



## The Climate Change Now Initiative:

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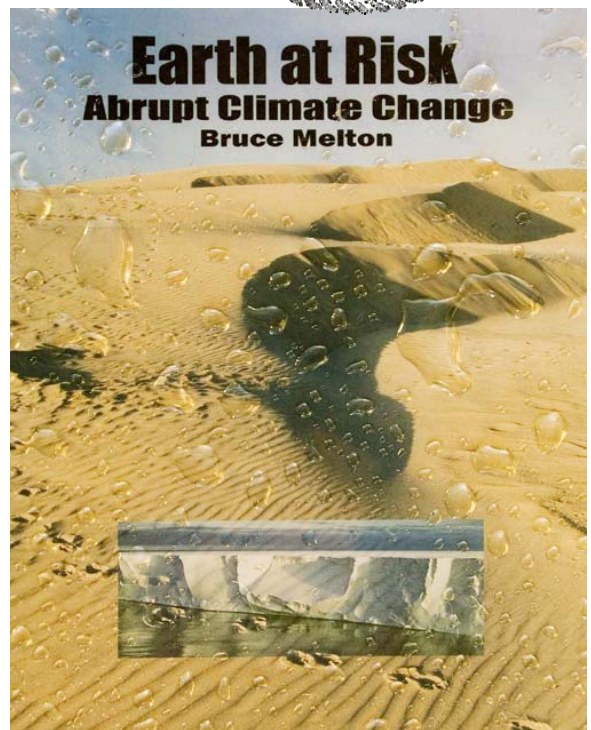


### Title(s)

Climate Change Now - Climate change adventure documentary

Climate Change Man – Discovery Channel style reality television series about the latest climate changes happening today

Earth at Risk: Abrupt Climate Change - Leading edge book on climate science for the average person



### Summary

*Climate Change Now* is an initiative of Melton Engineering Services Austin. This initiative will launch our society into the twenty first century of climate change using progressive outreach techniques. Long standing information abuse from industry and politics, and misguided though innocent personal actions concerning climate change can no longer be tolerated. The ongoing scientific discussion of the likely passing of a climate threshold is too ominous to be ignored. The number of scientists who now say that we must act immediately is startling. They say that our global actions to address this climate crisis must be similar to actions taken during the last World War; otherwise the consequences will be unimaginable. The stakes are that high.

Bruce and his co-host, local meteorologist Bob Rose, their Telly award winning HD film crew and of course, the band *Climate Change*, go to where climate change is happening today and show the viewer and the consumer exactly why the scientists have been warning us all along that climate change is real, it is happening now and it is worse than predicted. The locations

that the team visits are often at the ends of the Earth, the conditions are always challenging and the reality style adventure entertainment goes far beyond science education.

The need for greater outreach is abundantly clear. In 1987, Google Scholar referenced 44 papers on climate change and or global warming. In 2007 there were 8,010 references. Bruce is the engineer and scientist who is trained and prepared to interpret this rocket science-like information for the average consumer. There is just too much new information and too few outreach specialists. The media cannot comprehend the science, the scientists are often not prepared to present their findings to the average person and the politicians are no better than the media or industry at understanding *and* presentation.

*Climate Change Now*, *Climate Change Man* and *Earth at Risk* are positioned to accelerate onto the scene of climate change in the very near future. Ongoing changes in our climate cannot be ignored for long, because they are increasing rapidly and they will continue to do so. Climate change is not something that goes away, and it is not something that gets better over time.



The climate surprises will continue. It will not be long until Americans notice the 27 million acres of trees killed in North America in the last decade. The apparent shift of the Arctic sea ice state will become news once again in a few years when the scant remains of the new first year ice in the Arctic disintegrates under normal summertime conditions. Ice discharge from the Greenland Ice Cap has doubled and then likely doubled again in the last 15 years. Antarctica has gone from a place where ice accumulates to one that is discharging almost as much ice as Greenland. Sea level rise will gain media attention soon – careful observation shows irreversible impacts already.

