



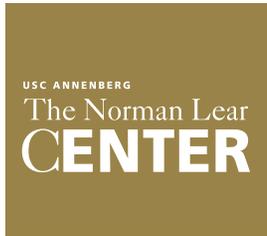
# EXTREME REALITIES

SEVERE WEATHER, CLIMATE CHANGE AND THREATS TO NATIONAL SECURITY



TRANSCRIPT  
OF A PANEL  
PRESENTED  
AT THE  
LINWOOD  
DUNN THEATER  
IN HOLLYWOOD

APRIL 30, 2014



### The Norman Lear Center

The Norman Lear Center is a nonpartisan research and public policy center that studies the social, political, economic and cultural impact of entertainment on the world. The Lear Center translates its findings into action through testimony, journalism, strategic research and innovative public outreach campaigns. On campus, from its base in the USC Annenberg School for Communication & Journalism, the Lear Center builds bridges between schools and disciplines whose faculty study aspects of entertainment, media and culture. Beyond campus, it bridges the gap between the entertainment industry and academia, and between them and the public. Through scholarship and research; through its conferences, public events and publications; and in its attempts to illuminate and repair the world, the Lear Center works to be at the forefront of discussion and practice in the field.

For more information, visit [www.learcenter.org](http://www.learcenter.org)



### Hollywood, Health & Society

Hollywood, Health & Society (HH&S), a program of the Norman Lear Center, provides entertainment industry professionals with accurate and timely information for storylines on health and climate change. Funded by the Centers for Disease Control and Prevention, the Bill & Melinda Gates Foundation, The California Endowment, the Grantham Foundation, ClimateWorks, Skoll Global Threats Fund, among others, HH&S recognizes the profound impact that entertainment media have on individual knowledge and behavior. HH&S supplies writers and producers with accurate health information through individual consultations, tip sheets, group briefings, a technical assistance hotline, panel discussions at the Writers Guild of America, West, a quarterly newsletter and web links to health information and public service announcements. The program also conducts extensive evaluations on the content and impact of TV health storylines.

For more information, visit [www.usc.edu/hhs](http://www.usc.edu/hhs)

➡ To watch a video of the full panel discussion, part of the HH&S outreach to writers, [click or tap here](#).

# Participants



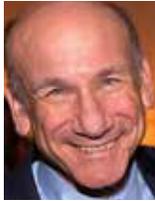
**MARILYN AND HAL WEINER** have produced, written and directed more than 225 documentaries, four public television series including *Journey to Planet Earth* and three feature films—*Family Business*, *The Imagemaker* and *K2*. They won Emmy Awards for *The Earth Summit Pledge*, commissioned by the UN to open the 1992 climate change conference in Rio de Janeiro, and *Streets of Sorrow*, an NBC documentary. Founders of the Washington D.C.-based production company Screenscope, the Weiners are recipients of the TV Academy’s Silver Circle Award for “outstanding contributions to the television industry” and 130 other international awards. Marilyn has been on the board of directors and vice president of Women-In-Film, president of the Washington Film Council, chairperson of the Advisory Committee to the Washington Office of Motion Picture Development and served on the DC Commission on the Arts and Humanities. Hal is the founder of the Independent Media Producer’s Association and has been an honorary adviser to American University’s School of Communications. He’s testified before the U.S. House of Representative’s Energy & Commerce Committee about the availability of the world’s drinking water and national security issues.

**BRIG. GEN. WENDELL C. KING (R)** is the chief academic officer for the U.S. Army Command and General Staff College, and the U.S. member of the international military advisory council on climate change at the Institute of Environmental Security. During more than 32 years of active service, his assignments included project leader providing environmental consultative support to Army installations worldwide; staff officer with the Deputy Chief of Staff Engineers at Headquarters U.S. Army Europe, where he helped develop engineering solutions for air, water and noise problems; and medical operations planner to the Army Chief of Staff’s crisis action team for the Rwanda relief mission. He was the program director of the Environmental Engineering Program at the U.S. Military Academy and directed the faculty in educating cadets on the geographic and environmental sciences. Dr. King won the American Academy of Environmental Engineering Award and the Army Science Award for outstanding research for his work in geophysical remote sensing in 1992. He has written journal articles, scientific reports and two books, including *Understanding International Environmental Security: A Strategic Military Perspective*, and lectured at conferences including the Copenhagen Climate Change Summit in 2009. Dr. King holds a B.S. in chemical engineering, an M.S. in civil engineering (environmental), an M.A. in national security and strategic studies at the Naval War College and a Ph.D. in environmental engineering.

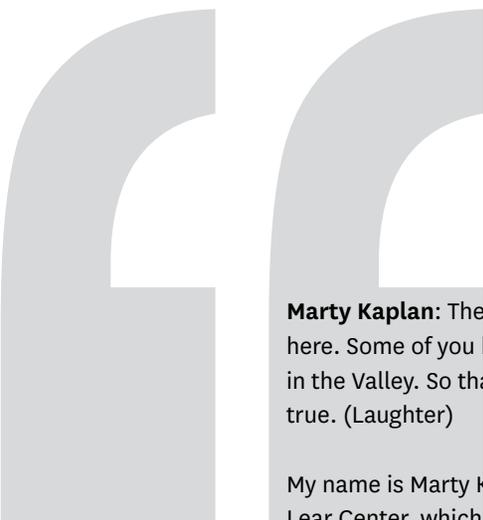
# Participants



**MICHAEL GUNSON** is currently the NASA-JPL manager of the Global Change & Energy Program and the project scientist for the Orbiting Carbon Observatory (OCO-2). His research interests have primarily focused on the physical and chemical processes of the Earth's atmosphere using space-based instruments. Most recently, through OCO-2 he has been examining ways in which atmospheric measurements of carbon dioxide can help resolve questions as to the sources and sinks of this gas at the surface, and how these inform carbon cycle science. He holds a Bachelor of Science in chemistry and Ph.D in chemistry from Bristol University in the United Kingdom.



