Global Warming, Climate Chaos and Human Conflict

Yet many U.S. "peace and justice" organizations have not embraced a climate chaos agenda that could prevent or reduce the conflict . . . such an agenda must be a key part of every organization's actions.

On June 21, 2011 I had six hours of surgery for renal cell cancer. At age 79 I'm devoting my remaining time and energy to this vital issue and dedicating this piece to Luc, my very first grandchild: an innocent, unaware member of "Generation Hot'—the two billion young people worldwide who will spend the rest of their lives coping with mounting climate disruption."[6]

Richard Lee Dechert* Maplewood, Minnesota August 31, 2011 (Luc's birthdate)

Introduction

Since the First Industrial Revolution began in Britain in the 1730's and the Second Industrial Revolution began in the U.S. in the 1860's, global atmospheric CO2 has exponentially increased from a stable level of about 280 parts per million (ppm) to a record 394.97 ppm in May 2011,[1,2] while world population has exponentially increased from about 730 million to over 7 billion in 2011 and is projected to over 9 billion by 2050.[3-5]

In his monumental 1988 testimony to the U.S. Senate, Dr. James Hansen, NASA's chief climate scientist "declared that man-made global warming had begun . . . [and] that human activities— notably, the burning of oil, coal and other carbon-based fuels . . . could trigger dangerous climate change."[6]

"But when Hansen was called back to testify in 1989, the White House of President George H.W. Bush edited this government scientist's remarks to water down his conclusions, and Hansen declined to appear. That was the year U.S. oil and coal interests formed the Global Climate Coalition to combat efforts to shift economies away from their products. Britain's Royal Society and other researchers later determined that oil giant Exxon disbursed millions of dollars annually to think tanks and a handful of supposed experts to sow doubt about the facts. . . . In fact, a document emerged years later showing that the industry coalition's own scientific team had quietly advised it that the basic science of global warming was indisputable."[7-10]

Subsequent studies have decisively confirmed Hansen's testimony: "Humans have increased the amount of . . . (CO2) in the atmosphere by about 40% over the past 150 years," and atmospheric CO2 has "increased by 45% between 1990 and 2010 . . . despite increased energy efficiency, nuclear energy and a growing renewable energy industry."[11-15]

In December 2008 Hansen and nine other climate scientists suggested that **global atmospheric CO2 must be lowered to a mean level of 350 ppm or less** "**if climate disasters are to be averted**."[16] That limit was breached in 1987, CO2 is increasing about 2 ppm a year and at that rate could rise to a climate chaos level of about 470 ppm by 2050.

In December 2009 over 100 governments attending the Copenhagen U.N. Climate Change

Conference "endorsed the 350-ppm target and its corollary of limiting temperature rise to 1.5 [degrees Celsius] above preindustrial levels." Despite its previous support, a rise of 2.0 degrees Celsius in the mean global atmospheric temperature was not endorsed; it would inundate island nations like the Maldives and cause other climate chaos.[17]

In the final hours of the deadlocked Conference, the non-binding Copenhagen Accord was unofficially adopted by the U.S., China, Russia, India, Brazil, Bangladesh, the Maldives and 21 other nations that represent over 80 percent of the human-induced greenhouse gas emissions and the people most affected by them. It "calls for the U.S. and 185 other nations to reduce emissions [by 2020], invest in clean energy technology and practices, and help people *adapt* to the effects of climate change. The Accord also, for the first time, acknowledges that staying below 2 degrees Celsius may not be sufficient and includes a review in 2015 of the need to potentially aim for staying below 1.5 degrees Celsius, or an atmospheric CO2 concentration of 350 ppm."