Permafrost is melting very rapidly across *hundreds of millions of acres* of the Arctic and sub Arctic and is likely to blame for the recent unexpected and what the scientists describe as uncharacteristically large increases in methane levels in the atmosphere (methane is 23 times more potent a greenhouse gas than carbon dioxide). But, could the methane increases also be coming from the Montana sized deposits of frozen methane on the continental shelf under the Arctic Ocean north of Siberia that are now melting because average annual temperatures have soared by up to ten degrees in the last thirty years? Which is it? The scientists do not really

know yet, but they know that it is happening and that things like atmospheric methane concentrations and many others are unparallel in the historic and prehistoric records of our planet.

The *Climate Change Now* Initiative can do something about these rapidly accelerating climate changes that we are now seeing. The concept involves the general education of the public and can be illustrated by the impact of the discovery of hygiene practices at the turn of the 20<sup>th</sup> century.



It was about 1900 that our society discovered that appropriate hygiene practices (clean water, proper waste disposal, food storage, hand washing, etc.) reduced deaths from what we beginning to understand about bacterial infection. Between 1900 and the beginning of WWII (1940), deaths from infection decreased by an astonishing 80%! Next is the most astonishing part. The invention of antibiotics during World War II only decreased deaths from infection by another 15%. The original 80% decrease was caused solely by the spread of knowledge through society.

The technology exists today to do something about climate change. Once society understand that this issue is beginning to occur much more rapidly than we have understood for several decades, the knowledge alone will lead to a significant solution – just as in the case of the knowledge learned with the invention of hygiene practices.

The really good news is: that climate change will very likely be a profitable venture for almost everyone. This is beginning to become understood despite the great efforts at disinformation

from some sectors of society. Ironically, it is exactly these sectors that are launching new alternative energy campaigns when just a few years ago they were promising financial doom.

## Work Completed

- Scouting trips to Greenland, Alaska, the Chihuahuan Desert, an uninhabited barrier island on the Gulf of Mexico, the greatest tree pandemic ever known in the north American Rockies and Galveston after Hurricane Ike, during the mandatory evacuation.
- Climate Change Now – 26 minute film, documentary sample video.
- What Have We Done? – 12 minutes, short film about the death of 27 million acres of trees in the last ten years in the Rockies.
- Thirteen essays on climate change, written for the average person
- *Earth At Risk: Abrupt Climate Change* - Four chapters.
- Over \$125,000 expended to date.
- The Sundance Institute Documentary Fund has asked for supplemental information.

## Author and Producer

Bruce has been a professional engineer, environmental researcher and outreach specialist for 25 years. Understanding advanced climate science has been his goal for the last decade; teaching people about abrupt climate change has been his passion for the last five years. He was the principle investigator and project manager for a \$1 million Clean Water Act research program. He has been giving climate change talks for three years, and has been an environmental speaker for twenty years.



He has written extensively about the little known and aggressively accelerating aspects of climate change that are so important to the discussion today. He is locally published and has a growing portfolio of climate presentations at his command.

For the past several years he has been active locally and regionally in an effort to convince local and regional officials and the Texas Department of Transportation that their multi-lane transportation designs were just no longer acceptable in the 21<sup>st</sup> Century. He has spoken publicly in an intensive campaign and donated thousands

of hours of engineering time in environmental analysis and lobbying efforts. The campaign has resulted in a new Environmental Impact Study and hopefully a new direction for the project.

Bruce is an adventurer, a climber and spelunker. He takes his four-wheel drive truck to 13,000 feet in the Rockies and 65 miles down a four wheel drive only wilderness beach. He camps on uninhabited islands from a homemade wooden boat. He assists biologist with endangered species surveys and plays rhythm guitar and harmonica and sings original climate change blues and rock and roll with his band *Climate Change*.



Bob Rose was a local television meteorologist for ten years in Austin. For the last ten years he has been the Chief Meteorologist for the lower Colorado River Authority, Bob's duties include significant public relations responsibilities. Bob is a practiced public figure with great "local weatherman" credibility. His love for the weather is obvious. His ability to connect with the public is practiced and polished. The trustworthiness of the local weatherman will be an valued asset to the production.

