together with a consortium of energy companies – they are now developing state-of-the-art solar power plants designed to export electricity to Europe.

Lester Brown, Earth Policy Institute: The Algerians point out that in their desert – which is most of the country – they have enough harnessable solar energy to power the entire world economy. That almost sounds like an error – a mathematical error – but it's not. In fact, the solar energy striking the earth in one hour is sufficient to power the world economy for one year.

Scott Doney, Woods Hole Oceanographic Institute: We are really on the cusp of this fundamental restructuring of the energy system in a way that – and on a scale – that we have never really tried before.

Lester Brown, Earth Policy Institute: What we're now seeing is a fundamental change in the way the future can look – a future powered almost entirely with renewable clean sources of energy – featuring high-speed intra-city connections – urban landscapes built to complement a highly electrified economy – residential homes surrounded by green space and located within walking distance of commercial centers and light rail transportation hubs. In the future – cities will be designed for people – not cars. And there'll be much less noise and air pollution – thanks to hybrid plug-in cars – all electric cars – and state-of-the-art light rail. What an exciting place that would be and what a legacy to leave the next generation – an

economy based on energy sources that will never run out – we've never been able to do this before. Ever since the industrial revolution began we have been investing in temporary sources of energy. Oil fields that would run out, coal mines that would run out. Now suddenly we can build an entirely new world – a world powered almost entirely with renewable sources of energy. That's an enormous challenge. But it's one that we must face – and face with a sense of urgency.

CAN WE CHANGE FAST ENOUGH?

Lester Brown, Earth Policy Institute: When I look at the enormous challenges we are facing in the world – the need, for example to restructure the world energy economy, shifting from fossil fuels to renewable sources of energy, I sometimes go back and reread the economic history of World War Two. The Japanese attack on Pearl Harbor December 7, 1941. January 6, 1942 – president Roosevelt giving his state of the union address.

President Roosevelt: I have just sent a letter of directive to the appropriate departments and agencies of our Government, ordering that immediate steps be taken to increase our production rate of airplanes so rapidly that in this year, 1942, we shall produce...

Lester Brown, Earth Policy Institute: He said we're going to produce 45,000 tanks, 60,000 planes, 20,000 artillery and anti-aircraft guns and we're going to build several thousand ships.

President Roosevelt: Our task is unprecedented –and the time is short. We must strain every existing armament-producing facility to the utmost.

Lester Brown, Earth Policy Institute: People were blown away by these numbers. No one had ever seen arms production numbers on this scale before.

President Roosevelt: Let no man say it cannot be done. It must be done – and we have undertaken to do it.

Lester Brown, Earth Policy Institute: What Roosevelt and his colleagues realized was at that time the largest concentration of industrial power in the world was in the U.S. automobile industry. So after his state of the union address, he called in the leaders of the automobile industry and he said we are going to rely heavily on you to help us reach these arms production goals and they said well Mr. President we'll do everything we can. It's going to be a stretch producing cars and all these arms too. He said: "you don't understand, we're going to ban the sale of private automobiles in the United States." And that's exactly what happened. From the beginning of April 1942 until the end of 1944 – nearly three years – there were essentially no cars produced in the United States.

Newsreel Narrator: President Roosevelt makes an unprecedented nine thousand mile tour of the United States to see for himself the nation at war. He stops at the giant Chrysler tank arsenal where he sees the army's latest mechanized monsters tested as they come from assembly lines. Then on to one of Henry Ford's great bomber plants. Where automobile fenders once were made aircraft propellers are turned out by the thousands.

Lester Brown, Earth Policy Institute: The point of this example is that it did not take decades to restructure the U.S. industrial economy. It did not take years. We did it in a matter of months. Can we make the changes in the time that's available? I think so. But we're going to have to move very fast.

Peter Hart, Pollster: NBC/Wall Street Journal: When you think about the American public they can change on a dime. We think about long evolutionary periods but to be perfectly honest there are things that happen over a very short period of time where we look at things and we say we are not long going to

do this – we are no longer going to accept this. I see it in political movements and I see it in social movements.

Bruce Babbitt, Former Secretary of the Interior: My personal experience during my lifetime but with the dynamics of change is the civil rights revolution that began in the 1960s. Remarkably in the course of 5 years we went from 100 years of complacency through a civil rights revolution that culminated in the voting rights act of 1965.

Peter Hart, Pollster: NBC/Wall Street Journal: If I had said two years ago that the American public would accept an African American as their next president, we would have said this will take years and years and years and yet in the end of the day we've change attitudes and changed attitudes about how people look at America.

Bruce Babbitt, Former Secretary of the Interior: Change, which seems impossible, suddenly becomes quite real very rapidly driven by a massive change of understanding and attitudes that relate to values that are held by American citizens.

Lester Brown, Earth Policy Institute: If we could restructure the U.S. industrial economy in a matter of months, then certainly in a matter of years we can prevent climate change from spiraling out of control – because if climate change spirals out of control and it puts so much stress on governments we'll have so many failing states that it's quite possible that civilization itself could begin to break down.

<p style="text-align: center;">SAVING CIVILIZATION IS NOT A SPECTATOR SPORT</p>
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Lester Brown, Earth Policy Institute: As I travel around the world the question that I am asked most often is, “*what can I do?*”

They expect me to say change your light bulbs or recycle your newspapers. Those are important but we're at a point now where we need more than that – we've got to restructure the global economy –

– Whether it's supporting development of renewable energy sources such as wind and solar and geothermal or the adoption of plug in hybrid cars –

–Getting involved in the extraordinary movement in the U.S. to ban the construction of new coal fired power plants for example –

– Pick an issue. One of these issues that's important to you and go to work on it.