However, the Accord allowed nations to set their own, ineffectual emission reduction targets for 2020,[18,19] and the December 2010 U.N. Climate Change Conference in Cancun, Mexico officially adopted similar non-binding provisions. CO2 and other greenhouse gas emissions have raised the mean global temperature by 0.8 degrees Celsius since 1900, and 0.6 more has been locked in by climate system inertia. With the temperature continuing to rise about 0.2 degrees a decade since 1990—and with the U.S. and other Accord nations not doing enough to reverse the rise or *adapt* to it—the 1.5 and 2.0 limits will likely be exceeded well before 2050,[14-17,20] and **the chaotic impacts of human-induced global warming will become the paramount issue of the 21st century**.[6-10,21-24]

Rampant conflict within and between nations is one of those impacts. Yet many U.S. "peace and justice" organizations have not embraced a climate chaos agenda that could prevent or reduce the conflict. The Appendix of 28 conflict reports shows why such an agenda must be a key part of every organization's actions. Certainly, measures must urgently be taken and sustained to reduce greenhouse gas emissions and lower global temperatures to a viable level. However, with decades of human-induced global warming already locked into our planet's climate system,[6] U.S. "peace and justice" organizations should primarily focus on measures that will enable populations in our nation and other nations to adapt as best as they can to increasing climate chaos.[15,25]

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Washington, D.C.-based Citizens for Global Solutions. He was the lead producer for the Chapter's 2011 Annual Meeting and Dinner. Its keynote theme was "The Science of Climate Change."

References and Notes

If a web link doesn't work, you can search with the title to review the article.

[1] The Way Back to 280 ppm http://theenergycollective.com/samcarana/61790/way-back-280-ppm

See the CO2 timeline graph, and Figure 1 in [11] and [12]. The Second Industrial Revolution is usually described as beginning in the U.S. in the 1860's and extending to 1914 when WWI began.

[2] Carbon levels hit new peak, research shows http://www.guardian.co.uk/environment/2011/may/31/carbon-levels-peak

Per the NOAA data it was a temporary peak in the fourth week of May 2011.

[3] World Population Growth History Chart http://www.vaughns-1-pagers.com/history/world-population-growth.htm

[4] World Population 1950-2050 http://www.npg.org/facts/world_pop_year.htm

[5] Reflections on Live Earth, Save Our Selves, and 'Limits to Growth' <u>http://www.tcdailyplanet.net/article/2007/07/11/reflections-live-earth-save-our-selves-and-limits-growth.html</u>

As the 1972 "Limits to Growth" and its follow-up reports have clearly shown, **population stabilization is an essential condition for climate stabilization**. Yet for religious, cultural, political or other reasons, the massive increase in world population is often downplayed or ignored as a major component of human-induced (anthropogenic) global warming.

[6] Mark Hertsgaard, "HOT: Living Through the Next Fifty Years on Earth," New York: Houghton Mifflin Harcourt Publishing Company, 2011.

Hansen's Senate testimony is paraphrased on pp. 4-5. For Hertsgaard "preindustrial levels" apparently means the levels that prevailed before the Second Industrial Revolution; see [1]. I highly recommend this comprehensive and thoroughly researched book, which includes indepth evaluations of measures to mitigate global warming and *adapt* to its climate change impacts. Mark dedicates it to his five-year old daughter Chiara, who is part of what he calls "Generation Hot'—the two billion young people worldwide who will spend the rest of their lives coping with mounting climate disruption."

[7] The American 'allergy' to global warming: Why? http://www.msnbc.msn.com/id/44658363/

Emphasis added to the Introduction text. Columbia University geoscientist Wally Broecker coined the term "global warming" in his obscure 1975 paper, "Are We on the Brink of a Pronounced Global Warming?." It "calculated how much carbon dioxide would accumulate in the atmosphere in the coming 35 years, and how temperatures consequently would rise. His numbers have proven almost dead-on correct. . . . **The desire to disbelieve deepens as the scale of the threat grows**," concludes economist-ethicist Clive Hamilton." Emphasis added; also see the Global Climate Coalition in [6], pp. 6-7, 12-13 and 260.