## Arrowhead Film and Video

Award winning director Pat Fries has produced and directed documentaries and commercials for 25 years. In 2002, Fries restored and flew a Vietnam era "Huey" helicopter across America to capture the untold stories of Vietnam veterans and families. His documentary mission became the catalyst for a remarkable journey of healing and reconciliation that landed the aircraft and film clips a permanent home in the Smithsonian Museum of American History. Pat also directed and produced the Telly Award winning *An Ocean Away* and the acclaimed *A Run Unto the Sea: The Adventures of the Abilene Boys*, narrated by Walter Cronkite. Arrowhead Film and Video can tell the story of the abrupt climate changes we are seeing across our planet today.

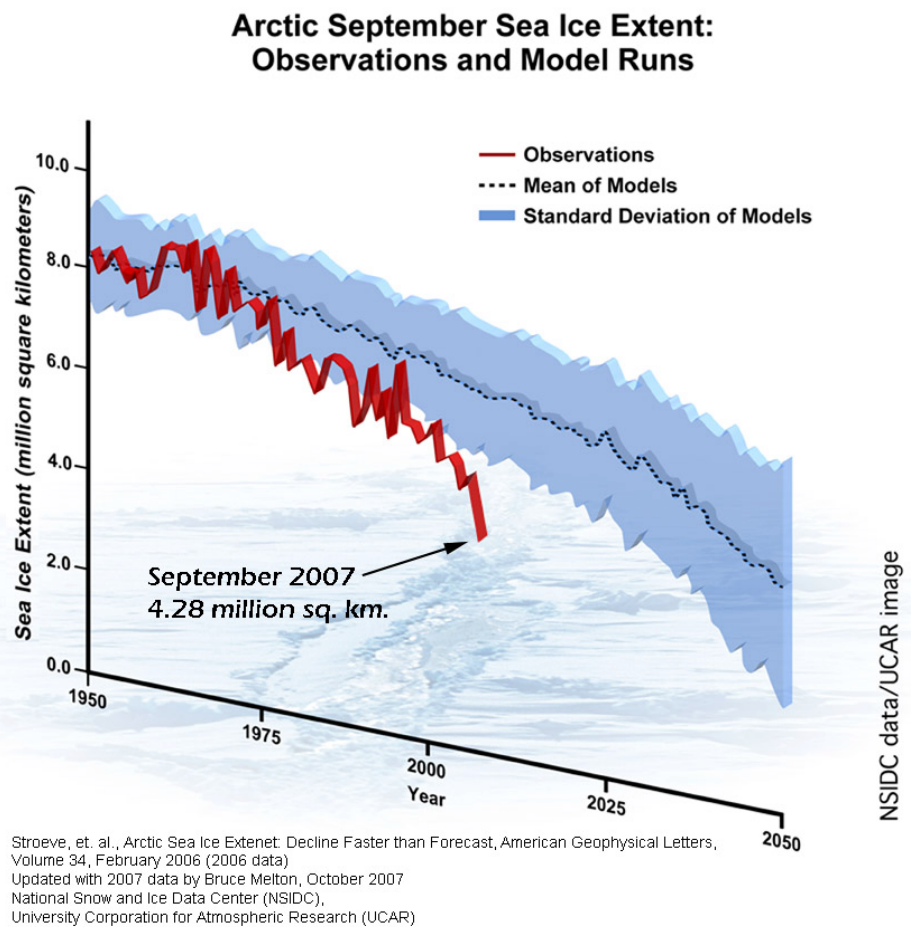
A screenshot of the Arrowhead Films website. The top navigation bar includes a red arrow logo, the text "Documentaries That Make A Difference.", and menu items: HOME, ABOUT US, OUR WORK, HDGALLERY, STORE, CONTACT US. The main content area features a large image for the documentary "A TOUCH OF HOME: The Vietnam War's Red Cross Girls". The image shows a group of soldiers and a Red Cross worker in a field. A button below the image says "Learn more about the film". To the right, there is a promotional banner for the film's premiere: "PREMIERING Sunday, November 9th at the WOMEN IN MILITARY SERVICE FOR AMERICA MEMORIAL". Below the banner is a smaller image of a woman in a Red Cross uniform and a "MORE INFORMATION" button.

Arrowhead Film and Video is a veteran of fifteen years of service in Austin, with numerous National clients as well. Disney, Universal and Paramount have consistently hired Arrowhead for their ability to get the job done and to tell the story like it needs to be told.