**MARTIN KAPLAN** holds the Norman Lear Chair in Entertainment, Media and Society at the USC Annenberg School, where he was associate dean for 10 years. He is the founding director of the school's Norman Lear Center, whose mission is to study and shape the impact of media and entertainment on society. He was Vice President Walter Mondale's chief speechwriter and deputy campaign manager of Mondale's presidential bid. He worked at Walt Disney Studios for 12 years, where he was first a feature films vice president and then a screenwriter/producer. His movie credits include *The Distinguished Gentleman*, starring Eddie Murphy, and the film adaptation of Michael Frayn's *Noises Off*. A *summa cum laude* in molecular biology from Harvard College, where he was president of *The Harvard Lampoon*, he won a First in English as a Marshall Scholar at Cambridge University, and he holds a Ph.D. from Stanford in modern thought and literature.



**Marty Kaplan:** The thermometer on my car said 97° as I was driving here. Some of you have been reporting what the winds have been like in the Valley. So that's evidence that nothing you will see tonight is true. (Laughter)

My name is Marty Kaplan. I am the Director of the Norman Lear Center, which is at USC. It's at the Annenberg School for Communication and Journalism. What the Lear Center does is to study the impact of media and entertainment on society. And also to shape that to the degree that we can.

So we are both scholars and meddlers. And tonight is somewhere in that middle ground between. One of the great pleasures that I occasionally get, and I'm going to take this opportunity to do it, is just to make sure I recognize someone who is a hero of mine for his values, his creativity, and his friendship and his unbelievable generosity. So please join me in welcoming Mr. Norman Lear. (Applause)

Our subject tonight is climate change. And for those who wonder whether there are stories for storytellers to tell, I'll just submit two things that are in the news today. Today a group of students at Harvard blockaded the office of the president of Harvard because she refused to have a public meeting to discuss the divestment of the Harvard Endowment of fossil fuels. So there's a little conflict and a little story. And I bet lots of interesting personalities.

The other is something that happened. And this morning on television

there is a Scientific American editor named Michael Moyer who was scheduled to be on *Fox and Friends*, their morning show, to talk about tech trends. And the producer in the green room was saying, "So, what's your number one tech trend?"

And he said, "That'd have to be climate change." And they said, "Don't do that. You can't say that." He later tweeted—oh, "Pick something else," is the exact quote. He later tweeted, "Kind of feel like I should take a shower." (Laughter) He then said that the person putting his makeup on theorized that the Malaysian flight was now at an army base, which led him to talk about the bubble that he was in.

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"The thermometer on my car said 97 degrees as I was driving here. Some of you have been reporting what the winds have been like in the Valley. So that's evidence that nothing you will see tonight is true."

– LEAR CENTER DIRECTOR MARTY KAPLAN

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So real stories, real people, and really important issues. Our climate change work is part of Hollywood Health and Society, one of our signature programs. And to talk a little bit more about that, please join me in welcoming the director of Hollywood Health and Society, Kate Folb. (Applause)

**Kate Folb:** Good evening. And welcome. And excuse me, I've just gotten over a cold. As Marty said, Hollywood Health and Society provides the entertainment industry with accurate information on health and climate change. And guess what? It's free.

We work with dozens and dozens and dozens of top-rated network and cable shows, providing information, access to experts and real people who have real stories to tell. And we do all of this to help

ensure that your storylines are accurate, relevant and impactful. And did I mention it's free?

Our climate change specialists, Matt Rose and Roberta Cruger. I don't know if they're in the room, but if you are, wave. And along with the rest of the Hollywood Health and Society staff, which if there are other staff members, please wave. They've worked tirelessly to put this amazing event together for you tonight.

And I also assure you that they will put just as much effort, if not more, into helping with your storyline research. So please give us a call. If you're working on a health or climate change storyline, I urge you to contact us for the latest data and speedy access to experts and real people. We can even bring experts into your writers' rooms for more in-depth discussion. Okay, commercial's over.

Tonight is about climate change. And we hope that this program will inform and inspire all of you to address this extremely critical issue. Now, we're pleased to present "Extreme Realities," which is the 13th installment of the acclaimed PBS series *Journey to Planet Earth*, which has covered climate change and the state of the world's oceans, wildlife, urban centers and hot zones.

This latest episode explores the link between severe weather, climate change and international security, from the Arab Spring all the way to arctic oil drilling. So it's going to be an interesting evening, I think. And I'll let Marty take it away. (Applause)

**Marty Kaplan:** After the film, we will have a brief discussion. We always like people to hit their pillows at a reasonable time. So we promise it won't be long-winded and really will very much be worth staying for. And the filmmakers will be part of the conversation and some special guests as well.

I know a number of you are tweeting. I can see the light reflecting in your faces. The hashtag for tonight is #HollywoodHealth, or #J2PlanetEarth. This film will be on PBS in the fall. It premiered at the 23rd Environmental Film Festival in Washington just last month. And



this is the West Coast's premiere. So please enjoy, watch and see you on the other side. (Applause)

(Break in audio)

**Marty Kaplan:** I'm going to ask our panelists to come up here. And as they do, you have with—at—in your pamphlets, you have where do you turn this on? How can that be? (Laughter) (Event instructions)

So, I'm going to only briefly introduce our panelists, because we have bios right here. And I'll just briefly introduce them. And then at the end, please welcome them.