[8] Who's Bankrolling the Climate-Change Deniers? http://www.time.com/time/health/article/0,8599,2096055,00.html

"As recently as the 2008 U.S. presidential election, both the Democratic and Republican candidates professed belief in the threat of global warming, and each advanced policies designed to curb U.S. carbon emissions. . . . Not anymore. With the exception of Jon Huntsman — who barely registers in polls — you can't find a Republican presidential candidate who unequivocally believes in climate science, let alone one who wants to do anything about it. . . . That's deeply troubling. It's one thing when people disagree on the effectiveness of different approaches to fix a problem; it's worse when they refuse even to believe that a problem exists — despite an overwhelming scientific consensus that says it does. **One of America's major political parties has, in effect, adopted denial as policy**." Emphasis added.

[9] EU Climate Chief 'Shocked' at US Debate <u>http://thehill.com/blogs/e2-wire/677-e2-wire/183901-eu-climate-chief-shocked-at-us-debate</u>

"European Union climate chief Connie Hedegaard is disposing of diplomatic niceties when describing U.S. political battles over climate change. . . . 'When more than 90 percent of researchers in the field are saying that we have to take [climate change] seriously, it is incredibly irresponsible to ignore it.'. . . The European Union in 2007 committed to cut its overall emissions by at least 20 percent below 1990 levels by 2020, and has offered much steeper cuts if other major emitting countries agree to an international deal. . . . The next big U.N. climate summit will take place in Durban, South Africa, in late November. 'In Durban we will attempt to lay out a plan with deadlines for when we will arrive at a legally binding agreement that includes both the U.S. and China.'" Emphasis added.

[10] For a piercing analysis of climate change skeptics and deniers and their efforts to block measures that would reduce global warming and *adapt* to its climate change impacts, see "The Tobacco Connection" and "The Crime Continues" in [6], pp. 258-268:

"Just as tobacco companies denied that smoking causes cancer, so the carbon lobby [is denying] that greenhouse gas emissions pose a threat to human well-being. In each case, the companies cloaked their self-serving interests in a mantle of scientific respectability. . . . As a journalist, it shames me that the lobby could never have succeeded without the media; if the deniers themselves committed a crime by misrepresenting the science on climate change, many mainstream outlets aided and abetted the crime, a journalistic failure as profound as any in modern U.S. history." Emphasis added.

According to the Union of Concerned Scientists, [15] "Skeptical Science is the leading website

for debunking spurious claims regarding climate science. The site tackles everything from flawed research papers to conspiracy theories about scientists and is updated with the latest contrarian claims and primary sources that debunk them." Also see [11-15] and http://www.skepticalscience.com.

"The Climate Science Rapid Response Team is a match-making service to connect climate scientists with lawmakers and the media. The group is committed to providing rapid, high-quality information to media and government officials." It was co-founded by University of St. Thomas Associate Professor of Engineering John Abraham in Saint Paul, Minnesota. See http://www.climaterapidresponse.org/.

"The denial of human-induced global warming and its chaotic impacts on our ecosphere by government officials and their supporters is the ultimate 'Nero Syndrome.'"—Richard Lee Dechert

[11] How do human CO2 emissions compare to natural CO2 emissions? http://www.skepticalscience.com/human-co2-smaller-than-natural-emissions-basic.htm

[12] Empirical evidence that humans are causing global warming . . . <u>http://www.skepticalscience.com/empirical-evidence-for-global-warming.htm</u>

[13] Quantifying the human contribution to global warming <u>http://www.skepticalscience.com/Quantifying-the-human-contribution-to-global-warming.html</u>

[14] Carbon Emissions Continue to Rise Despite Reductions http://mail-

sg3.msntv.msn.com/apps/mail/writemail.aspx?subject=Carbon%20Emissions%20Continue%20t o%20Rise%20Despite%20Reductions%20%7C%20Planetsave&ru=http%3A//planetsave.com/2 011/09/21/carbon-emissions-continue-to-rise-despite-reductions/&action=sendlink