Arrowhead's clients also include the Discovery Channel, the National Parks Service, Dell, Walt Disney, the Public Broadcasting System, the British Broadcasting Corporation and the Environmental Protection Agency.

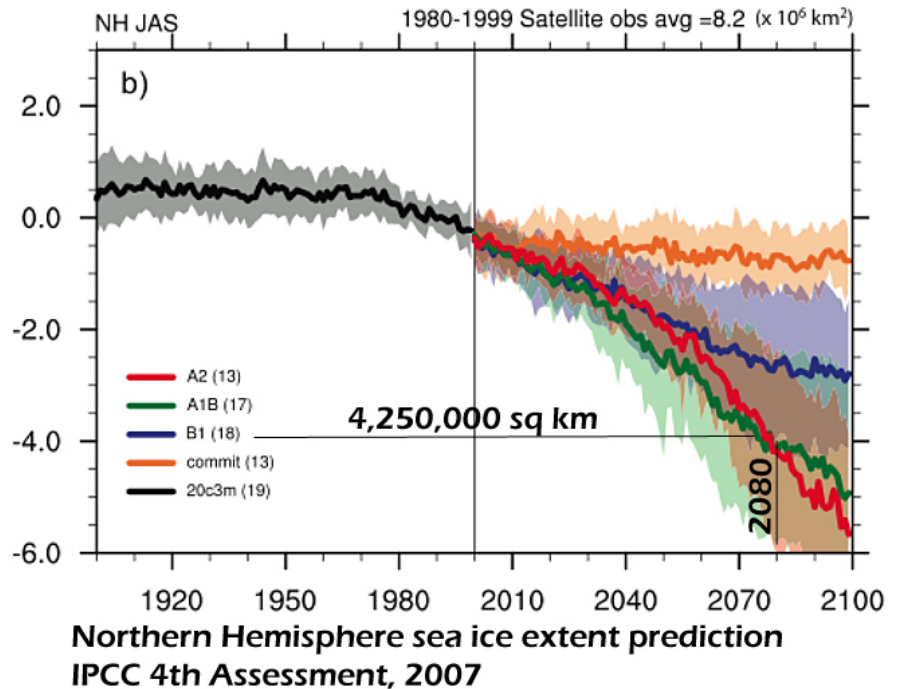
## Audience

The Discovery Channel style "reality adventure audience" is the general target of this Initiative. But the true audience is most of the people on the planet today and this is why: Our global society today understands climate change about like our scientists new it ten years ago. People understand that climate change will impact their lives and want to do something to lessen that impact. But the details are not clear for a number of reasons. Details like the graph above that shows the results of most of the scientists' computer model projections of Arctic sea ice coverage. The blue shaded area represents most of the modeled results; the black dotted line represents the average of all the models. What the big red line shows is actual sea ice coverage of the Arctic Ocean. You can think of the bottom edge of the blue shaded area is basically the "worst case scenario". Actual ice coverage is far below the "worse case scenario".



The bottom graph shows the IPCC climate models estimate of future Arctic Sea Ice. The green line is scenario for the a rapidly expanding economy with an evenly mixed fossil and alternative fuel that implements new energy efficient technologies as fast as possible. This scenario is considered by most to be the most likely way that our society will develop. So as can be seen comparing the dates for the 4.25 million square kilometer area, the Arctic Sea ice melt is progressing about 70 years ahead of schedule.

This kind of knowledge is being repeated over and over in science today, but people really don't understand more than a new record has been set. At each new presentation I make, there are more minds open to the new facts of climate change. More people are beginning to understand that this climate change thing might be worse than the forecasts that we have been spoon fed for twenty years now, and these people want to learn more. They understand that to make appropriate behavioral decisions, the full story must be known.



## The Challenges of the Initiative

There are two main challenges of presentation with this initiative: The believability factor and the perceivably boring subject matter. The Discovery Channel has a pretty good idea of how to keep this type of presentation from being boring. Everything from animation to rock and roll will be used with this programming. The adventure ingredient will be found at every turn because most climate changes today if not in a wilderness, can certainly be found with an adventurous spirit. The host, co-host, staff and crew will provide the comedy as they go about the challenges of creating a professional product in a challenging environment. Camping, eating and daily chores will play filler roles.