So, Hal and Marilyn Weiner, thank you so much for the film. I'm thrilled I got to see it on a big screen. I had seen it on a small screen before. It's amazing. They have produced, written and directed more than 225 documentaries, which has to be a typo. That's

*From left: JPL climate scientist Mike Gunson, Brig. Gen. Chris King (Ret.), HH&S Director Kate Folb, TV and film producer Norman Lear, Lear Center Director Marty Kaplan, and filmmakers Marilyn and Hal Weiner.*

not possible. And they have won not only an Emmy, but 130 plus international awards.

Mike Gunson has been working with the NASA Jet Propulsion Laboratory since about 1990. And is that right?

**Mike Gunson:** A little earlier, unfortunately.

**Marty Kaplan:** Oh, my. And is primarily responsible for the looking at CO<sub>2</sub> on the Earth from the sky. And figuring out what it is that we can learn from that vantage point.

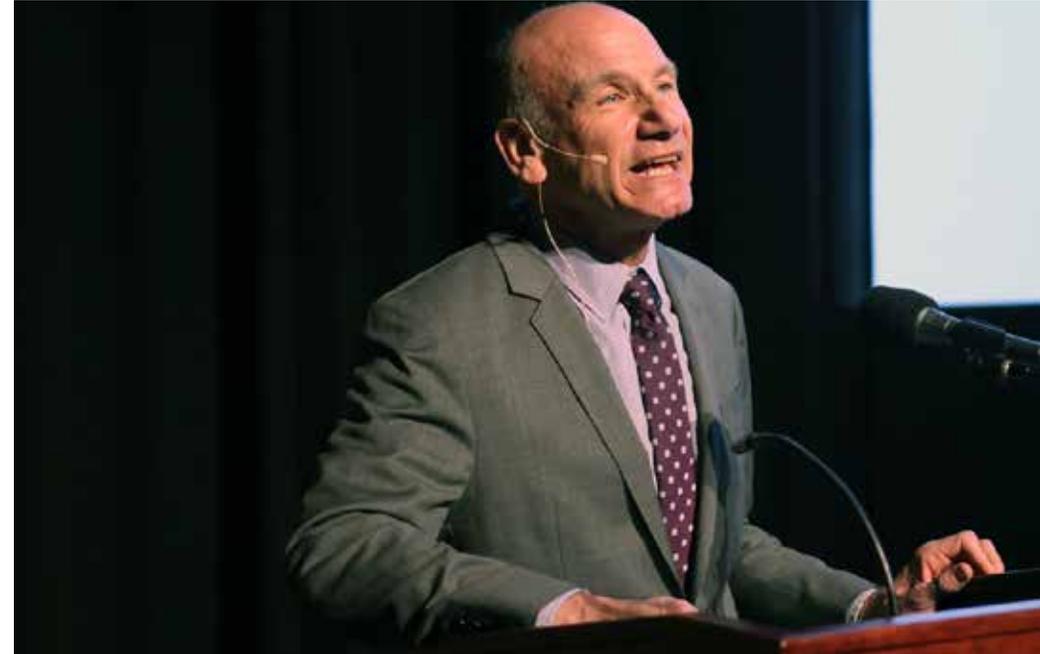
And Chris King, thank you so much for being with us. He is a retired brigadier general. He's the Chief Academic Officer for the US Army Command and General Staff College. He's the author, among other things, of *International Environmental Security: A Strategic Military Perspective*. That you are as perfect casting as we could want tonight. And thank you for your 32 years of service to the country.

Please welcome our panel. (Applause) So, Marilyn and Hal, you made the film that won an Emmy. That opened the conference in Rio 22 years ago at the U.N. climate summit then. And this September there's going to be another U.N. climate summit. So what's changed?

**Hal Weiner:** What's changed? Welcome to the new normal, that's for sure. Of particular interest to the audience here, which is a Los Angeles Hollywood audience, the—I just want to say that the genesis for Marilyn and [my] work in the environment really started here.

In 1991, we were just off a five-year run of doing three feature films in five years. Pretty good run. The first feature film was pretty good. The second one was not as good as we had hoped, but much better than some of the critics had said. And—but—and not as good as some of the other critics. But it was okay. And the third film was lousy. (Laughter)

And keeping with a tradition, I think, here in town, it was the third film that we made money on. And—but we also had decided that



we really wanted to get out of that business at that time. And we went back to Washington, D.C., and decided to see if we could find something of more substance to do. We're political animals, coming from the East Coast and what not.

**Marty Kaplan:** We're political animals out here, too.

**Hal Weiner:** Yes. Yes, you are. And in any event, we were—that—the U.N. discovered us and asked us to have a meeting in Switzerland. And thanks to the lousy movie, we were able to afford to go out to—go to Switzerland. And we did the opening film for the Rio conference. And that led to the series, *Journey to Planet Earth*.

**Marty Kaplan:** So to go back to the question, which you artfully ducked. And I'll ask Marilyn: What's changed since then?

**Marilyn Weiner:** Well, we're 22 years older, for one thing.

*Marty Kaplan, director of the USC Annenberg Norman Lear Center, delivers opening remarks before screening of "Extreme Realities" at the Linwood Dunn Theater.*

**Hal Weiner:** She may duck this one, also.

**Marilyn Weiner:** Unfortunately, it hasn't changed. If anything, things have gotten worse. So—and I think—but one thing that has changed is perhaps our reality, finally, of understanding what's going on around us, hopefully.