[15] Climate Science References for the Campaign Trail http://www.ucsusa.org/news/media alerts/climate-science-references-campaign-trail-0555.html

"In October 2009, 18 professional scientific societies issued a joint statement to the Senate regarding climate change: 'Observations throughout the world make it clear that climate change is occurring, and rigorous scientific research demonstrates that the greenhouse gases emitted by human activities are the primary driver,' the organizations wrote, adding that 'if we are to avoid the most severe impacts of climate change, emissions of greenhouse gases must be dramatically reduced. In addition, *adaptation* will be necessary to address those impacts that are already unavoidable."

[16] Target Atmospheric CO2: Where Should Humanity Aim? http://www.giss.nasa.gov/research/briefs/hansen_13/

Emphasis added to the Introduction text. "[T]he optimum CO2 level for maintaining a planet similar to that on which civilization developed is likely to be less than 350 ppm, but a 350 ppm target already reveals that dramatic policy changes are needed urgently.... **The greatest danger is continued ignorance and denial, which could make tragic consequences**

unavoidable." Emphasis added; also see [7-10].

[17] In [6], pp. 66-73, 247-255 and 287-291.

[18] Understanding the Copenhagen Accord http://www.usclimatenetwork.org/policy/understanding-the-copenhagen-accord

[19] Copenhagen Accord climate pledges too weak: U.N. http://www.reuters.com/article/2010/03/31/us-climate-accord-idUSTRE62U13M20100331

Yvo de Boer, outgoing head of the U.N. Climate Change Secretariat: "It is clear that while the pledges on the table are an important step toward the objective of limiting growth of emissions, they will not in themselves suffice to limit warming to below 2 degrees Celsius."

[20] GLOBAL CO2 EMISSIONS REACH A RECORD HIGH http://www.regency.org/news_june11_3.html

"This increase raises serious doubts over whether plans of limiting the average global temperature to an increase of two degrees Celsius by 2020 will be achieved (as agreed by a meeting of world leaders last year in Cancun). . . . [T]he window of opportunity for consequential action is closing quickly." In the text above and [17,19], 1.5 degrees Celsius is considered the maximum increase.

[21] The Discovery of Global Warming - Timeline http://www.aip.org/history/climate/timeline.htm

"2009.... Copenhagen conference fails to negotiate binding agreements: end of hopes of avoiding dangerous future climate change."

[22] Global Temperature - 2010 Hits Top of Temperature Chart http://www.earth-policy.org/indicators/C51/temperature_2011

"Topping off the warmest decade in history, 2010 experienced a global [mean] temperature of 14.63 degrees Celsius . . . tying 2005 as the hottest year in 131 years of record keeping. . . . [A] rise of 2-3 degrees Celsius will make the earth as hot as it was 3 million years ago, when oceans were more than 25 meters . . . higher than they are today."

[23] Arctic permafrost leaking methane at record levels, figures show http://www.guardian.co.uk/environment/2010/jan/14/arctic-permafrost-methane

"Such Arctic soils currently lock away billions of tonnes of methane, a far more potent greenhouse gas than carbon dioxide, leading some scientists to describe melting permafrost as **a ticking time bomb that could overwhelm efforts to tackle climate change**." Emphasis added.

[24] Global Warming 2050 | Climate Change 2050 http://www.global-warming-forecasts.com/2050-climate-change-global-warming-2050.php

A compilation of possible or likely climate-change chaos that will occur by 2050; also see the 2015 through 2090 compilations and the Underestimates.