The band will play a role in comedy and filler moments. They will mostly hang out in town near the pub and cause their own brand of responsible musician mayhem. And the band will play the obvious key role as well. Original climate change music in many genres will be the background for the show. But the most challenging part of the delivery is how believable the audience perceives the information to be.

Bruce is an engineer and a scientist. Bob is a meteorologist. These professions have a significant amount of respect. But respect alone will not convince a viewer that Arctic sea ice is melting 80 years ahead of schedule.

The quality of the information that Bruce can generate from the knowledge coming out of academia today is astounding. There are certainly some significant prepackaged graphics that tell a story, but Bruce has developed his own unique graphics and story telling abilities. This is an area of specialty of this project. Images tell stories. They also keep people awake.

Some topics however, are just plain old way out in space. Methane clathrates are a good example. Methane is a tough concept for most people until they realize that methane is just natural gas that burns on the stove at the house. Trying to get folks to understand that methane clathrates are a water ice and methane matrix that is frozen on and in ocean sediments and in permafrost in quantities that make coal reserves look like a bag of sugar inside a Super Walmart is a completely space age task however. It requires specialized scientists and deep-water extraction tools, underwater remote filming and massive graphics capabilities – just the kind of thing that an engineer and a scientist adventurer can coordinate.

## Competition

Bruce has read almost all of the titles about climate change that have been marketed since the 1970s. In the last seven or eight years the number of climate related books has skyrocketed, and in the last three or four the number has increased even more. However, it appears that the last eight to twelve months have seen a lull in new publications. Is this a trend or temporary? It seems that most of the “guides” to climate change have been written. There are at least 30 books published since the mid 1990s that say the exact same thing – “This is climate change, this is what it will do to your future and this is what we can do about it”.

Documentaries and television shows are also focusing on the primary education pieces of climate change outreach, and for good reason. This is virtually rocket science, and in many ways much more complicated. A lot of attention needs to be placed on the basics.

The transition to abrupt climate change from a believer who has just converted from “natural cycles” is too much to ask of most people. They turn off instead of tuning in. *Climate Change Now* will come along at a time when these viewers will have already been educated about the basics. They will be much more easily approached about dynamical ice sheet disintegration than people that view of glaciers and ice caps as slow and geologically progressing entities.

Bruce takes for granted that his audience understands the basics. His writing and filming style is a combination of the narrative and the reality adventure. The competition is on the edge now, but that edge is ten years behind true science. The edge today is right up against the recently discovered 5.2 magnitude icequakes rocking the Greenland Ice Cap. There have always been icequakes, but they have never been large enough to really be *called* icequakes. What we have historically seen are the shock waves from ice *cracking* that register no more than 2.1 on the Richter scale and last for no more than 2 seconds. These new, relatively massive icequakes, with their 5.2 magnitude shock waves, are more than 1,000 times more powerful than anything ever measured before and they can last for 90 seconds!

*Climate Change Now* will stand on the edge of climate science and report back to the world. We will bring the news from the academics to the viewer while camping in the wilderness, venturing to the ends of the Earth and playing live original music Austin style.

## Special Marketing and Promotional Opportunities

### Bruce's Selected Resources:

- Four chapters for *Earth at Risk: Abrupt Climate Change*,
- Two documentary sample films,
- A completed conceptualization for a regular science-adventure television series,
- Three scouting trips with 26 hours of video and 6,000 high resolution stills – Greenland, Alaska and an uninhabited barrier island,
- Thirteen essays, all complemented by high-resolution scenic photography,
- A four-day photo-journal essay assignment on Galveston Island during the mandatory evacuation after Hurricane Ike,
- Numerous miscellaneous interviews in local and regional media,
- The project's HD film crew won a Telly Award for one of its documentaries, *In the Shadow of the Blade*,
- A prominent local meteorologist will serve as Bruce's co-host on the television project, and Sundance has asked for supplemental information for the grant application they are considering.

See all of Bruce's resources at: <http://www.meltonengineering.com>

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