So from that point of view, I think people are a little bit more tuned in, a little bit more aware. And I think smarter about what's going on. Which I think is very, very helpful.

**Hal Weiner:** What Marilyn is saying is code for politicians aren't going to bring this about. And it really is going to have to be grassroots work and people like the folks here tonight that can bring the message in many different ways.

We're big—obviously, from the show, we're big champions of Greenpeace. And I—you know, we were talking earlier this evening with somebody. I forget who it was. And we all remembered that during the Vietnam war we all marched.

And during the—and we were always marching, whether it be for women's rights or gay and lesbian rights or rights for women to control their bodies. There was grassroots people that went into the streets. And I think we need that.

**Marilyn Weiner:** The other thing that—what Hal didn't say is that when we left—

**Marty Kaplan:** I love this—(multiple speakers)

**Marilyn Weiner:** Yes, right.

**Marty Kaplan:** —going on here.

**Marilyn Weiner:** In 1992, is—we did always come back. I mean, we were always working out here. And we've always had this love, ambivalence, love, hatred between Hollywood. We've always been

developing things. We know what it's like to be in that development hell. Both dramatic and non-dramatic. So we've never really completely left.

**Marty Kaplan:** So, Mike, you over that same period of time, largely, have been looking at what we've been doing to the planet.

**Mike Gunson:** That's right. And a great film, by the way.

**Marilyn Weiner:** Thank you.

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“One thing that has changed is perhaps our reality, finally, of understanding what's going on around us, hopefully. So from that point of view, I think people are a little bit more tuned in, a little bit more aware. And I think smarter about what's going on. Which I think is very, very helpful.”

– “EXTREME REALITIES” FILMMAKER MARILYN WEINER

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**Mike Gunson:** A great film. In that period, I think in my professional life we've gone from climate change being something of an academic issue, even though those signs were quite measureable in terms of the change that was occurring.

The past decade actually highlighting the arctic region. The polar regions were always known and forecast to be, as a metaphor, the canary in the coal mine. You would see the biggest changes there. And that's what we're seeing now.

So in the past 10 years, we've gone from—we've gone to a very demonstrable impact of the fact we're engineering the planet. And maybe the la—as they quoted in the film, interestingly, I thought that the first thing as human beings we had at our control which could impact the planet were nuclear weapons on a global scale.

And here we are quite inexorably re-engineering the planet. And what we really are at the face of it, it's not—I've said this to—in many forums, actually. Not just this one. But it's no longer a scientific result to say that the planet's in the midst of climate change. It is not new science.

Svante Arrhenius—Augustus Arrhenius, the Swedish scientist, published the first paper, quite remarkably, in 1896 talking about this. And we're not going to change the projections dramatically by more fundamental research.

What's needed is the message of the film. It is really about adaptation and about what technologies, what innovation we can bring to bear to respond to our own engineering experiment. And the [upbeat's] a very sat—fortunately for me, given that I have a day job that involves satellites (inaudible) sensing.

Satellite observations of the arctic region are one of our prime resources to give a visualization to the sheer scale of the changes that are occurring in arctic sea ice extent, the amount of ice that's melting in Greenland, the changes in ecosystems that are occurring in the northern tundra are (inaudible) trees, et cetera. Remarkable changes.

**Marty Kaplan:** I want to come back to adaptation, what we're doing and what we saw toward the end of the film. But, Chris, let me ask you. Here you are, you're in the army. How is it that you ended up focusing on climate change?

**Chris King:** Well, I've got like the split personality. I have three engineering—

**Marty Kaplan:** What's the other part?

**Chris King:** Engineering, engineering and engineering. (Laughter)

**Marty Kaplan:** I see.

**Chris King:** And I have a Ph.D. In environmental engineering. I got



a bachelor's in chemical engineering and immediately went into environmental studies and got a master's degree in environmental engineering before I came into the army.

A lot of the work I have done for the army has been in environmental protection kinds of work, humanitarian operations and preventive medicine kinds of things. So there has been that relationship all along. But when I started to teach at West Point, I found a way that the two came together: national security interests and environmental protection.

And I started studying people such as Homer-Dixon and Norman Myers who were writing on environmental security at that time. And I want to read a quote to the folks. What is change? I think this really gets to it: "Hence, national security is not just about fighting forces and weaponry. It relates to watersheds, crop lands, forests, genetic resources, climate and other factors that are rarely figured in the minds of military experts and political leaders. But

*Lear Center Director Marty Kaplan, who served as moderator, introduces the panel members.*

increasingly deserve in their collectivity to rank alongside military approaches as crucial to national security.”

He wrote that in *The Environmentalist* in 1986. So in that sense, we haven’t made much progress. But if you look in the national security strategies that were just published, it says straight up climate change is real, it is severe, and is a threat to our national security. And we have to build on that.

**Marty Kaplan:** That’s the Pentagon’s?

**Chris King:** No, that’s the president of the United States. Everything that you do in the military has to be based on the guidance that we receive from the civilian authority. The president on a regular basis publishes what’s called the national security strategy. That’s his direction to all of the defense forces and the rest of government of what are the actions we should take for our national defense?

During the global war on terrorism from 2001 through 2011, all the mention of climate change was out of the national security strategy. It is now back into the strategy in a clear and directive way. And then the military has to develop the military strategies that—their component of that.