[25] "It is not the strongest of the species that survives . . . nor the most intelligent that survives. It is the one that is most *adaptable* to change."—Charles Darwin, italics added. **In addition to those cited in [6] and the Appendix, there are many measures on** *adapting* **to climate chaos that "peace and justice" organizations can embrace**. See for example:

Climate Change 101: Adaptation
<u>http://www.pewclimate.org/docUploads/Adaptation_0.pdf</u>

• UNDP | Adaptation to Climate Change http://www.undp.org/climatechange/adapt/

• Adaptation | Climate Change - Health and Environmental Effects | U.S. EPA <u>http://www.epa.gov/climatechange/effects/adaptation.html</u>

California Climate Adaptation Strategy
<u>http://www.climatechange.ca.gov/adaptation/</u>

• Climate Change Adaptation - Minnesota http://www.dnr.state.mn.us/conservationagenda/direction/climate_change.html

Climate Change Adaptation in New York City
<u>http://www.nyas.org/publications/annals/Detail.aspx?cid=ab9d0f9f-1cb1-4f21-b0c8-7607daa5dfcc</u>

 Corridors of Opportunity: Presentation to the Twin Cities Sustainability Conference -Metropolitan Council http://www.metrocouncil.org/planning/COO/AFORSApril2011.pdf

Appendix

The 28 sample reports are clustered in similar conflict topics. Two of them are from mainstream U.S. media; see the critique in [10].

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• U.N. chief: Warming as dangerous as war http://www.msnbc.msn.com/id/17401890/ns/us_news-environment/t/warming-dangerous-warun-chief-says/

"Human-induced global warming poses as much danger to the world as war, U.N. Secretary-General Ban Ki-moon said . . . as he urged the United States to take the lead in the fight against global warming."

• UN Climate Talks and the Prevention of Violent Conflict <u>http://www.friendsjournal.org/un-climate-talks-and-prevention-violent-confl</u>

"We, the young people of today, will be the recipients of an irreparably damaged planet if the international community fails to deal with climate change."—Alexandra Stark, a Quaker observer and the report author. See [25].

• Tomgram: Chip Ward, Occupy Earth http://www.tomdispatch.com/post/175459/tomgram%3A chip ward%2C occupy earth/#more

"At some point, we'll discover that you can't exist for long beyond the boundaries of the natural world, that (as with every other species) if you overload the carrying capacity of your habitat, you crash. Warming temperatures, chaotic weather patterns, extreme storms, monster wildfires, epic droughts, Biblical floods, an avalanche of species extinction... that collapse is upon us now. In the human realm, it translates into hunger and violence, mass migrations and civil strife, failed states and resource wars....

"After Occupy Wall Street, isn't it time for Occupy Earth?." Emphasis added; see [25].

• Pentagon to rank global warming as destabilising force http://www.guardian.co.uk/world/2010/jan/31/pentagon-ranks-global-warming-destabilising-force

"The Pentagon will for the first time rank global warming as a destabilising force, adding fuel to conflict and putting US troops at risk around the world. . . . The quadrennial defence review, prepared by the Pentagon to update Congress on its security vision, will direct military planners to keep track of the latest climate science, and to factor global warming into their long term strategic planning."

• National Security and the Threat of Climate Change http://securityandclimate.cna.org/news/

A compilation of 2007, 2008 and 2009 reports from U.S. military and intelligence perspectives.

• Global Warming Is Just the Tip of the Iceberg http://www.washingtonpost.com/wp-dyn/content/article/2009/01/02/AR2009010202280.html

"The Cold War shaped world politics for half a century. But global warming may shape the patterns of global conflict for much longer than that — and help spark clashes that will be, in every sense of the word, hot wars."

Climate Change and Global Conflicts
<u>http://www.wfs.org/node/370</u>

"Responses to resource shortages extend beyond fighting over dwindling crumbs of bread and drops of water, but include economic change, trade, technological and social innovation, and peaceful resource distribution." See [25].

• Climate Conflict: how global warming threatens security and what to do about it - Launch http://www.iiss.org/whats-new/iiss-podcasts/adelphi-webcasts/climate-conflict/

"Climate change has been a key factor in the rise and fall of societies and states from prehistory to the recent fighting in the Sudanese state of Darfur. It drives instability, conflict and collapse, but also expansion and reorganisation. The ways cultures have met the climate challenge provide object lessons for how the modern world can handle the new security threats posed by unprecedented global warming." See [25].