– And it means becoming politically involved and pushing for the changes that are needed.

Stephen Pacala, Princeton Environmental Institute: Individuals have to bind together and work cooperatively by electing people who want to solve this problem and by encouraging their governments to engage in international agreements to solve this problem.

President Obama: I don't know how you have an international agreement where we all are not sharing information and insuring that we are meeting our commitments.

Tom Friedman, Author: *Hot, Flat, and Crowded*: You're trying and mobilize people to confront a gas you cannot see touch or smell who will primarily affect your unborn grandchildren. That's a hard sell. It takes a very unique level of leadership and statesmanship and stewardship by one generation on behalf of another to really get people to act on this issue.

Paul Krugman, Nobel Laureate in Economics: We're not going to solve this problem unless we get global political action. We're not going to get global political action unless the U.S. congress passes strong environmental legislation. That's the starting point for everything.

Peter Hart, Pollster: NBC/Wall Street Journal: I look at it through the lens of the American public. And you can look at it from conservative side or the liberal side of the aisle. And in that respect the American public says we want to protect our environment – we recognize that we have to make changes and adaptation.

Bruce Babbitt, Former Secretary of the Interior: I'm really encouraged by the fact that when I go to my hometown in Arizona – small town of 50,000 people – candidates for local office are debating climate change. They are asking and taking positions now what should be done in county government to move toward alternative energy to use conservation. Those debates are happening everywhere clear down to the grassroots in a wonderfully positive way that will yield national change.

Lester Brown, Earth Policy Institute: It's an exciting new world and one that'll be much more interesting – much more satisfying. We'll have a much stronger sense of community than the one that we now know. Saving civilization is not a spectator sport. We all have to get involved.

FINAL THOUGHTS...

Lester Brown, Earth Policy Institute: We are looking at a race between tipping points – between natural tipping points and political tipping points.

Can we cut carbon emissions fast enough to save the glaciers in the Himalayas and on the Tibetan plateau or will we watch them melt and disappear.

Can we phase out coal fired power plants fast enough to save the Greenland ice sheet.

Can we arrest the deforestation of the Amazon basin before the forest is so weakened that it becomes vulnerable to natural fire.

These are the questions we're facing as a civilization. And my final point would be this – saving civilization is not a spectator sport – we all need to get involved.

This is the situation that we find ourselves in in the early 21st century. It is a new situation. It is unlike anything that civilization has faced before. Those of us in the environmental community talk about saving the planet but it's really now civilization that we need to save.

EPILOGUE

Matt Damon (Narrator): For over 40 years, Lester Brown has been a major voice of the environmental movement. He continues to travel around the world – meeting with heads of state as well as today's most respected and influential thinkers. But perhaps his greatest gift is providing us with a clear and universal vision of the world around us – where first light still reveals the rich tapestry of the natural world. And with each new day – there exists a chance for every child to share the same dreams we so often take for granted. What we need now are the efforts of people everywhere – all those who are seeking ways to strike the right balance – between what we want – and what nature can provide. Though separated by distance and culture – for the nearly seven billion people who draw sustenance from the resources of the world – there are common bonds – bonds that are renewed by each generation – bringing new ideas – new attitudes – new hope. Planet Earth – this is our home – this is where our journey of discovery must begin.

To discover more about today's featured stories, educational resources, or download teacher's guides and other information about the environment, please join me on the "Journey to Planet Earth" web site at pbs.org.

CREDITS

Narrated By
MATT DAMON

Produced By
MARILYN WEINER

Written & Directed By
HAL WEINER

Editor
JIM MCNAMEE

Cinematographers
ZAYFER AYHAN
DENNIS BONI
IZUMI HIROKI
SCOTT JEWELL
RHETT TURNER
HAL WEINER

Associate Producer
REBECCA HOWLAND

Outreach Manager
KIMBERLY KLINGER

Original Music
FRANK FERRUCCI
CHRISTOPHER MANGUM

Educational Materials Development
DAVID WOOD
MARGARET PENNOCK

Web Site Design
SONNETT MEDIA

Publicity
CARA WHITE

Production Controller
VICTOR J. CALANDRA

Post Production Facility
HENNINGER MEDIA SERVICES

Audio Mix

DAVID HURLEY

Colorist

DAVID MARKUN

Series Advisors

BONNIE COHEN

RITA COLWELL

GEOFFREY DABELKO

ROBERT FRI

PETER HART

NAY HTUN

CHARLES KENNEL

ANDREW LIGHT

THOMAS E. LOVEJOY

JESSICA TUCHMAN MATHEWS

MAURICE STRONG

Special Thanks

AMERICAN ELECTRIC POWER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CATHAY PACIFIC

CHINA CENTRAL TELEVISION

CHINA INSTITUTE OF WATER RESOURCES

CLIMATEWORKS FOUNDATION

CONSERVATION INTERNATIONAL

DEEPWATER HORIZON UNIFIED COMMAND

FISH AND WILDLIFE SERVICE

GEOLOGICAL SURVEY

GREENPEACE INTERNATIONAL

KOREA GREEN FOUNDATION

NATIONAL AERONAUTIC AND SPACE ADMINISTRATION

NATIONAL ARCHIVES

NOAA

NUCLEAR ENERGY INSTITUTE

PRELINGER ARCHIVES

SOLAR MILLENNIUM AG

TEMA

TV ASAHI NEWS

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USAID

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PBS Narrator 2: We are PBS

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