**Marty Kaplan:** So, that leads me to ask. I read, you said, “When you dial 911 on a national level, you call the military.” So how does climate change on a practical day-to-day level have an impact on our military?

**Chris King:** Well, immediate, you saw it in the film. Every place you looked where there was a disaster or a calamity, once it goes over a fairly limited magnitude, then the first people that are going to be able to respond at that level will be the military forces of Pakistan, of India, of the United States. Wherever it might be.

They have the logistical capability to move the material, the food. They have the ability to respond to large refugees. One of my major missions and one I enjoyed the most not in the sense that it was—it was rewarding and it was really intriguing to be involved in the

Rwanda relief mission.

We’re the only people that can go to the middle of Africa, set up a support system for a million people sitting in Goma, Zaire and sustain them. And help to re-establish basic human needs for groups like that.

The more climate change has extreme events, the more of those events are going to occur. The negative part of that is, the more and more it drains resources from countries that they should be spending on other things. So that’s the relationship that’s primary there.

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– ARMY BRIG. GEN. CHRIS KING (RET.)

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But we also have to be involved in finding the solutions. And developing a national strategy that has a practical approach to implementing—it’s a multitude of things that we have to do. Some of it is security related, it’s economics, it’s education. Probably a huge piece in education. And that’s what you’re all doing with your film.

**Marty Kaplan:** So let’s talk about solutions. This film ended on a hopeful and concrete note. Is that how you really feel?

**Marilyn Weiner:** That depends on who you’re talking to.

**Hal Weiner:** We always have this—

**Marty Kaplan:** Don’t listen.

**Hal Weiner:** We always have this fight. Marilyn's much more optimistic than I am. And when we get—when we do a first cut of a show, I deliberately try not to have good news. (Laughter)

**Marilyn Weiner:** I had to take out all those words like catastrophe and all these other doom and gloom. I mean, we go through this all the time. We just—

**Hal Weiner:** But to follow on what the general said, the big buzzword in the Pentagon today is *threat multiplier*. And the big problem is, if there is going to be one event they can handle it. But in the future, climate change is going to bring about multiple events simultaneously, as we saw in the Russia-Pakistan Arab Spring sequence.

Which all happened in about—it was a six- to eight-month period of time. And it was a domino effect. But think about California. All right, you're going to have a forest fire. You're going to have a fire that's made much worse by climate change for a variety of reasons.

But then you're going to have a second one and a third one and a fourth one. The pressures on the National Guard are enormous. And then all of a sudden we have a Cat 3 or 4 hurricane hits Houston and our oil reserves. And then at the same time think about the glaciers in South America. They're melting.

Within—some say 20 years and some scientists say 10 years, but within a very short period of time, they're going to be gone. Well, along the west coast of South America, it's just like California here. It's a desert. And all of their water comes from the Andes.

**Marty Kaplan:** You're the optimist in this couple?

**Marilyn Weiner:** No.

**Hal Weiner:** No, no, no, no. I'm not the optimist. (Laughter) But where—you see the story about Bangladesh and where are all those people going to go? Where are the 40, 50, 60 million people in South America going to go when they don't have water? What about San



Diego when they don't have water?

**Marty Kaplan:** This is the solutions part of the conversation. (Laughter) But I'm going to pick up your cue and Marilyn.

**Marilyn Weiner:** No, I think if you listen to—one of the most interesting—for me, one of the best interviews that we did was with Jim Yong Kim because he's taking the World Bank into a whole different direction.

And he expresses, I think, the optimism that I feel. That think of what you can do with the amount of money that can be saved if we invest now. It's that old saying, pay me now or pay me later. I'd rather pay you now and have something at the end of the day.

And I just think that if you—that we—if we all decide that we can do something, change can happen quickly. It did when there was a ban on smoking. It did for the civil rights. Change can happen but

*Filmmakers Hal and Marilyn Weiner discuss the making of their documentary "Extreme Realities," part of the public TV series "Journey to Planet Earth."*

you can't just sit there and leave it to somebody else to do.

**Marty Kaplan:** Go ahead, Chris.

**Chris King:** I had an interview, and it's kind of caused a big stir and it's out on the blogosphere. One comment that I think that relates to this, the best analogy I could draw from my perspective as a security perspective is that we're in a hundred years war.

Because of the damage that we've already done and the amount of time it takes to correct. And from a security standpoint, those are the ones we—you can't win. So I'm a little bit pessimistic because I haven't seen the responses fast enough to start overcoming that. I think scientifically you can look at that.

**Mike Gunson:** I wasn't going to make a scientific comment. I've probably shared this story before but last year I had the pleasure of working with a middle school teacher, Jill Grace. And she—we were talking about how to bring climate change into fourth through sixth grade. And I was the expert and former drip.

And the—she told me—she took me aside. “You know, at the end of this, because it can be so depressing, you have to think of what are the pathways out of this that you can give to people?” And she's a big beach lover. And she said every time she goes for a walk on the beach she always—she finds the litter horrible. But she always picks some up and takes [and acts]. It's one small step at a time.

So my message to everybody is that from a grassroots point of view, it starts with the individual taking one small step. And it's not like you should not drive your car everywhere. It's why not think about not taking one trip in the car? Why not think about one—how do you cut back on your need for water?

Just small, tangible steps. And you have to start with that kind of optimistic can-do. But because the bigger picture is daunting. Absolutely daunting.

**Marty Kaplan:** One of the challenges for the people here is an issue like climate change can seem remote, abstract, taking place over geologic time. And the stories that get told are usually based in people and conflict and what's—emotion. And what's going on right now.