• Climate change 'will spark global conflict' http://www.telegraph.co.uk/earth/earthnews/3335483/Climate-change-will-spark-globalconflict.html

"A stark report, written by two senior EU officials, Javier Solana, foreign policy chief and Benita Ferrero-Waldner, the Commissioner for External Relations, highlights seven threats unleashed by 'intensified competition over access to, and control over, energy resources.'... One major concern is growing rivalry with Russia over a scramble to claim the geological resources opened by a thawing Arctic, developments with 'potential consequences for international stability and European security interests.'"

Climate change will increase threat of war, Chris Huhne to warn
<u>http://www.b4esummit.com/2011/07/climate-change-will-increase-threat-of-war-chris-huhne-to-warn</u>

As the Secretary for Energy and Climate Change in the cabinet of British Prime Minister David Cameron, "[he] believes the UK and other countries must act urgently to prepare for the threat. 'We cannot be 100% sure that our enemies will attack our country, but we do not hesitate to prepare for the eventuality.... The same principle applies to climate change, which a report published by the Ministry of Defence ... has identified as one of the four critical issues that will affect everyone on the planet over the next 30 years.'"

• Global Warming and the Stresses of War - A Post Bin Laden Perspective <u>http://blog.nwf.org/wildlifepromise/2011/05/global-warming-and-the-stresses-of-war-a-post-bin-laden-perspective/</u>

"In December 2001, even in the immediate aftermath of the World Trade Center and Pentagon disasters, 100 Nobel Laureates declared in a public statement: '**The most profound danger to world peace in the coming years will stem not from the irrational acts of states or individuals but from the legitimate demands of the world's dispossessed.**" Emphasis added; see [25].

• The Linked Challenges of Global Climate Change and Local Peace http://www.e-ir.info/?p=11301

"As climate change impacts interact with features of the social, economic and political landscape, countries with weak governance systems will become overwhelmed, and face a high

risk of falling into political instability and violent conflict. The risk of instability both adds to the burdens faced by vulnerable communities, and makes it harder for them to *adapt* to climate change." Italics added; see [25].

• Mental illness rise linked to climate http://www.smh.com.au/environment/mental-illness-rise-linked-to-climate-20110828-1jger.html

The report "A Climate of Suffering: The Real Cost of Living with Inaction on Climate Change"... suggests a possible link between Australia's recent decade-long drought and climate change. It points to a breakdown of social cohesion caused by loss of work and associated stability, adding that the suicide rate in rural communities rose by 8 per cent." See [25].

Climate Chaos: Christian Parenti's New Book Exposes How Global Warming Could Lead to Global Warfare
http://www.democracynow.org/2011/6/30/climate chaos christian parentis new book

"In Afghanistan . . . I was reporting on the poppy economy, the heroin economy, and asked the farmers, 'Why are you growing this illegal crop that the government and NATO come after you for growing?' And one reason they would give was that it's drought-resistant. . . . Afghanistan is suffering the worst drought in living memory, that coincides with the U.S. occupation there, and the Afghan government and the NATO forces attack poppy as part of their counterinsurgency strategy and nation-building strategy. The Taliban defend poppy. The farmers grow poppy because it uses one-fifth the amount of water that wheat uses."

• Global Warming Increases Risk of Civil War in Africa http://woods.stanford.edu/cgi-bin/focal.php?name=civil_war&focal_area=climate_and_energy

"Climate change could increase the likelihood of civil war in sub-Saharan Africa by over 50 percent within the next two decades, according to a study led by a team of researchers at Stanford University, the University of California-Berkeley, New York University and Harvard University. . . . The study provides the first quantitative evidence linking climate change and the risk of civil conflict. It concludes by urging accelerated support by African governments and foreign aid donors for new and/or expanded policies to assist with African adaptation to climate change." Emphasis and italics added; see [25].

Glaciers go, leaving drought, conflict and tension in Andes
<u>http://wwwp.dailyclimate.org/tdc-newsroom/2009/05/glaciers-go-leaving-drought-conflict-and-tension</u>

"In 1991, tropical Andean glaciers covered some 1,065 square miles, with 70 percent in Peru, 20 percent in Bolivia, and the rest in Ecuador, Colombia and Venezuela. Since then, glaciers have disappeared from Venezuela and are shrinking in the other countries. . . . With cities growing and agriculture expanding throughout South America, experts predict that climate change will exacerbate water scarcity, increasing conflicts between competing users."

• Water Wars: Climate change may spark conflict <u>http://www.globalministries.org/get-involved/justice-and-advocacy/water/water-wars-climate change-may-s.html</u>

Dangerous tensions exist between Israel, Jordan and Palestine; Turkey and Syria; Angola and Namibia; Ethiopia and Egypt; Bangladesh and India; China and India.

• Rising sea levels 'could spark conflict over energy and food reserves' http://www.telegraph.co.uk/earth/environment/climatechange/4161206/Rising-sea-levels-couldspark-conflict-over-energy-and-food-reserves.html

"Rising sea levels caused by climate change are threatening to destabilise island nations and spark conflict across the world over energy and food reserves, the Australian military has claimed. . . . Resource-hungry nations are already snapping up large tracts of agricultural land in poor Asian and African nations."

• Global warming impact like "nuclear war": report http://www.enn.com/climate/article/22981/print

"The International Institute for Strategic Studies (IISS) security think-tank said global warming would hit crop yields and water availability everywhere, causing great human suffering and leading to regional strife. . . . Overall, it said 65 countries were likely to lose over 15 percent of their agricultural output by 2100 at a time when the world's population was expected to head from six billion now to nine billion people."

• Population and Security: How Demographic Change Can Lead to Violent Conflict http://www.mafhoum.com/press6/179S21.pdf

"While overall population growth and population density do not generally predict political risks, a number of distinct kinds of demographic changes—rapid growth in the labor force in slowgrowing economies, a rapid increase in educated youth aspiring to elite positions when such positions are scarce, unequal population growth rates between different ethnic groups, urbanization that exceeds employment growth and migrations that change the local balance among major ethnic groups—*do* appear to increase the risks of violent internal political and ethnic conflicts. In addition, there is some evidence that countries with larger populations have greater risks of both armed conflict and state repression." Also see [3-5].

• World needs refugee re-think for climate victims: U.N. http://www.reuters.com/article/2011/06/06/us-climate-refugees-idUSTRE7553UG20110606

"The world must invent new ways to protect people driven from their homes by climate change without copying safeguards for those uprooted by wars or persecution, the head of the U.N. refugee agency said. . . . 'We must now reconsider our approach' to help people uprooted by global warming, he said in a speech, adding that **he considered environmental degradation and climate change to be 'the defining challenge of our times**.'" Emphasis added; see [25].

• Workable Peace: Current Conflicts - The Global Warming Debate http://www.workablepeace.org/now.html

"There is more than one way to analyze the global warming debate. It can be viewed in terms of

scientific evidence, comparing research of those who claim that climate change is a result of man-made greenhouse emissions, and the reports of scientists who claim that natural climate patterns characterize recent warmer weather.

"The conflict can also be viewed economically. When looking at global warming from an economic standpoint, one must consider the implications of doing nothing about the current warming trend, or risking shorter-term economic growth to create an energy efficient economy. One's position in the global economy may strongly influence which scientific views they advocate.

"Global climate change can also be analyzed politically, on a national and international level. Because climate change is an international issue, actions taken by individual nations may have short-term economic costs to be borne locally, even if longer-term international benefits include slowing or reversing climate change. This trade-off has been particularly charged in the United States....