So I—other than yourselves, who are all terrific characters to be incorporated into scripts, can you tell us, and this is a jump off for anyone, about someone you have met along the way who you found really amazing? Chris?

**Chris King:** I can give you a group. I'm a member of what's called the

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– “EXTREME REALITIES” FILMMAKER HAL WEINER

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Global Military Advisory Council on Climate Change. They're retired senior officers from all over the world. Bangladesh, former chief of staff. The army. From Pakistan, from India, from Guyana, from Nepal.

They have one common thread. It is that they believe that climate change is a secure—threat to their security. To their national security. And we heard the story of Bangladesh being told.

They have amazing stories. They have amazing energy. And they have dedicated basically their retired life to trying to push this forward. We will probably meet in September again in New York to try to—

**Marty Kaplan:** Around the time of the summit.

Chris King: —develop a call to action. But there’s some amazing stories in—

**Marty Kaplan:** That’s great.

**Chris King:** —this group of men.

**Marty Kaplan:** That’s great.

**Chris King:** Just put an image of a Pakistani, a Bangladeshi and an Indian military sitting in a room and having a heartfelt conversation about a subject in complete agreement. And trying to find solutions that work between their countries.

**Marty Kaplan:** And—

**Chris King:** That to me is a great story. That’s why—

**Marty Kaplan:** And like *Ocean’s Eleven*, one day the call comes out, “We need you all to do battle together.”

**Chris King:** That’s my story. I’m sticking with it.

**Marty Kaplan:** Mike, did you have one?

**Mike Gunson:** I’m not sure one comes—jumps to mind. But I was just thinking, listening to Chris. The International IPCC report. I just bought my version on Amazon, for the physical basis. And if there’s any testament to how international agreement, it’s the number of people who contributed to that report. It’s hundreds. Hundreds, if not thousands—

**Marty Kaplan:** These are the—

**Mike Gunson:** —of scientists.

**Marty Kaplan:** —three reports that the UN body just put out. And—



**Mike Gunson:** That’s right.

**Marty Kaplan:** —that’s the body that shared the Nobel Prize with Al Gore.

**Mike Gunson:** That’s right. So the 2013 assessment is now in print. It’s another terrific—I’d just like to say, I didn’t personally write anything. But, dang, when you look at the thousands of pages of scientific work that’s gone into that, it’s just unbelievable.

**Marty Kaplan:** Hal, Marilyn, most unforgettable character or amazing story?

**Hal Weiner:** Well, there’s a recent story and it goes to our favorite organization, Greenpeace. Greenpeace was protesting Apple for quite a while. And they would demonstrate against Apple and their use of energy. And it was just recently announced that Apple will not use any energy in the United States at any of its facilities that is not renewable.

*Army Brig. Gen. Chris King (Ret.), chief academic officer for the U.S. Army Command and General Staff College, discusses the national security implications of climate change.*

And that's because of Greenpeace.

So I really think that it's—I agree more with Tom Friedman than anyone in the show. Tom is a realist. And he's given up on the politicians. And the only way to get politicians to do what we all want is to get rid of them. And put somebody else in there that's going to listen.

The polarizing of climate into red and blue and left and right is what—what a tragedy. What a tragedy in 20 years, 30 years or probably less when our kids and grandkids are going to say, “What the hell were you thinking?” (Laughter)

**Marty Kaplan:** I'm going to ask Marilyn and others. But just to let you know, in just a moment I would love you to join the conversation. There are people with microphones. So if you put your hands up, they'll know where to find you. Did you want to add a—

**Marilyn Weiner:** Yes. One of the things in doing the research, and I don't know if we—it came out quite—is the military. That when we interviewed—when we started doing research, we found that the military was so far ahead in their thinking in terms of getting us ready to be a climate-ready nation.

And the fact is that they were employing in green technologies way ahead. And saw the benefit of it in the co—and I was surprised. I was just as surprised as anybody because I—to me the military was the military. That they were about big guns, bi— (multiple speakers) yes, right. Big planes.

**Marty Kaplan:** Knuckle draggers. (Laughter)

**Marilyn Weiner:** Yes.

**Marty Kaplan:** I was wondering what you were—

**Marilyn Weiner:** Right, exactly. Yes.

**Marty Kaplan:** —miming here. Thank you.

**Marilyn Weiner:** So just understanding that they were actually working for their benefit and for the benefit of all of us changed my whole view of the importance of the military.

**Hal Weiner:** It was very important for us to get Jim Woolsey in the show. Former head of the CIA. And I think Marilyn asked him, “How do you describe yourself?” And he said, “Well, I'm a neo-con who believes in climate change.” (Laughter)

**Marty Kaplan:** Do we have any questions from the house? Yes, right

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“[In our research] we found that the military was so far ahead in their thinking in terms of getting us ready to be a climate-ready nation. I was just as surprised as anybody because to me, the military was the military. That they were about big guns.”

– “EXTREME REALITIES” FILMMAKER MARILYN WEINER

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there. There's a mic, gentleman with the blue shirt.

**Unidentified Audience Member:** I seem to have the requisite blue shirt, judging from the film. Yes, I wonder if you would—talking about solutions, if anybody would care to talk about nuclear fusion. Because it's pollution-free. And the raw materials are free. And all we need to do is spend about 10 or 15 years and several hundred billion dollars on developing it. And it would solve our need for energy forever.