"Finally, the global warming debate is a moral issue. If, indeed, humans are systematically destroying the planet, it will have enormous implications for future generations of human and animal life. A person's moral opinion also has a lot to do with their scientific, economic, and political perspectives." Emphasis added; see [25].

• Snubbing Skeptics Threatens to Intensify Climate War, Study Says <u>http://www.stopglobalwarming.org/news/snubbing-skeptics-threatens-to-intensify-climate-war-study-says/</u>

"That insight by social scientists was illustrated by what the paper describes as the 'climate whiplash' of the last two years, when polling showed an eroding number of people who believe in global warming. Establishing a scientific consensus on warming represents the beginning, not the end, of building a 'social consensus,' the paper says. . . . 'When presenting the climate change issue, it is critical that the frames and categories used do not threaten people's values and therefore [create] dismissive resistance to the argument,' the paper says, noting that 'dormant' climate connections to religion, technology and national security might work better." See [25].

• US Military Goes to War with Climate Skeptics http://www.commondreams.org/view/2011/05/21-2

"Federal legislation to combat climate change is quashed for the foreseeable future, scuttled by congressional climate cranks who allege the climate-science jury is still out. . . . Fortunately, though, a four-star trump card waits in the wings: the US national security apparatus. . . . For years, in fact, high-level national security officials both inside the Pentagon and in think-tank land have been acknowledging climate change is for real and that we need to take action to preserve and enhance US national security interests." Emphasis added.

• Disarmament for Development Program . . . Climate Change and Conflict <u>http://www.ipb.org/i/disarmament-and-development/III-J-01-DADP-climate-of-war-climate-change-and-conflict.html</u>

"The International Peace Bureau congratulates the Intergovernmental Panel on Climate Change and Al Gore on the award of the 2007 Nobel Peace Prize. . . . Worldwide climate change is not only a peace question because of the risk of new conflicts that may follow, as stated by the Nobel Committee, but also on account of the enormous negative impact the military itself has on the environment—through pollution, use of scarce resources, and diversion of colossal sums of money away from sustainable development." See [25].

Climate Change and Conflict
<u>http://www.crisisgroup.org/en/key-issues/climate-change-and-conflict.aspx</u>

"A key challenge today is to better understand the relationship between climate change, environmental degradation and conflict and to effectively manage associated risks through appropriate conflict prevention and resolution mechanisms." See [25].

• Climate Change Adaptation, Social Entrepreneurship and Peacebuilding http://www.cusa.uci.edu/programs/climate_change.html

"Our research explores the security implications of climate change as well as the potential for social entrepreneurship to support peacebuilding and *adaptation* activities." See [25], italics added.

 Climate Security Now! - Warming Means War <u>http://www.globalclimatesecurity.org/home</u>

"Climate Security will develop joint actions between the climate change and peace movements in order to confront climate change effectively and equitably thereby reducing the risk of climate-related conflict. Climate Security was developed by Friends of the Earth and Voters for Peace." See [25].

• Climate Change: Crisis and Challenge - How our movements can achieve both global justice and ecological balance http://resistinc.org/newsletters/articles/climate-change-crisis-and-challenge

"There is no better example of the interconnection of the root causes of social injustice, ecological destruction and economic domination than climate change. . . . What will the solutions to the climate crisis look like? They will be found in a model that is the opposite of the dominant economic model of incessant and unsustainable growth, oppression and injustice. . . . "The movement against climate change in the United States plays a pivotal role in the global effort to avoid climate catastrophe. This is because the US is historically responsible for the lion's share of global greenhouse gas emissions; the US military is the largest single emitter of carbon on the planet; the US and the World Bank dominate the discussion of what to do about global warming; and the historic role of the US in climate negotiations has been to obstruct forward progress. . . .

"This will require broad alliances with diverse peoples and movements around the world, and it will require the fundamental transformation of society to one that is based on principles of justice and ecology." Emphasis added; see [25].