**Marty Kaplan:** Mike, do you want to?

**Hal Weiner:** Why me? (Laughter)

**Mike Gunson:** Thank you. So—

**Hal Weiner:** I come from a laboratory.

**Mike Gunson:** I come from a labor—yes. I come from a laboratory. Yes. I'm not a test tube baby, either.

So the—I—my—I agree with you that the future requires a portfolio of energy sources. There is no magic bullet out there at the moment anybody can come up with. And one of them is the continued development of possibilities of nuclear fusion. Of course, the—what's the great experiment up at Lawrence Livermore? The big—

**Marty Kaplan:** Manhattan Project?

**Voices:** No.

**Mike Gunson:** No, the big flash. You know, where they got all the— (multiple speakers) the big lasers they're using to—

**Hal Weiner:** There's a—

**Mike Gunson:** The ignition facility. Thank you. Wow. I think I'm getting older or something, I don't know. (Laughter) The ignition facility is one such attempt to try and create the conditions for nuclear fusion.

I personally believe, I know this is horrible, but I believe nuclear power has got to be considered as a component of the portfolio. There are plenty of reasons to be cautious about nuclear power because of its—the consequences if you have an accident. Look at what happened in Japan. That's just awful.

But I don't see a future that's carbon-free without considering all of the options in a balanced portfolio of—at the moment we're just too dependent on coal.

**Marty Kaplan:** I just want to bring some more questions. And I know there's plenty more to say about each thing. But, yes, could—Elliot,



that's right. Yes. Thank you.

**Unidentified Audience Member:** Yes. First of all, I thought the movie was phenomenal. I loved—and I loved both of you having an opposing point of view. (Laughter) And based on that, the interesting comment that I had heard from Michael, I believe, was that the first report was in 1896 of climate change. And if that's the case, what did that have to do with carbon emissions?

**Mike Gunson:** No. So, the quick response on that, because I know I can go on too long, is that even the French mathematician Fourier, the Irish physicist John Tyndall, had all wondered about the greenhouse effect, effectively, about what kept the earth warm.

But it was Arrhenius who actually speculated on the role, an important role, of carbon dioxide in the atmosphere about climate. And did some tedious pencil and paper calculations that looked at, like, two years. Now we have them called climate models.

*NASA-JPL climatologist Mike Gunson: "It is really about adaptation and about what technologies, what innovation we can bring to bear to respond to our own" re-engineering of the planet.*

And came up with the idea that it could—that a doubling of carbon dioxide would lead to something like a 1.5°C to 4°C change. That was in 1896. And quite frankly, that number range has been adjusted minutely with computer models.

**Marty Kaplan:** Questions on this side, anyone? Well, right in the center. Yes.

**Unidentified Audience Member:** (inaudible - microphone inaccessible)

**Marty Kaplan:** Thank you.

**Unidentified Audience Member:** I promise this is on topic. A movie came out this year called *God's Not Dead* that cost \$2 million and has made \$50 million in the box office. *Heaven Is for Real* is going to cross easily the \$50 million mark.

So there is this giant audience for those types of movies. And I think if you create a Venn diagram of the audience for those movies and the audience for Fox News and the people who vote for politicians who are against climate change, or are climate change deniers, you're going to see a giant cross-over.

There's going to be a really big section in the middle. And I was watching this movie and I was getting super angry about how un-Christian this attitude is about not caring about any of those people in the world who are being destroyed by this issue.

But everyone in this room supports this movie. We love this movie. The people who are not in this room are the people who need to see this movie.

**Marty Kaplan:** So let me—

**Unidentified Audience Member:** And—

**Marty Kaplan:** —turn that into a question for Chris.

**Unidentified Audience Member:** Yes.

**Marty Kaplan:** You live in Kansas now.

**Chris King:** I live there. (Laughter)

**Marty Kaplan:** And you (multiple speakers) they're—yes, that's—

**Marilyn Weiner:** Dorothy, we're not in Kansas.

**Marty Kaplan:** —that's my question. That's my question.

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“What do you do when you have the Koch brothers . . . who spend [hundreds] of millions of dollars to spread disinformation? How do you counter that? And that, frankly, I don't know. I don't have the answer to it.”

— “EXTREME REALITIES” FILMMAKER MARILYN WEINER

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**Chris King:** I'm 45 miles from Westboro Baptist Church.

**Marty Kaplan:** And you have the point of view you have. You live there. What is it like for you in those conversations?

**Chris King:** Well, I'm going to be much optimistic. The Interfaith Power and Light started in San Francisco. But it's non-denominational churches from all over the country. I speak regularly at those venues to very large crowds.

It's still a minority in our region of the world. One of the best sessions I've had most recently, I was invited to be one of the guest speakers at the annual meeting of the Kansas Farmers Association. That's very, very conservative.

There wasn't one contrarian in the whole room. You know why? Because they have to farm in that region and they're out of water. And they're seeing changes in their ecosystem. They're just wanting somebody to help them understand why those changes are occurring. Their only comment was, "That was really informative but you're scary." (Laughter)

**Unidentified Audience Member:** So, but my question is, are you going to—

**Marty Kaplan:** There's a—

**Unidentified Audience Member:** —are you making content for that audience? For the audience that wants to marry their faith to their politics to denying science?

**Marty Kaplan:** That's the challenge to the room.

**Unidentified Audience Member:** Can I say something on that very subject?

**Marty Kaplan:** I'm sorry, you've spoken. I love you, but we're going to move on to someone who hasn't. Gentleman on the aisle. Yes.

**Unidentified Audience Member:** Yes, that's a very interesting drift that the conversation is going into. And I don't know why I bring this up, but in my hometown, there was Fort Vancouver. And they had this wonderful supply of water.

And they built outhouses next to the well and wondered why things went wrong. And that type of ignorance I was, like, "What's—how could people be so stupid?" And now I have to look at today and see how ignorance rules through politics and religion and through economic theory.

And I'm wondering if this is a direction that you would like to go into through your television work. Am I just stirring the pot? Or is there a direction that might open the door? I was really relieved to see that



you noticed that there are people—

**Marty Kaplan:** Chris has an answer for you.

**Unidentified Audience Member:** Okay. With that, I'll shut up.

**Chris King:** No, I just have a comment. There's a very effective group out there, they're spending a tremendous amount of money and very professionally trying to tell the story that we need to wait. I think that even they are giving up on it's not real. But we don't know enough. We need to wait.

It's what we call in my business a delaying action. They're not expecting to win but they're going to make it go as slow and—

**Marty Kaplan:** And financed by the fossil fuel industry.

**Chris King:** Yes, financed very, very well. So it's not just that. People

*JPL climate scientist Mike Gunson answers a question from member of the audience during Q&A that followed the screening of "Extreme Realities."*

are hearing that message more than they're being able to see this, in my view.

**Marty Kaplan:** Who has the two shortest questions? We're going to hear them both. Right over here and then the other one. And then the panel will answer. Yes?

**Unidentified Audience Member:** What—okay, so the question is kind of dialectical. So if—

**Marty Kaplan:** It can't—dialectical can't be short.

**Unidentified Audience Member:** Okay, real quick. Scientists. If you—is—are there scientists that are not paid by industry that have any evidence, any data against global warming? Do they have any quantitative evidence that's qualified?

**Marty Kaplan:** Okay. And another question? Right here. We do—wait for the mic.

**Unidentified Audience Member:** Thank you. I mean, the whole argument seems to come down to the old story about the grasshopper and the ant. I mean, every—they're always putting short-term profits over long-term strategy.

**Marty Kaplan:** And the question is?

**Unidentified Audience Member:** The question is, what can be done about it in terms of—I mean, we see it now with Oklahoma wanting to charge people for using solar panels and renewable energy.

And why can't there be some kind of concerted strategy among states that when—which they feel the opposite to lure business away from states that want to charge them for putting energy into the power grid? So that—because once business—if businesses start moving away with jobs and then taking away the tax base, suddenly those government policies would change.

**Marty Kaplan:** Thank you. So either question?

**Chris King:** No. (Laughter) To that question, no.

**Marty Kaplan:** There are not such scientists?

**Hal Weiner:** Yes. I—if you go—we travel around the world and—doing shows like this. And giving talks like this. The United States—

**Marty Kaplan:** They're the smartest and best looking, right?

**Hal Weiner:** With—by far. And the United States is by far the leading

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“That argument really belongs to us. I think when you get to the heart, everybody that we would want to talk to believes that that's a value for them: They care about what happens to their kids, what kind of future they're going to have.”

– ARMY BRIG. GEN. CHRIS KING (RET.)

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center of Luddite-ism in the world. And it's not—they're not—this is not a Luddite country. It's really—there's a psychosis that's been spread in this country that's beyond belief.

You go to any place in the world and, number one, Greenpeace is heroes. The green movement is important to everybody. Everybody recognizes the problem of climate change. This country is just crazy. (Laughter)

**Marilyn Weiner:** No. No, no, no, no, no.

**Hal Weiner:** Wait. Wait, wait. Marilyn'll comment. It is just crazy that we're—that big money, the Koch Brothers are allowed to do what they're allowed to do. We have a supreme court that does what it

does. And it's so politicized it's beyond belief.

**Marty Kaplan:** And, Marilyn, do you have to interrupt him?

**Marilyn Weiner:** Well, I mean—

**Marty Kaplan:** Or you just start in—

**Hal Weiner:** No, she's—

**Marilyn Weiner:** No. No. Do—I don't have to, no. Because he actually got to the right point. I mean, what do you do when you have the Koch brothers or people like the Koch Brothers, because there must be more than just these two, who spend tens of millions of dollars—

**Hal Weiner:** Hundreds of—

**Marilyn Weiner:** Hundreds of millions of dollars to spread disinformation? How do you counter that? And that, frankly, I don't know. I don't have the answer to it.

**Hal Weiner:** And an Australian who controls the media in this country. (multiple speakers) Think about that.

**Marty Kaplan:** Chris and Mike, I'm going to ask just—throw one last question to see if either of you or both want to talk to it. I was reminded by a recent *New York Times* story about this. There's a saying, "What did future generations ever do for us?" (Laughter)

**Marilyn Weiner:** (inaudible)

**Mike Gunson:** Well, acco—

**Chris King:** Go ahead.

**Mike Gunson:** Go ahead. According to my son, nothing. Wow. (Laughter) Marty, that's a brilliant question. I don't know. It'll take me all night to even think of an answer.



**Chris King:** I think that argument really belongs to us, though. I think when you get to the heart, everybody that we would want to talk to believes that that's a value for them. They care about what happens to their kids, what kind of future they're going to have.

*Audience member poses a question to panel that followed the screening of "Extreme Realities."*

And if you can win that argument, I think you've got—you're going to make a dramatic effect in trying to accomplish the goals we have. Which is to get the message out in a clear and understandable way, not with a bunch of the science stuff. But in terms and create and telling—

**Mike Gunson:** Storytelling and (inaudible). I agree.

**Chris King:** Storytelling and visions. And I think that's a great way to do it. What have they done? That's the book.

**Marty Kaplan:** And thank you for giving us the perfect note on which to end. Thank—please thank the panel. (Applause)